Update to Content Not Reviewed by SRP

Request to Update Content Not Reviewed and Approved by the State Review Panel
Proposed changes shall be made available for public review on Texas Education Agency's website for a minimum of seven calendar days prior to approval.

Proclamation Year: 2024
Publisher: Studies Weekly, Inc.
Subject Area/Course: Science, 4th Grade

Adopted Program Information

Title: Texas Science Studies Weekly: 4th Grade
ISBN: 9781649783837-MP1

Enter the identical Program Title of your identical product that will contain the identical updates.
Identical Program Title:
Identical Program ISBN:

Adopted Component Information

Title: Texas Science Studies Weekly: 4th Grade Student Edition with Online Access
ISBN: 9781649783837-SE1

Enter the identical Program Title of your identical product that will contain the identical updates.
Identical Program Title:
Identical Program ISBN:

Publisher's overall rationale for this update

The purpose of these updates is to enhance existing articles and to add missing non TEKS-bearing resources.

Publisher's overall description of the change

Adding visuals to text-based articles. Other additions are described individually below.

Access Information

Enter access information below to the adopted version of the instructional materials and the proposed new content.

Enter access information below to the adopted version of the instructional materials and the proposed new content.

Currently Adopted Content URL: online.studiesweekly.com/login
Currently Adopted Content Username: TXSNadoption
Currently Adopted Content Password: Demo2023

Update to Content Not Reviewed by SRP

Proposed Updated Content URL: Direct links to the resources are provided below.
Proposed Updated Content Username: none required
Proposed Updated Content Password: none required

Update to Content Not Reviewed by SRP

Update comparison:

Each change in the component on this form should be documented in the update comparison below. You must submit a separate request form for **each component**, not each change. (Note: Repeat this section as often as needed by copying and pasting the entire area from the divided line above the **Description of the specific location and hyperlinking to the exact location of the currently adopted content** to the dividing line below the *Screenshot of Proposed New Content*.)

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 21, week 32, TEKS Explained- Standard 13 B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2045/week/17468/articles/96778

Description of the specific location and hyperlink to the exact location of the proposed updated content.

Same as above.

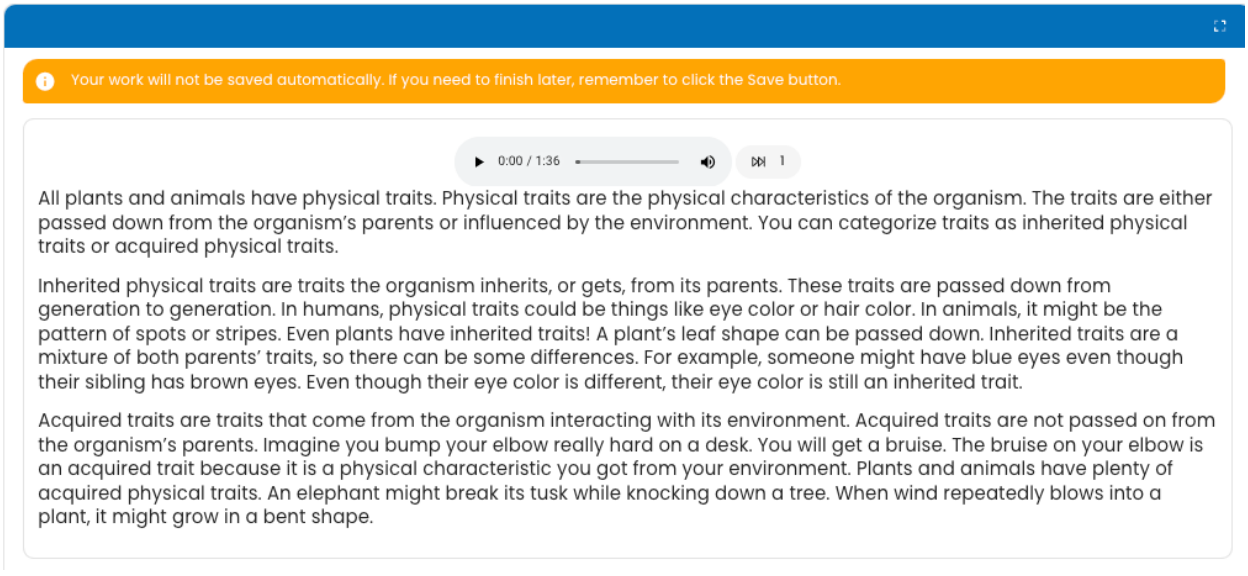
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

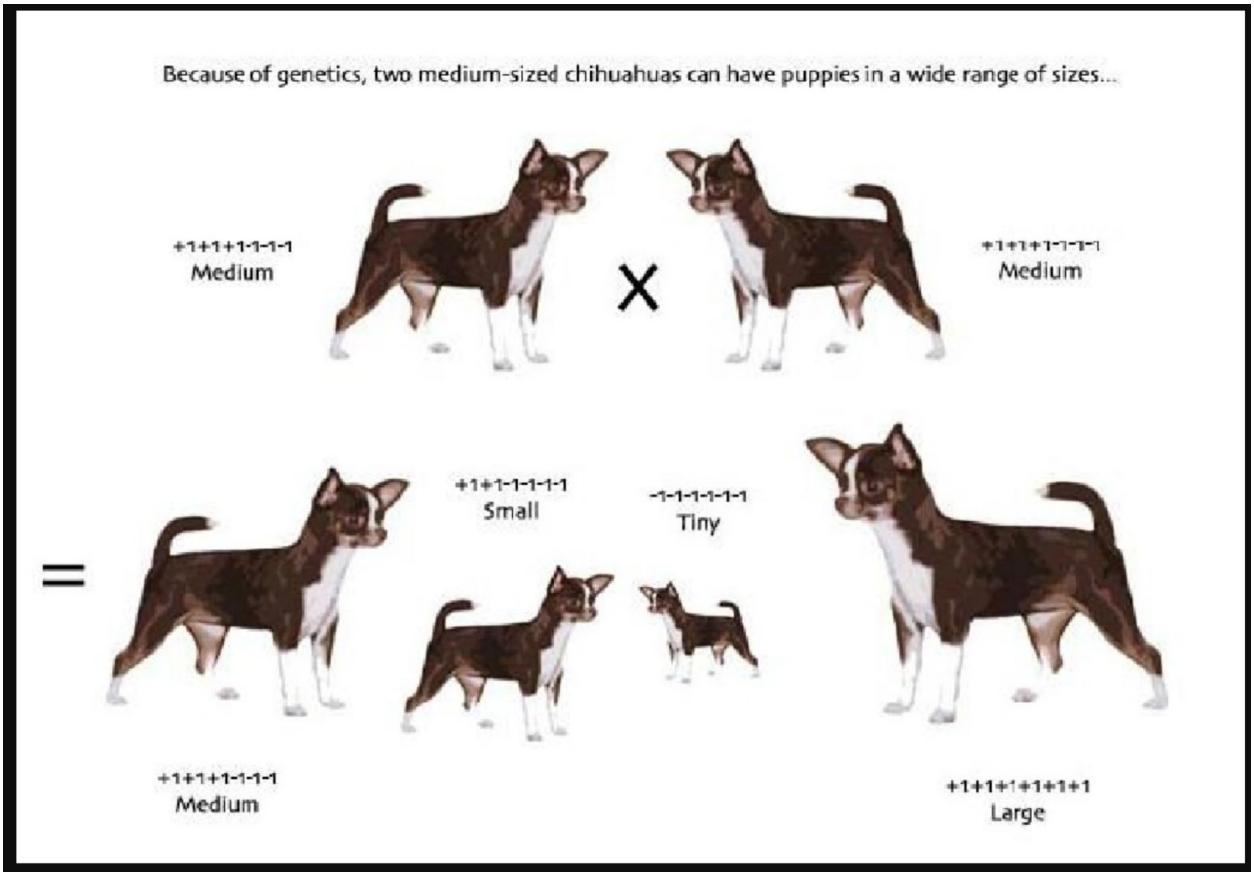
Publisher's description of this change if different from overall description.

An image of heredity has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 20, week 31, TEKS Explained- Standard 13 A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2037/week/17457/articles/96707

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

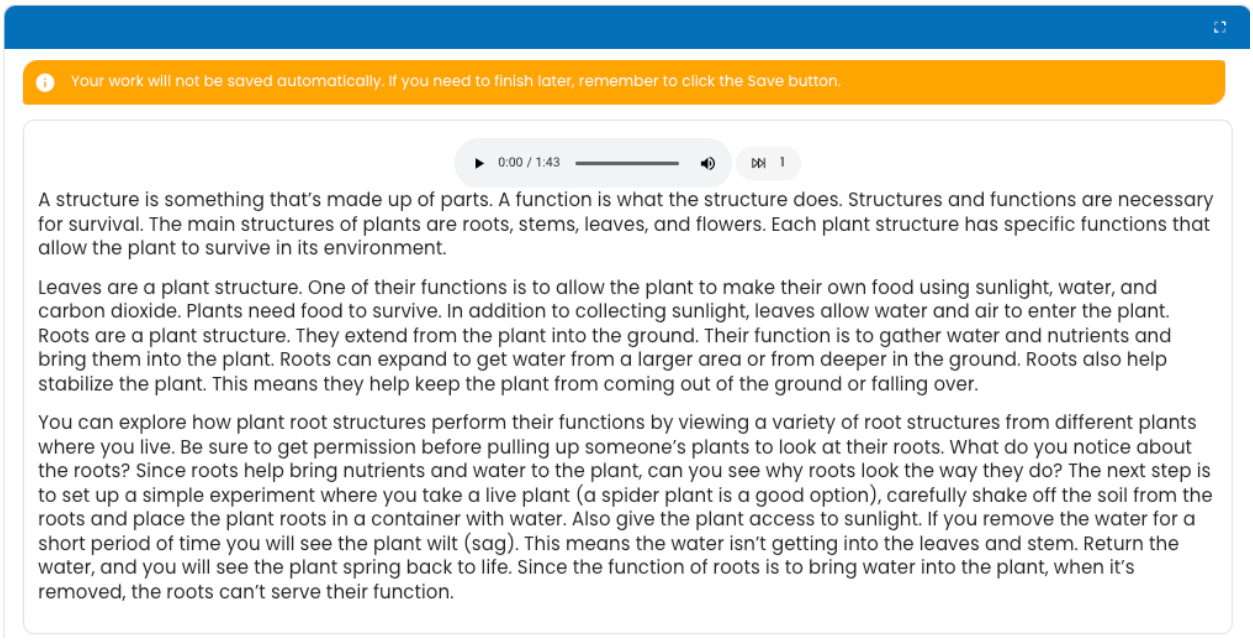
An image is missing from the resource.

Update to Content Not Reviewed by SRP

Publisher's description of this change if different from overall description.

An image of cell structure has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

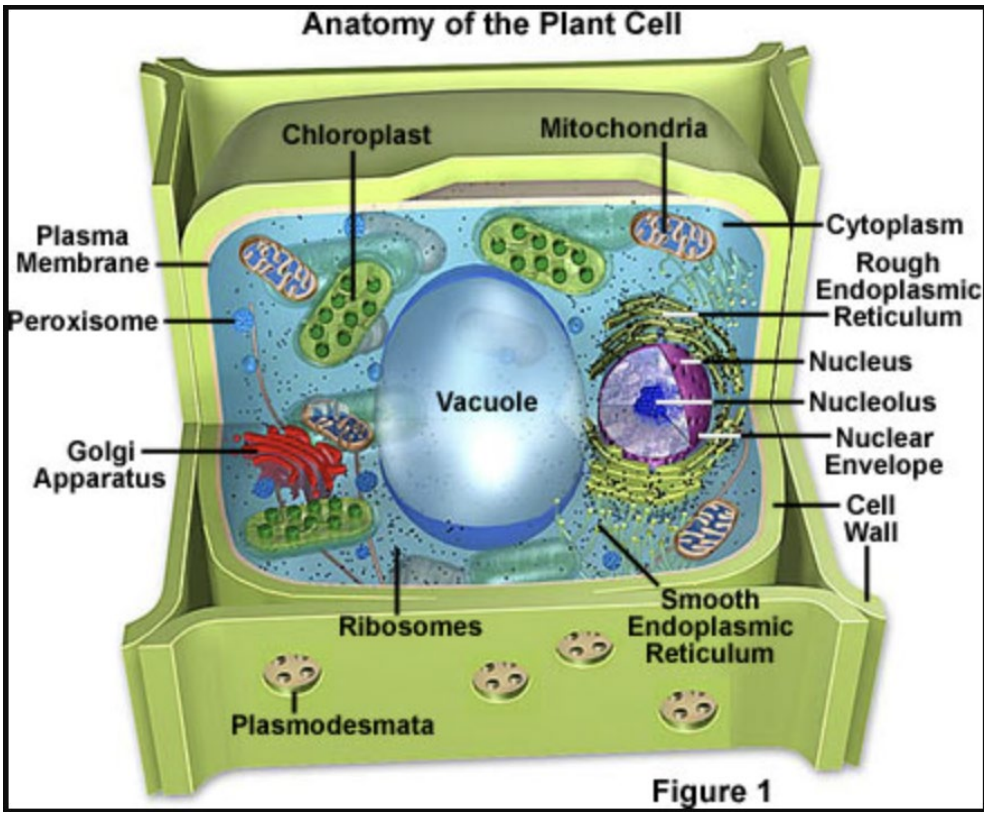


Figure 1

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 19, week 30, TEKS Explained- Standard 12C
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2048/week/17474/articles/96812

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

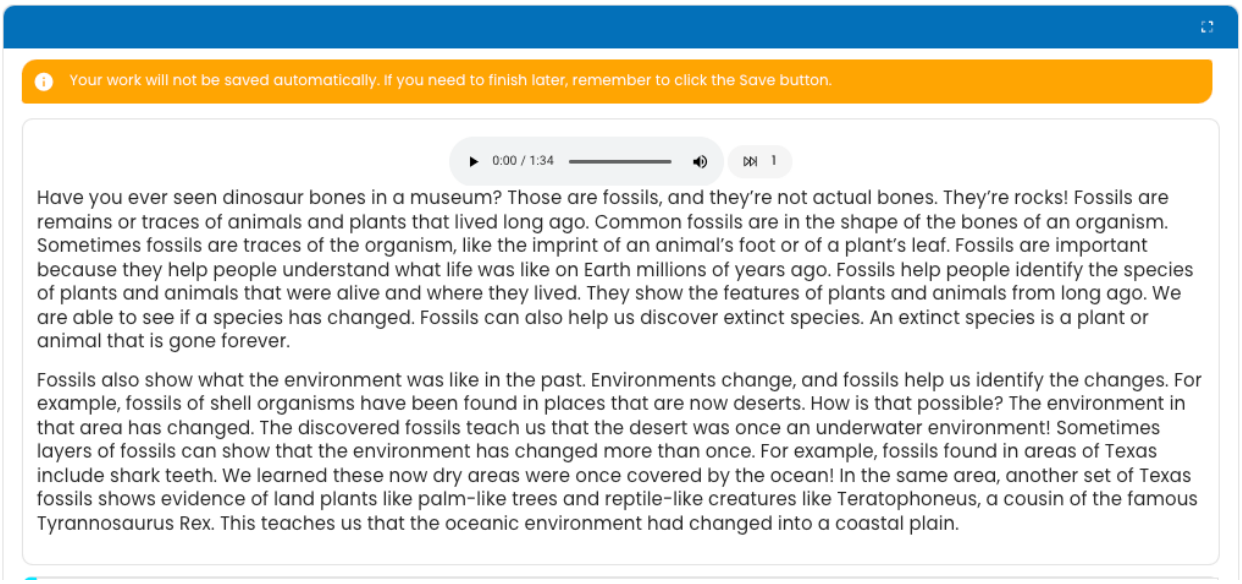
An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a fossil has been added to improve student comprehension.

Screenshot of Currently Adopted Content

Update to Content Not Reviewed by SRP



Screenshot of Proposed Updated Content

Update to Content Not Reviewed by SRP

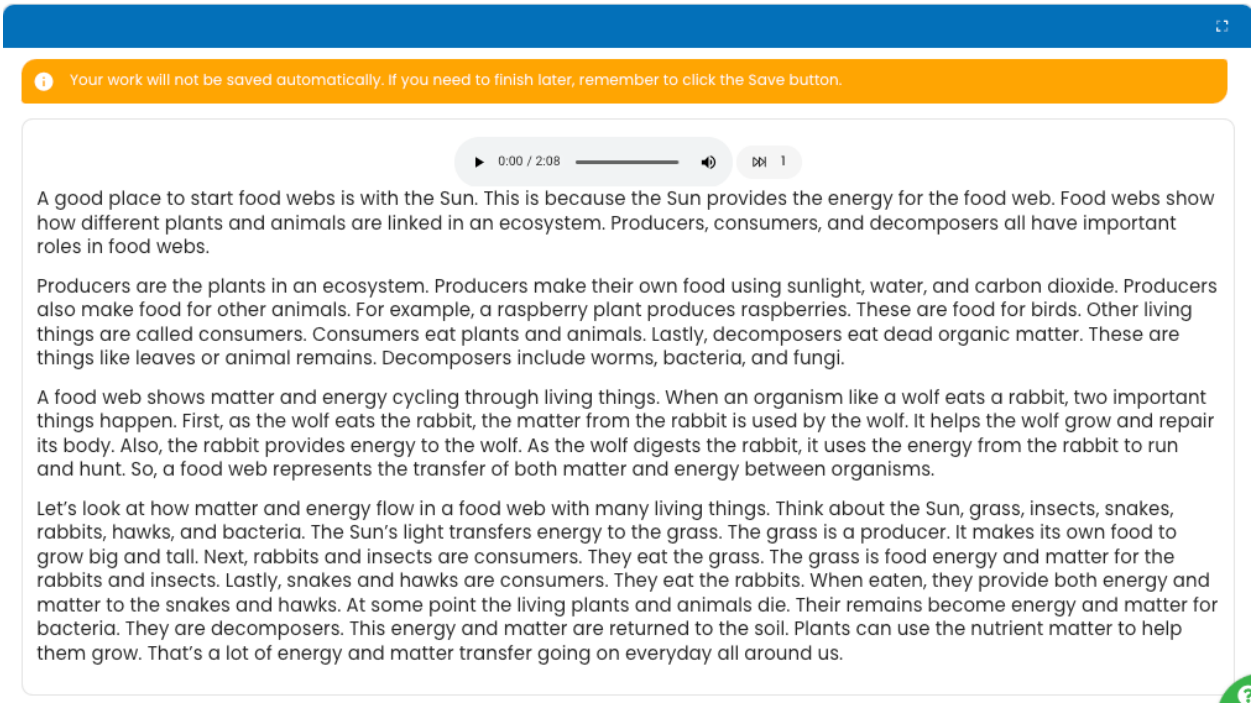
Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 18, week 29, TEKS Explained- Standard 12B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2040/week/17462/articles/96738

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.
An image is missing from the resource.

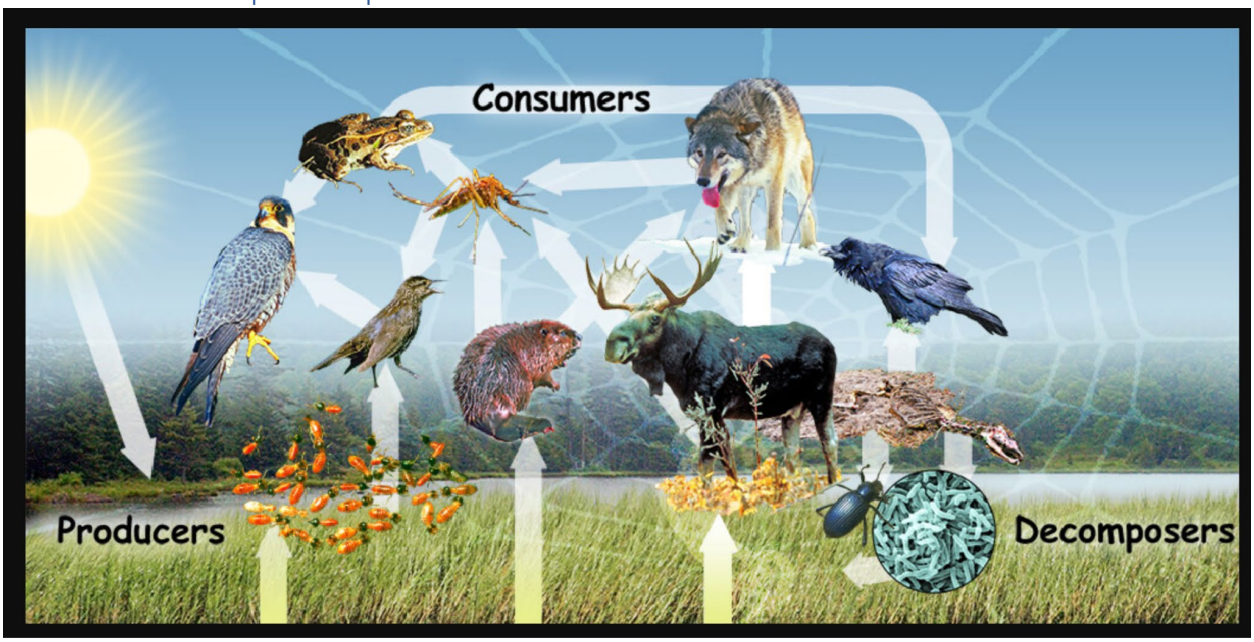
Publisher's description of this change if different from overall description.
An image of a food web has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Update to Content Not Reviewed by SRP

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 16, week 26 , TEKS Explained- Standard 11C
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2052/week/17481/articles/96855

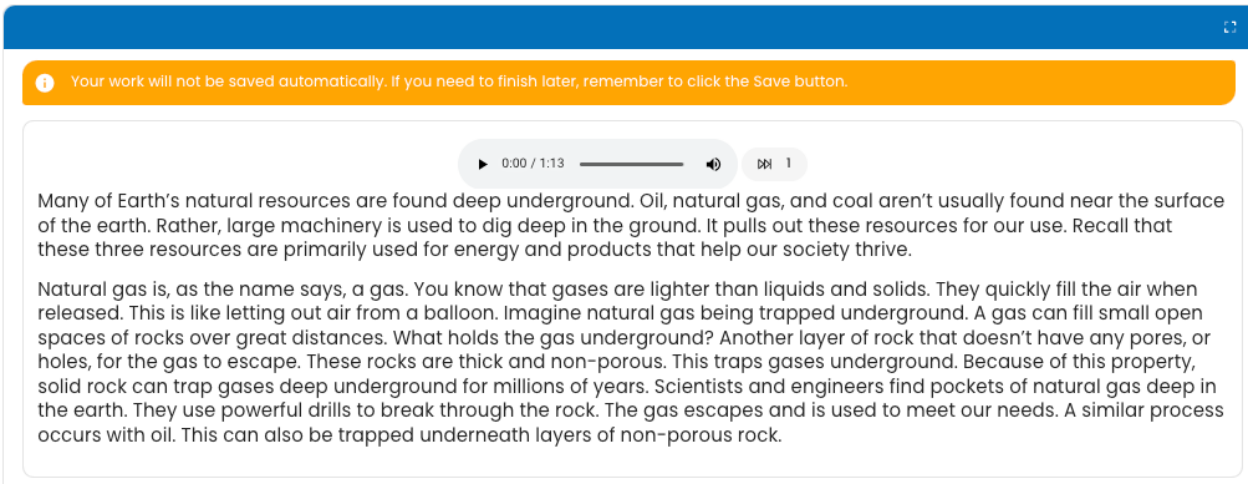
Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.
An image is missing from the resource.

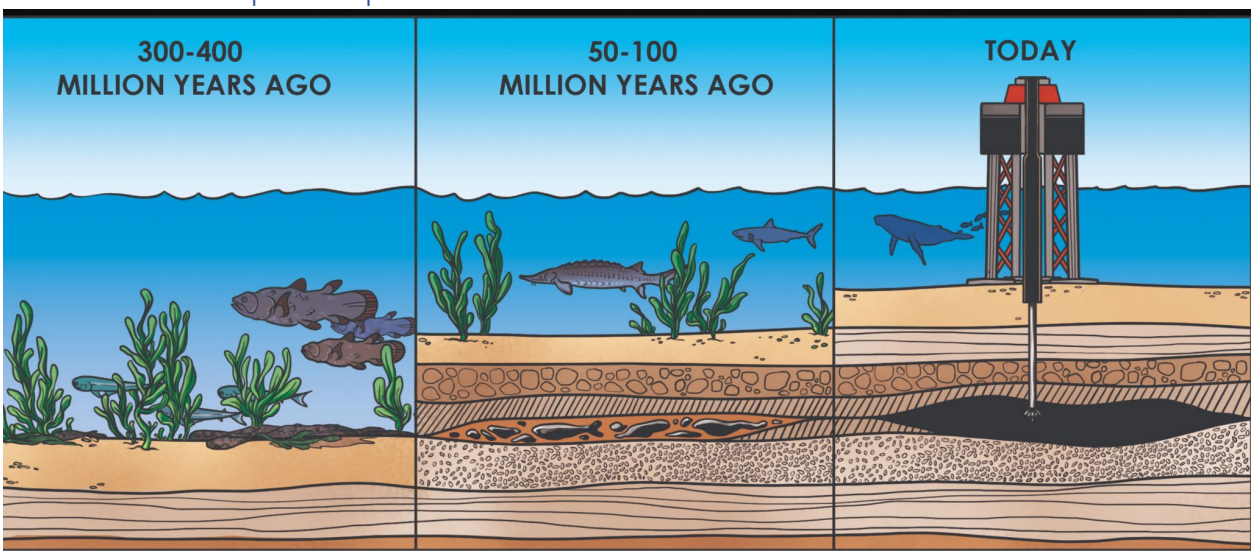
Publisher's description of this change if different from overall description.
An image of natural resources has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 15, week25 , TEKS Explained- Standard 11B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2042/week/17464/articles/96752

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Update to Content Not Reviewed by SRP

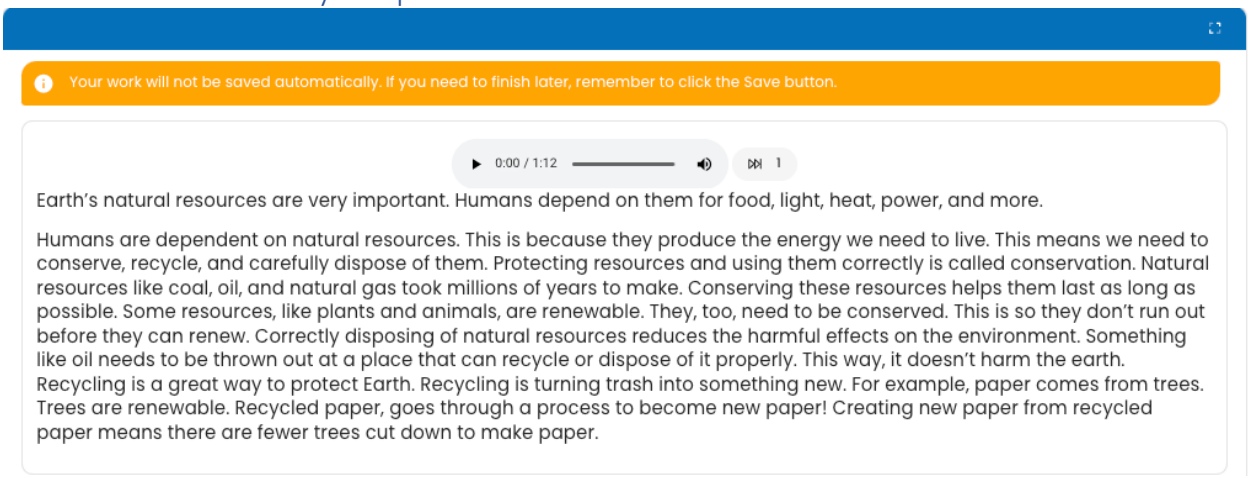
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a lake has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 14, week 23/24 , TEKS Explained- Standard 11A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2039/week/17461/articles/96731

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

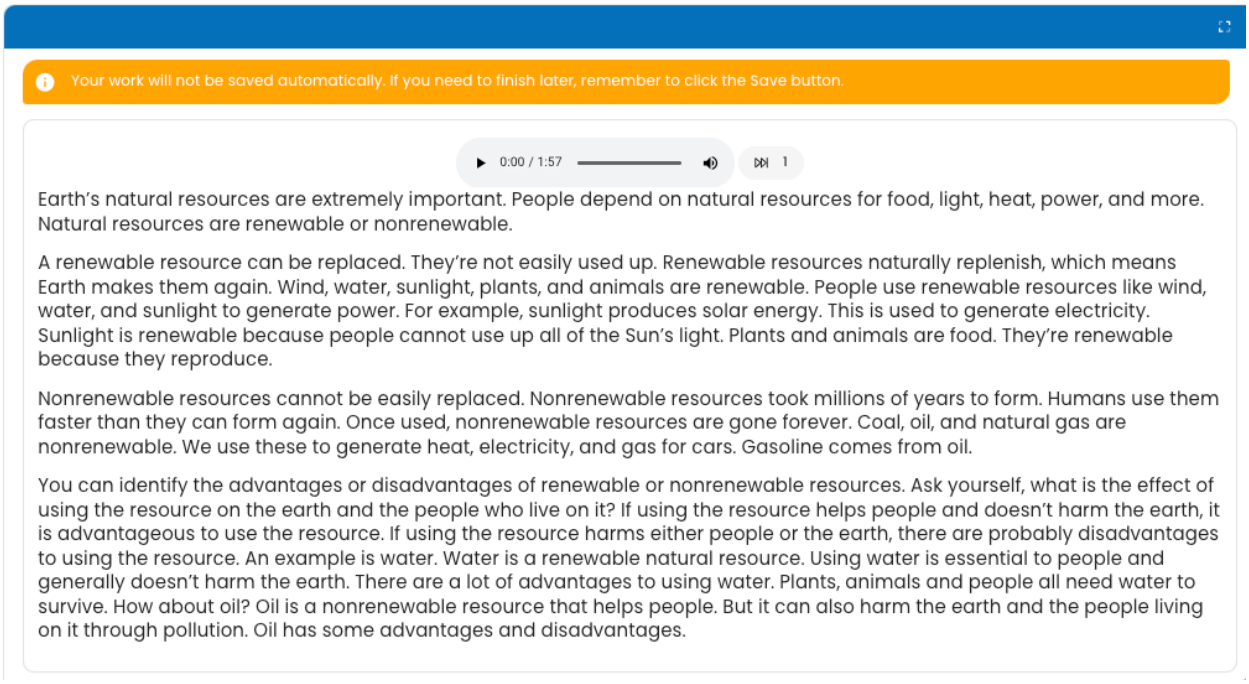
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of natural resources has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 13, week 22, TEKS Explained- Standard 10C
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2036/week/17456/articles/96699

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

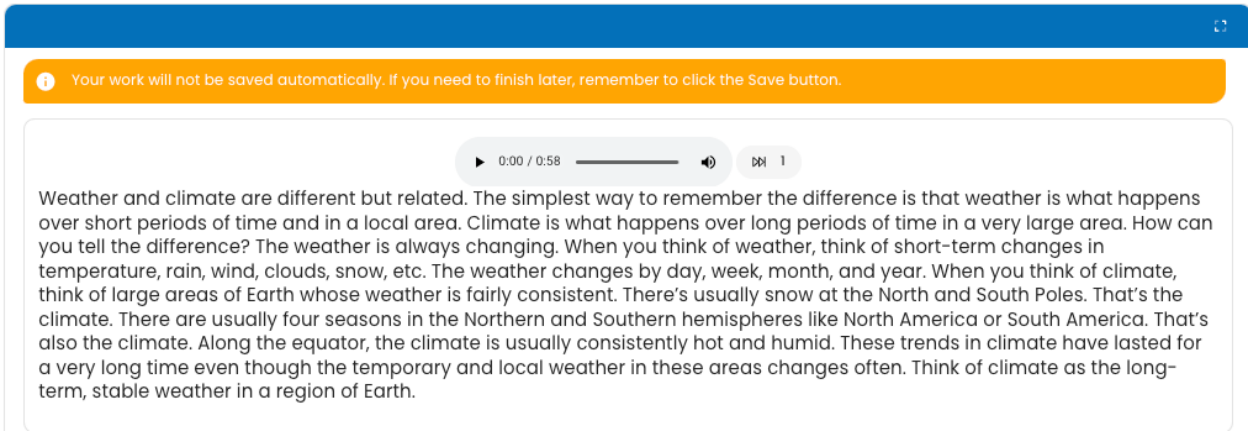
An image is missing from the resource.

Publisher's description of this change if different from overall description.

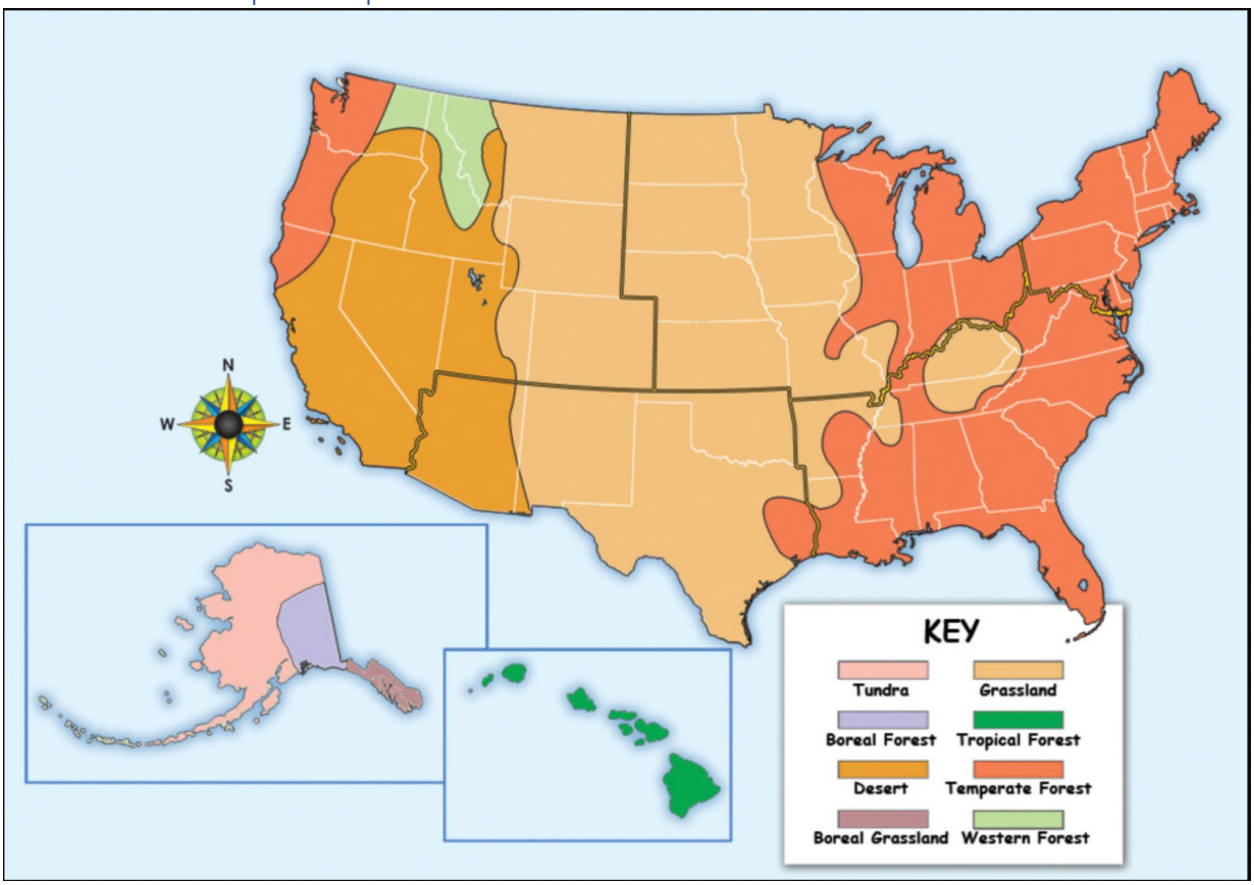
An image of biomes has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 12, week 20/21 , TEKS Explained- Standard 10B

Update to Content Not Reviewed by SRP

https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2051/week/17480/articles/96848

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

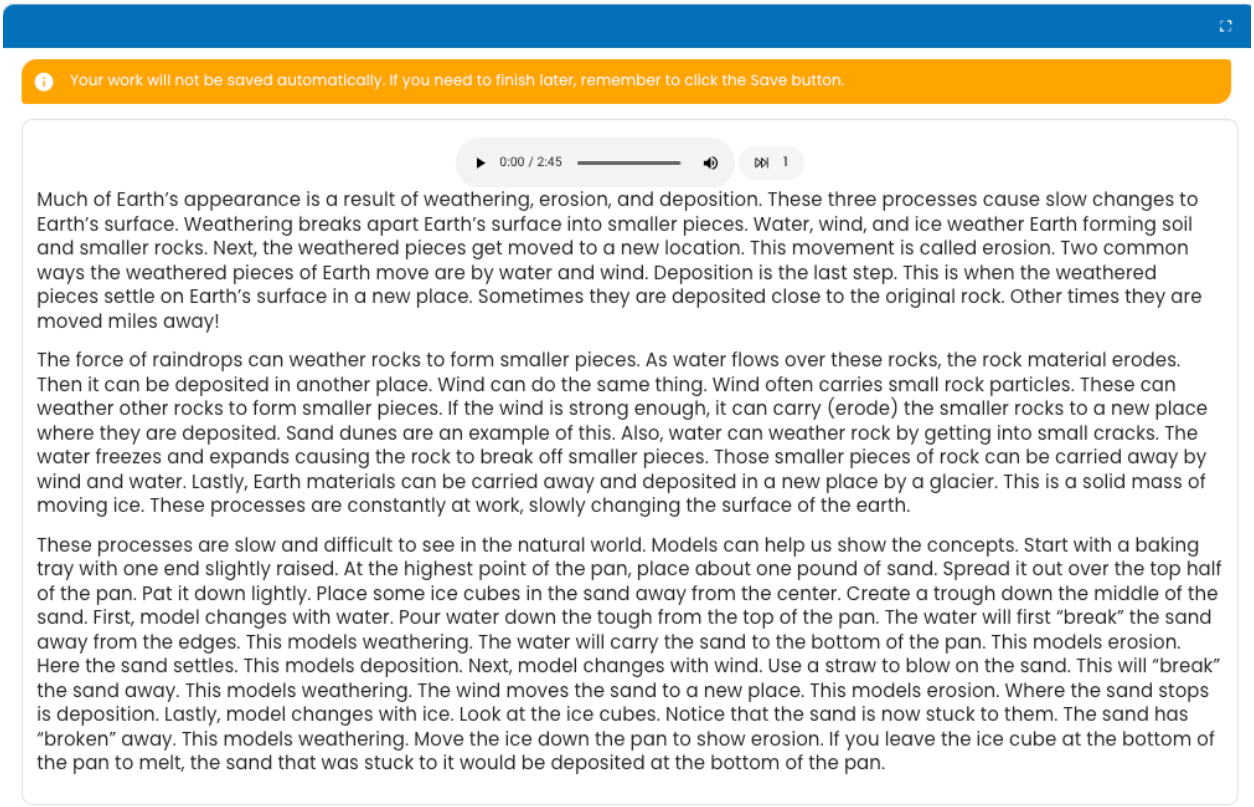
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of weathering has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 11, week 18/19 , TEKS Explained- Standard 10A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2038/week/17459/articles/96719

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

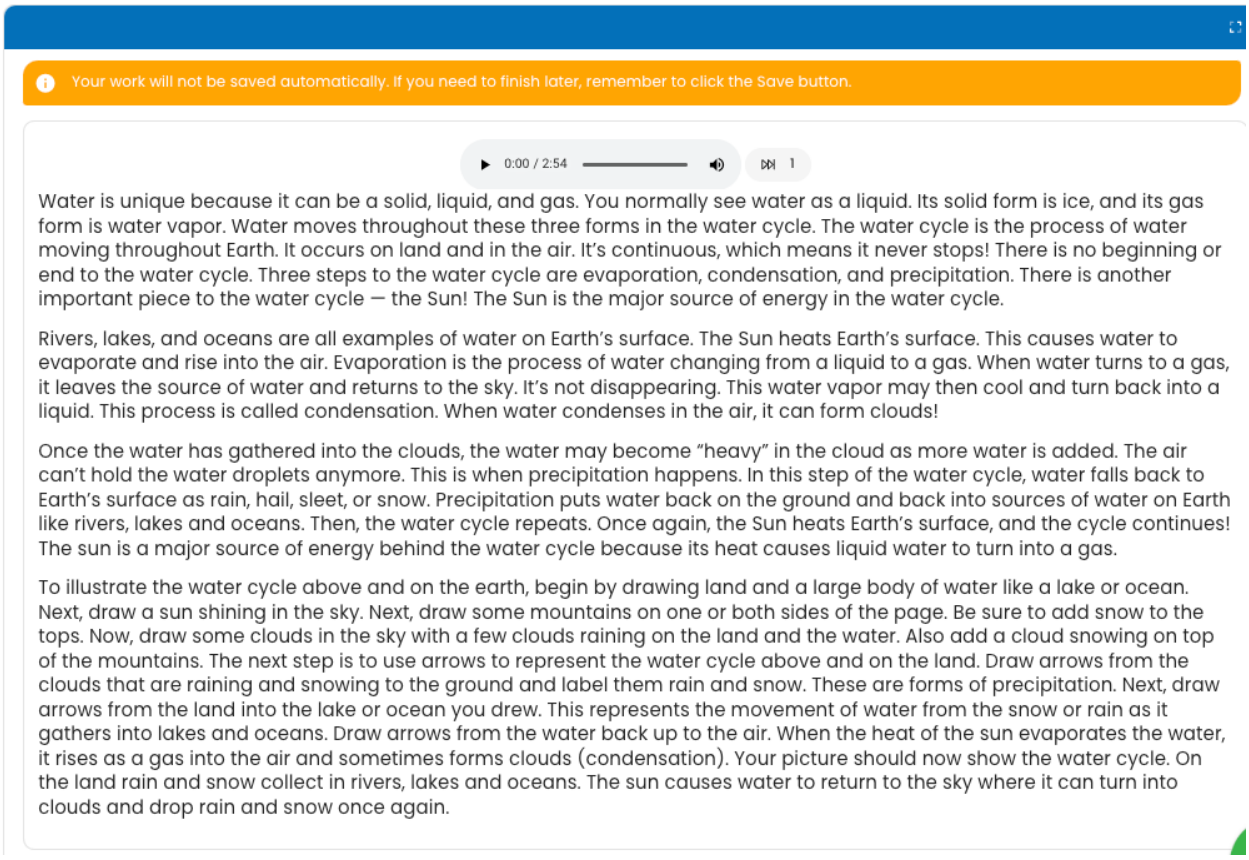
An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of water has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 10, week 17 , TEKS Explained- Standard 9B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2047/week/17473/articles/96805

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

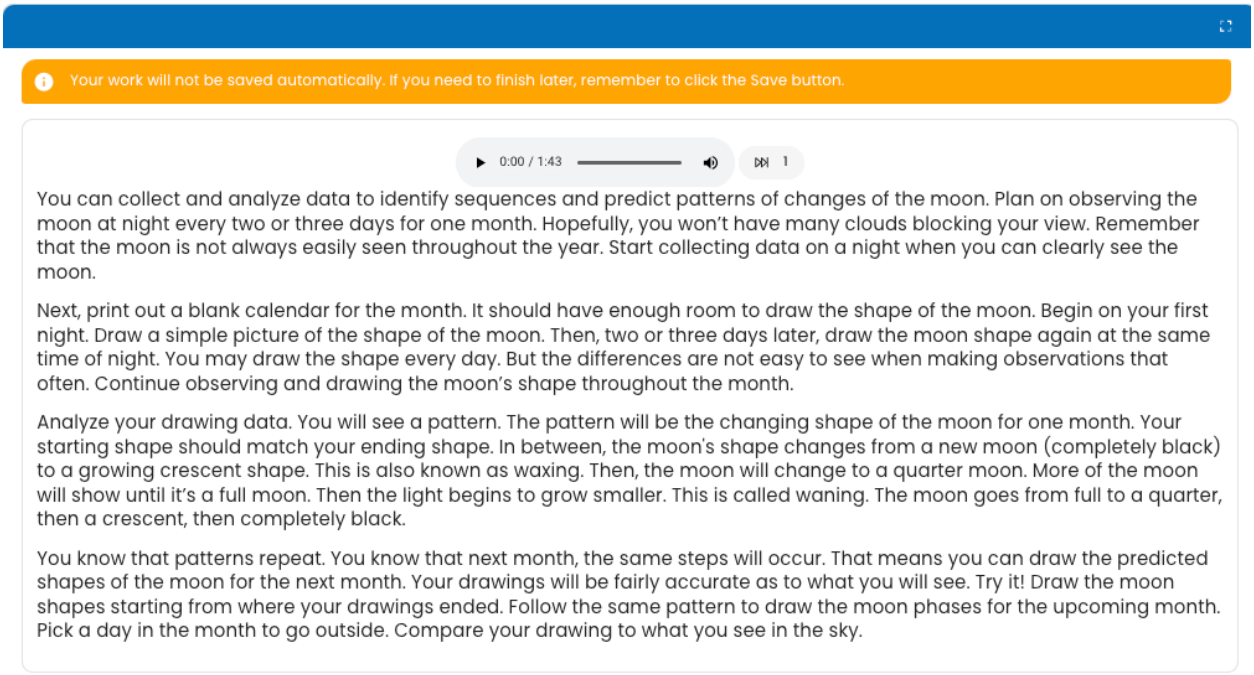
An image is missing from the resource.

Publisher's description of this change if different from overall description.

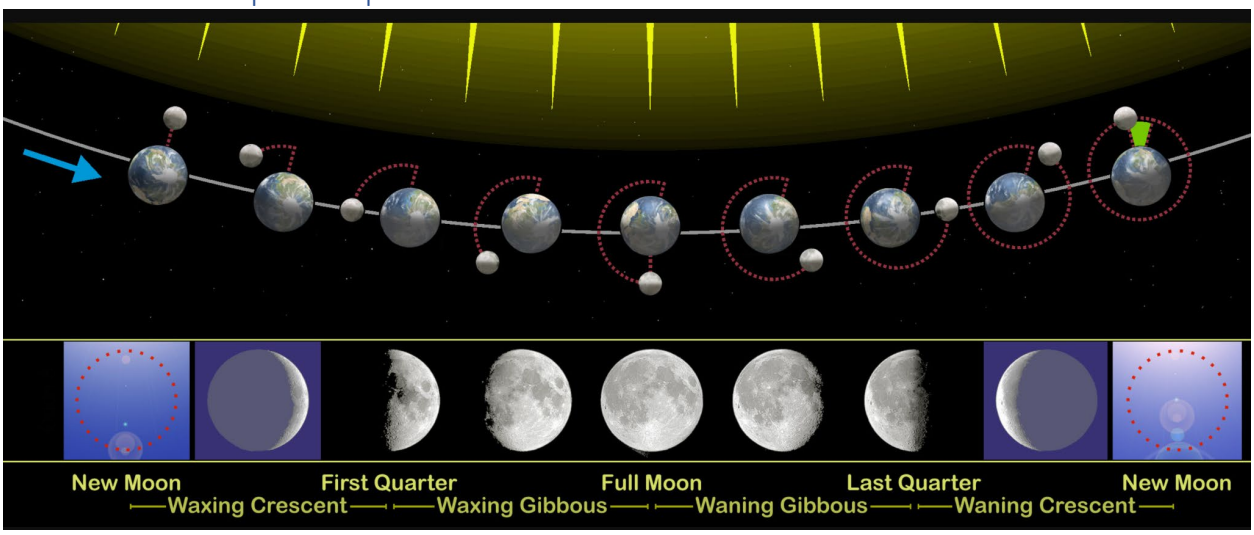
An image of moon phases has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 9, week 16 , TEKS Explained- Standard 9A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2043/week/17465/articles/96759

Description of the specific location and hyperlink to the exact location of the proposed updated

content.
Same as above.

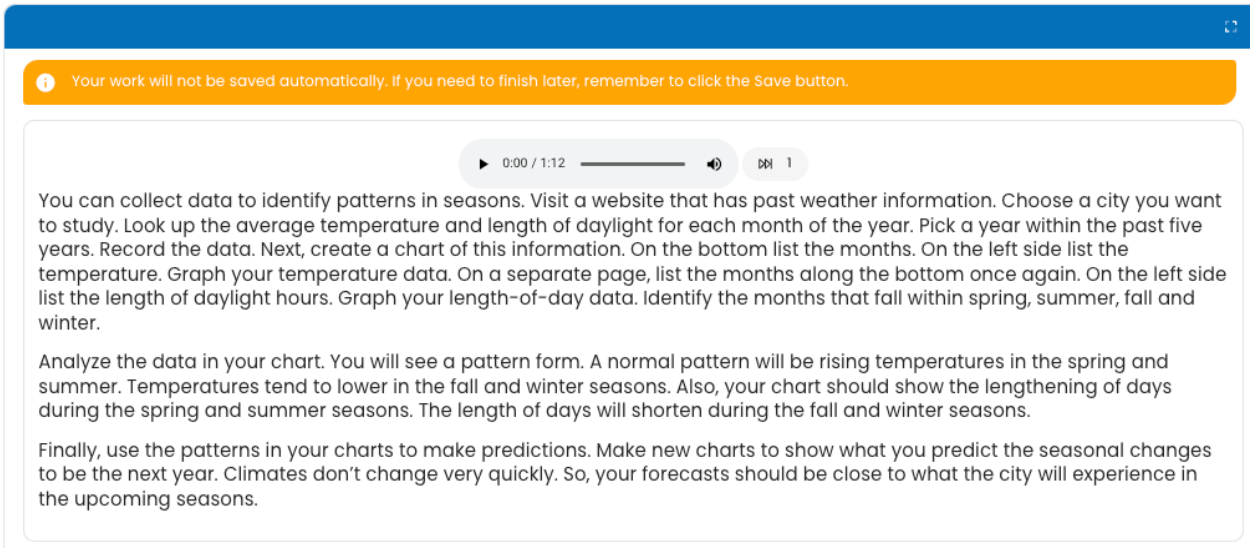
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of seasons has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 8, week 15 , TEKS Explained- Standard 8C
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2041/week/17463/articles/96745

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

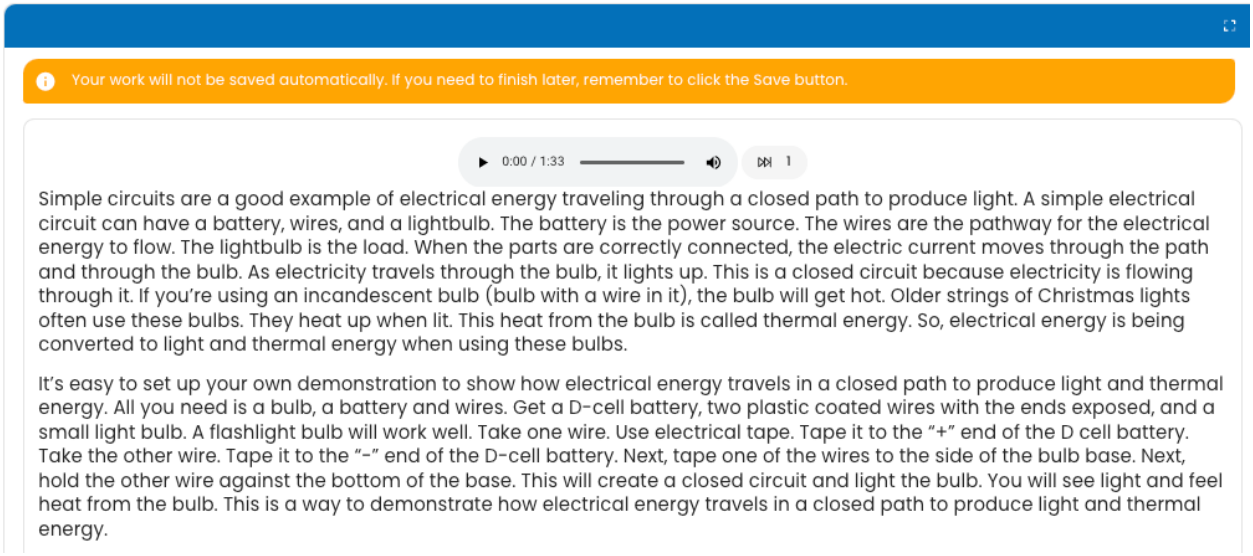
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a circuit box has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 4, week 8, TEKS Explained- Standard 6C
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2035/week/17455/articles/96692

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

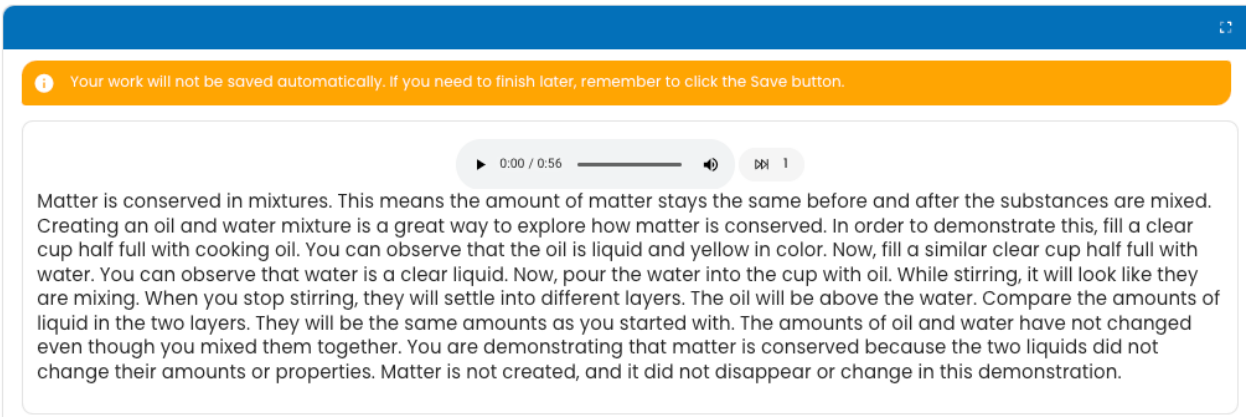
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

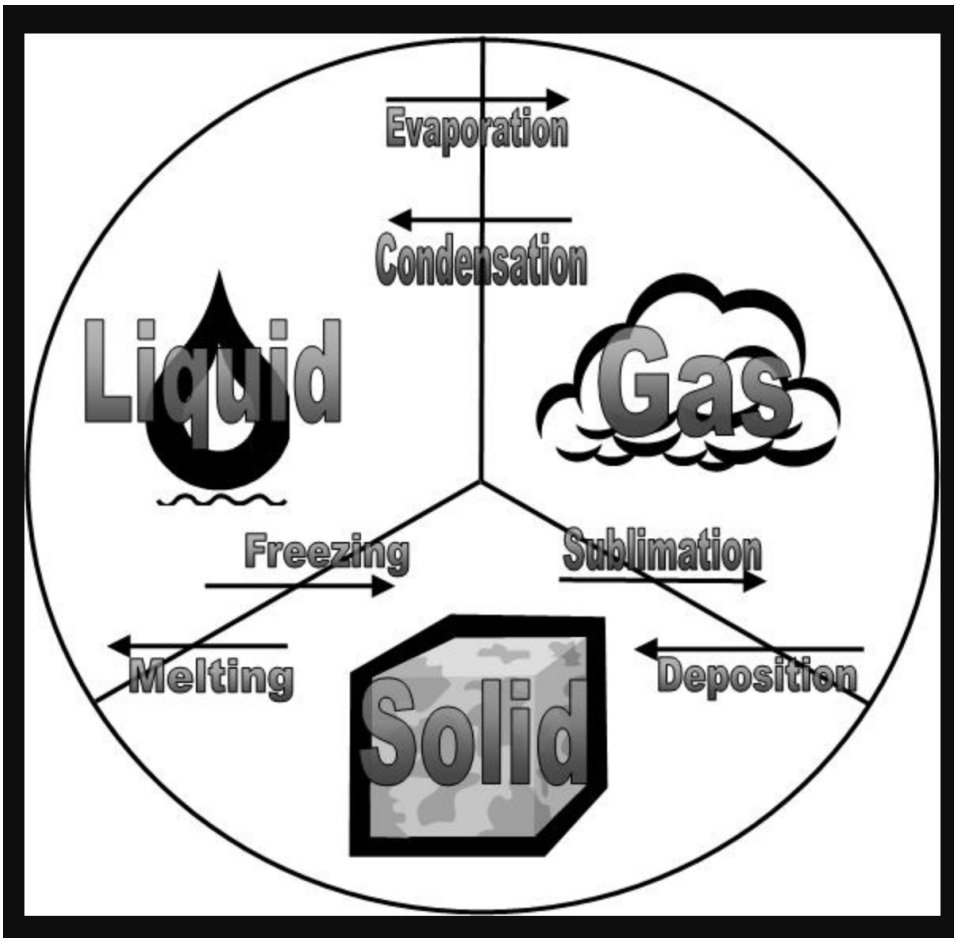
Publisher's description of this change if different from overall description.

An image of states of matter has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 2, week 6, TEKS Explained- Standard 6A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2033/week/17453/articles/96677

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

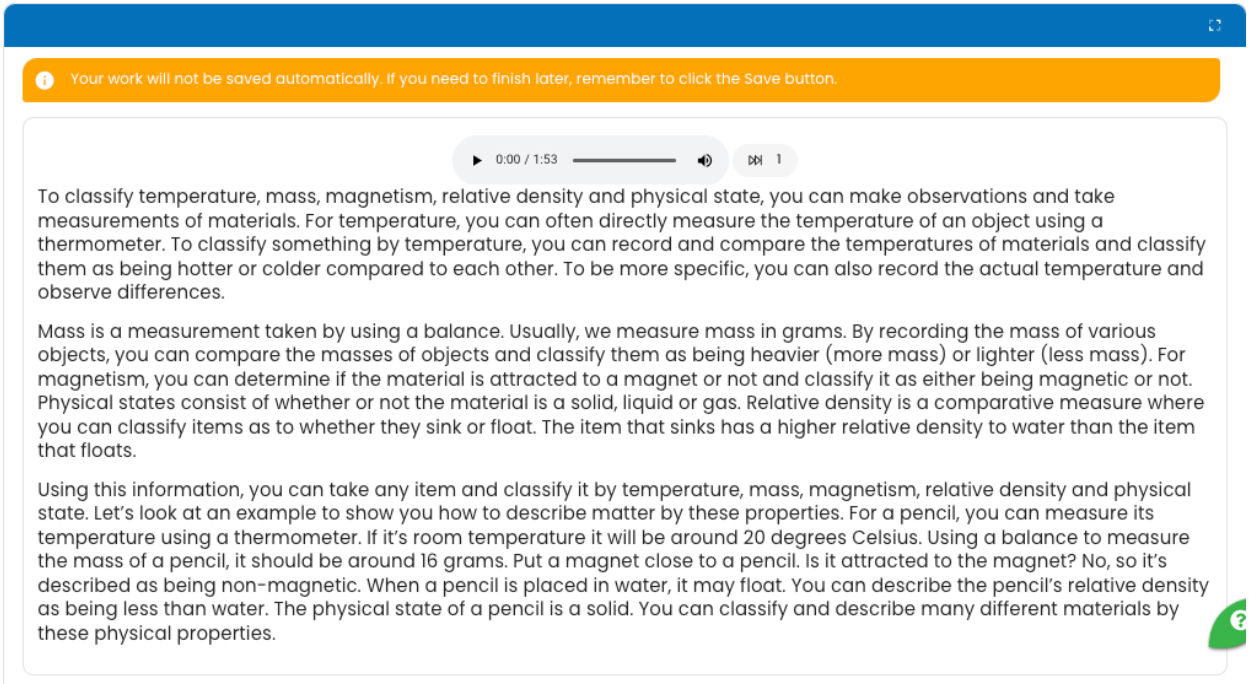
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of states of matter has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 3, week 7, TEKS Explained- Standard 6B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2034/week/17454/articles/96685

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

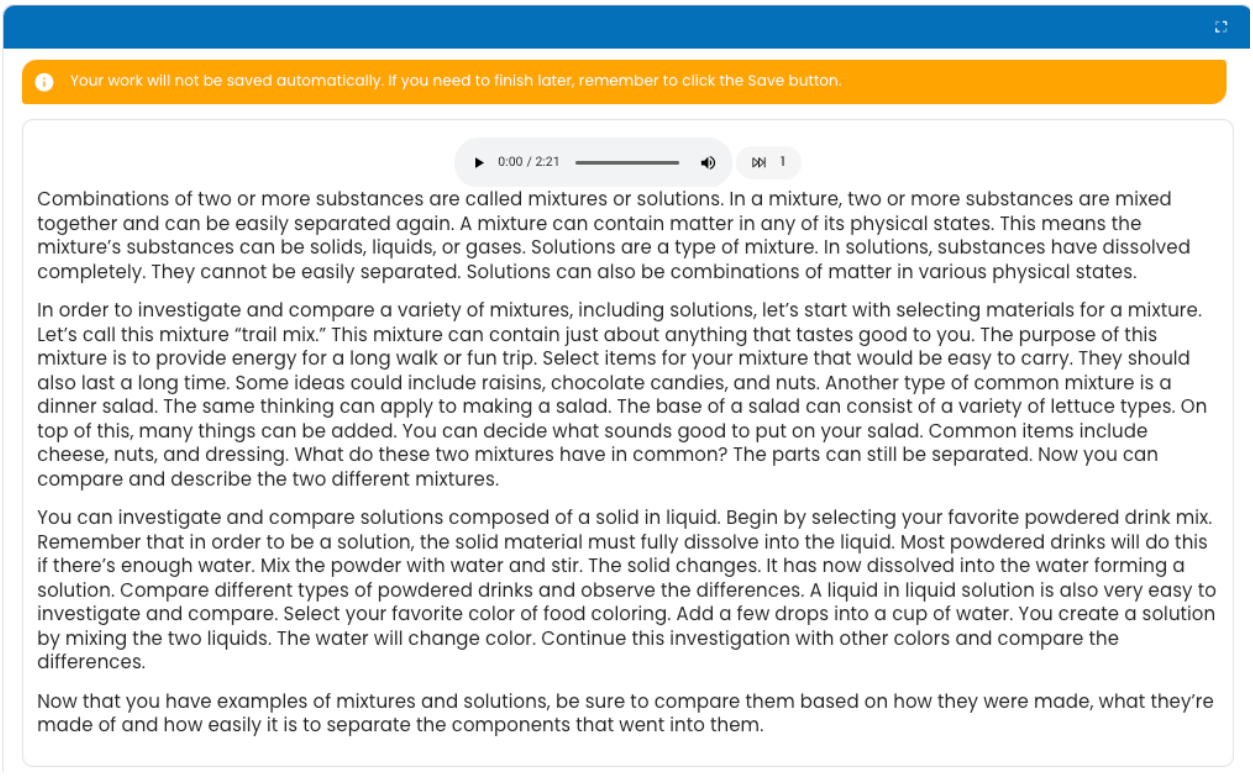
An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a mixture has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 5, week 10, TEKS Explained- Standard 7
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2032/week/17451/articles/96665

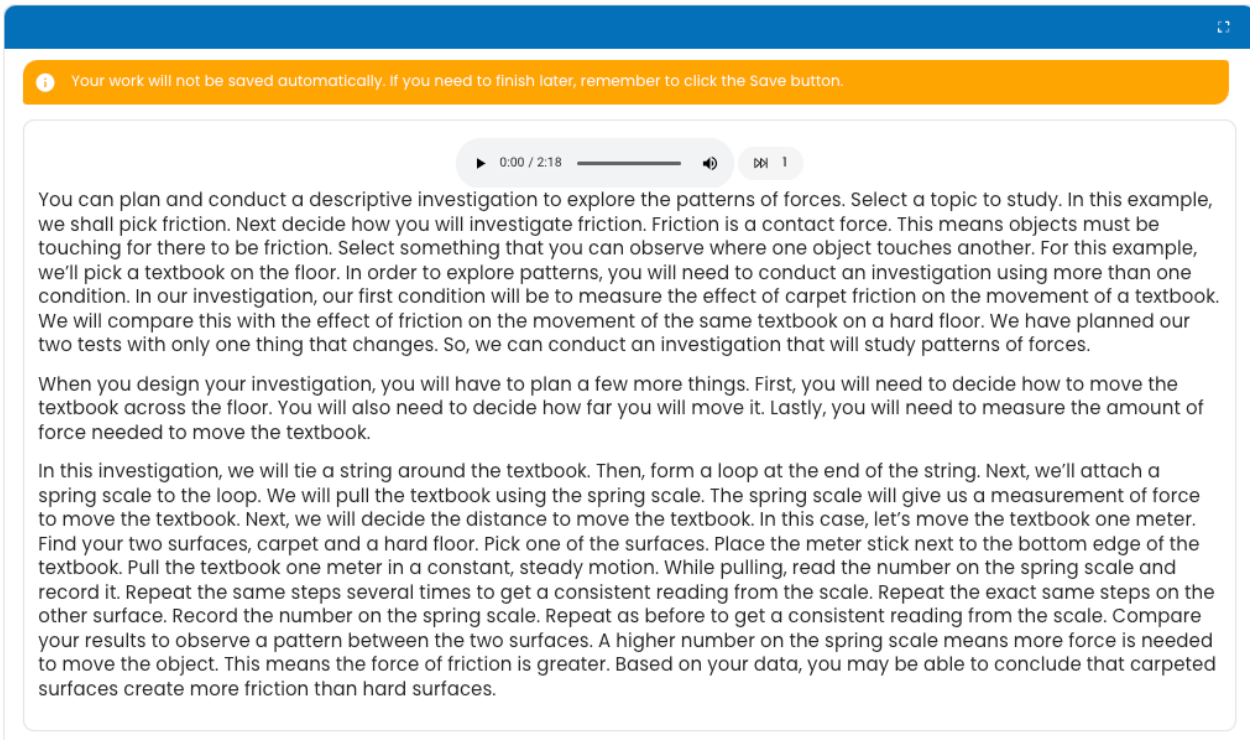
Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

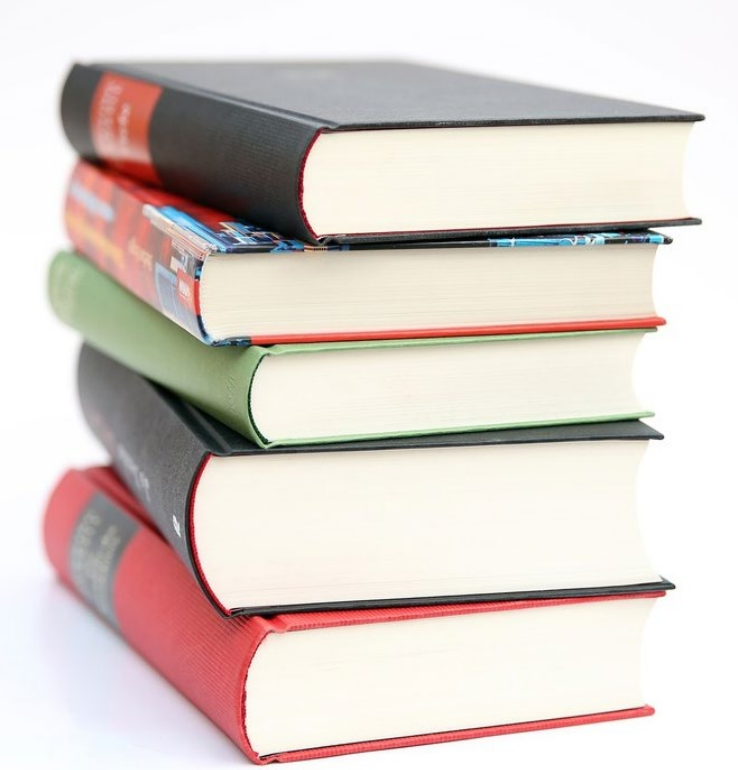
Publisher's rationale for this change if different from overall rationale.
An image is missing from the resource.

Publisher's description of this change if different from overall description.
An image of books has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 6, week 12, TEKS Explained- Standard 8A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2049/week/17476/articles/96824

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An illustration of dropping a marble into water has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content

Your work will not be saved automatically. If you need to finish later, remember to click the Save button.

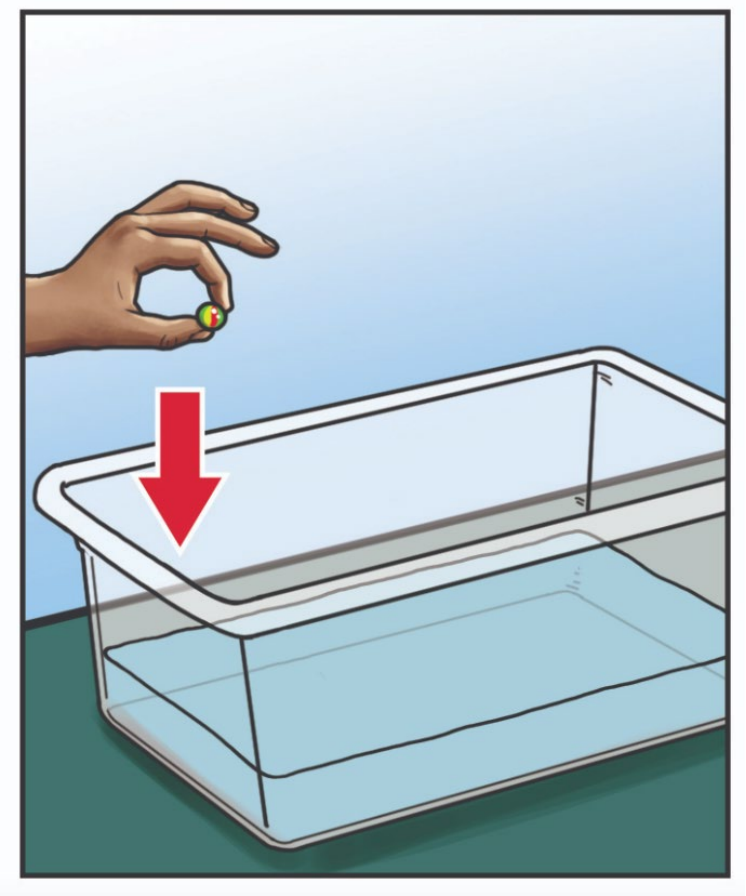
0:00 / 1:48 1

You can investigate the transfer of energy by objects in motion, by sound, and by waves in the water. All you need are two marbles, a metal pan, and a bowl of water. First, study the transfer of energy between objects in motion. Place one marble on a flat surface. Flick the other marble so that it hits the still marble. The transfer of energy happens when the marble in motion hits the still marble. This causes it to move. The movement of the still marble is evidence of the transfer of energy. Measure the distance the still marble travels after being hit. A greater distance means the moving marble applied a greater force.

Next, study the transfer of energy by sound. Flick a marble towards a wall, a board, a metal pan or some other stilly object that won't move. A metal pan works best. When the marble hits the object, you can hear a sound. The marble in motion has energy. When the moving marble hits the pan, that energy is transferred. That sound you hear is evidence of the energy being transferred from the moving object to the still object. When it hits, sound waves form. These are another form of energy. You can measure the force of the hit by listening to how loud the sound is. A louder sound means more energy.

Now, study the transfer of energy by waves. Drop a marble into a bowl of water. It will cause a splash. It will also make waves. You can see the waves travel outward from the marble. Those waves are energy. Where did that energy come from? The falling marble has energy. This energy gets transferred to the water which causes the waves to form. The making of waves is the evidence of the energy transferring from the falling marble to the water. The faster it falls, the more energy is transferred. You will see larger waves as you drop the marble from taller heights into the water.

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 7, week 14, TEKS Explained- Standard 8B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2050/week/17478/articles/96836

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

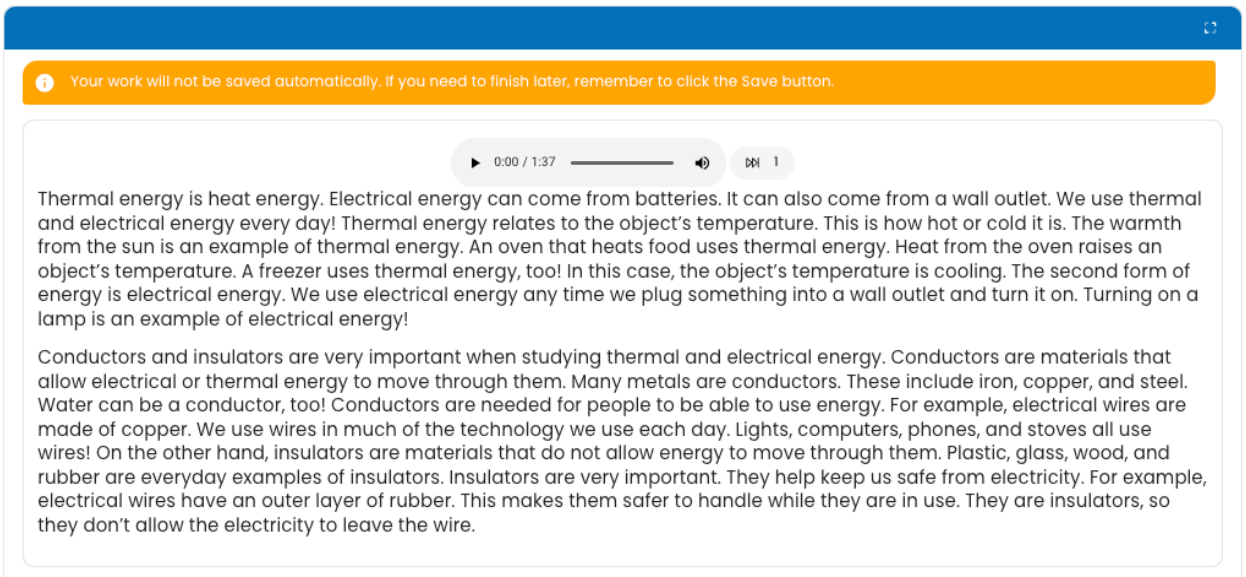
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

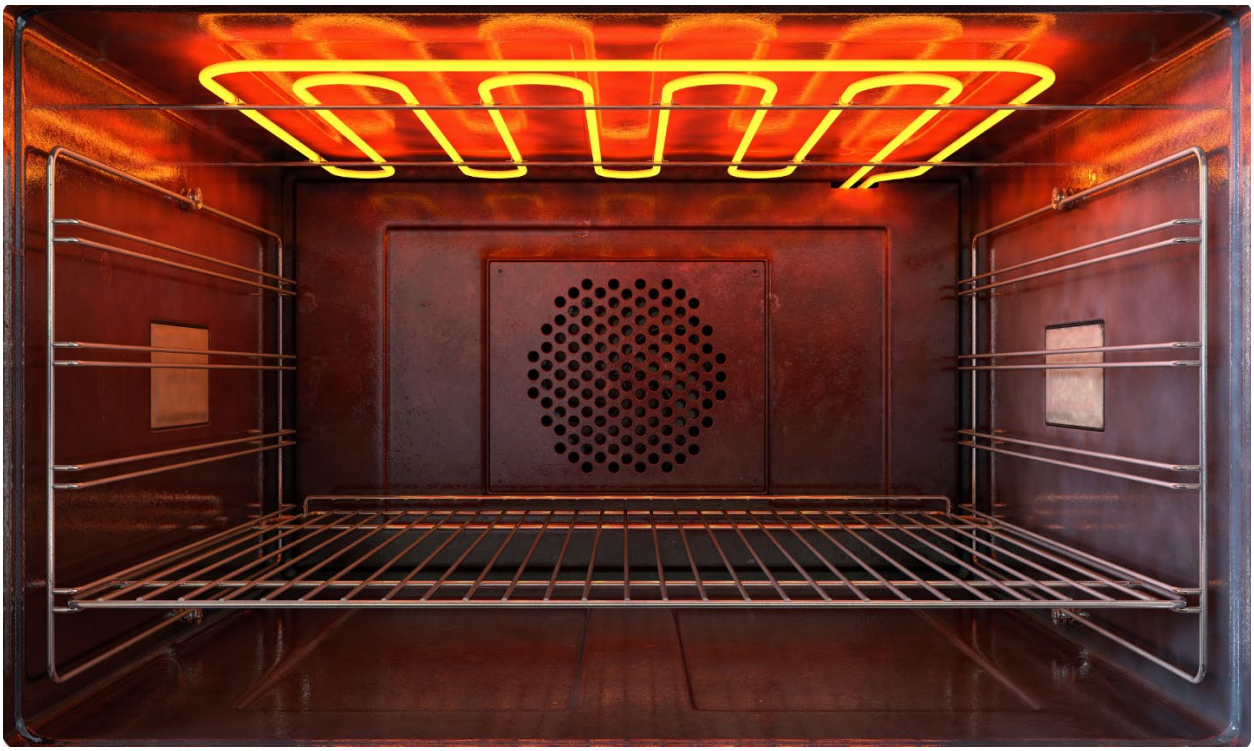
Publisher's description of this change if different from overall description.

An image of an oven has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 17, week 28, TEKS Explained- Standard 12A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2044/week/17467/articles/96771

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

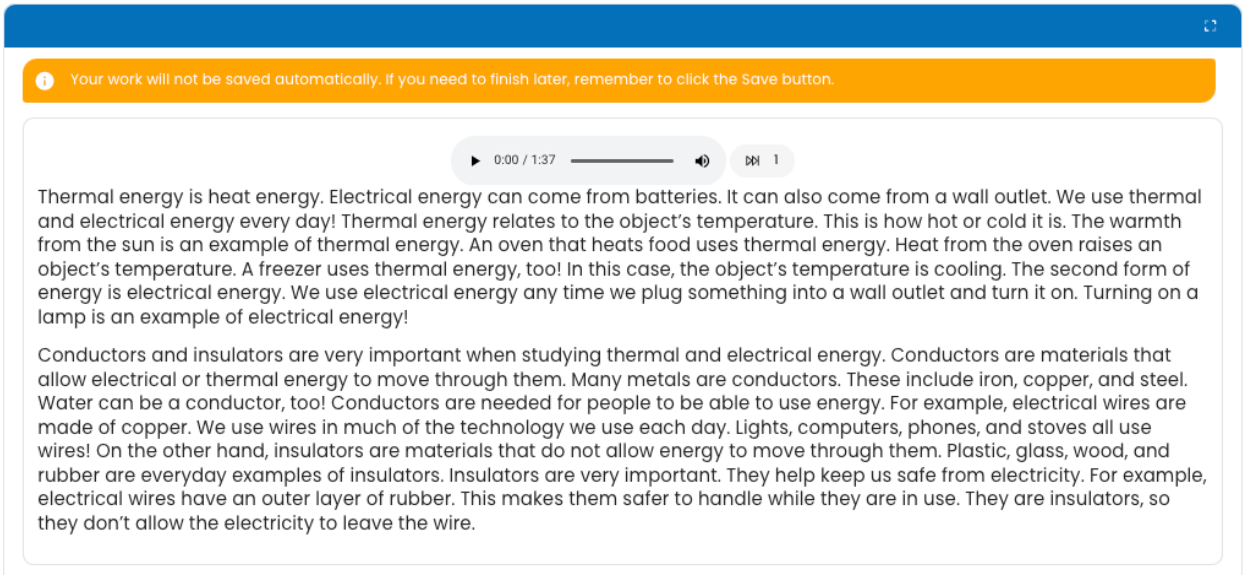
An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a raspberry plant has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 7, week 14, TEKS Explained- Standard 8B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2050/week/17478/articles/96836

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

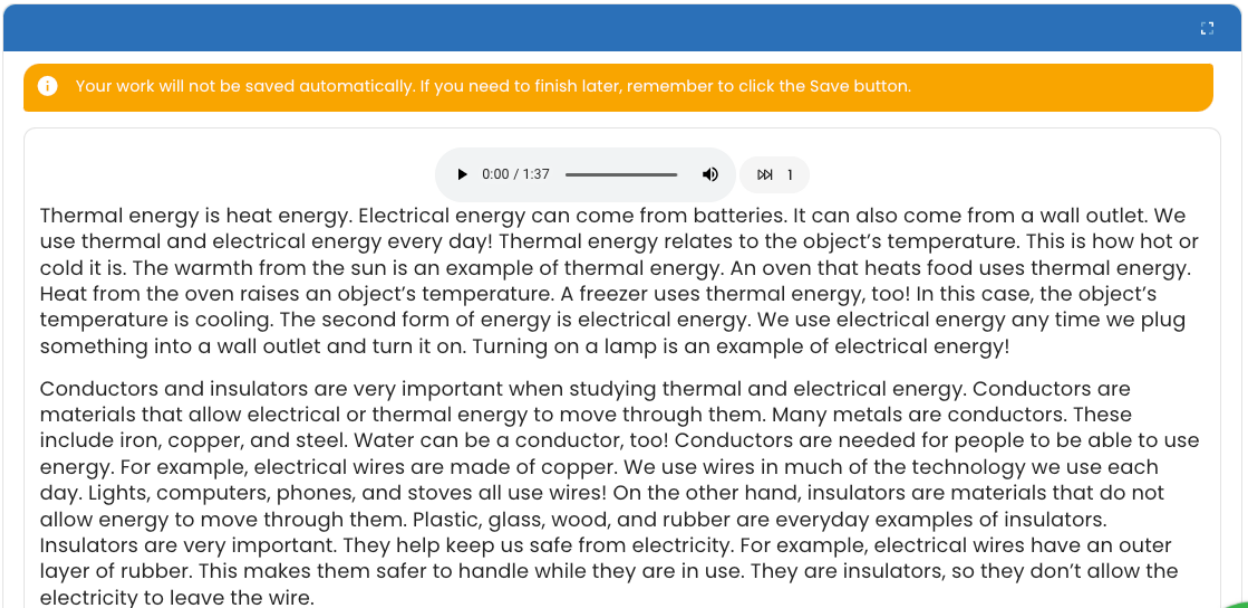
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a power plant has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 6, week 12, TEKS Explained- Standard 8A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2049/week/17476/articles/96824

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of marbles has been added to improve student comprehension.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content

Your work will not be saved automatically. If you need to finish later, remember to click the Save button.

0:00 / 1:48 1

You can investigate the transfer of energy by objects in motion, by sound, and by waves in the water. All you need are two marbles, a metal pan, and a bowl of water. First, study the transfer of energy between objects in motion. Place one marble on a flat surface. Flick the other marble so that it hits the still marble. The transfer of energy happens when the marble in motion hits the still marble. This causes it to move. The movement of the still marble is evidence of the transfer of energy. Measure the distance the still marble travels after being hit. A greater distance means the moving marble applied a greater force.

Next, study the transfer of energy by sound. Flick a marble towards a wall, a board, a metal pan or some other stilly object that won't move. A metal pan works best. When the marble hits the object, you can hear a sound. The marble in motion has energy. When the moving marble hits the pan, that energy is transferred. That sound you hear is evidence of the energy being transferred from the moving object to the still object. When it hits, sound waves form. These are another form of energy. You can measure the force of the hit by listening to how loud the sound is. A louder sound means more energy.

Now, study the transfer of energy by waves. Drop a marble into a bowl of water. It will cause a splash. It will also make waves. You can see the waves travel outward from the marble. Those waves are energy. Where did that energy come from? The falling marble has energy. This energy gets transferred to the water which causes the waves to form. The making of waves is the evidence of the energy transferring from the falling marble to the water. The faster it falls, the more energy is transferred. You will see larger waves as you drop the marble from taller heights into the water.

Screenshot of Proposed Updated Content

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 5, week 10, TEKS Explained- Standard 7
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2032/week/17451/articles/96665

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

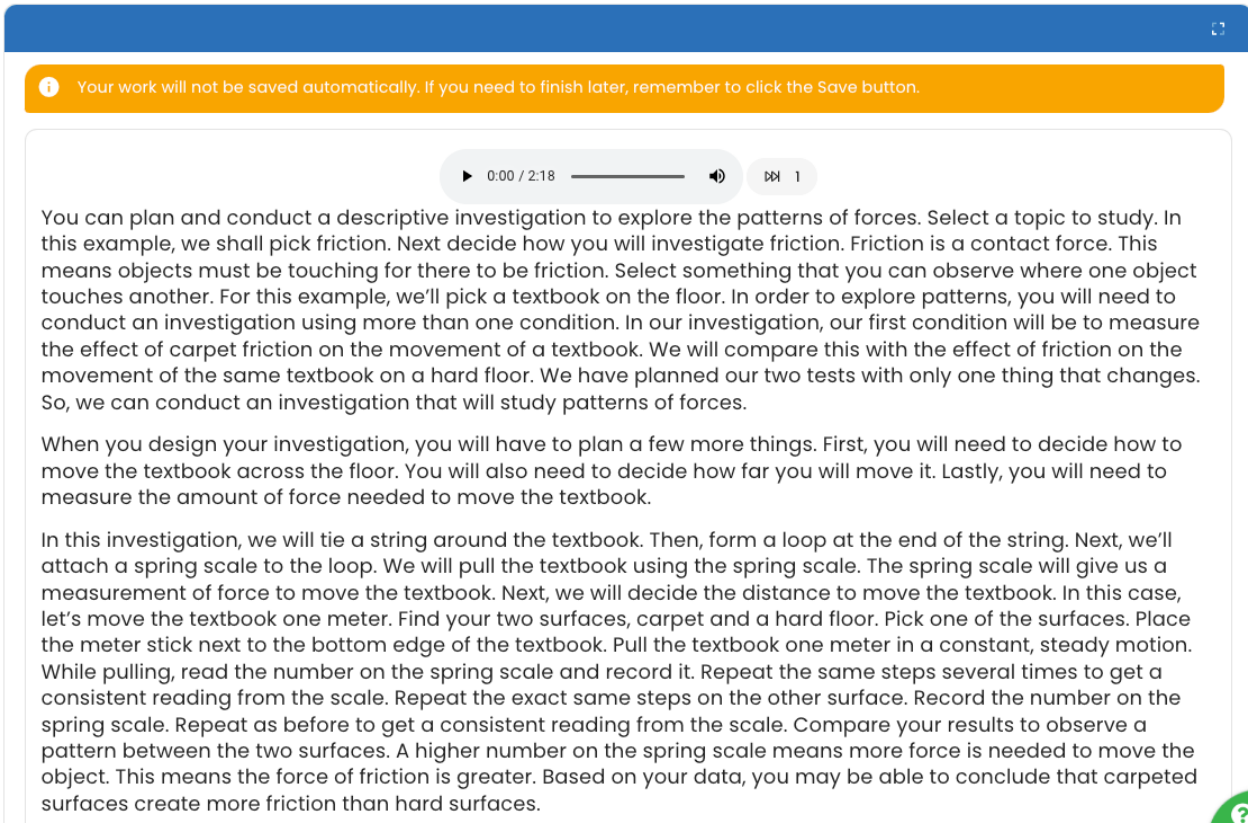
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of rug has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Update to Content Not Reviewed by SRP

Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 2, week 6, TEKS Explained- Standard 6a
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2033/week/17453/articles/96677

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

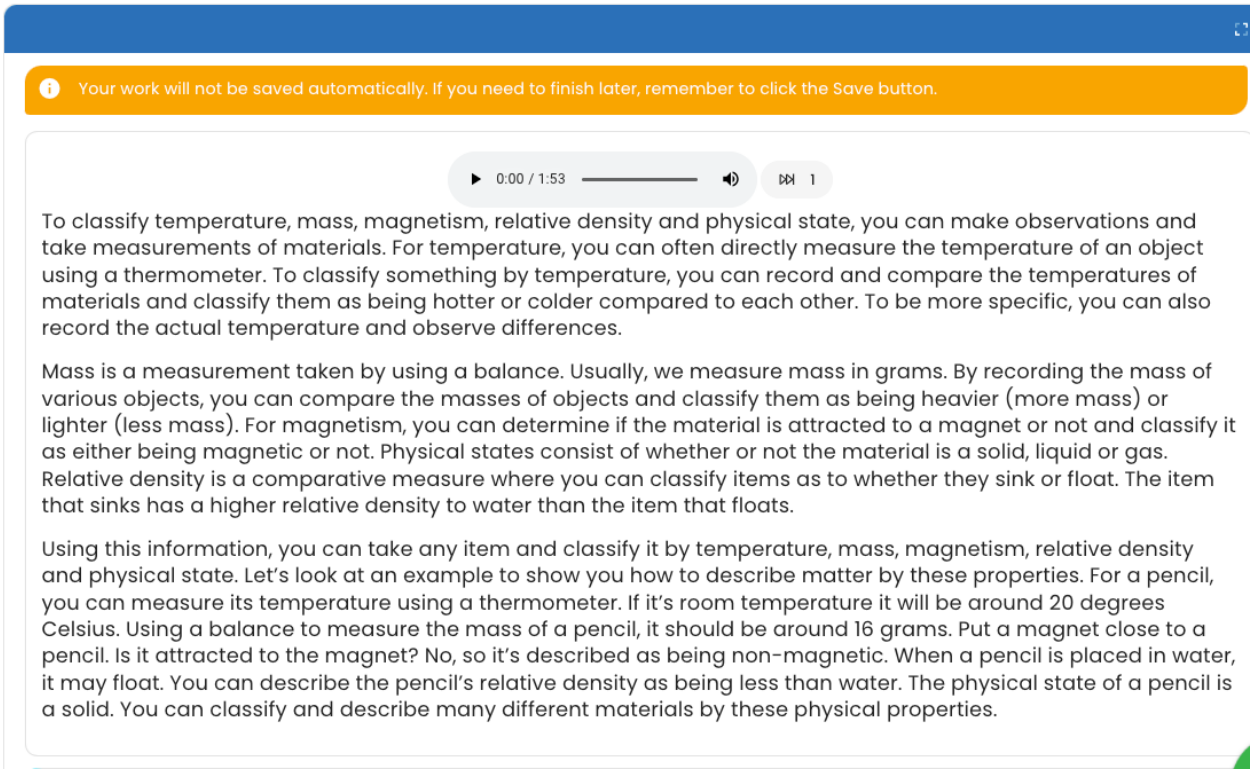
An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a thermometer has been added to improve student comprehension.

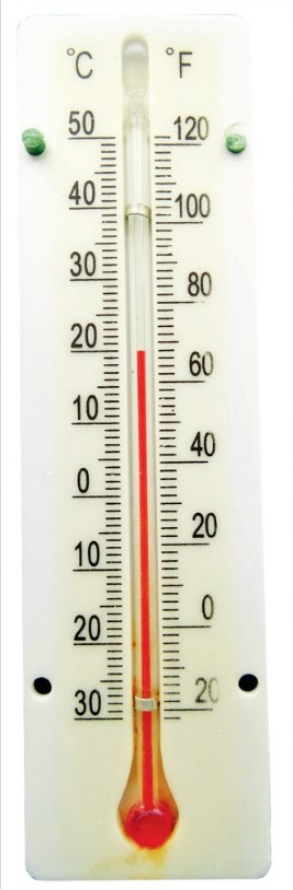
Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content



Update to Content Not Reviewed by SRP

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 13, week 22, Explore More
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2036/week/17456/articles/96697

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

A video is missing.

Publisher's description of this change if different from overall description.

Adding the video, How Can I Be A Critical Reader, to the Explore More resources to support the Wellness optional extension activity.

Update to Content Not Reviewed by SRP

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content
This is a video resource, the link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/pod_media/POD_S0A_MIS_AA_HowCanIBeaCriticalReader_WK0A_ENG_11302016_360p.mp4?a5387

Description of the specific location and hyperlink to the exact location of the currently adopted content.
NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 11, week 18, Activity 3, Explore More
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2038/week/17458/articles/96711

Publisher's rationale for this change if different from overall rationale.
A video is missing.

Publisher's description of this change if different from overall description.
Adding the video, Water in a Glass, Content Video, to the Explore More resources to support Activity 3.

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content
This is a video resource, the link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/pod_media/SCI_EX04_UN11_WaterInAGlass-Content-TX_FIX-360p.mp4

Description of the specific location and hyperlink to the exact location of the currently adopted content.
NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 10, week 17, Activity 4, Explore More
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2047/week/17473/articles/96803

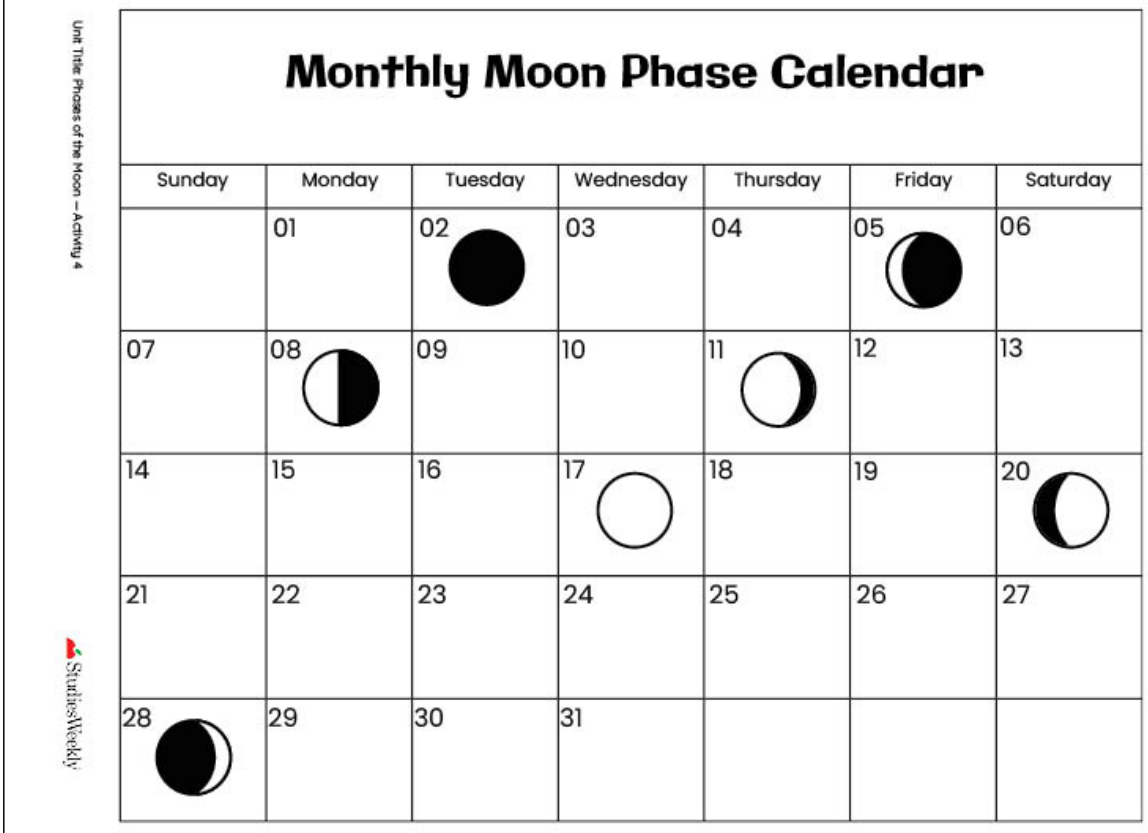
Update to Content Not Reviewed by SRP

Publisher's rationale for this change if different from overall rationale.
An image is missing.

Publisher's description of this change if different from overall description.
Adding an image of a monthly moon phase calendar to support the lesson in Activity 4.

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.
NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 10, week 17, Activity 3, Explore More

https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2047/week/17473/articles/96802

Publisher's rationale for this change if different from overall rationale.

An image is missing.

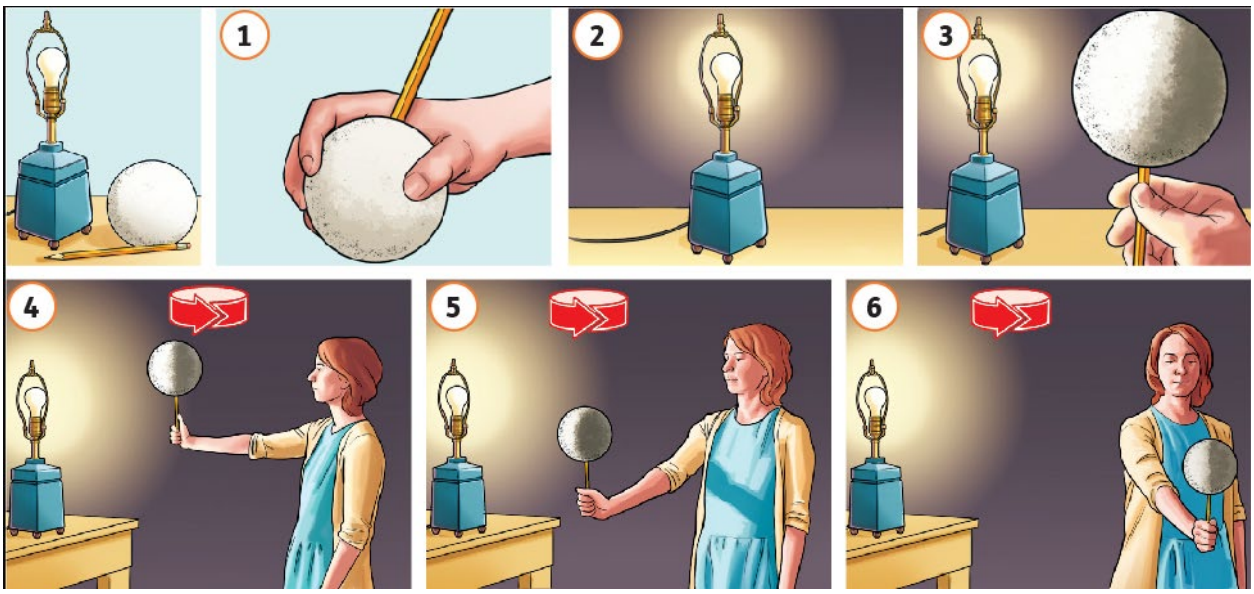
Publisher's description of this change if different from overall description.

Adding an image to support the lesson in Activity 3.

Screenshot of Currently Adopted Content

NA

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.

This resource will be found online, Unit 1, week 3, Activity 1, Explore More
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2031/week/17448/articles/96644

Publisher's rationale for this change if different from overall rationale.

An image is missing.

Update to Content Not Reviewed by SRP

Publisher's description of this change if different from overall description.
Adding an image to support the lesson in Activity 1.

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.
Fossil image in Explore More, Unit 19, Week 30, Activity 4.
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2048/week/17474/articles/96810

Description of the specific location and hyperlink to the exact location of the proposed updated content.
same as above

Publisher's rationale for this change if different from overall rationale.
The existing image needs to be replaced.

Publisher's description of this change if different from overall description.
Replacing the existing image with a combined image to better support the lesson.

Screenshot of Currently Adopted Content

Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 3, week 7, TEKS Explained- Standard 6B
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2034/week/17454/articles/96685

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

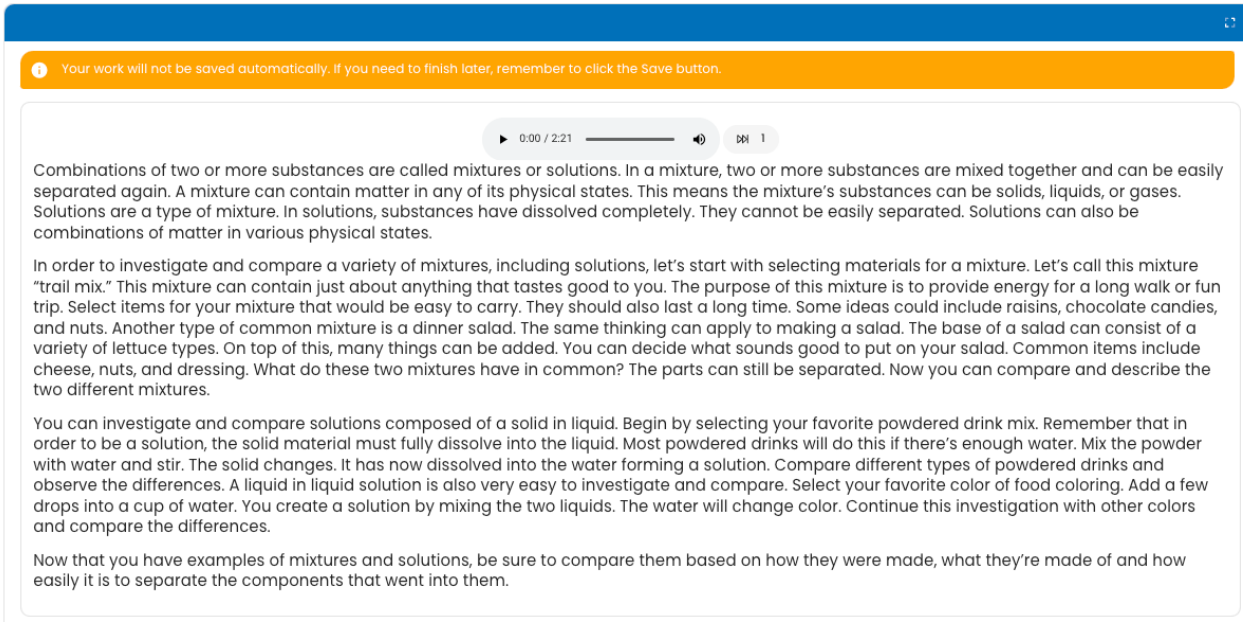
Publisher's rationale for this change if different from overall rationale.

An image is missing from the resource.

Publisher's description of this change if different from overall description.

An image of a solution has been added to improve student comprehension.

Screenshot of Currently Adopted Content



Screenshot of Proposed Updated Content

Description of the specific location and hyperlink to the exact location of the currently adopted content.
NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, in Activity 3 under Explore More
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/units/2038/week/17458/articles/96711

Publisher's rationale for this change if different from overall rationale.
A video is missing.

Publisher's description of this change if different from overall description.
Adding the video, Water in a Glass, Content Video, to the Explore More resources to support Activity 3.

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content
This is a video resource, the link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/pod_media/SCI_EX04_UN11_WaterInAGlass-Content-

Update to Content Not Reviewed by SRP

TX_FIX-360p.mp4

Signature: By entering your name below, you are signing this document electronically. You agree that your electronic signature is the equivalent of your manual signature.

X Clayton Chamberlain

Date Submitted: March 11, 2024

Update to Content Not Reviewed by SRP

Request to Update Content Not Reviewed and Approved by the State Review Panel
Proposed changes shall be made available for public review on Texas Education Agency's website for a minimum of seven calendar days prior to approval.

Proclamation Year: 2024
Publisher: Studies Weekly, Inc.
Subject Area/Course: Science, 4th Grade

Adopted Program Information

Title: Texas Science Studies Weekly: 4th Grade
ISBN: 9781649783837-MP1

Enter the identical Program Title of your identical product that will contain the identical updates.
Identical Program Title: N/A
Identical Program ISBN: N/A

Adopted Component Information

Title: Texas Science Studies Weekly: 4th Grade Teacher Edition
ISBN: 9781649783820-TE1

Enter the identical Program Title of your identical product that will contain the identical updates.
Identical Program Title: N/A
Identical Program ISBN: N/A

Publisher's overall rationale for this update

The rationale for the updates fall into three categories, new materials to improve the curriculum, corrections to materials that are not TEKS-bearing, and the addition of missing materials referenced in the curriculum that are also not TEKS-bearing.

Publisher's overall description of the change

The items that are included in this request for update to content not reviewed by the SRP include:

1. New materials
    a. Topic Information Background Podcasts transcript PDF
    b. Summary Videos
    c. Printable materials
2. Corrections to materials
    a. Updated Teacher Editions
    b. Various activity instruction pages
3. Addition of missing materials

Update to Content Not Reviewed by SRP

Access Information

Enter access information below to the adopted version of the instructional materials and the proposed new content.

Enter access information below to the adopted version of the instructional materials and the proposed new content.

Currently Adopted Content URL: online.studiesweekly.com/login
Currently Adopted Content Username: TXSNadoption
Currently Adopted Content Password: Demo2023

Proposed Updated Content URL: Direct links to the resources are provided below.
Proposed Updated Content Username: none required
Proposed Updated Content Password: only required for assessment documents, SWteacher!

Update to Content Not Reviewed by SRP

Update comparison:

Each change in the component on this form should be documented in the update comparison below. You must submit a separate request form for **each component**, not each change. (Note: Repeat this section as often as needed by copying and pasting the entire area from the divided line above the **Description of the specific location and hyperlinking to the exact location of the currently adopted content** to the dividing line below the *Screenshot of Proposed New Content*.)

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource is found online in Unit 1, Week 2, Activity 5 Teacher Resources. It is found with the activity level printables.

https://cdn.studiesweekly.com/online/resources/printables/9146/Scale,%20Proportion,%20and%20Quantity%20Worksheet.pdf

Description of the specific location and hyperlink to the exact location of the proposed updated content.

Same as above.

Publisher's rationale for this change if different from overall rationale.

The printable needed an updated image to better demonstrate the concept of scale, proportion, and quantity.

Publisher's description of this change if different from overall description.

The image of the Mojave Desert is replaced with an image of Arches National Park.

Screenshot of Currently Adopted Content

Name: **Date:**

Scale, Proportion, and Quantity

Look at this phenomenon through the lens of scale, proportion, and quantity to answer the following questions.

Image courtesy of Dana Hutchinson.

What questions about quantity or proportion could you ask about this phenomenon?

_____

_____

_____

_____

_____

How could the answers to these questions help guide your investigations?

_____

_____

_____

_____

_____

StudiesWeekly

Name: Date:

Scale, Proportion, and Quantity Answer Key

Look at this phenomenon through the lens of scale, proportion, and quantity to answer the following questions.

What questions about quantity or proportion could you ask about this phenomenon?

Answers will vary. Example: Why do the areas have different temperatures? How big is one area compared to the other? How does this temperature affect the proportion of plant life in the area? How high is the elevation in each area? How much does it rain in each area? How does the temperature affect the amount of rain?

How could the answers to these questions help guide your investigations?

Answers will vary. Example: The answers could provide explanations, clues, or more items to guide research or investigations.

Image courtesy of Dana Hutchinson.

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Screenshot of Proposed Updated Content

Name: **Date:**

Scale, Proportion, and Quantity Worksheet

Look at this phenomenon through the lens of scale, proportion, and quantity to answer the following questions.

Images courtesy of Getty Images and Hogs555.

What questions about quantity or proportion could you ask about this phenomenon?

_____

_____

_____

_____

_____

How could the answers to these questions help guide your investigations?

_____

_____

_____

_____

_____

StudiesWeekly®

Name: Date:

Scale, Proportion, and Quantity Worksheet Answer Key

Look at this phenomenon through the lens of scale, proportion, and quantity to answer the following questions.

What questions about quantity or proportion could you ask about this phenomenon?

Answers will vary. Example: Why do the areas have different temperatures? How big is one area compared to the other? How does this temperature affect the proportion of plant life in the area? How high is the elevation in each area? How much does it rain in each area? How does the temperature affect the amount of rain?

How could the answers to these questions help guide your investigations?

Answers will vary. Example: The answers could provide explanations, clues, or more items to guide research or investigations.

Images courtesy of Getty Images and Hogs555.

StudiesWeekly

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

Online, Unit 12, Teacher Resources page, under Teacher Resources, “Erosion Station: Teacher Instruction Page”
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2051

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher’s rationale for this change if different from overall rationale.

The printable needed to be replaced due to some corrections.

Publisher’s description of this change if different from overall description.

The cup description was updated in the materials list.

Screenshot of Currently Adopted Content

TEXAS SCIENCE Teacher Instructions

Fourth Grade: Weathering, Erosion, and Deposition

Activity Duration	Activity Difficulty	Preparation Time	Preparation Effort
45 minutes	Low	Medium	Medium

Materials:

- ½ cup (2)
- aluminum bread loaf pans (8)
- chalk (6 pieces)
- digital scale (1)
- plastic cups, 8 oz (2)
- prepared bags of ice (2)
    - resealable plastic bags (2)
    - water (as needed)
- rulers (4)
- salt (3 c)
- sand (16 lb)
- small, clear containers with lids (2)
- sticky notes (6)
- string, 1-ft pieces (2)
- water (as needed)

Lesson Guide

Erosion Stations

1. Create two sets of three stations around the classroom.
    - This will allow you to place students into six groups with four students in each group. If you would like students to work in smaller groups, add another set of stations in the classroom.
    - Three groups of six students each will rotate through one set of stations while the other three groups will rotate through the second set of stations. The sets of stations are identical.
2. Use a sticky note to label one station in each set "Water Erosion."
3. At each "Water Erosion" station, place the following: three aluminum bread loaf pans with 2 lbs of sand in each pan, one 8-oz plastic cup, 24 ounces of water (or access to water), and one ruler.
4. Use a sticky note to label the second station in each set "Ice Erosion."
5. At each "Ice Erosion" station, place the following: one aluminum bread loaf pan with 2 lbs of sand in each pan, a piece of string that is one foot long, one ruler, and one bag of ice.
6. Use a sticky note to label the third station in each set "Wind Erosion."
7. At each "Wind Erosion" station, place the following: three pieces of chalk, 1.5 cups of salt, one 1⁄2 measuring cup, and one small plastic container with a lid.
8. Place the digital scale in a location where students at both "Wind Erosion" stations can easily access it.

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Weathering, Erosion, and Deposition

Activity Duration	Activity Difficulty	Preparation Time	Preparation Effort
45 minutes	Low	Medium	Medium

Materials:

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- rulers (4)
- salt (3 c)
- sand (16 lb)
- small, clear containers with lids (2)
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- string, 1-ft pieces (2)
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Lesson Guide

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1. Create two sets of three stations around the classroom.
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5. At each "Ice Erosion" station, place the following: one aluminum bread loaf pan with 2 lbs of sand in each pan, a piece of string that is one foot long, one ruler, and one bag of ice.
6. Use a sticky note to label the third station in each set "Wind Erosion."
7. At each "Wind Erosion" station, place the following: three pieces of chalk, 1.5 cups of salt, one ½ measuring cup, and one small plastic container with a lid.
8. Place the digital scale in a location where students at both "Wind Erosion" stations can easily access it.

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.
Online, Unit 2, Teacher Resource page, under Teacher Resources, Junk Drawer: Teacher Instruction Page
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2033

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.

The printable needed to be updated.

Publisher's description of this change if different from overall description.

In step 2 of the lesson guide while describing the items that will go into each box, "unsharpened pencils" was listed twice. In the update, the error was corrected and it was only listed once.

Screenshot of Currently Adopted Content

TEXAS SCIENCE Teacher Instructions

Fourth Grade: The Junk Drawer

Junk Drawer Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
20 minutes	Low	Low	Low

Materials:

- aluminum foil (as needed)
- balloons (12)
- boxes (6) (to serve as junk drawers)
- bubble wrap, roll (1)
- cereal, Total® brand, box (1)
- cinnamon powder, 7-oz container (1)
- condiment containers with lids, 1 oz (42)
- corks (6)
- craft sticks (6)
- crayons (6)
- erasers (6)
- glue, 4-oz bottles (2)
- index cards (6)
- iodized salt, 26-oz container (1)
- paper clips (6)
- pencils, unsharpened (6)
- quarters (6)
- resealable bags (6)
- rubber bands, thick (6)
- scissors, identical (6 pairs)
- table tennis balls (6)
- vegetable oil, 24-oz jar (1)
- water (as needed)

Lesson Guide

1. Set up six boxes.
2. In each box, place one cork, one craft stick, one crayon, one eraser, one index card, one paper clip, one unsharpened pencil, one pair of scissors, one table tennis ball, one unsharpened pencil, one quarter, and one thick rubber band.
3. Set aside six condiment containers with lids. These will be used in Activity 3 when measuring mass.
4. Take six condiment containers. Fill each condiment container with one ounce of salt, or fill until full. Secure a lid on each container. Place one container of salt in each junk drawer box.
5. Take six more condiment containers. Fill each condiment container with one ounce of cinnamon powder, or fill until full. Secure a lid on each container. Put one container of cinnamon in each junk drawer.
6. Take out six more condiment containers. Fill each condiment container with one ounce of glue, or fill until full. Secure a lid on each container. Put one container of glue in each junk drawer.

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: The Junk Drawer

Junk Drawer Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
20 minutes	Low	Low	Low

Materials:

- aluminum foil (as needed)
- balloons (12)
- boxes (6) (to serve as junk drawers)
- bubble wrap, roll (1)
- cereal, Total® brand, box (1)
- cinnamon powder, 7-oz container (1)
- condiment containers with lids, 1 oz (42)
- corks (6)
- craft sticks (6)
- crayons (6)
- erasers (6)
- glue, 4-oz bottles (2)
- index cards (6)
- iodized salt, 26-oz container (1)
- paper clips (6)
- pencils, unsharpened (6)
- quarters (6)
- resealable bags (6)
- rubber bands, thick (6)
- scissors, identical (6 pairs)
- table tennis balls (6)
- vegetable oil, 24-oz jar (1)
- water (as needed)

Lesson Guide

1. Set up six boxes.
2. In each box, place one cork, one craft stick, one crayon, one eraser, one index card, one paper clip, one unsharpened pencil, one pair of scissors, one table tennis ball, one quarter, and one thick rubber band.
3. Set aside six condiment containers with lids. These will be used in Activity 3 when measuring mass.
4. Take six condiment containers. Fill each condiment container with one ounce of salt, or fill until full. Secure a lid on each container. Place one container of salt in each junk drawer box.
5. Take six more condiment containers. Fill each condiment container with one ounce of cinnamon powder, or fill until full. Secure a lid on each container. Put one container of cinnamon in each junk drawer.
6. Take out six more condiment containers. Fill each condiment container with one ounce of glue, or fill

Description of the specific location and hyperlink to the exact location of the currently adopted content.
Online, Unit 4, Teacher Resources, Unit Printables, "Matter that Changes State: Investigation Plan and Chart"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

The printable needed to be updated.

Publisher's description of this change if different from overall description.

The updated printable was updated with the correct term for a graduated cylinder, and more clear and concise instructions.

Screenshot of Currently Adopted Content

This resource is more than 5 pages, a link has been provided to review the entire document.
https://cdn.studiesweekly.com/online/resources/printables/8921/Matter%20that%20Changes%20States%20Investigation%20Plan%20and%20Chart.pdf

Name: **Date:**

Matter that Changes States

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

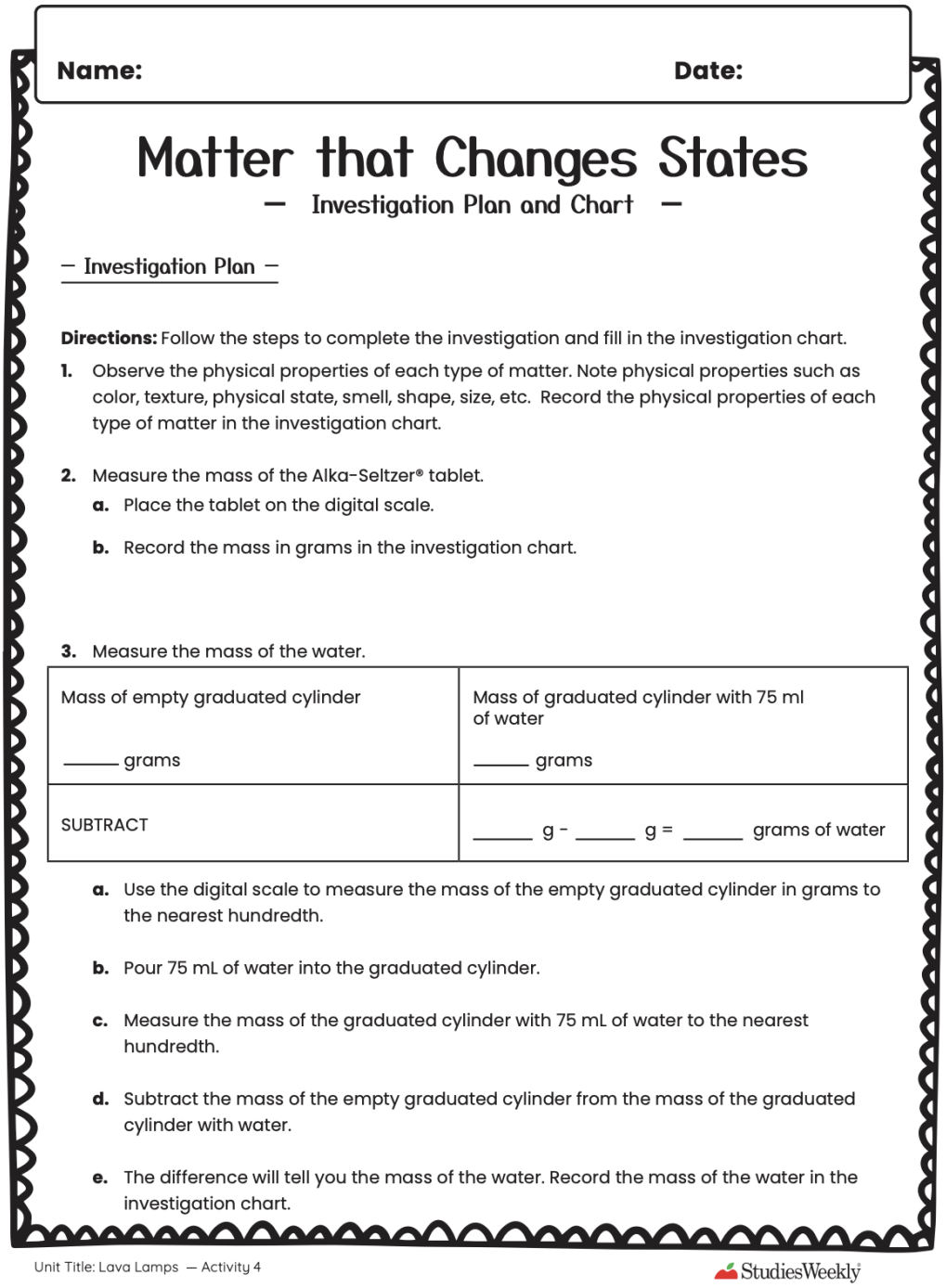
1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.
2. Measure the mass of the Alka-Seltzer® tablet.
   - **a.** Use the digital scale to measure the mass of the empty 100ml beaker in grams to the nearest hundredth.
   - **b.** Use the digital scale to record the mass of each beaker of water in grams to the nearest hundredth.
3. Measure the mass of the water.

Mass of empty beaker _____ grams	Mass of beaker with 75 ml of water _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water

- **a.** Use the digital scale to measure the mass of the empty 100ml beaker in grams to the nearest hundredth.
- **b.** Use the digital scale to record the mass of each beaker of water in grams to the nearest hundredth.
- **c.** Subtract the mass of the empty beaker from the mass of each beaker with water.
- **d.** The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Screenshot of Proposed Updated Content

This resource is more than 5 pages, a link has been provided to review the entire document.
https://cdn.studiesweekly.com/online/resources/printables/13560/Matter%20that%20Changes%20States%20Investigation%20Plan%20and%20Chart.pdf



Name: **Date:**

Matter that Changes States

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.

2. Measure the mass of the Alka-Seltzer® tablet.
   - **a.** Place the tablet on the digital scale.
   - **b.** Record the mass in grams in the investigation chart.

3. Measure the mass of the water.

Mass of empty graduated cylinder _____ grams	Mass of graduated cylinder with 75 ml of water _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water

   - **a.** Use the digital scale to measure the mass of the empty graduated cylinder in grams to the nearest hundredth.
   - **b.** Pour 75 mL of water into the graduated cylinder.
   - **c.** Measure the mass of the graduated cylinder with 75 mL of water to the nearest hundredth.
   - **d.** Subtract the mass of the empty graduated cylinder from the mass of the graduated cylinder with water.
   - **e.** The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Description of the specific location and hyperlink to the exact location of the currently adopted content.

NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.

Update to Content Not Reviewed by SRP

This resource will be found online in Unit 4, Teacher Resources, Unit Printables
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Publisher's rationale for this change if different from overall rationale.

Adding a missing printable.

Publisher's description of this change if different from overall description.

Adding Matter that Changes States: Teacher Instruction Page, to support Activity 4 of Unit 4.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content

Fourth Grade: Lava Lamps

Matter that Changes States: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
25 minutes	Low	Low	Low

Materials:

- Alka-Seltzer® effervescent tablets (6)
- balloons (6)
- graduated cylinders (6)
- water (450 mL)

Instructions

In the following steps you will create 6 sets of ingredients that will be used by student groups to create solutions.

1. Fill each graduated cylinder with 75 mL of water.
2. Create 6 sets by grouping one graduated cylinder with one Alka-Seltzer® effervescent tablet, one deflated balloon, and one empty graduated cylinder.

Description of the specific location and hyperlink to the exact location of the currently adopted content.

The resource can be found online, Unit 4, on the Teacher Resources page, under the Teacher Resource tab, Matter in Mixtures: Teacher Instructions
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.

The materials needed to be updated so the items were easier for teachers to obtain.

Publisher's description of this change if different from overall description.

Materials were changed and then the lesson guide was adjusted to reflect those changes.

Screenshot of Currently Adopted Content

Fourth Grade: Lava Lamps

Matter in Mixtures: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
25 minutes	Low	Low	Low

Students will investigate if matter is conserved when different mixtures are created.

Materials:

- 18 condiment container cups
- 18 100ml beakers
- vegetable oil
- soil
- cereal
- water

Lesson Guide

1. Fill each of the 18 100 ml beakers with 50mls of room temperature tap water.
2. In the following steps you will create 6 sets of ingredients that will be used by student groups to create mixtures.
3. Fill 6 of the condiment container cups ¾ full with vegetable oil. Secure with a lid.
4. Fill 6 of the condiment containers ¾ full with soil. Secure with a lid.
5. Fill 6 of the condiment containers to the top with cereal.
6. Create 6 sets by grouping three beakers of water, one container of vegetable oil, one container of soil, and one container of cereal.

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Lava Lamps

Matter in Mixtures: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
25 minutes	Low	Low	Low

Students will investigate if matter is conserved when different mixtures are created.

Materials:

- 18 1 oz condiment containers
- 18 4 oz condiment containers
- vegetable oil
- soil
- cereal
- water

Lesson Guide

1. Fill each of the 18 4 oz condiment containers with 50mls of room temperature tap water.
2. In the following steps you will create 6 sets of ingredients that will be used by student groups to create mixtures.
3. Fill 6 of the 1 oz condiment containers ¾ full with vegetable oil. Secure with a lid.
4. Fill 6 of the 1 oz condiment containers ¾ full with soil. Secure with a lid.
5. Fill 6 of the 1 oz condiment containers to the top with cereal.
6. Create 6 sets by grouping three containers of water, one container of vegetable oil, one container of soil, and one container of cereal.

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 4, Teacher Resources, Unit printables, Matter in Mixtures: Investigation Plan and Chart
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.
Materials needed to be updated so that they are more accessible for teachers.

Publisher's description of this change if different from overall description.
"Beaker" was replaced with "4 oz container" throughout the entire printable.

Screenshot of Currently Adopted Content
This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/8917/Matter%20in%20Mixtures.pdf

Name: **Date:**

Matter in Mixtures

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.
2. Measure the mass of 50 ml water.

Mass of empty beaker _____ grams	Mass of beaker with water _____ grams	Mass of beaker with water _____ grams	Mass of beaker with water _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water

a. Use the digital scale to measure the mass of the empty 100ml beaker in grams to the nearest hundredth.

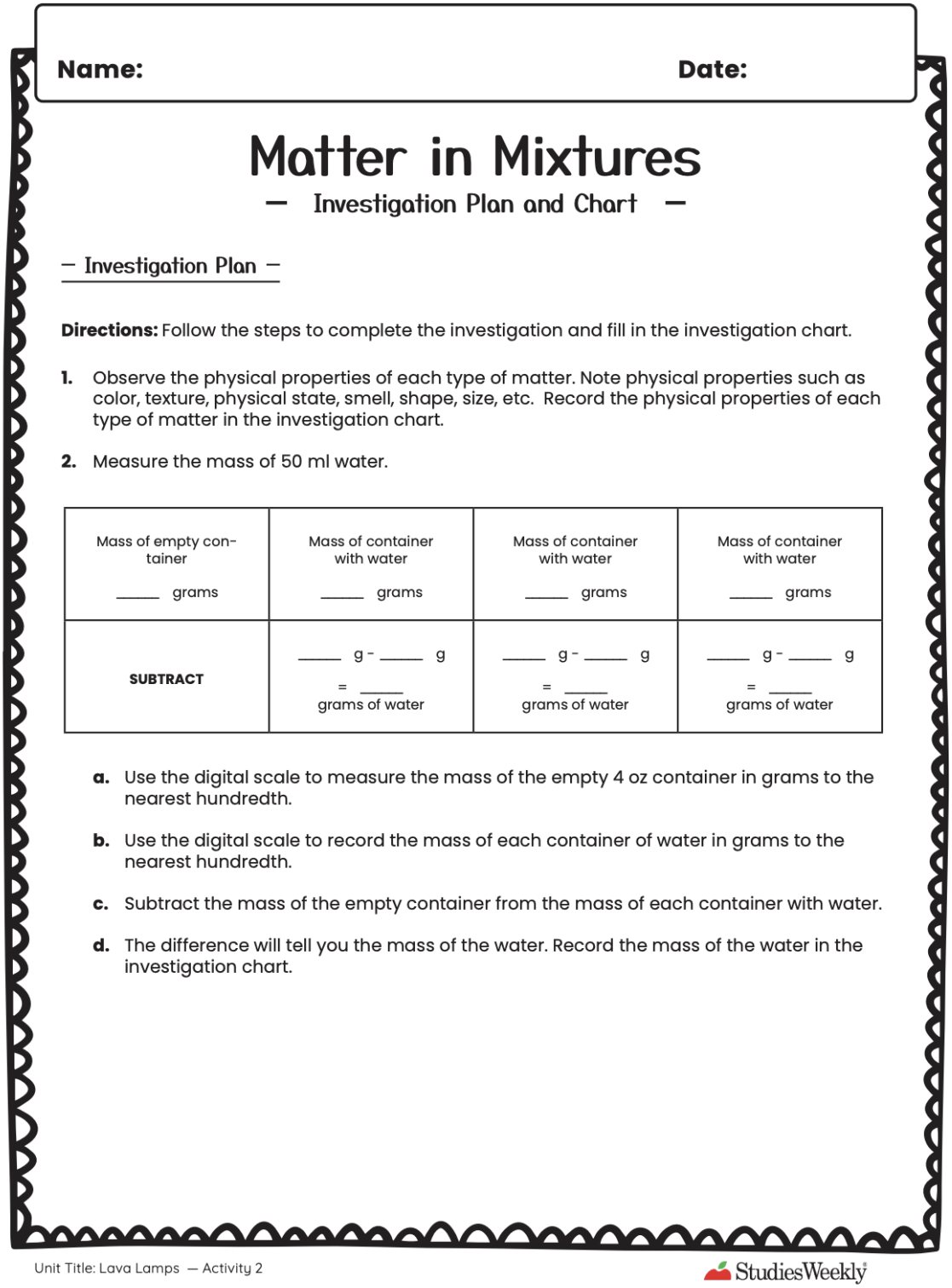
b. Use the digital scale to record the mass of each beaker of water in grams to the nearest hundredth.

c. Subtract the mass of the empty beaker from the mass of each beaker with water.

d. The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Screenshot of Proposed Updated Content

This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/13557/Matter%20in%20Mixtures.pdf



Name: **Date:**

Matter in Mixtures

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.
2. Measure the mass of 50 ml water.

Mass of empty container _____ grams	Mass of container with water _____ grams	Mass of container with water _____ grams	Mass of container with water _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water

a. Use the digital scale to measure the mass of the empty 4 oz container in grams to the nearest hundredth.

b. Use the digital scale to record the mass of each container of water in grams to the nearest hundredth.

c. Subtract the mass of the empty container from the mass of each container with water.

d. The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Unit Title: Lava Lamps — Activity 2

StudiesWeekly

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 4, Teacher Resources, Matter in Solutions Teacher Instructions Page
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.

Materials needed to be updated so that they are more accessible for teachers.

Publisher's description of this change if different from overall description.

"Beaker" was replaced with "4 oz container" throughout the entire printable.

Screenshot of Currently Adopted Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Lava Lamps

Matter in Solutions: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
25 minutes	Low	Low	Low

Students will investigate if matter is conserved when different solutions are created.

Materials:

- 12 condiment container cups
- 12 100ml beakers
- salt
- dish soap
- water

Instructions:

In the following steps you will create 6 sets of ingredients that will be used by student groups to create solutions.

1. Fill 6 of the 100 ml beakers with 75ml of room temperature tap water.
2. Fill 6 of the 100 ml beakers with 50 ml of room temperature tap water.
3. Fill 6 of the condiment container cups 1/2 full with salt. Secure with a lid.
4. Fill 6 of the condiment containers ⅓ full with dish soap. Secure with a lid.
5. Create 6 sets by grouping one beaker with 75 ml of water, one beaker with 50 ml of water, a container of salt, and a container of dish soap.

Screenshot of Proposed Updated Content

Fourth Grade: Lava Lamps

Matter in Solutions: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
25 minutes	Low	Low	Low

Students will investigate if matter is conserved when different solutions are created.

Materials:

- 12 1 oz condiment cups
- 12 4 oz condiment containers
- salt
- dish soap
- water

Instructions:

In the following steps you will create 6 sets of ingredients that will be used by student groups to create solutions.

1. Fill 6 of the 4 oz condiment containers with 75ml of room temperature tap water.
2. Fill 6 of the 4 oz condiment containers with 50 ml of room temperature tap water.
3. Fill 6 of the 1 oz condiment cups 1/2 full with salt. Secure with a lid.
4. Fill 6 of the 1 oz condiment cups 1⁄3 full with dish soap. Secure with a lid.
5. Create 6 sets by grouping one container with 75 ml of water, one container with 50 ml of water, a container of salt, and a container of dish soap

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Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 4, Teacher Resources, Unit Printables, Matter in Solutions Investigation Plan and Chart
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Update to Content Not Reviewed by SRP

Publisher's rationale for this change if different from overall rationale.

Materials needed to be updated so that they are more accessible for teachers.

Publisher's description of this change if different from overall description.

"Beaker" was replaced with "4 oz container" throughout the entire printable.

Screenshot of Currently Adopted Content

This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/8920/Matter%20in%20Solutions.pdf

Name: **Date:**

Matter in Solutions

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.
2. Measure the mass of the water.

Mass of empty beaker _____ grams	Mass of beaker with 50 ml of water _____ grams	Mass of beaker with 75 ml of water _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water

a. Use the digital scale to measure the mass of the empty 100 ml beaker in grams to the nearest hundredth.

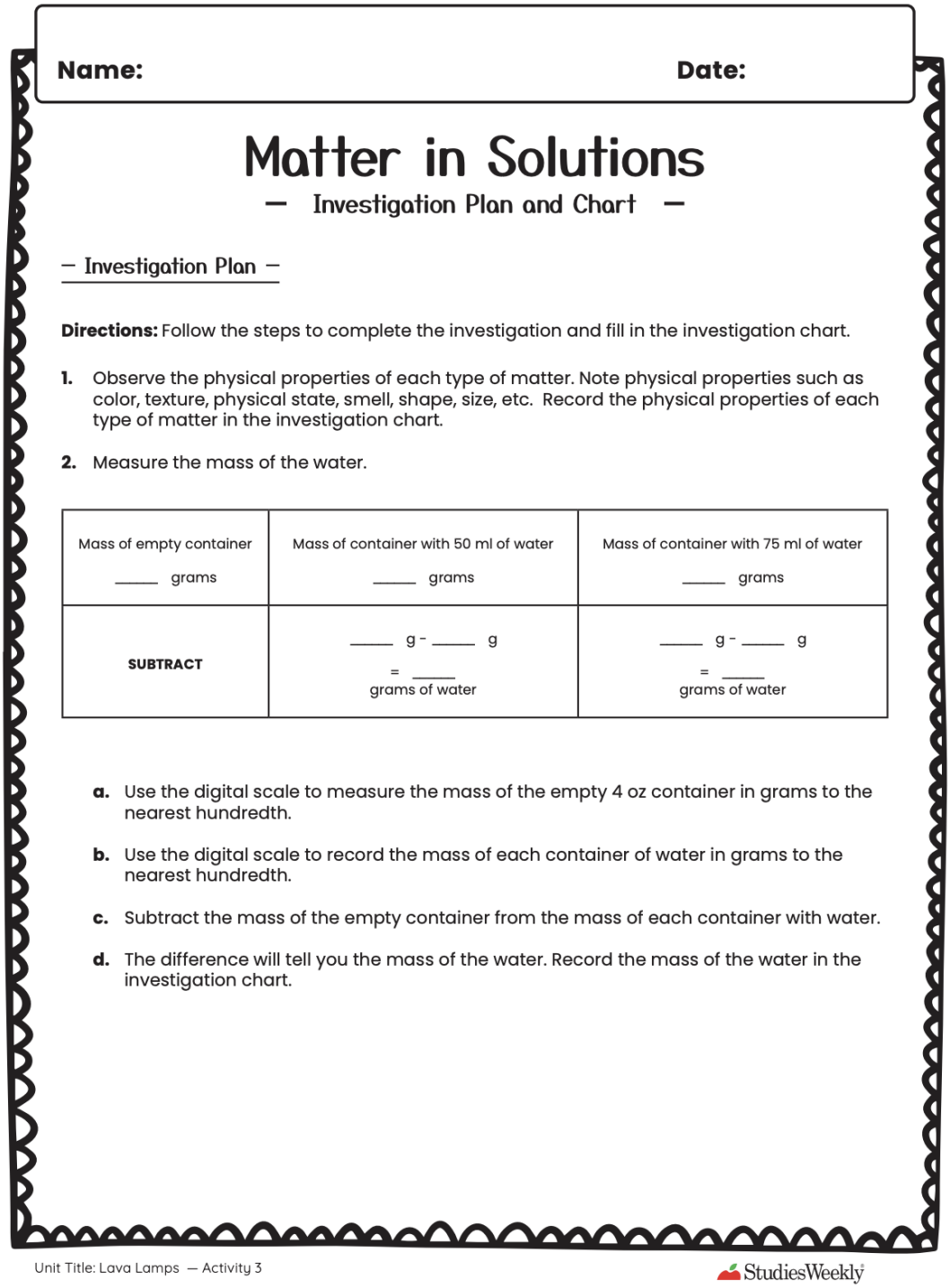
b. Use the digital scale to record the mass of each beaker of water in grams to the nearest hundredth.

c. Subtract the mass of the empty beaker from the mass of each beaker with water.

d. The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Screenshot of Proposed Updated Content

This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/13559/Matter%20in%20Solutions.pdf



Name: **Date:**

Matter in Solutions

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in the investigation chart.
2. Measure the mass of the water.

Mass of empty container	Mass of container with 50 ml of water	Mass of container with 75 ml of water
_____ grams	_____ grams	_____ grams
SUBTRACT	_____ g - _____ g = _____ grams of water	_____ g - _____ g = _____ grams of water

a. Use the digital scale to measure the mass of the empty 4 oz container in grams to the nearest hundredth.

b. Use the digital scale to record the mass of each container of water in grams to the nearest hundredth.

c. Subtract the mass of the empty container from the mass of each container with water.

d. The difference will tell you the mass of the water. Record the mass of the water in the investigation chart.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 4, Teacher Resources, Phenomenon Explanation: Teacher Instruction Page
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.
Materials needed to be updated so that they are more accessible for teachers.

Publisher's description of this change if different from overall description.
"Beaker" was replaced with "4 oz container" throughout the entire printable.

Screenshot of Currently Adopted Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Lava Lamps

Phenomenon Explanation: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
40 minutes	Low	Low	Low

Students will investigate if matter is conserved when a lava lamp is created.

Materials:

- 12 condiment container cups
- 12 100 ml beakers
- vegetable oil
- baking soda
- vinegar
- food dye

Instructions:

In the following steps you will create 6 sets of ingredients that will be used by student groups to create lava lamps.

1. Fill 6 of the 100 ml beakers with 80 ml of vegetable oil.
2. Fill 6 of the condiment container cups to the top with baking soda.
3. Fill 6 of the 100 ml beakers with 15 ml of vinegar
4. Fill 6 of the condiment container cups with 4-5 drops of food coloring.
5. Create 6 sets by grouping one beaker with 80 ml of vegetable oil, one condiment container cup with baking soda, one 100ml beaker with 15ml of vinegar, and one condiment container cup with food coloring.

Screenshot of Proposed Updated Content

Fourth Grade: Lava Lamps

Phenomenon Explanation: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
40 minutes	Low	Low	Low

Students will investigate if matter is conserved when a lava lamp is created.

Materials:

- 12 1 oz condiment cups
- 12 4 oz condiment containers
- vegetable oil
- baking soda
- vinegar
- food dye

Instructions:

In the following steps you will create 6 sets of ingredients that will be used by student groups to create lava lamps.

1. Fill 6 of the 4 oz containers with 80 ml of vegetable oil.
2. Fill 6 of the 1 oz condiment cups to the top with baking soda.
3. Fill 6 of the 4 oz containers with 15 ml of vinegar
4. Fill 6 of the 1oz condiment cups with 4-5 drops of food coloring.
5. Create 6 sets by grouping one container with 80 ml of vegetable oil, one container with baking soda, one container with 15ml of vinegar, and one container with food coloring.

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource is found online, Unit 4, Teacher Resources, Unit Printables, Phenomenon Explanation: Investigation Plan and Chart
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.

Same as above

Update to Content Not Reviewed by SRP

Publisher's rationale for this change if different from overall rationale.

Materials needed to be updated so that they are more accessible for teachers.

Publisher's description of this change if different from overall description.

"Beaker" was replaced with "4 oz container" throughout the entire printable.

Screenshot of Currently Adopted Content

This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/8923/Phenomenon%20Explanation.pdf

Name: **Date:**

Phenomenon Explanation

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in box a in the investigation chart.
2. Measure the mass of the water.

Mass of empty beaker _____ grams	Mass of beaker with 80 ml of vegetable oil _____ grams
SUBTRACT	_____ g - _____ g = _____ grams of vegetable oil

a. Use the digital scale to measure the mass of the empty 100ml beaker in grams to the nearest hundredth.

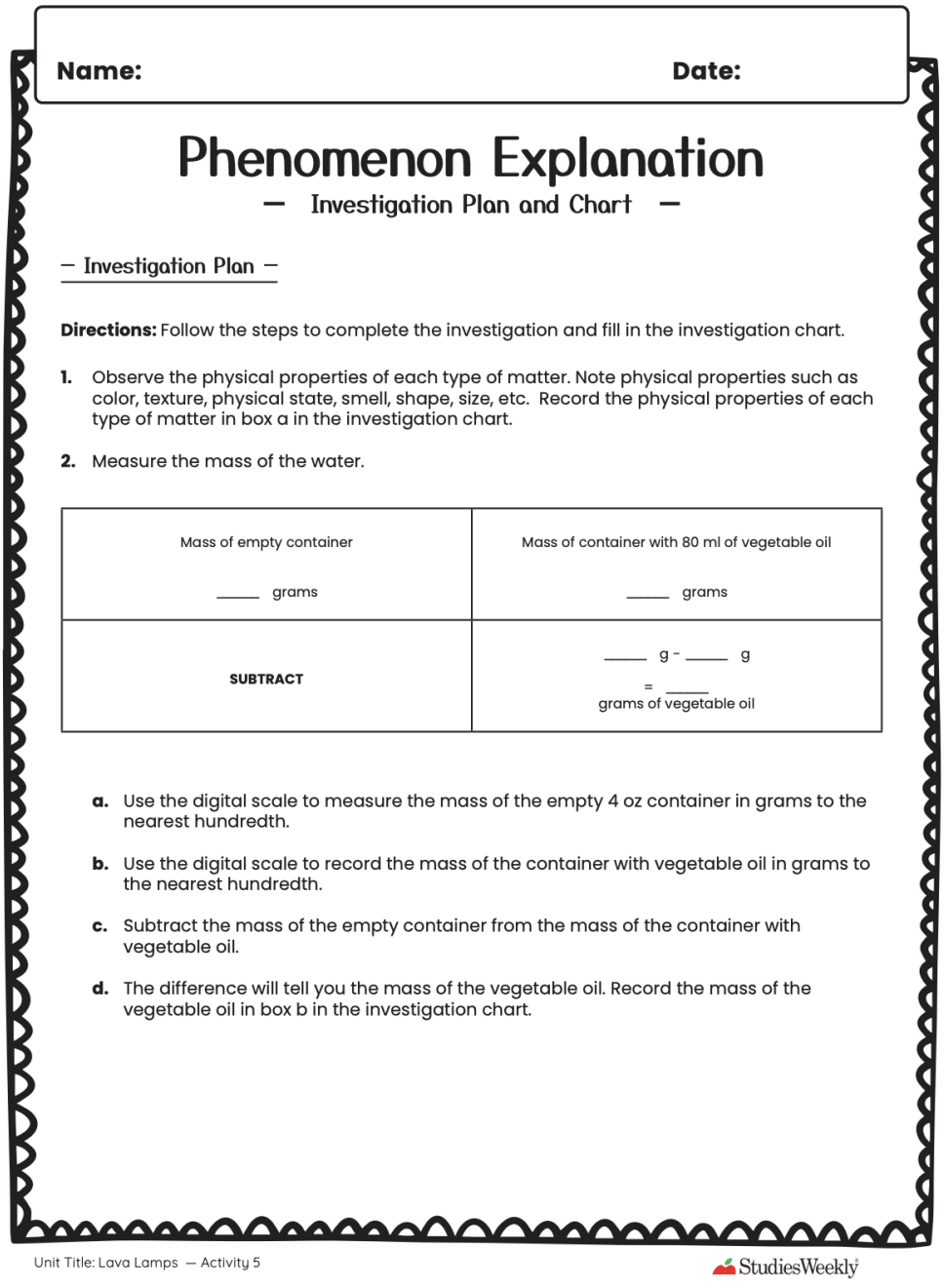
b. Use the digital scale to record the mass of the beaker with vegetable oil in grams to the nearest hundredth.

c. Subtract the mass of the empty beaker from the mass of the beaker with vegetable oil.

d. The difference will tell you the mass of the vegetable oil. Record the mass of the vegetable oil in box b in the investigation chart.

Screenshot of Proposed Updated Content

This resource is more than 5 pages, a link is provided to access the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/13562/Phenomenon%20explanation.pdf



Name: **Date:**

Phenomenon Explanation

— Investigation Plan and Chart —

— Investigation Plan —

Directions: Follow the steps to complete the investigation and fill in the investigation chart.

1. Observe the physical properties of each type of matter. Note physical properties such as color, texture, physical state, smell, shape, size, etc. Record the physical properties of each type of matter in box a in the investigation chart.
2. Measure the mass of the water.

Mass of empty container ____ grams	Mass of container with 80 ml of vegetable oil ____ grams
SUBTRACT	____ g - ____ g = ____ grams of vegetable oil

a. Use the digital scale to measure the mass of the empty 4 oz container in grams to the nearest hundredth.

b. Use the digital scale to record the mass of the container with vegetable oil in grams to the nearest hundredth.

c. Subtract the mass of the empty container from the mass of the container with vegetable oil.

d. The difference will tell you the mass of the vegetable oil. Record the mass of the vegetable oil in box b in the investigation chart.

Unit Title: Lava Lamps — Activity 5

StudiesWeekly

Description of the specific location and hyperlink to the exact location of the currently adopted content.

N/A - new resource

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online in the Teacher Resources of each unit, except unit 1. Proposed location by unit.

2:The Junk Drawer
3:Mixtures and Solutions
4:Lava Lamps
5: Magnetism, Gravity, and Friction
6: Energy Transfer
7: Engineering Design: Conductors and Insulators
8:Electric Paths
9:Seasons in the Sun
10:Phases of the Moon
11:The Water Cycle
12:Engineering Design: Weathering, Erosion, and Deposition
13:Weather Patterns Over Time
14: Energy Resources
15:Energy Use and Conservation
16:Natural Resources and Properties of Rocks
17: Engineering Design: Producers Make Food
18:Matter and Energy in Ecosystems
19:A Changing Texas Environment
20:Plant Structures and Functions
21: Physical Characteristics of Organisms

Publisher's rationale for this change if different from overall rationale.
Providing a Topic Background Information Podcast transcript will improve teacher access.

Publisher's description of this change if different from overall description.
The Topic Background Information Podcast provides teachers with background information about the science concepts covered in the unit. A PDF document of the podcast improves access.

Screenshot of Currently Adopted Content
N/A - new resource

Screenshot of Proposed Updated Content

Unit 2:

Teacher Background Information Podcast

Fourth Grade: The Junk Drawer

Welcome to the teacher background podcast for Unit 2! We will be covering what students already know about matter prior to this unit. You'll also learn how this unit builds on students' prior knowledge.

Students enjoy learning about matter because matter is all around us. Matter is anything that takes up space and has mass. Books, cars, plants, air, and people are all matter. In third grade, students learned that the physical properties of matter include temperature, mass, magnetism, and the ability to sink or float in water. Students classified matter as solids, liquids, or gases. Solids have a definite shape. Liquids and gases take the shape of their containers. Students studied how the state of matter changed when it was heated or cooled.

In fourth grade, the standard increases in complexity because students learn new physical properties and related terms. In this unit, students describe matter based on the following observable physical properties: temperature, mass, magnetism, relative density, and physical state.

Temperature is how warm or cold matter is. The temperature of matter can change by heating or cooling the substance. Matter's physical properties might change if its temperature changes. For example, heating ice will raise its temperature and change it from a solid to a liquid. If you continue to heat the liquid water, it will turn into water vapor, which is gas. Mass is the amount of matter in an object, and it can be observed using a balance. If both a bowling ball and a beach ball are placed on a balance, the bowling ball will drop down and the beach ball will rise up. This allows you to observe that the bowling ball has greater mass. Magnetism refers to matter's ability to attract magnetic materials. To observe magnetism, use a magnet. You can see if a substance is pulled toward the magnet. Substances with magnetism include most metals and even some rocks. Students have observed matter's ability to sink or float. Now they will learn a new term to describe this: relative density. Substances that have a lower density than water float, whereas substances with a higher density than water sink. Matter's physical state refers to whether it's a solid, liquid, or gas. Solids keep their shape and density. Liquids flow freely and take the shape of their containers. Gases also have no set shape: they take the shape of their containers.

A common misconception students have is that gases are not matter. Students think this because they cannot see gases, as most gases are invisible. Real-world examples of gases will help clarify this misconception. Helium in a balloon, air in a bike tire, and bubbles in carbonated soda will help students understand that gases are matter because they take up space.

Unit 3:

Teacher Background Information Podcast

Fourth Grade: Mixtures and Solutions

Welcome to the teacher background podcast for Unit 3! We will be covering what students already know about matter and combinations of materials preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Matter is all around us and exists in three physical states. Matter's three physical states are solid, liquid, and gas. Matter can be combined to make new substances, and there are many everyday examples of these combinations. Trail mix, salt water, and soda are all combinations of matter in different physical states. This unit will explain more about these combinations.

In third grade, students learned that materials can be combined. Sometimes, materials are combined because of their physical properties. Their physical properties can create a new object or modify existing objects. For example, adding clay to sand will make a stronger brick. In fourth grade, the standard expands, and students learn that matter can be combined. Combinations of two or more substances are called mixtures or solutions. Combinations of matter can contain matter in any of its physical states.

Let's start with mixtures. Mixtures are combinations of matter that can be easily separated again. Nuts, candy, and raisins are all solid substances. When you mix them, you've made a tasty mixture: trail mix! Sand and water are a common mixture of a solid and a liquid. Lastly, two liquids can form a mixture. It's important to know that mixtures can contain two liquid substances and that the substances can remain separate. Consider mixing oil and vinegar in a container. If you let the mixture settle, you can easily observe the oil settle on top of the vinegar.

Solutions are a type of mixture. In this type of mixture, the substances have entirely dissolved. Salt water is a solution made of a solid substance and a liquid substance. Salt is solid, and water is liquid. When mixed, the salt dissolves in the water and creates the salt water solution. Soft drinks, like soda, are also solutions made up of substances in various physical states. Soft drinks include water, which is liquid, and carbon dioxide, which is gas. Soft drinks also contain sugar, which is solid. When all of these are mixed, a soft drink is created. As you can see, mixtures of matter are truly everywhere. The next time you mix two substances, think about whether it's a mixture or a solution.

A common misconception among students is that mixtures are always solids and solutions are always liquids. A significant takeaway from this unit is that mixtures and solutions are both composed of combinations of matter in any of their physical states.

Unit 4:

Teacher Background Information Podcast

Fourth Grade: Lava Lamps

Welcome to the teacher background podcast for Unit 4! We will be covering what students already know about matter preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Matter is all around us and exists in three physical states—solid, liquid, and gas. Matter is combined to make new substances, and there are many everyday examples of these combinations. A bag of different-colored candy, lemonade, and seltzer are all mixtures of matter. Interestingly, the amount of matter in these mixtures never changes. Matter is conserved! This unit captivates learners as they explore the conservation of matter.

In third grade, students learned that materials can be combined. Sometimes, materials are combined because of their physical properties. Their physical properties can create a new object or modify existing objects. For example, adding clay to sand will make a stronger brick. In fourth grade, students learn that matter can be combined. Combinations of two or more substances are called mixtures or solutions. Combinations of matter can contain matter in any of its physical states.

In this fourth-grade standard, students learn that matter is conserved, even when forming mixtures. Matter cannot be created or destroyed. Matter can change its state or form, but the amount of matter does not change, even in a mixture. You can use matter's physical properties to confirm its amount hasn't changed. Weighing the matter is particularly useful when proving that matter is conserved. The mass of the materials before mixing will be the same as the mass of the materials after mixing.

An oil-and-water mixture is a great way to study the conservation of matter. Prior to mixing, you can observe the individual properties of both liquids. The oil is yellow, while the water is clear. Both substances have measurable masses. Now, imagine pouring the oil and water into the same container. You can stir them, but they won't combine, and you still see two individual substances. When you stop mixing, they will eventually settle into different layers. Oil settles above the water. What's more, if you weigh the oil-and-water mixture, you'll notice the mass of the two substances hasn't changed. The mixture's mass is equal to the mass of the two substances prior to mixing. This shows the conservation of matter because the two liquids did not change their amounts or properties. Matter was not created, and it did not disappear or change. It is important to remember that matter is always conserved in mixtures, whether the substances are solid, liquid, or gas.

A common misconception students have is that at least one of the substances in a mixture disappears. This is very common when dissolving solids in liquids. You can use a soil and water mixture to clarify this misconception. Observing and measuring the weight before mixing the soil with water is important because students often think the solid soil matter disappears once combined with water. When the soil and water mixture is weighed together, the weight will be the same as the two separate substances.

Unit 5:

Teacher Background Information Podcast

Fourth Grade: Magnetism, Gravity, and Friction

Welcome to the teacher background podcast for Unit 05! We will be covering what students already know about forces preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Forces are all around us, which makes this an exciting topic for students. A force is a push or a pull. Hitting a ball, pushing a swing, pressing a car brake, and even leaves falling from trees are all examples of forces in our world.

In third grade, students learned that forces act on objects by either coming in contact with them or acting from a distance. These forces include magnetism, gravity, and simple pushes and pulls. Students also investigated how pushes and pulls change an object's motion and position. Consider a stationary wagon; there is no motion. Now, picture pushing or pulling the wagon. It'll start to move! A push moves the wagon away from the force and a pull moves the wagon toward the force. These pushes and pulls also change the wagon's position, or where the wagon is located.

In fourth grade, the standard expands to include patterns of forces and introduces the force of friction. While students have learned about gravity and magnetism in third grade, these forces are more thoroughly investigated in fourth grade. In this unit, students learn about patterns of magnetism, gravity, and friction. Patterns of forces can be recognized in an object's motion. Remember, forces can affect an object's motion or position from direct contact or at a distance. Think about the different ways an object can move. Objects can go up and down and side to side. They can move in a straight line. There are many different motions! Sometimes objects even move in a combination of these motions. When a motion repeats itself again and again, we call it a pattern.

Gravity is an invisible force that works over a distance. Gravity pulls objects toward one another. Gravity is the force that pulls objects down toward Earth's center. It's why objects always come down when we throw them into the air. Gravity is the force that keeps us from floating up. Magnetism is another force that works over a distance. Magnets have a magnetic field. If there is a magnetic object within the magnet's magnetic field, the magnet pulls the object toward it. Interestingly, magnets can also push other magnets away.

Friction is a new term for students. Friction is a contact force that occurs when objects rub against one another. When you repeatedly rub your hands together, you'll notice they begin to heat. That's friction! Friction is considered the resistance of motion because it slows moving objects. When you press the brakes in a car, you create friction and begin to slow down. Different surfaces can generate more or less friction. For example, you're more likely to slip or slide when walking on ice than on a cement sidewalk. The ice's surface is slippery. There is less friction. The cement sidewalk has bumps that help create friction and slow down our walking.

A common misconception students have is that forces make things move, but they don't make things stop. This misconception can be clarified with the introduction of friction. A push can cause a ball to move across the floor, but the force of friction acting between the ball and the ground is what causes the ball to stop moving.

Unit 6:

Teacher Background Information Podcast

Fourth Grade: Energy Transfer

Welcome to the teacher background podcast for Unit 6! We will be covering what students already know about force, motion, and energy preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

All around us are signs that energy is present, which makes energy an exciting topic for students. We can hear, see, and feel energy. The sun's light, a moving fan, and birds chirping are all examples of energy. What's more, the energy around us is constantly transferring! This means energy is moving from one thing to another. In this unit, you'll explore three different ways that energy transfers.

In third grade, students identified everyday examples of light, sound, thermal, and mechanical energy. They also learned how an object's speed relates to its mechanical energy. Light energy is a form of energy that we use to see. Examples of light energy include the sun, fire, light bulbs, and lightning. Sound energy, which is a form of energy that we hear, is present whenever we hear a sound. Car engines starting, birds chirping, bells ringing, and popcorn popping are great examples of sound energy. Thermal energy is heat energy. When ovens heat food and clothes dryers dry wet clothes, we can identify that thermal energy is present. Lastly, mechanical energy is energy in movement. Everything around us has mechanical energy. Trains, markers, swings, soccer balls—you name it! They all contain mechanical energy. How do we know? Well, they all move.

In fourth grade, the standard moves beyond identifying everyday examples of energy, and it becomes more complex. Students learn about the transfer of energy by objects in motion, waves in water, and sound. When energy transfers, it moves from one thing to another. One way energy transfers is through objects in motion. When two or more objects interact, the energy moves from one object to the other. Think of a bowling ball and bowling pins. To start, the bowling pins are not moving. When you roll a bowling ball into the pins, they collide. The pins move. That's energy transfer! The moving energy has transferred from the bowling ball to the pins.

Energy transfers through waves in water. Water waves move up and down, which causes objects in the water to move, too. Imagine a boat floating in the ocean. It moves up and down with the ocean's waves, showing that waves transfer moving energy to the boat. Also, water waves can collide with the shore and cause rocks and sand to move. This is another example of energy transfer, because the moving energy moves from the waves and transfers to the rocks and sand.

Energy transfers through sound waves, which travel out from their source. When the source vibrates, sound energy sends waves out to other objects. In your car, you can raise the volume of the music. When you do this, you'll notice vibrations. The sound energy leaves the speakers and transfers to your ears. As you go about your day, try to identify examples of energy transfer in the objects around you!

A common misconception of students is that energy entirely disappears from objects during energy transformations. For example, they think that when a bowling ball collides with the bowling pins, the energy has disappeared from the bowling ball. To clarify, remind students that when the bowling ball stops, its moving energy has transferred into stored energy. The same is true of the pins—or anything that is moving and then stops.

Unit 7:

Teacher Background Information Podcast

Fourth Grade: Engineering Design: Conductors and Insulators

Welcome to the teacher background podcast for Unit 7! We will be covering what students already know about energy preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Electrical energy and thermal energy are incredibly important in our daily lives. If you look around, you'll see examples of energy everywhere. We use electrical energy for lights, computers, televisions, transportation, household appliances, and more! Thermal energy is often used to heat our homes, dry items, and to cook and bake food. Imagine if you didn't have access to electrical or thermal energy. How would that affect your day? It would definitely be challenging!

In third grade, students learned to identify everyday examples of mechanical, light, sound, and thermal energy. Mechanical energy is energy in movement. Everything has mechanical energy. Sound energy is energy we can hear. In this unit, students' prior knowledge of light energy and thermal energy will be especially important. Light energy is a form of energy we use to see. Sometimes, light energy is human-made, and sometimes, light energy occurs naturally. Examples of light energy include, but are not limited to, the sun, fire, lightbulbs, and lightning. Thermal energy is heat energy. When ovens heat food and clothes dryers dry wet clothes, you can identify that thermal energy is present.

In fourth grade, students learn about a new type of energy called electrical energy. In this unit, they identify conductors and insulators of both thermal (heat) and electrical energy. Electrical energy is moving energy, and we often identify it in outlets and appliances. Conductors and insulators are very important when studying thermal and electrical energy. Conductors are materials that allow electrical or thermal energy to move through them. Many metals are conductors, like iron and steel, but water and even people are conductors, too! Insulators, on the other hand, are materials that do not allow electrical or thermal energy to move through them. Glass, wood, rubber, and plastic are examples of insulators. Conductors and insulators are necessary for people to safely use thermal and electrical energy. They help us control the amount of energy being used, as well as allow us to turn the energy on and off.

A common misconception of students is that only metals are conductors. While it's true that metals are good conductors of both electrical and heat energy, they are not the only conductors. In fact, a pencil's graphite will conduct energy. You can explain that water and people are conductors, too, which is why we often stay away from water when there is lightning present.

Unit 8:

Teacher Background Information Podcast

Fourth Grade: Electric Paths

Welcome to the teacher background podcast for Unit 8! We will be covering what students already know about energy preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned to identify everyday examples of mechanical, light, sound, and thermal energy. Mechanical energy is energy in movement. Everything has mechanical energy. Sound energy is energy we can hear. Birds chirping, car doors slamming, and popcorn popping are all examples of sound energy. Light energy is a form of energy we use to see. Sometimes light energy is human-made, and sometimes light energy occurs naturally. Examples of light energy include, but are not limited to, the sun, fire, lightbulbs, and lightning. Thermal energy is heat energy. When ovens heat food and clothes dryers dry wet clothes, thermal energy is present.

In fourth grade, students learn about electrical energy and how to identify conductors and insulators of both thermal (heat) and electrical energy. Electrical energy is moving energy and we often identify it in batteries, outlets, and appliances. Conductors and insulators are very important when studying thermal and electrical energy. Conductors are materials that allow electrical or thermal energy to move through them. Many metals are conductors, like iron, nickel, and steel. Insulators, on the other hand, are materials that do not allow electrical or thermal energy to move through them. Glass, wood, rubber, and plastic are examples of insulators. Conductors and insulators go hand in hand. Both allow us to safely use electrical energy. For example, many pieces of technology require wires to function. A lot of wires contain copper inside. Copper is an excellent conductor, so these wires make great pathways for energy to travel through. For us to safely use the wires, the copper is enclosed with rubber. Rubber is an insulator, and prevents the electricity from moving beyond the wires.

In this unit, students learn that electrical energy flows through a closed path and can produce light and thermal energy. In order for a path to be closed, you need three important parts: a power source, an energy pathway, and an energy receiver (or load). The power source provides electrical energy to the closed path. Power sources are usually batteries or electric outlets. The pathway allows electrical energy to flow through the closed path. Wires are commonly used as pathways in electrical systems. Lastly, the load is the object that receives the electrical energy and produces light or thermal energy. A light bulb is a good example of a load that produces light energy, and a burner on a stove is a great way to show thermal energy. Remember, the power source, pathway, and load must be connected with no gaps in order for a closed path to work properly.

A common misconception students have is that energy gets used up as it travels through the closed path. Students think the energy goes from one part of the path to another instead of continuously flowing through the path. For example, they may think that the energy leaves the battery, goes through the wires, and ends at the light bulb. Once it reaches the lightbulb, the energy in the battery and the wires is all gone. To clarify this misconception, emphasize that

Unit 9:

Teacher Background Information Podcast

Fourth Grade: Seasons in the Sun

Welcome to the teacher background podcast for Unit 09! We will be covering what students already know about the Earth, sun, and moon system preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Students are fascinated to learn about the connections between the sun, moon, and Earth. Often, we live our lives by this important system. When the sun is in the sky, we wake up and begin our days. The moon often makes its appearance at nighttime. In this unit, students are eager to discover how this system affects seasons, temperature, and length of daylight.

In third grade, students learned about the orbits of the sun, Earth, and moon in our solar system. The sun's gravitational pull on Earth causes Earth to orbit the sun. While Earth orbits the sun, the moon orbits Earth. Why do you think that is? You guessed it! The Earth's gravitational pull on the moon causes the moon to orbit Earth. In third grade, students also learned the order of the planets in our solar system in relation to the Sun. The eight planets in our solar system are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Mercury is closest to the sun, and Neptune is farthest from the sun. The eight planets orbit the sun because of the sun's gravitational pull on them.

In fourth grade, students learn that Earth's changes in seasons, temperature, and length of daylight happen simultaneously. Many places on Earth have four seasons: summer, fall, winter, and spring. Temperature and length of daylight change as the seasons change. In the summer, you might notice the sun is out longer. The extra daylight might allow you to enjoy more time outside. However, in the winter, the sun sets early. You might notice it's dark when you wake up and dark again long before you go to sleep. Why does this happen? Throughout the year, parts of Earth get more direct sunlight from the sun as Earth orbits the sun. More direct sunlight increases the amount of daylight people experience. Direct sunlight also causes Earth's surface to heat up. Therefore, more direct sunlight increases the temperature. This is why summer is usually warmer and has longer daylight hours. The temperature and amount of daylight change along with the seasons. When parts of the Earth receive less direct sunlight, people there experience winter. Winter has cooler temperatures and a shorter amount of daylight. The reason for this is due to the tilt of the Earth along its axis. Students in fourth grade don't need to understand this, but it's helpful for you to know why.

A common misconception students have is that seasonal change occurs at the same time for all parts of Earth. Students may assume that all of Earth experiences the same temperature and length of daylight at the same time. An important takeaway from this unit is that as the Earth orbits the sun, it changes which parts of Earth receive more or less direct sunlight. One part of Earth receives more direct sunlight while, at the same time, another part of Earth receives less direct sunlight. While one part of Earth experiences summer, warmer temperatures, and longer daylight hours, the other part experiences the opposite.

Unit 10:

Teacher Background Information Podcast

Fourth Grade: Phases of the Moon

Welcome to the teacher background podcast for Unit 10! We will be covering what students already know about the sun, Earth, and moon preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

It's easy to admire the moon glowing in the night sky. Students enjoy talking about the differences they see in the moon's appearance. They might mention that when they imagine the moon glowing at night, they think of a large, bright circle. Some students might imagine a crescent. Others might say they imagine the moon when it's barely visible! As you can see, the moon's appearance is an engaging topic for students because of its relevance in students' lives!

In third grade, students learned about the orbits of the sun, Earth, and moon in our solar system. The sun's gravitational pull on Earth causes Earth to orbit the sun. While Earth orbits the sun, the moon orbits Earth. The Earth's gravitational pull on the moon causes the moon to orbit Earth. In third grade, students also learned the order of the planets in our solar system in relation to the sun. The eight planets in our solar system are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Mercury is closest to the sun, and Neptune is farthest from the sun. The eight planets orbit the sun because of the sun's gravitational pull on them.

In fourth grade, students learn about sequences and patterns in the moon's appearance. The Earth, sun, and moon system is in constant motion. The moon orbits Earth while Earth orbits the sun. The moon's surface reflects the sun's light, which allows us to see the moon from Earth. This reflection makes it seem like the moon is glowing. The sun always lights up half of the moon, but, due to the moon's orbit of Earth, only portions of the moon are visible. Some nights, we are able to see all of the side that is lit up. On other nights, we only see a part or even none of the side that is lit up. It all depends on the moon's position! The portion of the moon we are able to see is called the moon's phase. Remember, the moon's size does not actually change, even if it looks like it's getting bigger or smaller! These changes are due to the location of the moon in its orbit. It takes about 27 days for the moon to complete its orbit. Then the process repeats. There are several phases we experience while the moon orbits. A full moon is when the moon appears as a full circle. Sometimes we can't see the moon at all. This phase is called a new moon. In between the full moon and new moon phases are quarter moons. The next time you look up at the night sky and admire the moon, think about where it is in its orbit!

A common misconception students have is that the moon makes its own light, and that light is what we see at night. However, the moon does not produce its own light. What we see is the sun's light reflecting off of the moon's surface.

Unit 11:

Teacher Background Information Podcast

Fourth Grade: The Water Cycle

Welcome to the teacher background podcast for Unit 11! We will be covering what students already know about water and weather preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Water is vital to our survival. We use water to grow food and to drink. Water helps us with transportation. We even use water to clean. Water is unique because it can be a solid, liquid, or gas. Its liquid form is water, its solid form is ice, and its gas form is water vapor. In this unit, students explore how water moves between these three forms in the water cycle.

In third grade, students learned about the weather. They compared and described day-to-day weather in different locations at the same time. Students explored wind direction, precipitation, and air temperature. Wind causes clouds to move to different locations, which affects the weather in those locations. Clouds affect an area's precipitation. Rain, snow, hail, and sleet are types of precipitation. Clouds also affect air temperature.

In fourth grade, students will learn about the water cycle. The water cycle is the continuous process of water moving throughout Earth on land and in the air. Three steps to the water cycle are evaporation, condensation, and precipitation. The sun has a key role in the water cycle because it is the major source of energy. The sun heats the water on the Earth's surface and causes it to evaporate. When water evaporates, it turns from a liquid into a gas called water vapor. Water vapor rises from land into the air. This leads us to the next part of the water cycle process called condensation. In this step, the water vapor cools in the air and turns back into a liquid. When the water condenses, it forms clouds in the sky. When a lot of water gathers in the clouds, the water droplets become heavy. The air is unable to hold the water droplets anymore. This is when precipitation occurs. In this step of the water cycle, water falls back to Earth's surface as rain, hail, sleet, or snow. Precipitation provides the water needed on Earth's surface for the water cycle to repeat. Once again, the sun heats the water on the surface, and the cycle begins again.

A common misconception among students is that water disappears when it evaporates. They think this because they can no longer see the water. A key takeaway from this unit is that water doesn't disappear. It becomes water vapor, which is an important part of the water cycle.

Unit 12:

Teacher Background Information Podcast

Fourth Grade: Engineering Design: Weathering, Erosion, and Deposition

Welcome to the teacher background podcast for Unit 12! We will be covering what students already know about changes to Earth's surface preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Earth's surface varies in appearance depending on where you live. Look outside your window. What do you see? Sometimes, the landscape is flat and smooth. Sometimes, it has hills or canyons. Maybe it's covered with rocks or sand. There are so many possibilities! However, no matter what the differences are in what it looks like, there's a commonality. Changes to the Earth's surface are the reason for its appearance.

In third grade, students learned that the Earth's surface is constantly changing. Weathering is a process that changes Earth's surface. Weathering is when Earth's materials break down into smaller pieces. These small pieces become a crucial component in something on Earth's surface that we use every day. Can you guess what it is? These weathered pieces become part of the soil. In third grade, students explored soil mixtures and how they're formed. They learned that soil is a mixture of minerals, weathered rock, and decomposed animal remains. Additionally, students learned how natural disasters rapidly change Earth's surface. Natural disasters include phenomena such as volcanic eruptions, earthquakes, and landslides. These disasters rapidly impact the Earth's surface, changing the landscape's appearance.

In fourth grade, students learn that weathering, erosion, and deposition cause slow changes to the Earth's surface. Weathering is the wearing down, or breaking apart, of the Earth's surface into smaller pieces. Next, through erosion, the pieces move to a new location. Deposition occurs when the pieces settle on Earth's surface.

In this unit, students explore how water, wind, and ice play a key role in the process of weathering, erosion, and deposition. Water, which includes ice and rain, weathers rocks. For example, when water continually flows over the surface of a rock, it wears the rock down. Additionally, the force of raindrops repeatedly pounding onto a rock's surface causes weathering. Depending on the location, water gets into the cracks of rocks and freezes. Once frozen, water expands in the rock's cracks and acts as a wedge, breaking the rock apart over time.

Water causes erosion, too. Weathered pieces of rock are carried by water. Ice also causes weathering and erosion. Glaciers are a great example. As glaciers move, they break apart and drag pieces of Earth's surface to new locations. Lastly, wind contributes to weathering, erosion, and deposition. Wind blows tiny pieces of Earth's materials against the surface, which causes weathering. Wind moves sand and dust in its gusts and deposits them in new locations.

A common misconception among students is that erosion and deposition are the same things. However, a significant takeaway from this unit is that erosion is the movement of weathered material, and deposition is when the material has settled on Earth's surface.

Unit 13:

Teacher Background Information Podcast

Fourth Grade: Weather Patterns Over Time

Welcome to the teacher background podcast for Unit 13! We will be covering what students already know about weather preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned about the weather. They compared and described day-to-day weather in different locations at the same time. Students explored wind direction, precipitation, and air temperature. The wind causes clouds to move to different locations, which affects the weather in those locations. Clouds affect an area's precipitation. Rain, snow, hail, and sleet are types of precipitation. Clouds also affect air temperature.

In fourth grade, students learn the difference between weather and climate. When learning about climate and weather, it's helpful to think about clothes. Your location's climate determines what type of clothes you have in your closet. The weather determines what clothes you wear each day.

Let's explore this concept further. If an area's climate is warm and humid with moderate precipitation, what clothes would you need in your closet? Shorts, short-sleeved shirts, sneakers, and flip-flops, to name a few! Imagine you check the weather on Monday, and it's hot and sunny. The clothes you choose for the day are shorts and flip-flops. You check the weather on Tuesday, and you see rain is in the forecast. Your clothes for the day are probably sneakers and a raincoat. Real-world connections like these make learning about weather and climate exciting for students.

Weather consists of the day-to-day, short-term changes in our atmosphere. Temperature, precipitation, wind direction, air pressure, and cloud coverage are examples of conditions that make up the weather. These weather events are considered "short-term" because they happen hourly, daily, or weekly. For example, when asked to describe the weather, you might say, "It's really hot today!" You usually check the daily weather to see if there is a chance of rain. Or, you might check that day's temperature to help you decide on clothes to wear. Weather can vary. One day, it might be sunny, and the next day, it might be rainy. Climate, on the other hand, is a long-term pattern of weather that is expected in an area.

Climate is the average weather conditions over an extended period of time (i.e., longer than 30 years). Average conditions include the area's usual precipitation, temperature, humidity, sunshine, and so on. Different areas of the world have different climates. For example, when asked to describe the climate of the South Pole, you might say, "The South Pole receives very little precipitation. It has low temperatures and some humidity." Remember, the weather can change quickly, even in a few hours. Climate, however, takes many, many years to change.

A common misconception among students is that an area's climate and weather are the same year-round. This is not the case, and exploring various climates will help clarify this misconception. Take a look at Dallas, Texas, for example. Dallas experiences warm, humid months in the summer. However, in the winter, the climate is cooler and windy. In terms of weather, the temperature varies depending on the month.

Unit 14:

Teacher Background Information Podcast

Fourth Grade: Energy Resources

Welcome to the teacher background podcast for Unit 14! We will be covering what students already know about natural resources preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Students are quickly engaged when learning about natural resources because of the numerous real-world examples. Students enjoy identifying the resources all around them and determining how the resources impact their life. When the concepts of renewable and nonrenewable resources are introduced, students are eager to understand why some things are easily replenished and why others are not.

In third grade, students learned about natural resources. Natural resources include water, plants, animals, fossil fuels, rocks, and minerals. Students explored how natural resources are used in construction, agriculture, transportation, and manufacturing products.

In fourth grade, students learn that natural resources are either renewable or nonrenewable. A renewable resource is a natural resource that naturally replenishes. Earth repeatedly makes the resource, so it's not easily used up. Wind, water, sunlight, plants, and animals are all renewable resources. We use these daily for things like generating power and consuming food. Nonrenewable resources, however, cannot be easily replaced. They take millions of years to form, and humans are using them much faster than the resource can form again. Once a nonrenewable resource is used up, it's gone forever. Coal, oil, and natural gas are nonrenewable resources that we use every day. They're used to generate heat and electricity and to produce gasoline.

In this unit, students explore the advantages and disadvantages of both renewable and nonrenewable natural resources. Renewable resources are extremely beneficial to the environment. They are less likely to create pollution or negatively impact Earth. What's more, since they naturally replenish, renewable resources won't run out. They will always be available for people to use. Occasionally, renewable resources are more costly to utilize than nonrenewable resources. For example, to harness sunlight and use it to power a home, solar panels must be purchased. Using nonrenewable resources, however, can be detrimental to Earth's environment. Using them often generates air and land pollution. Nonrenewable resources are easy to use, but they can be entirely used up. Once humans use all of a nonrenewable resource, it is gone forever.

A common misconception among students is that living things, like plants and animals, are nonrenewable resources. Students think this because, once you eat a plant or animal, that single one is gone. However, the entirety of that species is not gone just because you eat one of them. For example, if you eat one carrot, that individual carrot is now gone, but not all carrots are gone. You've only eaten one. Carrots will continue to renew through reproduction, which makes them a renewable resource. Similar examples can be used for animals.

Unit 15:

Teacher Background Information Podcast

Fourth Grade: Energy Use and Conservation

Welcome to the teacher background podcast for Unit 15! We will be covering what students already know about the conservation of natural resources preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Each day, people use various natural resources. We drink water. We consume plants and animals as food. Fossil fuels help transport us to work, school, and home. Energy lights and heats our homes. Many of the items we use are made from natural resources. As you can see, natural resources are crucial in our lives. Therefore, students are highly engaged when learning about the importance of conserving, properly disposing of, and recycling natural resources.

In third grade, students learned about the importance of conserving natural resources. Conserving natural resources means protecting Earth's resources and using them responsibly. Water, plants, animals, fossil fuels, rocks, and minerals are natural resources that people use daily. Without them, humans wouldn't be able to survive. Therefore, conserving them is crucial. Students learned that reducing, reusing, and recycling natural resources aids in conserving them.

In fourth grade, the standard expands to include the critical role of energy resources in human life. It also includes how the conservation, disposal, and recycling of natural resources impact the environment.

Natural resources produce the energy humans depend on each day. Fossil fuels, like coal, oil, and natural gas, are nonrenewable natural resources. We use fossil fuels to generate heat, electricity, and gas. Fossil fuels require millions of years to form. That means, once humans use the fossil fuels up, they're gone forever. Conserving fossil fuels ensures that they last as long as possible. The use of fossil fuels negatively impacts the environment by causing land, air, and water pollution. Fortunately, we can also get energy from renewable resources, such as wind, sunlight, and water. These resources are less likely to pollute the Earth. A way to conserve energy is to turn off lights and appliances when they're not being used. Other renewable resources, such as plants and animals, need to be conserved, too. It is possible to use these resources up before they're able to replenish.

Disposing of natural resources correctly reduces the negative impact on the environment. If you dispose of something incorrectly, it can cause air, water, or land pollution. Often, what we throw away ends up in a landfill. A lot of these items are made from materials that take many, many years to break down. Recycling is a great way to protect Earth's resources. Paper, plastic, cardboard, glass, and other materials are recyclable. When you recycle items made from those materials, the items do not end up in a landfill. Instead, they undergo a process to become something new.

A common misconception students have is that fossil fuels are a renewable energy source because they come from plant and animal remains. Therefore, conserving them is not important. However, a takeaway from this unit is that fossil fuels are nonrenewable because they take millions of years to form. Also, it's important to conserve them because of their negative impact on the environment.

Unit 16:

Teacher Background Information Podcast

Fourth Grade: Natural Resources and Properties of Rocks

Welcome to the teacher background podcast for Unit 16! We will be covering what students already know about natural resources preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned about the importance of conserving natural resources. Conserving natural resources means protecting Earth's resources and using them responsibly. Water, plants, animals, fossil fuels, rocks, and minerals are natural resources that people use daily. Without them, humans wouldn't be able to survive. Therefore, conserving them is crucial.

Students learned that reducing, reusing, and recycling natural resources aids in conserving them. Reducing means using less of a resource, like taking a shorter shower. Reusing a natural resource means using an item more than one time. Sometimes, that can be repurposing the item. Other times, it's reusing the same item for the same purpose, like refilling a reusable water bottle. Finally, recycling is key to conserving natural resources. Many of the items we use each day can be recycled, which means that when disposed of properly, they are turned into something new.

In fourth grade, students determine the physical properties of rocks that allow the rocks to store Earth's natural resources. Natural resources stored within rocks include oil, natural gas, and even water. Sedimentary rocks are one type of rock that store natural resources. Sedimentary rocks form from minerals, pieces of rock, soil, and organic material. Sedimentary rocks are the product of 1) weathering of preexisting rocks, 2) transport of the weathering products, 3) deposition of the material, followed by 4) compaction, and 5) cementation of the sediment to form a rock. Can you picture the various materials getting compressed? They would not be one, solid chunk. Instead, there would be tiny spaces in sedimentary rocks. The tiny spaces in rocks are called pores. We label any rock with pores as a porous rock. The empty spaces in porous rocks fill with natural resources like oil, natural gas, and water. Porous rocks are like a sponge! Rocks without pores act as a seal and trap the natural resources underground.

A common misconception among students is that the spaces between different rocks hold natural resources. Students don't realize that it's not the spaces between different rocks, but the spaces within individual rocks. This unit clarifies that misconception by emphasizing the physical properties of porous rocks and how they allow the individual rock to hold natural resources.

Unit 17:

Teacher Background Information Podcast

Fourth Grade: Engineering Design: Producers Make Food

Welcome to the teacher background podcast for Unit 17! We will be covering what students already know about organisms in environments preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

Wouldn't it be great if we could go outside, soak up the sunshine, and instantaneously be filled with food and energy? While this, unfortunately, isn't possible for humans, it is possible for plants. In this unit, you'll explore how plants use the sun's light for energy to produce their own food.

In third grade, students explored the flow of energy in a food chain. Food chains start with the sun and include plants and animals. The sun provides energy to nearly every living thing. In a food chain, plants produce their own food using the sun's light. That means energy transfers from the sun to plants. In an ecosystem, there are animals that consume plants. When these animals consume the plants, energy transfers (as food) from the plants to the animals. Sometimes, animals eat other animals, and energy transfers from one animal to the other.

Let's study the flow of energy through a food chain in a pond ecosystem. A common food chain includes the sun, grass, grasshoppers, frogs, and hawks. The sun provides energy to the grass. Grasshoppers eat the grass, so energy transfers from the grass to the grasshoppers. Next, frogs eat the grasshoppers, transferring energy from the grasshoppers to the frogs. Finally, hawks eat the frogs, transferring energy from the frogs to the hawks. If a food chain changes, there can be negative effects on the ecosystem. For instance, if frogs are removed from this pond's food chain, there will be less food for the hawks. The hawks may have to move to another place that has frogs or another food source. Also, there won't be frogs to eat the grasshoppers. That means the population of grasshoppers will increase, which causes more grass to get eaten.

In fourth grade, students dive deeper into organisms in environments and learn how producers make their own food. Often, producers are plants. Plants make their own food using sunlight, water, and carbon dioxide. This process is called Photosynthesis but your students don't need to learn that term. Let's identify the important parts of a plant that allow it to make its own food. The parts include the leaves, roots, and stem. The leaves contain a chemical that absorbs sunlight. They also have tiny pores that carbon dioxide passes through. A plant's roots soak up water, and the stem transports the water to other parts of the plant. Now that you know the purpose of a plant's different structures, let's explore the process of a plant making its own food.

The leaves contain a chemical called chlorophyll. Chlorophyll absorbs energy from the sun's light. The plant uses light energy to change water and carbon dioxide into oxygen and sugar. The sugar, called glucose, provides energy for the plant to grow. The plant also stores glucose in its leaves, roots, and fruits. Oxygen is released into the air from the plant's leaves. This oxygen is what we use to breathe.

The cycling of matter is essential in this process. As the plant lives and grows, matter taken from the air and from the ground as water continues to add to the plant. As other organisms live and die, some of their matter is returned to the air and ground. Then, it is available for plants to be used for growth once again.

A common misconception students have is thinking plants "eat" sunlight or soil. Students assume that the sun's light is the food for the plant. This is not the case. The sun provides the energy and light needed for the plant to make its own food. Students may also think that plant matter comes from soil. In reality, plant matter comes

Unit 18:

Teacher Background Information Podcast

Fourth Grade: Matter and Energy in Ecosystems

Welcome to the teacher background podcast for Unit 18! We will be covering what students already know about food webs preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students explored a food chain's flow of energy. Food chains include the sun, plants, and animals. All food chains start with the sun. The sun provides energy to nearly every living thing. In a food chain, plants produce their own food using sunlight, showing how energy transfers from the sun to the plants. When animals consume plants, energy transfers (as food) from the plants to the animals. Sometimes, animals eat other animals, and energy transfers (as food) from one animal to the other.

In fourth grade, students describe the cycling of matter and the flow of energy through food webs. Food webs depict how the sun, producers, consumers, and decomposers interact in an ecosystem. The sun is a major energy source in food webs.

Producers, which are plants, get their energy from the sun's light. Producers make their own food using sunlight, water, and carbon dioxide. The cycling of matter is essential in this process. As other organisms live and die, some of their matter is returned to the air and ground. Then, it's available for plants to use for growth. Producers are often the food source for other organisms. Producers transfer matter and energy to the animals that eat them. For instance, grass is a food source for rabbits. When rabbits eat grass, they receive its energy and matter.

Organisms that consume other living organisms are called consumers. There are three types of consumers: herbivores, carnivores, and omnivores. Herbivores eat only plants, carnivores eat only meat, and omnivores eat both plants and meat. When a consumer eats a producer, or when a consumer eats another consumer, it shows the cycles of matter and energy. For example, when a wolf eats a rabbit, two important things happen. The matter from the rabbit is used by the wolf to help it grow and repair its body. The rabbit also provides energy for the wolf. The rabbit contains energy, so when it's eaten by the wolf, the wolf gains energy to run and hunt.

The final important organisms in food webs are decomposers. Decomposers consume dead organic matter, such as plant and animal remains. The energy from the organic matter flows to the decomposer. Common decomposers are fungi, bacteria, and worms. Decomposers return important nutrients to the soil, which, in turn, plants use to grow.

As you can see, energy flows from the sun to producers, to consumers, to other consumers, and then to decomposers. Remember, matter is continuously cycling throughout the food web, too. Matter cycles between soil and air and among plants and animals as they live and die. Living organisms get water and gasses from the environment. When organisms die, they release matter back into the environment.

A common misconception students have is that organisms higher in a food web eat everything below them in the food web. For instance, in a food web containing the sun, grass, insects, snakes, rabbits, hawks, and bacteria, students may think hawks eat rabbits, snakes, insects, and grass. They assume because hawks are at the top of the web, everything below them is their food.

Unit 19:

Teacher Background Information Podcast

Fourth Grade: A Changing Texas Environment

Welcome to the teacher background podcast for Unit 19! We will be covering what students already know about fossils preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned that fossils are evidence of organisms from long ago. They identified two types of fossils: body fossils and trace fossils. Body fossils include fossilized bones, teeth, shells, and leaves. Trace fossils show how a plant or animal was active in an area. Footprints, eggs, and burrows are trace fossils. These fossils are traces that a living organism was present, even if we can't find its physical body. Students also learned that fossils are evidence of the environment long ago.

In fourth grade, the standard expands in complexity. Students learn to describe past environments based on fossil evidence. Preserved body fossils and trace fossils are important because they help people understand what life was like on Earth millions of years ago. Fossils are evidence of the species of plants and animals that were alive and where they lived. We can study their features and determine if species have changed. Fossils can even provide evidence of extinct species. Fossils also show us environmental changes. For example, fossils of shark teeth were found in a desert in Texas. What does this tell us about the environment long ago? Was the desert always a desert? No, the fossilized shark teeth are evidence that the area was once oceanic. Sometimes, an environment can change multiple times. Not only were shark teeth found in this desert, but another set of fossils was also uncovered. These fossils show evidence of land plants and reptile-like creatures. Based on the evidence, we know the oceanic environment changed into a coastal plain before becoming the desert we see now. Fossils provide us with information about past environments that we otherwise wouldn't have known existed.

A common misconception among students is that all fossils are bones. Additionally, they assume the fossils are the actual bones. This unit will explore various fossils, not just fossilized bones, and cover that these bones are actually rock, which should clarify this misconception.

Unit 20:

Teacher Background Information Podcast

Fourth Grade: Plant Structures and Functions

Welcome to the teacher background podcast for Unit 20! We will be covering what students already know about structures and functions preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned about animals' external structures and functions. A structure is something made up of parts, and a function is what the structure does. An organism's structures all have specific functions that aid in its survival. External structures are on the outside of the organism, so we can usually see them. A duck's webbed feet are a unique external structure. The webbed feet's function is to allow the duck to paddle easily through the water. Think of an elephant. What's an external structure that comes to mind? One structure is its long trunk. A trunk has many functions. It helps the elephant breathe, drink, and also cool down its body by spraying water. The next time you see an animal, identify an external structure. Then, try to identify its function!

In fourth grade, the standard expands, and students explore the structures and functions of plants. The main structures of plants are roots, stems, leaves, and flowers. Each structure has specific functions that enable the plant to survive in its environment.

Roots are structures that extend from the plant into the ground. One function of roots is to gather water and bring it into the plant. Roots expand to gather water from a larger area or extend to gather water from deeper in the ground. Another function of roots is to stabilize the plant. They prevent the plant from falling over or coming out of the ground. The next structure is the plant's stem. The stem's function is to move nutrients from the plant to its leaves. It's helpful to picture a plant's stem as a path that brings food and nutrients to the rest of the plant! Leaves are another important structure. Leaves are the location where plants make their own food using sunlight, water, and carbon dioxide. Additionally, leaves allow water and air to enter the plant. While plants are able to take in water through their leaves, it is more efficient to use the water taken in by their roots. Finally, a plant's flowers make seeds and fruits. The flowers attract insects to the plant. Insects spread the plant's pollen which assists in the plant's reproduction!

Plants' structures and functions vary depending on the environment. This is key to the plant's survival. For example, a pine tree has needles, which have a thick, waxy coating. The needle's function is to conserve water for the pine tree. A cactus has spines. The spines function to protect the cactus from animals that might eat it. The spines also cast shadows on the plant, providing shade.

A common misconception is that students assume each structure has one function. However, this is not the case as structures can have several functions. Let's consider a plant's roots, for example. The roots are a structure with several functions. They gather water for the plant, but also stabilize it.

Unit 21:

Fourth Grade: Physical Characteristics of Organisms

Welcome to the teacher background podcast for Unit 21! We will be covering what students already know about organism traits preparatory to this unit. You'll also learn how this unit builds on students' prior knowledge.

In third grade, students learned about animals' external structures and functions. A structure is a thing made up of parts, and a function is what the structure does. An organism's structures all have specific functions that aid in its survival. External structures are on the outside of the organism, so we can usually see them. A duck's webbed feet are a unique external structure. The webbed feet's function is to allow the duck to paddle easily through the water. Think of an elephant. What's an external structure that comes to mind? One structure is its long trunk. A trunk has many functions. It helps the elephant breathe, drink, and also cool down its body by spraying water. The next time you see an animal, identify an external structure. Then, try to identify its function!

In fourth grade, students learn to differentiate between inherited and acquired physical traits of organisms. Think about what you look like. What is your eye color? Is your hair straight or curly? Do you have freckles? We call these physical traits. They describe your appearance. All plants and animals have physical traits. Some are passed down from their parents, whereas other traits are influenced by the organism's environment. Traits are categorized as either inherited physical traits or acquired physical traits.

Inherited physical traits are traits an organism inherits from its parents. The traits are passed down from the parent to the offspring from generation to generation. Physical traits include hair or fur color, a pattern of stripes or spots, or the shape of leaves or ears. Acquired physical traits, on the other hand, come from the organism interacting with its environment. They are not passed down. If you bump your knee on a table, you might get a bruise. The bruise is a physical trait you've acquired from interacting with your environment. In nature, you will notice plants and animals with acquired traits. For example, an elephant might have a broken tusk from knocking down a tree. Now that you've learned the differences between inherited and acquired physical traits, try to find examples around you!

A common misconception students have is that inherited physical traits cause the offspring to look exactly like their parents. A reason for this misconception is that often, animals look very similar to their parents. For example, a baby elephant doesn't differ much in its appearance from its parents. Similarly, adult elephants all look very similar. To clarify this misconception, emphasize that the traits are similar but not exact. There will be differences among the elephants, even if they're minor. Also, think of a litter of puppies. Even though the puppies have the same parents, sometimes there is a variation of physical traits in the offspring. The traits are inherited, even if they differ.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - New Material

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 4, Teacher Resources, Unit Printables, Moon Chart Extension

Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Publisher's rationale for this change if different from overall rationale.

This resource is provided as an activity to enrich the unit.

Publisher's description of this change if different from overall description.

The printable provides teachers with an extension activity that elaborates on the learning within the unit.

Screenshot of Currently Adopted Content

N/A - new material

Screenshot of Proposed Updated Content

Fourth Grade: Phases of the Moon

	Lesson Time	5E
Moon Chart	20 minutes	Elaborate

Materials:

- the Moon Chart template

Lesson Guide/Plan:

1. Students will use the template provided to keep a moon journal. Each night, students will observe the moon and record the shape the moon appears.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - New Material

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 4, Teacher Resources, Unit Printables, Space Timeline Extension Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

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This resource is provided to enrich the unit.

Publisher's description of this change if different from overall description.
The printable provides teachers with an extension activity that elaborates on the learning within the unit.

Screenshot of Currently Adopted Content
N/A - new material

Screenshot of Proposed Updated Content

TEXAS SCIENCE **Extension Activity**

Fourth Grade: Phases of the Moon

	Lesson Time	5E
Space Timeline	20 minutes	Elaborate

Materials:

- Space Timeline Printable

Lesson Guide/Plan:

1. Students will read the space timeline and answer questions about how NASA researched and investigated Earth's moon.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - new resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Texas Science Studies Weekly: Fourth Grade, Teacher Resources, Publication Resources
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources

Publisher's rationale for this change if different from overall rationale.

These printables provide a summary of the materials needed for the hands-on activities, including those provided in the available materials kits.

Publisher's description of this change if different from overall description.

The materials lists consist of:

1. A comprehensive materials list. This list identifies all the materials needed for the activities by unit including teacher supplied materials.
2. A kit materials list organized alphabetically. This list includes quantities, materials information and identified materials available in a refill kit.
3. A kit materials lists organized by unit. This list includes quantities, materials information and the associated activity.

Screenshot of Currently Adopted Content

N/A - new resource

Screenshot of Proposed Updated Content

TEXAS SCIENCE

Materials List

Texas Fourth Grade

(* indicates items supplied by the teacher and not included in the kit)

Unit 1 Week 1	• box coverings (e.g., lid, sheet)* • boxes*	• plastic building blocks (six colors) • plastic cups
Unit 1 Week 2	n/a	
Unit 1 Week 3	• beverages (soft drinks, juice, etc)* • clear cups	• toothbrushes • white eggs*
Unit 1 Week 4	• balloons • buttons • cardboard/cereal boxes* • cardstock* • craft sticks • duct tape • egg cartons* • glue* • manila folders* • milk cartons*	• plastic building blocks • plastic recyclables* • poster paper* • resealable plastic bags • ribbon • rubber bands • scissors* • water bottles* • yarn
Unit 2 Week 5-6	• aluminum foil • balloons • bar magnets • beakers • bins, clear • boxes* • cereal, Total® brand • cinnamon powder • condiment containers, 1oz with lids • cork • craft sticks • crayons* • digital scales • erasers	• glue sticks* • index cards* • hand lenses • paper clip • plastic spoons • pencils, unsharpened* • quarters* • resealable plastic bag • rubber band • scissors* • table tennis balls • thermometer, touchless • vegetable oil* • water*

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Unit 3 Week 7	• beakers • chocolate syrup* • cinnamon powder • condiment containers, 1 oz • condiment containers, 4 oz • coffee filters • dish soap • food dye • gravel • hand lenses • hot plate	• lemonade mix* • milk chocolate M&M's® • paper plates • plastic spoons • rubber bands • salt • sand • sieves • sugar cubes • vegetable oil* • water*
Unit 4 Week 8	• Alka-Seltzer® effervescent tablets • baking soda • balloons • beakers • cereal* • condiment cups, 1 oz • condiment cups, 4 oz • digital scales	• dish soap* • food dye • graduated cylinders • hand lenses • soil • vegetable oil* • vinegar* • water*
Unit 5 Week 9-10	• anchor chart paper* • bag clips* • bar magnets • beaker • binder clips • bubble wrap • cardboard, round pieces* • CDs • cereal boxes* • chapter books* • clothespins • copy paper* • digital scales • duct tape • felt • hand lenses • iron filings	• jar lids* • magnets* • metallic surfaces* • masking tape • metersticks* • mini-clamps or tongs* • notebook* • pencils* • plastic cups • plastic lids • scissors* • skewers • stopwatches • steel tacks • toy cars • water* • water bottles*
Unit 6 Week 11-12	• aluminum foil • balloons • baseballs or large rocks* • bell • classroom technology • clear bins • cotton balls • dominoes • food coloring • golf balls • heavy string • marbles • masking tape • paper towel rolls*	• pencils* • pieces of cork* • plastic cups • play clay • pre-compressed Slinky® • pre-cut empty plastic containers* • rice • rubber bands • rulers* • scissors* • timer or stopwatches • voice-recording app/website* • water*

Unit 7 Week 13-14	• aluminum foil • anchor chart paper* • baking powder • baking soda • batteries, 9V • beakers • brass tacks • brown paper bags • bubble wrap • copper wire • craft sticks • crayons (blue and red)* • crocodile clips, dual ended • drink mix, powdered • electrical tape • felt • gelatin dessert mix • index cards* • hot plate • LED with wire leads • lemon juice* • magnets • masking tape • metal soup cans* • milk* • paper, poster or copy* • paper clips • paper cups • paper towels* • parchment paper • pepper • plastic cups • plastic wrap • rubber bands • rubber erasers • salt • scissors* • styrofoam cups • sugar • thermometers • tissues* • timers • water or hot chocolate* • wrapping paper*
Unit 8 Week 15	• batteries • bean bag • bulb • energy stick • flashlights • heat lamp • lamp • push light • scissors* • strands of string light • tape/magnet • thermometer, touchless • thermometers • wires
Unit 9 Week 16	• markers* • outdoor thermometer • rulers* • tape
Unit 10 Week 11-12	• black markers* • box cutter* • foam balls • foam poster boards • lamp • pencils or sticks* • pipe cleaners • scissors* • sticky notes • volleyball*
Unit 11 Week 18	• beakers • bowl, large • brass fasteners • cup • duct tape • eye droppers • food dye • glue sticks* • graduated cylinders • heat lamp • ice cubes* • laptops or tablets* • masking tape • mug or small cup* • paper plates • plastic storage container with lid • plastic wrap • plate • resealable plastic bags • rock, large* • sand • scissors* • shaving cream* • timer • water*

Unit 12 Week 20-21	• aluminum foil pans • aluminum foil loaf pans • anchor chart paper* • balloons • chalk • digital scale • glue sticks* • gravel • hardening chocolate syrup* • ice* • marbles, small* • marine sand • measuring cup, ½ cup • measuring spoon, 1 Tbsp* • pipe cleaners • plastic cups • poster paper* • potting soil	• resealable plastic bags • research materials* • rulers* • saltine crackers* • sand • salt • small clear containers with lid • straws • straws, thick • string • sticky notes • styrofoam cups • timers • toothpick flags • toothpicks • water* • water bottles*
Unit 13 Week 22	• calculators* • coloring pencils* • online research materials* • outdoor thermometer	• ruler with mm* • scissors* • stapler*
Unit 14 Week 23-24	• classroom technology for research* • coloring supplies* • copy paper*	• poster paper* • technology for video recording*
Unit 15 Week 25	• incandescent light bulb, 60W • lamps	• LED light bulb, 60W-equivalent
Unit 16 Week 26	• classroom technology for research* • cracker* • craft stick, jumbo • cup • digital scale	• graduated cylinders • poster board or anchor chart paper* • rocks sets • water*
Unit 17 Week 27-28	• anchor chart paper* • beakers • classroom technology for research* • clear bowls • fresh leaves* • graduated cylinders • hand lenses • lima bean seeds • masking tape • paper plates • paper towels*	• plastic soda bottle* • recycled containers* • resealable plastic bags • rulers* • seedling starter trays • shoebox* • small rocks • sticky notes • tape • water* • water-soluble fertilizer
Unit 18 Week 29	• apple* • classroom technology* • coloring supplies*	• crayons* • dice
Unit 19 Week 30	• classroom technology*	• coloring supplies*

Unit 20 Week 31	• celery stalks* • cups • food coloring • hand lenses • knife* • paper plates • plant with fibrous roots*	• plant with waxy leaves* • prickly pear cactus paddle* • scissors* • sticky notes • tablet/laptop* • tray* • water*
Unit 21 Week 32	• beads, assorted colors	• plastic cups
Unit 22 Week 33	• craft sticks • erasers • ice* • liquid glue* • oil* • plastic cups	• quarters* • salt • scissors* • thermometers • water*
Unit 22 Week 34	• Slinkys®	
Unit 22 Week 35	n/a	
Unit 22 Week 36	n/a	

Screenshot of Proposed Updated Content

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Alphabetized Texas Kit Materials List
Fourth Grade

Material	Unit	Quantity Needed	Details
9V batteries	7	6	
Alka Seltzer	4	6	tablets
aluminum foil	2, 6, 7	3	rolls, 1x25'
aluminum foil pans	12	18	12.75x10.38x1.5"
baking powder	7	1	10oz
baking soda	4, 7	1	1lb
balloons	1.4, 2, 4, 6, 12	2	25/pk, 9in
beaker	2, 5, 7, 11, 17	6	250mL, polypropylene
beaker, heat safe	2, 3, 7	6	250 mL, glass
bean bag	8	1	small, 4"
binder clips	5	1	12/pk
bowl, large	11	1	6qt, plastic
brass fastener	11	1	100/pk
bubble wrap	2, 5, 7	3	12x60x3/16"
buttons	1.4	30	
CDs	5	6	
chalk	12	1	12/pk, white
clothespins	5	1	30/pk
coffee filters	3	1	100/pk
condiment containers, 1 oz	2, 4, 22.33	140	1.5 oz, with lids
condiment containers, 4 oz	3, 4	3	50/pk, clear, 3.5 oz

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copper wire	7	1	100ft, bare, 20 gauge
cork	2, 6	6	cork stoppers
cotton ball	6	1	300/pk
craft sticks	1.4, 2, 7, 16, 17, 22.33	1	200/pk
D batteries	8	5	2/pk
dice	18	1	8/pk
digital scale	2, 4, 5, 12, 16	1	compact, 200 +/- 0.01g
dish soap	3, 4	1	14 oz
dominoes	6	3	sets of 28
duct tape	1.4, 5, 11	2	rolls, 2' x 10 yds
electrical tape	7	1	roll, 3/4"x22 yds
energy stick	8	1	7.5"
erasers	2	6	large wedge
eye droppers	11	1	20/pk
felt	5, 7	1	72x36", red
fertilizer	17	1	2.2lbs, water soluble for hydroponics
flashlight	8	2	plastic, D-cell, batteries included
foam balls	10	24	2" styrofoam balls
foam poster board	10	6	20x30"
food coloring	3, 4, 6, 11, 20	1	4 pk
gelatin dessert mix	7	7	4.2oz, yellow
golf balls	6	6	
graduated cylinder	4, 11, 16, 17	6	100 mL
gravel	3, 12	1	5lbs, medium, 3/8"
hand lenses	2, 3, 4, 5, 17, 20	2	6/pk, dual lens, 3X/6X

heat lamp	8, 11	1	clip-on, swivel head, 9" w/ 150W bulb
hot plate	3, 7, 11	1	single burner, solid top, 1000W
iron filings	5	1	12 oz
lamp	8, 10, 15	2	socket w/ base, 9ft cord
lead wires with alligator clips	7, 8	3	set of 6, 18 gauge, 18 in
LED light bulbs	7	6	white, LED with wire leads
light bulbs	8, 10, 15	1	LED, 9W, 60W incandescent equivalent
light bulbs, mini	8	1	10/pk, 1.5V
lima bean seeds	17	1	2oz
loaf pan	12	8	foil, 4x8 in
magnets	2, 5, 7	3	2/pk, 3" bar
marbles	6, 12	2	50/pk, 5/8"
masking tape	5, 6, 7, 11, 17	2	rolls, 1"x60yds
measuring cups	12	1	set of 4
packing tape	17	1	roll, 2"x110yds
paper clips	2	1	100/pk, #1
paper clips, jumbo	7	1	100/pk
paper cups	7	14	8 oz
paper plates	3, 11, 17, 20	1	50/pk, 9 in
paper plates, small	17	1	60/pk, 6 in
parchment paper	7	1	roll, 1x25ft
pepper	7	1	3.12 oz
pipe cleaners	10, 12	1	100/pk

plastic building blocks	1.1, 1.4	1	300/pk, 2x4, 50 of each: blue, light blue, green, orange, red, yellow
plastic container	2, 6, 11	6	clear, 14.25x8.25x4.75"
plastic container, small	12	2	8 oz, with lid
plastic cups	1.1, 1.3, 5, 6, 7, 11, 12, 16, 17, 20, 21, 22.33	3	50/pk, clear, 9 oz
plastic lids	5	6	plastic, w/ slit for 9 oz cup
plastic plate, small	11	1	6"
plastic spoons	2, 3	1	24/pk
plastic wrap	7, 11	1	roll
play clay	6	2	1 lb, white
pony beads	21	1	500/pk, assorted colors
potting soil	12	4	8 lbs
push light	8	1	set of 3, 2.75" puck lights w/ 3AAA batteries
resealable plastic bags, sandwich	1.4, 2, 11, 17	50	
resealable plastic bags, snack size	11, 12	50	
ribbon	1.4	1	roll, 3/4 x 28 ft
rice	6	2	1lb
rocks	16	6	sets of granite, limestone, obsidian, pumice, and sandstone, 2-3 cm
rubber bands	1.4, 2, 3, 6, 7	1	4 oz package, assorted
salt	2, 3, 4, 7, 12, 22.33	3	26.4oz box
sand	3, 11, 12	3	3.3 kg
seedling starter tray	17	1	32 cell plant inserts

sieve	3	4	plastic 10" sifter
skewers	5, 17	1	100/pk
slinkys	6, 22.34	1	slinky, metal
steel tacks	5, 7	1	100/pk, 7/16" thumbtacks
sticky notes	10, 12, 17, 20	2	pads, 3x3, canary yellow
stopwatches	5, 6, 7, 11, 12	6	digital
straws	12	1	50/pk, wrapped
straws, thick	12	1	50/pk, colossal, wrapped
string	6, 12, 17	2	spools, twine, pink (mason's line), 275 ft
string lights	8	2	LED string lights, plug in
styrofoam cups	7, 12	1	25/pk, 8 oz
sugar	7	1	1lb, granular
sugar cubes	3, 12	1	1lb
table tennis balls	2	1	6/pk
tape	9	1	roll, transparent, 3/4" w/ dispenser
thermometer, infra-red	2, 7, 8	1	touchless infrared
thermometer, out-door	9, 13	1	indoor/outdoor
thermometers, digital	7, 8, 22.33	6	digital, -50-70C
toothbrushes	1.3	6	
toothpick flags	12	2	50/pk
toothpicks	12	1	250/pk
toy cars	5	6	non-pull, 3"
yarn	1.4	2	skeins, 60 yds, blue

Screenshot of Proposed Updated Content
This document is more than 5 pages, a link is provided to view the entire document.
https://cdn.studiesweekly.com/online/resources/printables/13665/TX-04%20Alphabetized%20Texas%20Kit%20Materials%20ListsS.pdf

TEXAS SCIENCE

Texas Kit Materials Lists by Unit
Fourth Grade

Material	Unit	Activity	Quantity Needed	Details
plastic building blocks	1.1	3	240	6 prepared structures per group + 6 of each color per group
plastic cups		4	120	20 per group
plastic cups	1.3	2	4	
toothbrushes			6	1 per group
balloons	1.4	1, 4	6	1 per group
buttons			30	5 per group
craft sticks			12	2 per group
plastic building blocks			36	6 per group
rubber bands			12	2 per group
yarn		1, 3, 4	as needed, 6 balls	1 ball per group
resealable plastic bags, sandwich		3	as needed	
ribbon			as needed	
duct tape		3, 4	as needed	
hand lenses	2	1, 2	6	1 per group
aluminum foil		1, 2, 3, 5, 6, 7	as needed	1 2x2" piece per group
balloons			12	2 per group
bubble wrap			as needed	1 2x2" piece per group
condiment containers, 1 oz			74	7 per group + 8 per workstation
corks			6	1 per group
craft sticks			6	1 per group

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Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - new resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 21, Teacher Resources, Unit Printables, Trait Simulation Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2045

Publisher's rationale for this change if different from overall rationale.
This printable is needed for an activity in the unit.

Publisher's description of this change if different from overall description.
This activity gives students a template for the Trait Simulation activity.

Screenshot of Currently Adopted Content
N/A - new resource

Screenshot of Proposed Updated Content

Trait Simulation

Directions: Use beads to simulate the way parents pass on their traits to their offspring.

You have six beads that represent the mom's traits and six beads that represent the dad's traits.

- Record the parent's traits in the chart by writing the color of each bead.

To simulate the offspring's traits, pick three beads from the mom's cup and three beads from the dad's cup. The six new beads represent the offspring's traits.

- Record the results of the simulation in the chart and then answer the questions.
- Be sure to return the mom's beads to the mom's cup and the dad's beads to the dad's cup before picking six new beads for the next offspring.

Mom's Traits		Dad's Traits	
1. _____	4. _____	1. _____	4. _____
2. _____	5. _____	2. _____	5. _____
3. _____	6. _____	3. _____	6. _____

Offsprings 1's Traits	Offsprings 2's Traits	Offsprings 3's Traits	Offsprings 4's Traits
1. _____	1. _____	1. _____	1. _____
2. _____	2. _____	2. _____	2. _____
3. _____	3. _____	3. _____	3. _____
4. _____	4. _____	4. _____	4. _____
5. _____	5. _____	5. _____	5. _____
6. _____	6. _____	6. _____	6. _____

1. What are the similarities between the offspring's traits?

   _____

2. What are the differences between the offspring's traits?

   _____

3. Is any offspring exactly like a parent? Explain why you think this is.

   _____

4. Is any offspring exactly like their sibling? Explain why you think this is.

   _____

5. Does any offspring have a trait that the parents do not have? Explain why you think this is.

   _____

Answer Key

Trait Simulation

Directions: Use beads to simulate the way parents pass on their traits to their offspring.

You have six beads that represent the mom's traits and six beads that represent the dad's traits.

- Record the parent's traits in the chart by writing the color of each bead.

To simulate the offspring's traits, pick three beads from the mom's cup and three beads from the dad's cup. The six new beads represent the offspring's traits.

- Record the results of the simulation in the chart and then answer the questions.
- Be sure to return the mom's beads to the mom's cup and the dad's beads to the dad's cup before picking six new beads for the next offspring.

Parent Traits
Answers will vary depending on the assortment of beads given to students, but the mom's traits should be a mix of three colors and the dad's traits should be a mix of three colors not used in the mom's.

Offsprings 1's Traits	Offsprings 2's Traits	Offsprings 3's Traits	Offsprings 4's Traits
1. _____	1. _____	1. _____	1. _____
2. _____	2. _____	2. _____	2. _____
3. _____	3. _____	3. _____	3. _____
4. _____	4. _____	4. _____	4. _____
5. _____	5. _____	5. _____	5. _____
6. _____	6. _____	6. _____	6. _____

Answer Key

1. What are the similarities between the offspring's traits?
   Answers will vary.

2. What are the differences between the offspring's traits?
   Answers will vary.

3. Is any offspring exactly like a parent? Explain why you think this is.
   No. Half of the offspring's traits came from each parent.

4. Is any offspring exactly like their sibling? Explain why you think this is.
   No. Each offspring had a different mix of parent traits.

5. Does any offspring have a trait that the parents do not have? Explain why you think this is.
   No. The offspring's traits come from each parent - those traits stay the same.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource can be found online, Unit 17, Teacher Resources, Assessments, Producers Make Food: Performance Task Answer Key
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.
Important information was missing from the task.

Publisher's description of this change if different from overall description.
The answer key was missing the teacher instructions and the student facing task.

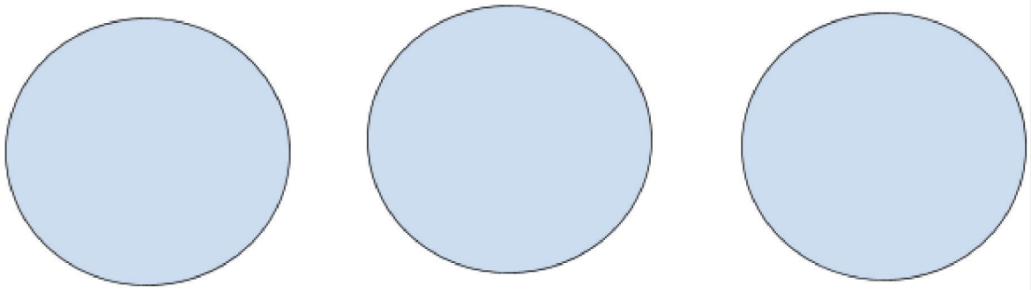
Screenshot of Currently Adopted Content

4.12A	Performance Task Answer Key	Option 1

Task 1

Option 1: Scenario Investigation (30 minutes)
Materials needed: Scenario Cards, Student Sheet, Pencil
Have students read the scenario on the cards and then investigate the plant growth on each card.

Scenario 1



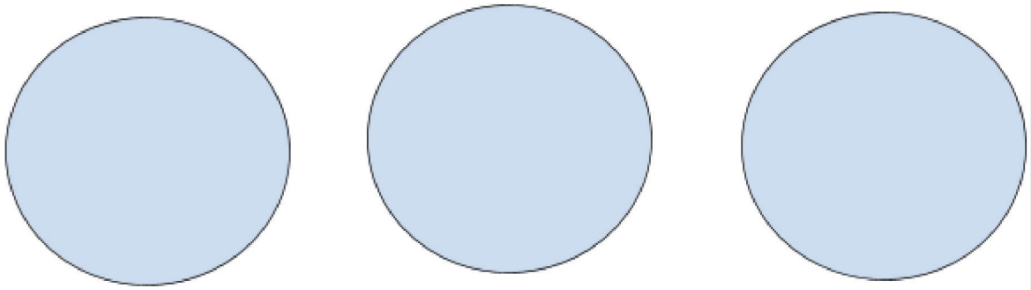
Plant 1
Watered with
Water

Plant 2
Watered with
Vinegar

Plant 3
Watered
with Oil

Scenario 1: Which plant will be able to make its own food? Investigate and explain how you know.

Scenario 2



Plant 1
Placed on a
windowsill

Plant 2
Placed on a
table

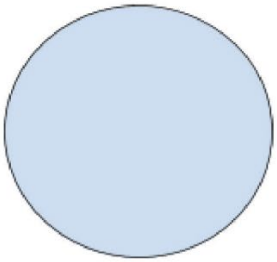
Plant 3
Placed in a
drawer

Scenario 2: Which plant will be able to make its own food? Investigate and explain how you know.

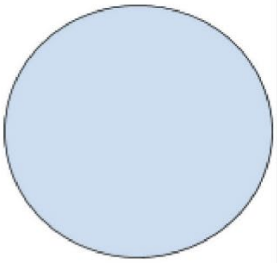
Scenario 3

Scenario 3: This plant has no soil. How is it still able to make its own food and grow?

Scenario 4



Plant 1
Placed on a table



Plant 2
Placed in an airtight box

Scenario 4: SW Character is having some trouble figuring out why Plant 1 is growing so well and also needs help investigating why Plant 2 is not growing. Can you investigate why? Explain your reasoning.

Plant 1:

Plant 2:

Key for Option 1:
Scenario 1: Which plant will be able to create its own food? Explain how you know.
Plant 1. Answers may vary on the explanation. Example: Plants need water to be able to make their own food and plant 1 is the only plant given water. Plant 2 and Plant 3 cannot make food without water so they cannot grow.

Scenario 2: Which plant will be able to make its own food? Investigate and explain how you know.
Plant 1 will be able to make its own food because it is in the direct sunlight and plants need sunlight to thrive. Plant 2 might be able to grow a little because it has some sun. Plant 3 will not thrive at all because it is not receiving any sunlight.

	Scenario 3: This plant has no soil. How is it still able to make its own food and grow? **Answers may vary but should say something about plants not actually needing soil to make their own food.** **Scenario 4:** SW Character is having some trouble figuring out why Plant 1 is growing so well and also needs help investigating why Plant 2 is not growing. Can you investigate why? Explain your reasoning. **Plant 1 is growing because it has carbon dioxide to be able to make food. Plant 2 has no carbon dioxide in the sealed box, so it cannot thrive and make food.**
Task 2	**Option 2: (15 minutes)** Have students work with a partner. They will take turns and use the following sentence stems to explain how producers make their own food. They can also discuss and explain their answers on their scenario cards. **Sentence Stems** Producers _____ their own _____. Producers need _____, _____, and _____ to make their own food. I know this because _____.
Task 3	**Key for Option 2**: **Sentence Stems** Producers **make** their own **food.** Producers need **carbon dioxide**, **water**, and **sunlight** to make their own food. I know this because **(answers may vary)**.

Screenshot of Proposed Updated Content

This document is more than 5 pages, a link has been provide in order to view the complete file.
https://cdn.studiesweekly.com/online/resources/printables/13769/TX-04%20Unit%2017%20Performance%20Task_%20Engineering%20Design_%20Producers%20Make%20Food.pdf

TEXAS SCIENCE Performance Task

Fourth Grade: Engineering Design: Producers Make Food

This performance task helps meet TEKS 4.12(A):

4.12A
Organisms and environments. The student describes patterns, cycles, systems, and relationships within environments. The student is expected to: A. investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter; Breakouts i. investigate how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter ii. explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter

Teacher Instructions

Most of this performance task should be completed individually. Some parts of the assessment will be shared with a small group.

There are two options for administering this performance task. Each is described below. Both can be used in the same classroom to equally assess the performance expectation. The assessments will provide different levels of challenge.

Assessment Map:		Option 1 Performance Task	Option 2 Performance Task
SEP	**Science and Engineering Practices**		x
	1B: Plan and Conduct Investigations and Design Solutions	x	
	1E: Collect Evidence	x	
	3C: Listen Actively and Discuss		x
	4A: Explain Discoveries and Innovations		x
RTC	**Science Standard**		
	Recurring Themes and Concepts		
	5B: Cause and Effect	x	
	5E: Energy and Matter	x	x
	5F: Structure and Function	x	x
	Depth of Knowledge		

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource can be found online, Unit 12, Teacher Resources, Unit Printables, Weathering, Erosion, and Deposition Lower Lexile Measure Articles
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2051

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.
There were missing articles in the printable

Publisher's description of this change if different from overall description.
The new resource has all articles at a lower lexile.

Screenshot of Currently Adopted Content

TEXAS SCIENCE
StudiesWeekly
WEATHERING, EROSION, AND DEPOSITION

Activity 4: Deposition

Weathering, erosion, and deposition slowly change the landscape. Earth's surface is weathered and eroded. Then, small pieces of rock are left in a new place. This is called deposition. Small pieces of rocks can be deposited anywhere. They may end up a few inches, a few feet, or many miles from where they were weathered.

Deposition can occur from water. Moving water can slow down, or lose energy. When this happens, the water may deposit small pieces of rock. Deposition can cause slow changes to Earth's surface over time. Water may deposit rock pieces in the same location over and over again. This can create a buildup. This creates a slow change to Earth's surface. Beaches are a result of a slow change to Earth's surface. They are caused by water depositing small rocks in the same area. In Hawaii, eroded lava is deposited onto the beaches. It appears as black sand.

Deposition can occur from wind. Wind can carry small pieces of rock. This wind might slow down or run into an obstacle, like a landform. The rock pieces can be deposited because of this. Deposition can cause slow changes to Earth's surface over time. Sand dunes are examples of changes to Earth's surface. They are caused by wind deposition. The wind deposits sand in certain areas. This buildup creates a sand dune.

Deposition can occur from ice. Ice can carry small pieces of rock. This ice might slow down or stop moving and deposit the rock pieces in an area. Deposition can cause slow changes to Earth's surface over time.
Glaciers can cause slow changes to Earth's surface. They can move down a mountainside and deposit rock. Do you see the deposits at the base of these mountains in this image? These deposits were left by a moving glacier. If you look closer, you can even see parts of the glacier.

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Screenshot of Proposed Updated Content

TEXAS SCIENCE
StudiesWeekly
WEATHERING, EROSION, AND DEPOSITION

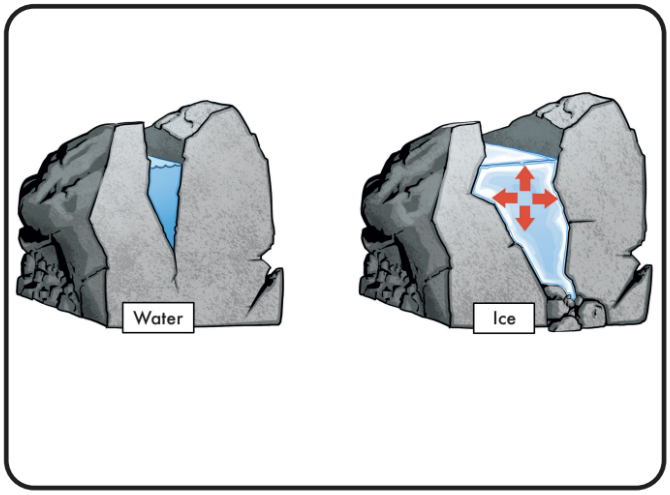
Activity 2: Weathering and Change

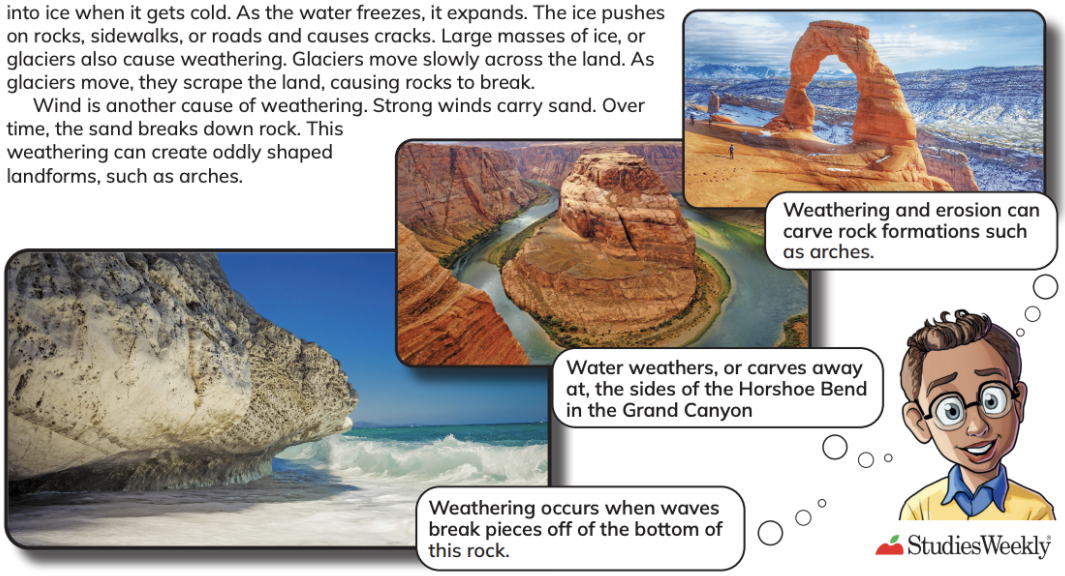
Weathering is a process that slowly breaks apart Earth's surface into small pieces. Weathering has been occurring as long as the Earth has existed. Over time, weathering can cause a landscape to change. It does this by carving rocks that make landforms.

Water, wind, and ice cause weathering. Weathering by water is the most common form. As water moves through creeks and rivers, it slowly breaks down rocks that form the riverbed. Over time, the river becomes deeper. It also becomes wider. With enough time, water that moves through riverbeds can carve canyons! Rainwater can also cause weathering. For example, if an area receives a lot of rain, the moving water can create a small temporary stream.

Ice is another cause of weathering. Water fills cracks in rocks, roads, or sidewalks. The water freezes and turns into ice when it gets cold. As the water freezes, it expands. The ice pushes on rocks, sidewalks, or roads and causes cracks. Large masses of ice, or glaciers also cause weathering. Glaciers move slowly across the land. As glaciers move, they scrape the land, causing rocks to break.

Wind is another cause of weathering. Strong winds carry sand. Over time, the sand breaks down rock. This weathering can create oddly shaped landforms, such as arches.

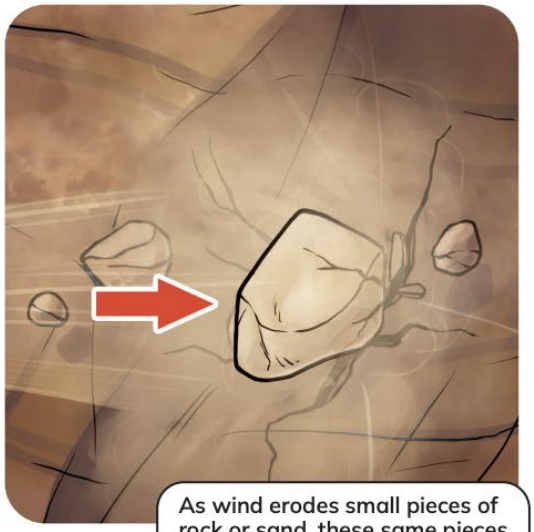




Activity 3: Wind Erosion

Have you ever been outside in windy weather? The wind can blow dust in your eyes. That dust is made up of tiny pieces of rock. Those rocks are being eroded by the wind. The wind is blowing them to another place. The wind may drive these tiny pieces into other rocks. When this happens, the rocks weather and erode. This process is slow and can take thousands of years or even longer. Wind erosion creates rock formations all around the world. For example, weathering and erosion due to wind and water can form curved rock formations called arches. Arches National Park in Utah has a lot of these arches. The same force of erosion that created these landforms will also eventually destroy them.

Image courtesy of Getty Images

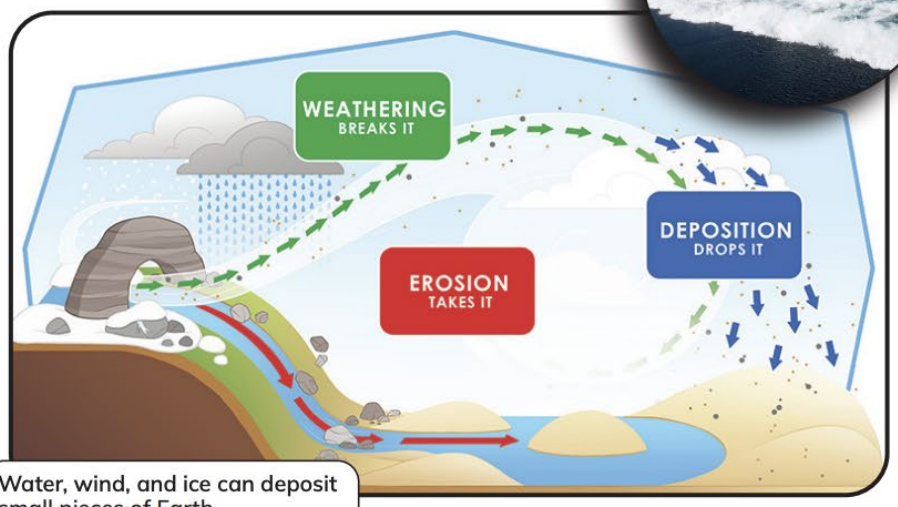


As wind erodes small pieces of rock or sand, these same pieces can weather land formations.

Activity 4: Deposition

Create a bird's-eye view drawing of your model. Color the water blue, the soil brown, the rocks gray, and any evidence of deposition orange. Place red Xs where the water moved slowly. Place green Xs where the water moved more quickly. Use your toothpick flags to help you color-code your drawing.

Honokatani Black Beach in Wainapanapa on Mauli Island



Water, wind, and ice can deposit small pieces of Earth.

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Activity 7: Reducing the Effects of Weathering, Erosion, and Deposition

Erosion affects our lives. Farmers rely on soil for farming. Many people live next to lakes or on mountains because of the views. Workers need access to mountain roads for avalanche and forest fire prevention. Many mountain villages across the globe rely on the stability of their landscapes. There is no way to stop erosion. However, humans have found ways to stabilize the landscape by limiting or preventing erosion.

Erosion in a coastal community

Activity 7: Plants

A common way to protect land from erosion is with plants. Plants can cause weathering. But they can also prevent erosion and deposition. The roots of plants grow into soil. The roots cling to the soil, holding it in place. This allows water to soak into the soil instead of washing it away. Small bushes cost about $20 each. A small bush covers an area that is about two feet long by one foot wide. Flowers can also be used. Their roots are smaller, so they are less likely to prevent erosion. Flowers cost about $10 and cover an area that is one foot by one foot.

Grasses along a creek slow the erosion of the land.

Roots hold soil in place and slow weathering and erosion caused by water.

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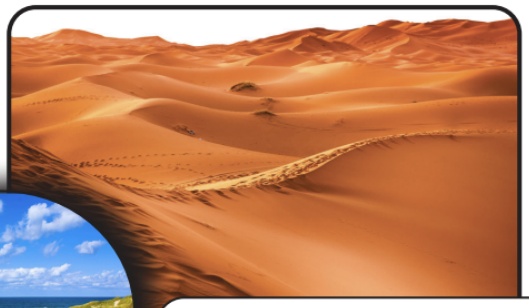
Activity 7: Sand

Sand can also protect land against weathering and erosion. Sand is piled into hills, or sand dunes, along the shoreline. When strong winds or big waves occur, the sand dunes protect the land. The wind and water weather and erode the sand dune first. Using sand doesn't cost a lot. One bag of sand costs about $5. A bag covers an area of about one square foot. Sand can also be dug up from the ocean floor. Then it is brought to the coastline. Sand used to prevent weathering and erosion will itself be weathered and eroded. It will also be deposited around the community. Sand will need to be replaced over time.



A sand dune protects the coastline from weathering and erosion.

A sand dune covered with grasses separates the ocean from a small town.

Activity 7: Rocks

Rocks and stones can be used to slow erosion caused by moving water. They can even prevent erosion. Rock walls can be built. They change the direction that water is flowing. This prevents weathering and erosion in one area. However, it creates weathering and erosion in another location. Rocks and stones can also be laid in the path of moving water. This slows the movement of the water. This prevents erosion from occurring. It only deposits water at the end of the rock path. A bag of rocks or stones that covers an area of one square foot is about $30.

A rock wall can be used to break waves.

A dredger can spray rock and seashell bits back onto the beach.

Activity 7: Pipes

Drainage pipes can prevent weathering, erosion, and deposition. The pipes drain moving water from one place to another. They need to be close to the source of moving water. This method prevents weathering, erosion, and deposition in one area. But, these things still occur at the bottom of the pipe. Drainage pipes typically do not need to be replaced. They usually cost more than other methods. Drainage pipes can cost about $40 to drain an area of two by one feet.

Water runs from drainage pipes into a creek.

Activity 7: Soil

Soil can be used to protect land. Soil and water are mixed together. This mud mixture is formed into stairs. The highest stair is built at the source of the flowing water. Weathering and erosion slow as water flows down the stairs. Sometimes weathering and erosion can be prevented. This happens when water is absorbed into the soil. The remaining water is deposited at the bottom of the stairs. Soil structures need to be maintained. They can wear down if they are not built with plant structures. Often, communities that use soil structures, such as stairs, will use plants to anchor each layer of soil in place. A bag of soil that covers an area of one square foot is $8.

Soil built in a stairlike structure slows weathering and erosion by absorbing water into each layer.

Image courtesy of Getty Images

Activity 7: Habitat Rebuilding

A habitat is a place where plants grow or animals live. Weathering, erosion, or deposition can destroy habitats. A habitat can be rebuilt when those things are prevented. Animals can live and plants can grow in rebuilt habitats. Soil or sand can prevent weathering and erosion along coastlines. This can also provide homes for plants and animals. Rocks and plants can prevent weathering and erosion where there is moving water. They can also prevent deposition. This can provide homes for new plants, such as flowers and bushes. It can also provide homes for animals like frogs, rabbits, and deer. Drainage pipes can also prevent weathering and erosion. The pipes move water from one area to another. This can create a new habitat for plants, such as lily pads or water lilies. It can also create new homes for fish, frogs, and ducks.

Image courtesy of Getty Images

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resources is found online, Unit 7, Teacher Resources, Unit Printables, Conductors and Insulators: Materials List A
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2050

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.

The unit has a materials list A and B. Materials List B was uploaded twice in place of Materials List A.

Publisher's description of this change if different from overall description.

The Materials List A was missing.

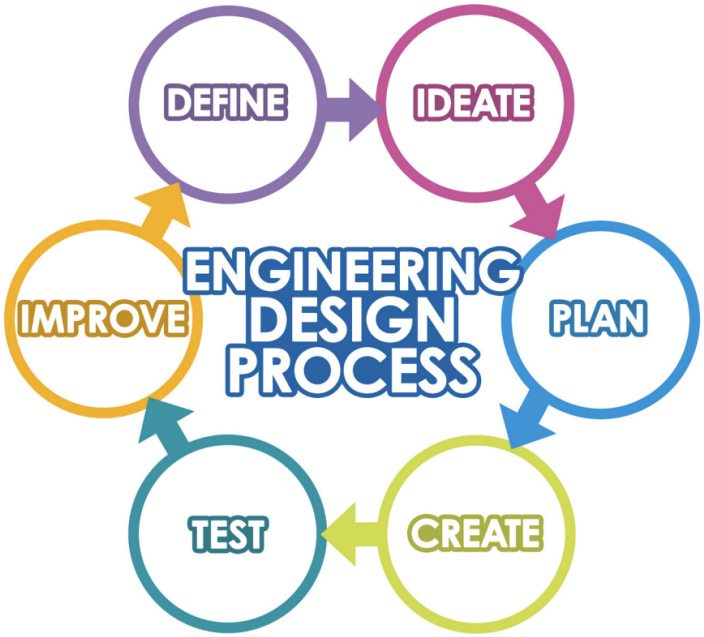
Screenshot of Currently Adopted Content

Name: **Date:**

Conductors and Insulators: Materials List B

- **baking soda**
- **baking powder***
- **beakers, 250 ml**
- **brass tacks**
- **brown paper bags***
- **bubble wrap***
- **craft sticks**
- **crayons**
- **drink mix, powdered**
- **gelatin dessert mix***
- **index cards**
- **lemon juice**
- **magnets, bar***
- **milk**
- **paper clips**
- **pencils**
- **pepper***
- **plastic cups (clear), 8 oz**
- **rubber erasers***
- **salt**
- **scissors**
- **sugar**
- **tinfoil**
- **water**
- **wrapping paper***

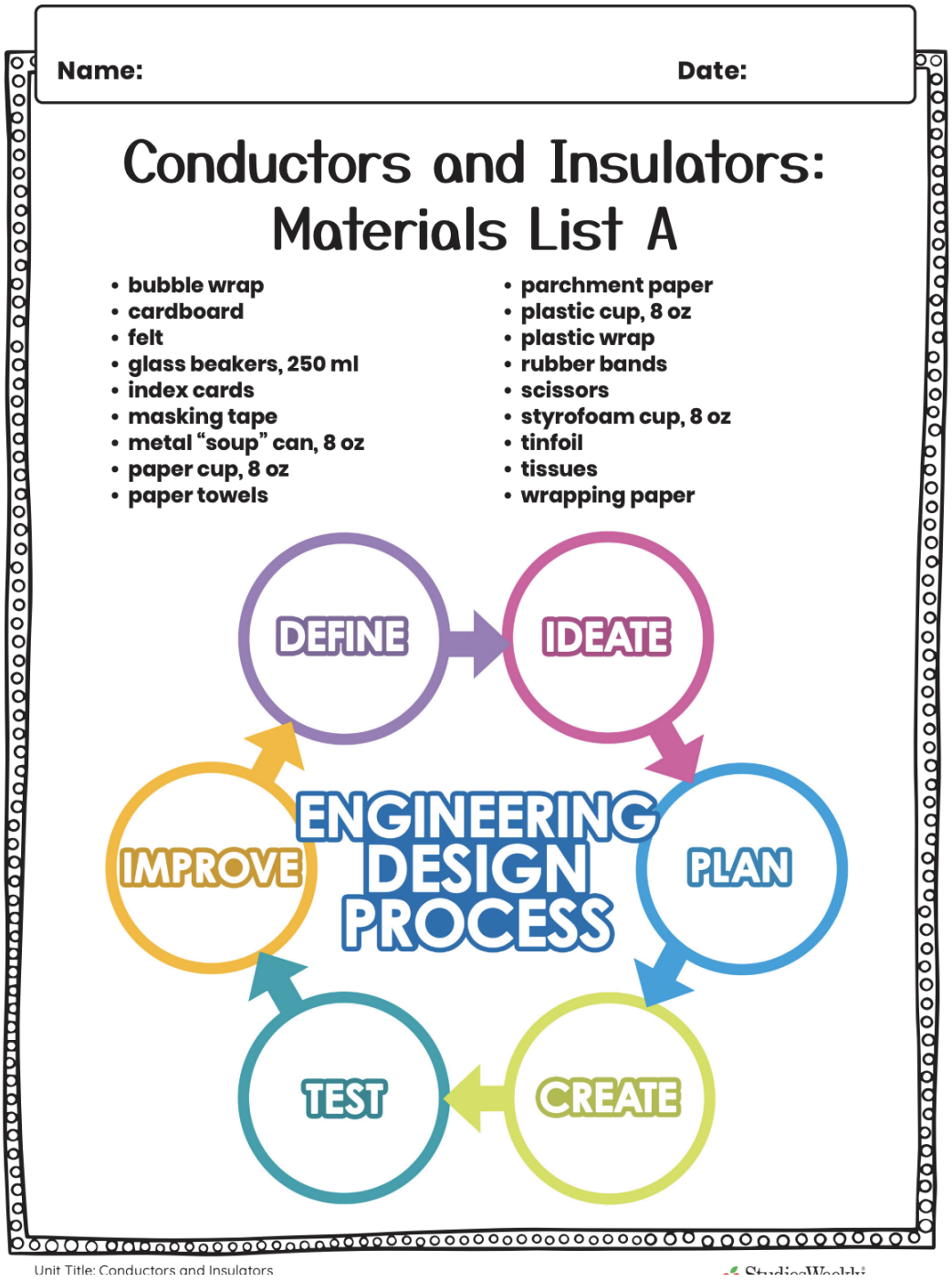
*Materials with an asterisk will not be tested in Activities 7 or 8. These are additional materials that can be included so that students can assess whether these materials will act as conductors or insulators.



Unit Title: Conductors and Insulators

StudiesWeekly

Screenshot of Proposed Updated Content



Description of the specific location and hyperlink to the exact location of the currently adopted content.

Update to Content Not Reviewed by SRP

This resource is found online, Unit 4, Teacher Resources, Assessments, Lava Lamps: Performance Task Answer Key
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above

Publisher's rationale for this change if different from overall rationale.
Answers are missing in the answer key.

Publisher's description of this change if different from overall description.
Answers are added in

Screenshot of Currently Adopted Content
Because this file is more than 5 pages, a link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/9640/TX-04%20U4%20Performance%20tasks%20-%20TX-04%20Unit4%20AKS.pdf

Name _____ Date _____

Texas Science Studies Weekly: Fourth Grade

Performance Task: Option 1: Observe Conserve Matter CER

4.6C

A group of students created a mixture, using the following solids and liquids.

					
glass beaker 25g	salt 5g	water 120g	oil 5g	sand 5g	Total mass of mixture: 160g

1. What is the total mass of only the salt, water, oil, and sand before it was combined?

_____ g +	_____ g +	_____ g +	_____ g =	_____ g
salt	water	oil	sand	Total

Screenshot of Proposed Updated Content

Because this file is more than 5 pages, a link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/14007/Performance%20tasks%20-%20TX-04%20Unit4%20(1)S.pdf

4.6C	Performance Task Answer Key	Option 1: Observe Conserve Matter CER

A group of students created a mixture, using the following solids and liquids.

					
glass beaker 25g	salt 5g	water 120g	oil 5g	sand 5g	Total mass of mixture: 160g

1. What is the total mass of only the salt, water, oil, and sand before it was combined?

5 g	+	120 g	+	5 g	+	5 g	=	135 g
salt		water		oil		sand		Total

2. Subtract the mass of the empty glass beaker from the mass of the glass beaker with water inside.

160g	−	25g	=	135g
Total mass with beaker		Mass of beaker		Mass of ingredients only

3. Use a complete sentence to create a claim to answer the question below:
When the students combined the ingredients to create a mixture, was the mass conserved?

When salt, water, oil, and sand are mixed together, mass is conserved.

4. Use the data from above to help support your claim:
What evidence do you have to support your claim?

The total mass of the beaker and ingredients is 160 g. If I subtract the mass of the beaker, 25 g, then I am left with just the mass of the ingredients, which is 135 g. This was the total mass of the ingredients before they were combined.

5. Include both your claim and evidence from above to explain why you are correct.

When salt, water, oil, and sand are mixed together, mass is conserved. We know this because the measured mass of the beaker and ingredients combined was 160 g. If we remove the mass of the beaker, 25 g, then we are left with the mass of the ingredients, which is 135 g. The total mass of the salt, water, oil, and sand before the ingredients were combined is 130 g. Therefore, even when matter is mixed, the matter is conserved.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found Unit 1, Week 4, Teacher Resources, Teacher Resources, What Do Engineers Do? Answer Keys
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2031&week_id=17449

Publisher's rationale for this change if different from overall rationale.
The document was missing.

Publisher's description of this change if different from overall description.
This document provides teachers with Student Edition answers for the entire week.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Answer Keys

Fourth Grade: What Do Engineers Do?: Answer Keys

Activity 1	**The Engineering Design Process and Practices**
Student Edition Answers	What problem did you define from the phenomenon of weather getting cold? **(Answers may vary.)** **Alana's Engineering Problem:** **(Alana cannot carry all of her supplies home.)** **Vocabulary:** engineering design process _____ **series of common steps used to create a functional item that improves science or society.** criteria _____ **standards by which engineers know that a solution is successful.** constraint _____ **a limitation or boundary that engineers face when designing solutions to problems (materials, time, or cost)**
Formative Assessment: Student Edition Responses	Use students' problem statements to check for proficiency of the success criteria. Use the "Define" section of the Engineering Design Process Rubric for guidance.
	Feedback: Pair with a Peer If students struggled to complete the formative assessment at proficiency level, ask them to problem-solve with a peer who showed mastery and compare their responses. Encourage students to assess the value of the feedback and whether or not they will incorporate it.

Activity 2	Ideate and Plan
Student Edition Answers	**Vocabulary:** **ideate:** to form ideas **Ideate a Solution** Brainstorm ideas with your group and record them in your science notebooks. Use the following questions to guide your discussion around creating an ideal solution to solve the engineering problem. Listen to all the proposals from your group members. • What materials will Alana carry home? • Will the prototype be carried or worn? • What type of structure will the prototype need to fit the criteria? • What materials will you use? • What tools will you need? **(Designs may vary.)** **Make a Plan** With your group, decide on the best possible solution and create a plan. Sketch a model of your solution. Label the materials you will be using in your model. Then use the flow chart to create a step-by-step plan that you can use to create your device. **(Plans for designs may vary but should include a sketched model with labeled materials.)**
Formative Assessment: Student Edition Response	Use students' ideations and design plans to check for proficiency of the success criteria. Use the "Ideate" and "Plan" sections of the Engineering Design Process Rubric for guidance.
	Feedback: Reteach If students struggled to complete the formative assessment at proficiency level, reteach the concepts in small groups or one-on-one time.

Activity 3	Create
Student Edition Answers	**Vocabulary:** **prototype:** the first version or draft of an engineering design. **Reflect and Connect** **(Answers may vary.)**
Formative Assessment: Student Edition Response	Use student prototypes to check for proficiency of the success criteria. Use the "Create" sections of the Engineering Design Process Rubric for guidance.
	Feedback: Circle Errors and Revise If students struggle to complete the formative assessment at proficiency level, circle incorrect ideas and/or areas for improvement on their responses

Activity 4	Test and Improve
Student Edition Answers	**Directions:** Test your created prototype by placing the chosen supplies in your container. Be sure to create a way to organize and record the data from your test in your science notebook. Your observations should be based on the criteria and constraints. **Test data may vary but should be organized in a meaningful way and indicate the evaluation of their prototype against the criteria and constraints.** **Improvements may vary but should indicate areas where the prototype could perform better under the criteria or better align with the constraints.** **Example: we weren't able to finish our prototype within the amount of time, so that affected the strength of our backpack. It ripped when we picked it up.**
Formative Assessment: Student Edition Response	Use students' tests and discussion on improvements to check for proficiency of the success criteria. Use the "Test" and "Improve" sections of the Engineering Design Process Rubric for guidance.
	Feedback: Circle Errors and Revise If students struggle to complete the formative assessment at proficiency level, circle incorrect ideas and/or areas for improvement on their responses and ask them to problem-solve how to correct their errors.

Activity 5	Communicate
Student Edition Answers	**Directions:** Create a poster that tells your audience (the class and Alana) about your process, solution, and results. Be sure to explain which materials you used and how those materials impacted your design based on the evidence you collected. **(Answers may vary.)**
Formative Assessment: Student Artifact	Use students' posters to check for proficiency of the success criteria. Refer to the "Test" and "Communicate" sections of the Engineering Design Process Rubric for guidance.
	Feedback: Written If students struggled to complete the formative assessment at proficiency level, provide written comments on their student edition.

General Formative Assessment Rubric

4 **Above Proficiency**	Student shows a complete understanding of the topic with no errors and/or misconceptions and not only can explain their thinking with reasons and/or evidence but can also make connections and transfer knowledge with ease.
3 **Proficient**	Student shows an understanding of the topic with very few errors and/or misconceptions and can explain their thinking with reasons and/or evidence.
2 **Approaching Proficiency**	Student is starting to show some understanding of the topic with few errors and/or misconceptions and has some ability to explain their thinking with reasons and/or evidence.
1 **Below Proficient**	Student shows a beginning-level understanding of the topic with several errors and/or misconceptions and has little to no ability to explain their thinking with reasons and/or evidence.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 11, Teacher Resources, Unit Printables, Tracking Your Water Usage Extension Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2038

Publisher's rationale for this change if different from overall rationale.
This extension activity provides a resource that will help students elaborate on the concepts within the unit.

Publisher's description of this change if different from overall description.
This resource was missing.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

Name: **Date:**

Tracking Your Water Usage

In this activity, you will learn why we need to conserve water. Then, you will track your own water usage and learn ways to reduce how much water you use during everyday activities.

Why do we need to conserve water? Doesn't the rain and snow provide us with enough fresh water?

- Many communities get their fresh water from groundwater. Precipitation does fall, but often there is too little rainfall in the summer to keep up with what we use.
- When rain or snow falls, it does not all seep into the groundwater. Much of it runs off into sewers, puddles, creeks, rivers and lakes. Then it must be cleaned and purified before humans can use it.
- In most communities, water that runs through our home faucets flows into public sewers. It costs money and uses a lot of energy to clean the trash, soap, and sewage out of our water. The less water we allow to flow out of our faucet, the more energy and money we will save.
- If we conserve water, we keep it in storage for the future and keep it available for wildlife and plants too.

Name: **Date:**

Tracking Your Water Usage

To track your water usage for one day, use this guide. You can copy the chart onto a sheet of paper or ask your teacher for a copy. For tasks with a *, ask your parents if the family did that activity on the day you are tracking.

Activity	Total Gallons of water used
Bath (# of baths x 35 gallons per bath)	
Shower (# of minutes x 5 gallons)	
Flushing toilet (# of flushes x 3 gallons)	
Washing hands (# of times x 2 gallons)	
Brushing teeth (# of times x 2 gallons)	
Drinking water (every 8 oz glass = 1/16 gallon)	
*Washing laundry (a small load uses 20 gallons)	
*Washing dishes by hand (uses 10-20 gallons each time)	
*Washing dishes in dishwasher (uses 12 gallons each time)	
*Watering lawn (# of minutes x 10 gallons)	
TOTAL gallons used	

Answer Key

Tracking Your Water Usage

To track your water usage for one day, use this guide. You can copy the chart onto a sheet of paper or ask your teacher for a copy. For tasks with a *, ask your parents if the family did that activity on the day you are tracking.

Activity	Total Gallons of water used
Bath (# of baths x 35 gallons per bath)	**Answers may vary.**
Shower (# of minutes x 5 gallons)	**Answers may vary.**
Flushing toilet (# of flushes x 3 gallons)	**Answers may vary.**
Washing hands (# of times x 2 gallons)	**Answers may vary.**
Brushing teeth (# of times x 2 gallons)	**Answers may vary.**
Drinking water (every 8 oz glass = 1/16 gallon)	**Answers may vary.**
*Washing laundry (a small load uses 20 gallons)	**Answers may vary.**
*Washing dishes by hand (uses 10-20 gallons each time)	**Answers may vary.**
*Washing dishes in dishwasher (uses 12 gallons each time)	**Answers may vary.**
*Watering lawn (# of minutes x 10 gallons)	**Answers may vary.**
TOTAL gallons used	**Answers may vary.**

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 3 , Teacher Resources, Unit Printables, “What is in this? Investigation Chart”
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2034

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher’s rationale for this change if different from overall rationale.

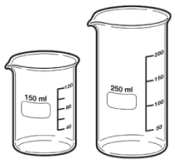
All instances of “beaker” were changed to “container” to include whatever materials teachers have available.

Publisher’s description of this change if different from overall description.

All instances of “beaker” were changed to “container” to include whatever materials teachers have available.

Screenshot of Currently Adopted Content

Name: Date:



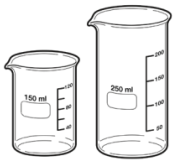
What Is in This?

Investigation Chart

Observe each beaker. Sketch what you notice. Use labels or colors to make your sketches more detailed to show physical properties (color, size, smell, texture, etc.). Then record questions that could help you investigate what is in the beaker.

A Sketch:	**B** Sketch:	**C** Sketch:	**D** Sketch:
Questions:	Questions:	Questions:	Questions:
E Sketch:	**F** Sketch:	**G** Sketch:	**H** Sketch:
Questions:	Questions:	Questions:	Questions:

Answer Key



What Is in This?

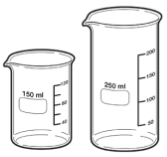
Investigation Chart

Observe each beaker. Sketch what you notice. Use labels or colors to make your sketches more detailed to show physical properties (color, size, smell, texture, etc.). Then record questions that could help you investigate what is in the beaker.

A Sketch: sketch of food dye in water (dissolved)	**B** Sketch: sketch of dish soap in water with a few bubbles on top (dissolved)	**C** Sketch: sketch of chocolate syrup in water (unmixed)	**D** Sketch: sketch of oil in water (unmixed)
Questions: Questions may vary. Example: Why is the liquid (color)? What turned the liquid this color? What is in here that is causing it to be this color?	Questions: Questions may vary. Example: Why are there bubbles? Why is there an iridescence to the liquid? What is the liquid made of? Why does the liquid have a clean smell?	Questions: Questions may vary. Example: Is that water? Is that chocolate syrup? Why don't they mix together?	Questions: Questions may vary. Example: Is that oil? Is that water? Why don't they mix together?
E Sketch: sketch of lemonade in water (dissolved)	**F** Sketch: sketch of sugar cube in water (dissolved)	**G** Sketch: sketch of cinnamon powder in water (unmixed)	**H** Sketch: sketch of sand and gravel in water (unmixed)
Questions: Questions may vary. Example: Why is the liquid a color? Why does the liquid smell sweet and like lemons? What is in the liquid that would cause these changes?	Questions: Questions may vary. Example: Why does the liquid appear a little cloudy? Why does the liquid smell sweet? Is this just water? What is in the beaker?	Questions: Questions may vary. Example: Is that cinnamon powder? Is that water? Why is the cinnamon powder floating? Why do they not mix?	Questions: Questions may vary. Example: Is that sand? Is that water? Why do the sand and rocks sink? Why don't sand and water mix? Does the sand take on water?

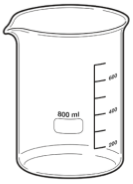
Screenshot of Proposed Updated Content

Name: **Date:**



What Is in This?

Investigation Chart



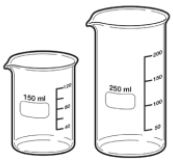
Observe each container. Sketch what you notice. Use labels or colors to make your sketches more detailed to show physical properties (color, size, smell, texture, etc.). Then record questions that could help you investigate what is in the container.

A Sketch:	**B** Sketch:	**C** Sketch:	**D** Sketch:
Questions:	Questions:	Questions:	Questions:
E Sketch:	**F** Sketch:	**G** Sketch:	**H** Sketch:
Questions:	Questions:	Questions:	Questions:

Unit Title: Mixtures and Solutions — Activity 2

StudiesWeekly

Answer Key



What Is in This?

Investigation Chart

Observe each container. Sketch what you notice. Use labels or colors to make your sketches more detailed to show physical properties (color, size, smell, texture, etc.). Then record questions that could help you investigate what is in the container.

A Sketch: sketch of food dye in water (dissolved)	**B** Sketch: sketch of dish soap in water with a few bubbles on top (dissolved)	**C** Sketch: sketch of chocolate syrup in water (unmixed)	**D** Sketch: sketch of oil in water (unmixed)
Questions: Questions may vary. Example: Why is the liquid (color)? What turned the liquid this color? What is in here that is causing it to be this color?	Questions: Questions may vary. Example: Why are there bubbles? Why is there an iridescence to the liquid? What is the liquid made of? Why does the liquid have a clean smell?	Questions: Questions may vary. Example: Is that water? Is that chocolate syrup? Why don't they mix together?	Questions: Questions may vary. Example: Is that oil? Is that water? Why don't they mix together?
E Sketch: sketch of lemonade in water (dissolved)	**F** Sketch: sketch of sugar cube in water (dissolved)	**G** Sketch: sketch of cinnamon powder in water (unmixed)	**H** Sketch: sketch of sand and gravel in water (unmixed)
Questions: Questions may vary. Example: Why is the liquid a color? Why does the liquid smell sweet and like lemons? What is in the liquid that would cause these changes?	Questions: Questions may vary. Example: Why does the liquid appear a little cloudy? Why does the liquid smell sweet? Is this just water? What is in the container?	Questions: Questions may vary. Example: Is that cinnamon powder? Is that water? Why is the cinnamon powder floating? Why do they not mix?	Questions: Questions may vary. Example: Is that sand? Is that water? Why do the sand and rocks sink? Why don't sand and water mix? Does the sand take on water?

Description of the specific location and hyperlink to the exact location of the currently adopted

content.
This resource is found online, Unit 3 , Teacher Resources, “Investigating Mixtures: Teacher Instruction Page"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2034

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher’s rationale for this change if different from overall rationale.

The materials list was adjusted so that it can be more accessible to teachers, as well as graphic organizers provided for ease of completing the activity.

Publisher’s description of this change if different from overall description.

All instances of “beakers” were replaced with containers and printables were added to the document with answer keys.

Screenshot of Currently Adopted Content

TEXAS SCIENCE Teacher Instructions

Fourth Grade: Mixtures and Solutions

Investigating Mixtures: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
45 minutes	Medium	Medium	Medium

Teacher Note:
Create various combinations of substances for students to investigate; students will discover that some mixtures of substances look different than other mixtures of substances.

Materials:

- 100mL beakers (40)
- cinnamon powder (as needed)
- chocolate syrup (as needed)
- dish soap (5–10 drops)
- food dye (5–15 drops)
- lemonade mix (as needed)
- sand and gravel mix (as needed)
- sugar cubes (five)
- vegetable oil (as needed)

Lesson Guide

Instructions

1. Fill each of the 40 100mL beakers with 50mL of room-temperature tap water.
2. In the following steps, you will create five sets of eight solutions and mixtures that can be used for group work. Four sets will be used for each of the four student groups to examine. One set of beakers will be used in the whole group debrief.
3. To create the first mixture, place 1–3 drops of food dye in five beakers.
   a. Swirl each beaker so that the food dye dissolves into the water.
   b. Label each beaker with the letter A.
4. To create the next mixture, place 1–2 drops of dish soap in five beakers.
   a. Swirl each beaker so that the dish soap dissolves into the water and creates a few small bubbles on the surface.
   b. Label each beaker with the letter B.
5. Create the next mixture by squeezing some chocolate syrup into the bottom of five beakers.
   a. Label each beaker with the letter C.
6. Next, gently pour a small amount of vegetable oil into four beakers by titling the beakers slightly and pouring enough vegetable oil to create a layer on top of the water.
   a. Label each beaker with the letter D.
7. To create the next mixture, pour a small amount of lemonade mix into five beakers.
   a. Swirl each beaker until the lemonade mix dissolves in the water.
   b. Label each beaker with the letter E.
8. Create the next mixture by placing one sugar cube in five different beakers.
   a. Swirl each beaker until the sugar cube dissolves.
   b. Tip: You may want to use warm water to dissolve the sugar cubes faster.
   c. Label each beaker with the letter F.

9. In five different beakers, gently sprinkle a small amount of cinnamon on top of the water.
   a. Label each beaker with the letter G.
10. To create the final mixture, drop a small amount of sand and gravel mix into five beakers.
    a. Label each beaker with the letter H.
11. Create four sets of eight mixtures by putting one beaker of each letter at each of the four group areas in your classroom.
    - Make sure there is enough room at each area to line the beakers up for a side-by-side comparison.
    - Keep the fifth set of eight beakers available for the whole group debrief.

Screenshot of Proposed Updated Content

Because this resource is greater than 5 pages, please follow the link to the entire document for review.
https://cdn.studiesweekly.com/online/resources/printables/13789/Investigating%20Mixtures_%20Teacher%20Instruction%20Page%20TX-04-SN%20Unit-3%20(1).pdf

TEXAS SCIENCE Teacher Instructions

Fourth Grade: Mixtures and Solutions

Investigating Mixtures: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
45 minutes	Medium	Medium	Medium

Teacher Note:

Create various combinations of substances for students to investigate; students will discover that some mixtures of substances look different than other mixtures of substances.

Materials:

- cinnamon powder (as needed)
- chocolate syrup (as needed)
- condiment containers, 4oz (40)
- dish soap (5–10 drops)
- food dye (5–15 drops)
- lemonade mix (as needed)
- sand and gravel mix (as needed)
- sugar cubes (five)
- vegetable oil (as needed)

Lesson Guide

Instructions

1. Fill each of the 40 4 oz condiment containers with 50mL of room-temperature tap water.
2. In the following steps, you will create five sets of eight solutions and mixtures that can be used for group work. Four sets will be used for each of the four student groups to examine. One set of containers will be used in the whole group debrief.
3. To create the first mixture, place 1–3 drops of food dye in five containers.
   a. Swirl each container so that the food dye dissolves into the water.
   b. Label each container with the letter A.
4. To create the next mixture, place 1–2 drops of dish soap in five containers.
   a. Swirl each container so that the dish soap dissolves into the water and creates a few small bubbles on the surface.
   b. Label each container with the letter B.
5. Create the next mixture by squeezing some chocolate syrup into the bottom of five containers.
   a. Label each container with the letter C.
6. Next, gently pour a small amount of vegetable oil into four containers by titling the containers slightly and pouring enough vegetable oil to create a layer on top of the water.
   a. Label each container with the letter D.
7. To create the next mixture, pour a small amount of lemonade mix into five containers.
   a. Swirl each container until the lemonade mix dissolves in the water.
   b. Label each container with the letter E.
8. Create the next mixture by placing one sugar cube in five different containers.
   a. Swirl each container until the sugar cube dissolves.
   b. Tip: You may want to use warm water to dissolve the sugar cubes faster.

   c. Label each container with the letter F.
9. In five different containers, gently sprinkle a small amount of cinnamon on top of the water.
   a. Label each container with the letter G.
10. To create the final mixture, drop a small amount of sand and gravel mix into five containers.
    a. Label each container with the letter H.
11. Create four sets of eight mixtures by putting one container of each letter at each of the four group areas in your classroom.

• Make sure there is enough room at each area to line the containers up for a side-by-side comparison.
• Keep the fifth set of eight containers available for the whole group debrief.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 3 , Teacher Resources, '"Creating Mixtures and Solutions: Teacher Instruction Page"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2034

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

The materials list was adjusted so that it can be more accessible to teacher

Publisher's description of this change if different from overall description.

All instances of "beakers" were replaced with containers.

Screenshot of Currently Adopted Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Mixtures and Solutions

Creating Mixtures and Solutions: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
45 minutes	Medium	Medium	Medium

Teacher Note

Prepare four sets of eight beakers and ingredients for students to create mixtures and solutions. Students will investigate what happens when two types of matter are combined and what makes a solution a specific type of mixture.

Materials:

- 100mL beakers (32)
- cinnamon powder (as needed)
- chocolate syrup (as needed)
- condiment containers with lids (32)
- dish soap (8–12 drops)
- food dye (16–20 drops)
- lemonade mix (2 tsp)
- sand and gravel mix (as needed)
- sugar cubes (4)
- vegetable oil (as needed)

Lesson Guide

1. Fill each of the 32 100mL beakers with 50mL of room-temperature tap water.
    a. Tip: you may want to use warmer water in some of the beakers. This will encourage a quicker reaction with some ingredients, such as the sugar cubes and lemonade mix.
2. In the following steps, you will create four sets of eight ingredients that can be used in group work to create mixtures and solutions.
3. Place 4–5 drops of food dye in four condiment cups.
    a. Label each cup with the letter A.
4. Place 2–3 drops of dish soap in four condiment cups.
    a. Label each cup with the letter B.
5. Squeeze 2–3 large drops of chocolate syrup into four condiment cups.
    a. Label each cup with the letter C.
6. Fill four condiment cups with about ½ inch of vegetable oil.
    a. Label each cup with the letter D.
7. Pour ½ tsp of lemonade mix into four condiment cups.
    a. Label each cup with the letter E.
8. Place one sugar cube in four condiment cups.
    a. Label each cup with the letter F.
9. Pour ½ tsp of cinnamon into four condiment cups.
    a. Label each cup with the letter G.
10. Pour 1 tsp of sand and gravel into four condiment cups.
    a. Label each cup with the letter H.

11. Create four group work stations in your classroom. At each workstation, place eight beakers with room temperature water and eight condiment cups of ingredients (one of each letter).
    - Make sure there is enough room at each area to line the beakers up for a side-by-side comparison.

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: Mixtures and Solutions

Creating Mixtures and Solutions: Teacher Instruction Page			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
45 minutes	Medium	Medium	Medium

Teacher Note

Prepare four sets of eight containers and ingredients for students to create mixtures and solutions. Students will investigate what happens when two types of matter are combined and what makes a solution a specific type of mixture.

Materials:

- cinnamon powder (as needed)
- chocolate syrup (as needed)
- condiment containers, 4 oz (32)
- condiment cups, 1 oz with lids (32)
- dish soap (8–12 drops)
- food dye (16–20 drops)
- lemonade mix (2 tsp)
- sand and gravel mix (as needed)
- sugar cubes (4)
- vegetable oil (as needed)

Lesson Guide

1. Fill each of the 32 4 oz condiment containers with 50mL of room-temperature tap water.
    a. Tip: you may want to use warmer water in some of the containers. This will encourage a quicker reaction with some ingredients, such as the sugar cubes and lemonade mix.
2. In the following steps, you will create four sets of eight ingredients that can be used in group work to create mixtures and solutions.
3. Place 4–5 drops of food dye in four 1 oz condiment cups.
    a. Label each cup with the letter A.
4. Place 2–3 drops of dish soap in four 1 oz condiment cups.
    a. Label each cup with the letter B.
5. Squeeze 2–3 large drops of chocolate syrup into four 1 oz condiment cups.
    a. Label each cup with the letter C.
6. Fill four 1 oz condiment cups with about 1⁄2 inch of vegetable oil.
    a. Label each cup with the letter D.
7. Pour 1⁄2 tsp of lemonade mix into four 1 oz condiment cups.
    a. Label each cup with the letter E.
8. Place one sugar cube in four 1 oz condiment cups.
    a. Label each cup with the letter F.
9. Pour 1⁄2 tsp of cinnamon into four 1 oz condiment cups.
    a. Label each cup with the letter G.
10. Pour 1 tsp of sand and gravel into four 1 oz condiment cups.
    a. Label each cup with the letter H.

11. Create four group work stations in your classroom. At each workstation, place eight 4 oz condiment containers with room temperature water and eight 1 oz condiment cups of ingredients (one of each letter).
- Make sure there is enough room at each area to line the containers up for a side-by-side comparison.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 3 , Teacher Resources, '"Mixtures and Solutions: Answer Keys"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2034

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.
The materials list was adjusted so that it can be more accessible to teacher

Publisher's description of this change if different from overall description.
All instances of "beakers" were replaced with containers.

Screenshot of Currently Adopted Content
This resources is more than 5 pages, a link is provided in order to review the entire file.
https://cdn.studiesweekly.com/online/resources/printables/8937/Mixtures-and-Solutions-Answer-Key_TX-04-SN_Unit-3.pdf

TEXAS SCIENCE — Answer Keys

Fourth Grade: Mixtures and Solutions

Activity 1	Phenomenon Introduction
Student Edition Answers	**My Question:** (Questions may vary.) **My Hypothesis:** (Hypotheses may vary.)
Formative Assessment: Self-Assessment	Have students grade themselves using the Questioning Rubric to check for proficiency of the success criteria.
	Feedback: Pair with a Peer If students struggled to complete the formative assessment at proficiency level, ask them to problem-solve with a peer who showed mastery and compare their responses. Encourage the students to assess the value of the feedback and whether or not they will incorporate it.

Activity 2	What Is in This?
Student Edition Answers	Answers may vary for the grouping of beakers and questions. Example:

Group 1	Group 2
Beaker A Beaker B Beaker E Beaker F	Beaker C Beaker D Beaker G Beaker H
Questions:	**Questions:**
(Is there more than one thing [type of matter] in this beaker? Why does it look like there is only one type of matter in the beaker? Where did the second type of matter go?)	(Why did the types of matter in these beakers remain unmixed? How can we separate the types of matter in each beaker to be sure of what they are?)

Vocabulary:
mixture: a combination of two or more substances. Each substance keeps its own physical properties and can be easily separated.

solution: a type of mixture in which one of the substances dissolves in the other. You cannot see the individual parts that were combined, and their physical properties may change.

Screenshot of Proposed Updated Content

This file is more than 5 pages, a link is provided in order to review the entire resource.
https://cdn.studiesweekly.com/online/resources/printables/13791/Mixtures%20and%20Solutions%20Answer%20Key%20TX-04-SN%20Unit-3S.pdf

TEXAS SCIENCE Answer Keys

Fourth Grade: Mixtures and Solutions

Activity 1	Phenomenon Introduction
Student Edition Answers	**My Question:** (Questions may vary.) **My Hypothesis:** (Hypotheses may vary.)
Formative Assessment: Self-Assessment	Have students grade themselves using the Questioning Rubric to check for proficiency of the success criteria.
	Feedback: Pair with a Peer If students struggled to complete the formative assessment at proficiency level, ask them to problem-solve with a peer who showed mastery and compare their responses. Encourage the students to assess the value of the feedback and whether or not they will incorporate it.

Activity 2	What Is in This?
Student Edition Answers	**Answers may vary for the grouping of containers and questions. Example:**

Group 1	Group 2
container A container B container E container F	container C container D container G container H
Questions:	**Questions:**
(Is there more than one thing [type of matter] in this container? Why does it look like there is only one type of matter in the container? Where did the second type of matter go?)	(Why did the types of matter in these containers remain unmixed? How can we separate the types of matter in each container to be sure of what they are?)

Vocabulary:
mixture: a combination of two or more substances. Each substance keeps its own physical properties and can be easily separated.

solution: a type of mixture in which one of the substances dissolves in the other. You cannot see the individual parts that were combined, and their physical properties may change.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 21 , Teacher Resources, Assessments, Physical Characteristics of Organisms Performance Task Answer Key
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2045

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

A portion of the activity was missing and is necessary to complete the performance task.

Publisher's description of this change if different from overall description.

Added in the "Meet my Creature" portion of the task as well as the teacher instructions.

Screenshot of Currently Adopted Content

This resource is more than 5 pages, please click on the link to see the entire file.
https://cdn.studiesweekly.com/online/resources/printables/9218/TX-04%20U21%20Performance%20Tasks_%20Physical%20Characteristics%20of%20Organisms%20AKS.pdf

4.13B	Performance Task Answer Key	Option 1

Task 1

Meet My Creature Instructions Page

Task 1: Flip a Trait

1. Flip a coin for each trait on the Traits Table to determine the trait your creature will have.
   a. If the coin lands on heads, circle the trait from Parent 1.
   b. If the count lands on tails, circle the trait from Parent 2.
2. In the My Creature's Traits chart on the **Meet My Creature** sheet, list the traits in the appropriate column to differentiate them as inherited or acquired. Provide evidence to explain how you categorized the traits.

	Traits						
Flip a Trait Table 	**body color**	**# of legs/ arms**	**# of eyes**	**eye color**	**horns**	**teeth**	**nose**
Parent 1 (heads) 	pink	four	two	blue	horns	top and bottom teeth	nose
Parent 3 (tails) 	green	six	four	purple	no horns	bottom teeth only	no nose

Screenshot of Proposed Updated Content

This resource is more than 5 pages, please click on the link to see the entire file.
https://cdn.studiesweekly.com/online/resources/printables/13792/TX-04%20Unit%2021%20Performance%20Tasks_%20Physical%20Characteristics%20of%20OrganismsS.pdf

TEXAS SCIENCE Performance Task

Fourth Grade: Physical Characteristics of Organisms

This performance task helps meet TEKS 4.13B: differentiate between inherited and acquired physical traits of organisms.

4.13B
Breakouts i. differentiate between inherited and acquired physical traits of organisms

Teacher Note
Students may share the coins and dice, but the task should be completed individually.

Materials
- coin (one per student)
- coloring supplies (as needed)
- die (one per student)
- **Meet My Creature Instructions Page** (one per student)
- **Meet My Creature** sheet (one per student)

Teacher Directions
1. Provide students with the **Meet My Creature Instructions Page**.
2. Have students read the directions and ask any questions they may have.
3. Provide students with the additional materials to complete the tasks.
    a. Tip: To help students manage their time for each task, you may want to set a timer.
4. For Task 3, students may be provided with the opportunity to use classroom technology to draw their creature instead of using paper and coloring supplies.
    a. Advanced Differentiation for Task 3 could include students adding additional physical traits on their creature, listing them as acquired or inherited, and providing evidence.
5. For Task 4, tell students they will present their creatures in pairs or small groups, or using one of the following alternatives:
    a. If there is time, have each student present their creature to the class.
    b. If time does not permit for you to hear each presentation, students may record their presentations using classroom technology for you to assess after the tasks.
    c. Students may present to you individually.
    d. Students may be assessed only on the written work and not on the presentation.
    e. A gallery walk may also be used for students to share their creatures.
6. As you circulate during the tasks, take anecdotal notes and begin completing the **Meet My Creature Rubric** for each student.
7. At the completion of the tasks, complete the **Meet My Creature Rubric** for each student and provide additional feedback as needed.

Note: If Options D or E are used for Task 4 (see step #5 above), then the presentation portion of the rubric would not be completed..

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 1, week 2, Teacher Resources, Teacher Resources, ”What Do Scientists Do? Answer Keys”
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2031&week_id=17447

Publisher’s rationale for this change if different from overall rationale.
This resources is missing.

Publisher’s description of this change if different from overall description.
This document provides teachers with Student Edition answers and feedback support.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content
This resource is more than 5 pages, please click on the link to see the entire file.
https://cdn.studiesweekly.com/online/resources/printables/13795/Unit%201%20Wk%202%20Answer%20KeyS.pdf

TEXAS SCIENCE — Answer Keys

Fourth Grade: What Do Scientists Do?

Activity 1	Lense of Recurring Themes and Concepts
Student Edition Answers	**Vocabulary:** **pattern:** **repeated** information that predicts **future** information **phenomenon**: observable event **recurring themes and concepts:** **ideas** that **repeatedly** occur in science and provide **connections** to other topics Look at the images of the poison ivy leaves. If humans touch poison ivy, they are likely to get a red, itchy rash. Now, look at the poison ivy leaves through the lens of patterns. Discuss your observations with a partner. Describe the similarities and differences you see between the images of the poison ivy leaves and other leaves you may have seen before. **(Answers may vary, but some may say that poison ivy has three green leaves, with distinct ridges on their leaves. They may have seen other leaves of different shape and color than the green poison ivy leaf.)** What questions could you ask about the patterns in this phenomenon? **(Answers may vary, but some may ask: Why are there three leaves? Why are the leaves green? Why do the leaves have ridges? Why do the leaves wind up the tree?)** How could the pattern you see help you make sense of this phenomenon? **(Answers may vary but some may say that the ridges on the green leaves are warning predators to stay away.)** Imagine poison ivy is growing in an area where people are camping, working or playing in the woods. How could observing the phenomenon help people take preventative measures to stay safe? **(Answers may vary, but some will say if people can identify the pattern of poison ivy, they are more likely to stay away from the leaves, learn from the reaction the leaves give off to develop ointments to treat poison ivy rashes, wear long sleeves and long pants, etc.)**
Formative Assessment: Student Edition Response	Use student edition responses to check for proficiency of the success criteria.
	Feedback: Written If students struggled to complete the formative assessment at proficiency level, provide written comments on their student edition.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 17, Teacher Resources, Unit Printables, "Wellness: Everyone has Strengths"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Wellness Connection

Fourth Grade: Producers Make Food

Activity 3 | Engineering Design Problem

WELL Everyone Has Strengths

	Lesson Time	5E
Everyone Has Strengths	30 minutes	Explore

Materials:

- N/A

Lesson Guide/Plan:

1. Read the article "Everyone Has Strengths" as a class.
2. Direct students' attention to the image in the article. Ask students to describe what is going on in the image. Ask:
   a. Do you think this girl has a difficult time painting? Why or why not?
   b. Do you think painting is a strength for her? Why or why not?
   c. Do you think she can develop painting as a strength with her limitation?
   d. What are strengths you see in your classmates?
   e. What strengths do you see in yourselves?
   f. How can you develop weaknesses into strengths?
3. Split the class into groups and hand out the cards from the graphic organizer . Each group will need a set of cards.
   a. Give them a certain amount of time to see how many challenges each team can finish.
   b. Remind students to use each other's strengths to collaborate and make it work, include everyone, and find a way to work together.
4. Debrief what students learned in the Team Task Challenge Cards graphic organizer activity.
   a. Which challenges were simple or challenging? Why?
   b. Did your group decide to have everyone work on one challenge together?
   c. Were there any strengths that stuck out to you about one of your classmates?
   d. What were they good at doing? Why?

Everyone Has Strengths	**Lexile® measure**	610L-800L
	Word Count	41
In a team, every single job is important. Everyone on the team has unique strengths. Collaborating means finding a way to use the strengths of each team member. You can accomplish and do some incredible things when you work with others!		

Wellness

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PRODUCERS MAKE FOOD: ACTIVITY 6

Everyone Has Strengths

In a team, every single job is important. Everyone on the team has unique strengths. Collaborating means finding a way to use the strengths of each team member. You can accomplish and do some incredible things when you work with others!

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 10, Teacher Resources, Unit Printables, "Wellness: Visual Communication"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2047

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Wellness Connection

Fourth Grade: Phases of the Moon

Activity 3 | Moon Phases

WELL **Communication Skills**

	Lesson Time	5E
Visual Communication	20 minutes	Explore

Materials:

- Art supplies
- paper

Lesson Guide/Plan:

1. Show students the images in related media.
   a. Ask students to infer what each image is trying to communicate.
   b. Ask: What can happen if the communication is not clear?
2. Have students read the article "Visual Communication" with a partner. Have partners brainstorm as many examples of visual communication as they can. Encourage students to look around the room and count how many examples there are in the classroom. Explain that visual communication is very effective and can be a fun way to communicate.
3. Direct students to highlight the definition of visual communication in their student edition article.
4. Would it be possible to tell an entire story only using pictures? (yes)
5. Hand out paper, crayons, and markers and encourage the students to create an image that shows a specific event.
6. Have the students do a gallery walk using a sheet of paper folded into four squares. They should use one square for each image they view. Students should write down what they think the artist is trying to show with their picture.
7. Choose a few images, and have the class share their ideas.
8. Have them put their images in their interactive notebooks and give their image a title.

Visual communication	**Lexile® measure**	610L-800L
	Word Count	62
Visual communication is using images to communicate with others. Images help you get information quickly without using a lot of words. Our computers, TVs, and cell phones all use visual communication. When you communicate with images, be very careful with the images you choose. Be sure to choose images that reflect your character. Whatever you share online can be shared many times.		

Wellness

Studies Weekly

PHASES OF THE MOON: ACTIVITY 3

Visual Communcation

Visual communication is using images to communicate with others. Images help you get information quickly without using a lot of words. Our computers, TVs, and cell phones all use visual communication. When you communicate with images, be very careful with the images you choose. Be sure to choose images that reflect your character. Whatever you share online can be shared many times.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 4, Teacher Resources, Unit Printables, "Wellness: Cooperation and Compromise"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE **Wellness Connection**

Fourth Grade: Lava Lamps

Activity 1 | Phenomenon Introduction

WELL Cooperation and Compromise

	Lesson Time	5E
Cooperation and Compromise	20 minutes	Elaborate

Materials:

- N/A

Lesson Guide/Plan:

2. Have students read the article "Cooperation and Compromise" in groups and use the "Popcorn Reading" strategy.
    a. Students will read until they want to pause, then say the name of another student. This passes the reading to the next student. This will help students practice cooperating to read the article together.
    b. Students should highlight the definitions of "cooperating" and "compromise" in the text.
3. Watch the video "Why are cooperation and diligence important?" found in related media (Explore More).
    a. What are some benefits you saw in the video when people were able to cooperate?
    b. Students should pair and share the definition for cooperation in their own words.
3. Give each student a copy of the graphic organizer **Finding a Compromise** .
    a. Students should complete the graphic organizer individually or with a partner.

Cooperation and Compromise	**Lexile® measure**	610L-800L
	Word Count	71
It helps to be adaptable when working and playing with others. Being adaptable means you are willing to cooperate and compromise when needed. Cooperating is working together to achieve a goal. Sometimes, when adapting, you have to look at different solutions. Then, you find a compromise that the group can agree on. Compromise is when some members of a group give up something so that everyone can agree on a solution.		

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LAVA LAMPS: ACTIVITY 1

Cooperation and Compromise

It helps to be adaptable when working and playing with others. Being adaptable means you are willing to cooperate and compromise when needed. Cooperating is working together to achieve a goal. Sometimes, when adapting, you have to look at different solutions. Then, you find a compromise that the group can agree on. Compromise is when some members of a group give up something so that everyone can agree on a solution.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 18, Teacher Resources, Unit Printables, "Wellness: Be Confident in Asking for Help"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2040

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Wellness Connection

Fourth Grade: Matter and Energy in Ecosystems

Activity 1 | Phenomenon Introduction

WELL Be Confident in Asking for Help

	Lesson Time	5E
Be Confident in Asking for Help	20 minutes	Elaborate

Materials:

- N/A

Lesson Guide/Plan:

1. Invite students to write down three talents or skills they know they have. Tell students you want them to write about things they know they are good at doing.
    a. Have students trade papers with a partner and add other talents or skills they see in that person to the list. Circle ones they agree on. Have students define the word "confidence" as a class.
    b. Have students highlight the definition of confidence in the student edition: "Confidence is when you know you are able to do something." Ask:
    c. What does it mean to be confident? (Answers will vary.)
    d. What are some ways you can build your confidence? (Answers will vary.)
    e. What are some talents you know you have?
2. Show students the images of different people from related media. Have students vote on whether or not the person looks confident. Reinforce body language that communicates confidence:
    a. smile
    b. eyes looking forward
    c. shoulders back
3. Read the article "Confidence in Asking for Help."
4. Direct student attention to the image with the article. Ask students to interpret the girl's body language.
    a. Turn to a partner and share your inferences for what this girl is feeling.
5. After reading the article, discuss:
    a. How can we be more confident in asking questions and asking for help? (Answers will vary. Point out that we first have to remember that asking for help is necessary and shows courage, not weakness.)
    b. How does asking for help build confidence? (The more we do it, the better we get at it, and asking for help allows us to get access to the resources we need.)
6. Show students the anchor chart .

Strategies to Help You Build Confidence

    a. Discuss the strategies with students. Have students glue the anchor chart into their interactive

Be Confident in Asking for Help	**Lexile® measure**	410L-600L
	Word Count	76

Confidence is when you know you are able to do something. You feel sure of your abilities. When you are good at something, you can feel confident. Everyone has something they are good at. Everyone has something that they struggle with. Becoming more confident helps you overcome your struggles. Use your courage and ask for what you need. Practice your confidence in asking for help, and you are more likely to get the help you need.

Wellness

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MATTER AND ENERGY IN ECOSYSTEMS: ACTIVITY 4

Be Confident in Asking for Help

Confidence is when you know you are able to do something. You feel sure of your abilities. When you are good at something, you can feel confident. Everyone has something they are good at. Everyone has something that they struggle with. Becoming more confident helps you overcome your struggles. Use your courage and ask for what you need. Practice your confidence in asking for help, and you are more likely to get the help you need.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 4 & 15, Teacher Resources, Unit Printables, "Wellness: Advocating for Change"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2035
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2042

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Wellness Connection

Fourth Grade: Energy Use and Conservation

Activity 5 | Phenomenon Explanation

WELL **Advocating for Change**

	Lesson Time	5E
Advocating for Change	25 minutes	Elaborate

Materials:

- Poster paper
- Poster-making supplies (markers, crayons, chalk etc.)

Lesson Guide/Plan:

1. Have students read the article "Advocating for Change" individually.
2. Ask the students what the words "advocate for change" mean. (When you "advocate for change," you are trying to improve something that you care about, whether for yourself or for someone else.)
3. What does advocating for change peacefully look like? (Ask students how they might do this in their lives. Share examples below.)
    a. Calmly express your voice and opinion in person or over social media.
    b. Respectfully communicate with individuals in leadership positions about your position or concern. Make sure you have a complete description of what you want changed and a proposal for how it should change.
    c. Make sure you are not infringing on others' rights or forcing them through threats or physical harm.
    d. Be patient with the process. Change is difficult and expecting it to happen right away can increase levels of frustration.
4. Show the video **Martin Luther King Jr.** to students.
5. Tell the class Dr. King said, "Darkness cannot drive out darkness; only light can do that. Hate cannot drive out hate; only love can do that."
    a. Have a class discussion about what they think the point is that he is trying to make.
    b. Invite students to create a poster with this quote and images that support the message.
6. Read the article "Learning from History" as a class.
7. Explain to the class that there are many people in history that have helped make our communities more fair and equal like Dr. King.
8. Show students the **Rose Parks** video .
    a. Why is Rosa a great example and someone we can learn from? **(She had courage to stand up for the rights of individuals. She saw something that wasn't right or fair and she spoke up. Because of Rosa Parks, more people have reedom.)**
    b. Did Rosa do this in a peaceful, respectful manner? **(Yes. Rosa did not harm anyone or property by her actions. She just chose to speak up and make a statement by refusing to move on the bus because she knew it was wrong and violated the rights of individuals. She had a lot of courage to speak up.)**

9. Ask students to think of any other students who have been good examples of standing up for what is right. Ask students to talk about what they did and how it was respectful and helpful.
    a. A possible example to help students brainstorm: One child would like to play with her older sister's toy. How can she go about this in a positive way?
        i. Should she hit her and take the toy or should she politely ask?
        ii. What if she says no?
        iii. What can she do then?
        iv. How can she properly communicate with her sister that would help her feel like letting her play with the toy?
        v. What would you do if it was you in this situation?
10. Give students the graphic organizer **Making a Difference**.
    a. Have students share some of their ideas they wrote down. rainstorm ideas with the whole class to help students come up with ideas of how they could affect change.

Advocating for Change	**Lexile® measure**	610L-800L
	Word Count	104

Someday, you may notice something that is unfair. You may see that someone is not being treated equally. If you see something, speak up. Let people know what you think. You can use your voice to advocate for change.

Advocating means supporting something that you think is right. When you advocate for change, you are trying to make something better. Being an advocate can be hard because you might have a lot of strong emotions about the change you want to make. You may want to react negatively. But it is important to advocate for change in a way that is assertive, not harmful.

Wellness

StudiesWeekly

ENERGY USE AND CONSERVATION: ACTIVITY 5

Advocating for Change

Someday, you may notice something that is unfair. You may see that someone is not being treated equally. If you see something, speak up. Let people know what you think. You can use your voice to advocate for change.

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Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 17, Teacher Resources, Unit Printables, "George Washington Carver Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit.

Publisher's description of this change if different from overall description.
The missing resource is an article about George Washington Carver from which students will identify problems and solutions.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

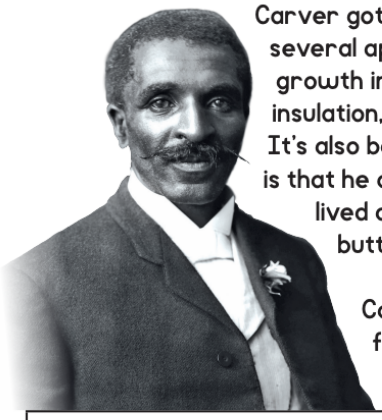
Name: **Date:**

George Washington Carver

Read the article. Then, identify two problems from the article and their solutions.

George Washington Carver was a famous plant scientist and an advocate for poor farmers in the rural South. One of his contributions to science and farming was the idea of crop rotation. Repeatedly growing the same crops in the same places year after year took too many nutrients from the soil. Without the proper nutrients, plants weren't able to grow. Carver's solution was to rotate the crops, growing something different in each location. For example, if farmers grew corn in one field and tomatoes in another field, they could switch them the following year. Since different plants require different nutrients, rotating the crops gave the soil time to replenish the nutrients. Carver trained farmers to rotate crops, which resulted in a much better harvest.

As part of crop rotation, Carver suggested rotating peanut crops with cotton. The peanut crops helped replenish nitrogen in the soil, which cotton needed. At the time, peanuts were not considered very useful, so this crop rotation resulted in a lot of unwanted peanuts. Carver got to work figuring out what to do with them. He invented several applications for peanuts, which resulted in huge economic growth in the South. Some of his applications for peanuts were paper, insulation, wood stains, soap, lotion, and medicines, just to name a few. It's also believed that he invented peanut butter. However, the truth is that he only created one version of peanut butter. The Inca, who lived over 3,000 years ago, were the first to develop a peanut butter paste.



Carver left behind a legacy of service and prosperity. He was a fine example of a scientist. One of Carver's famous quotes is, "Education is the key to unlock the golden door of freedom.

Problem:	Solution:
Problem:	Solution:

StudiesWeekly®

ANSWER KEY

George Washington Carver

Read the article. Then, identify two problems from the article and their solutions.

George Washington Carver was a famous plant scientist and an advocate for poor farmers in the rural South. One of his contributions to science and farming was the idea of crop rotation. Repeatedly growing the same crops in the same places year after year took too many nutrients from the soil. Without the proper nutrients, plants weren't able to grow. Carver's solution was to rotate the crops, growing something different in each location. For example, if farmers grew corn in one field and tomatoes in another field, they could switch them the following year. Since different plants require different nutrients, rotating the crops gave the soil time to replenish the nutrients. Carver trained farmers to rotate crops, which resulted in a much better harvest.

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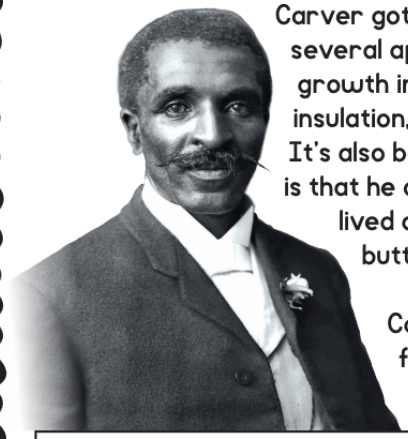

Carver left behind a legacy of service and prosperity. He was a fine example of a scientist. One of Carver's famous quotes is, "Education is the key to unlock the golden door of freedom.

Problem: "Repeatedly growing the same crops in the same places year after year took too many nutrients from the soil. Without the proper nutrients, plants weren't able to grow."	Solution: "... rotate the crops, growing something different in each location ... Since different plants require different nutrients, rotating the crops gave the soil time to replenish the nutrients."
Problem: "At the time, peanuts were not considered very useful, so this crop rotation resulted in a lot of unwanted peanuts."	Solution: "He invented several applications for peanuts ... paper, insulation, wood stains, soap, lotion, and medicines ..."

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Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 17, Teacher Resources, Unit Printables, "Do Plants Breathe?" https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit.

Publisher's description of this change if different from overall description.
The missing resource is an extension article about the pathway of photosynthesis.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE **Extension Activities**

Fourth Grade: Producers Make Food

	Lesson Time	5E
Do Plants Breathe	30 minutes	Elaborate

Materials: N/A

Lesson Guide

1. Engage: Read the article.
2. Explore/Engaging in Argument from Evidence: Show students the video "**Photosynthesis**" in related media. Have students discuss what they see happening with a partner. Play the video a few more times, then ask students to draw what is happening in their interactive notebooks.
3. Elaborate: Ask students: How does this video relate to the phenomenon? **(Answers will vary. Do not give students the answer at this point; allow them to brainstorm freely.)**
4. Elaborate: Have a class discussion about this week's well-being questions.

Do Plants Breathe	**Lexile® measure**	410L-600L
	Word Count	118

Plants have many important parts that help them make sugar. One part is the roots. Plants use their roots to absorb water and sometimes minerals from the soil. Roots also anchor the plant to the ground so that it does not fall over. Plants also have stems. The stem holds the plant up. It is also the path that water and nutrients take when traveling to the plant's leaves. Leaves come in many shapes and sizes, but they are essential for making sugar. Leaves collect sunlight to make sugar for the plant. They also help the plant breathe. Did you know that plants breathe? Some of the ingredients that plants need to make sugar come from the air!

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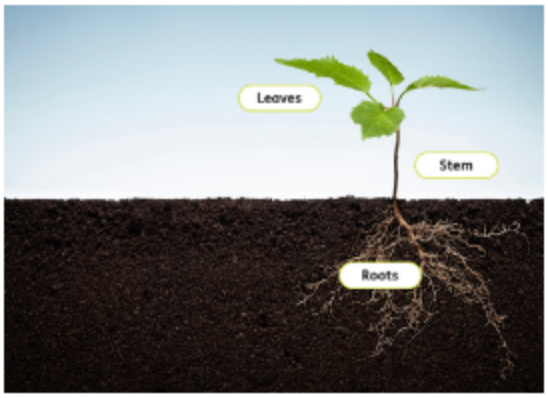


Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 13, Teacher Resources, Unit Printables, "Weather vs Climate Report"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2036

Publisher's rationale for this change if different from overall rationale.

This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

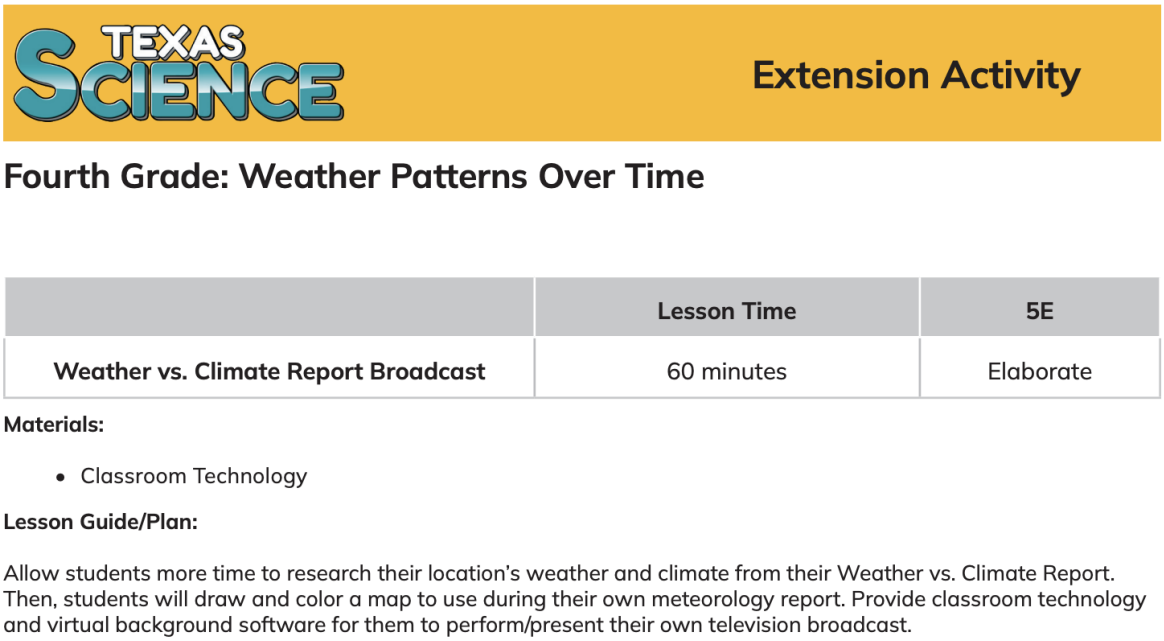
Publisher's description of this change if different from overall description.

This resource explains the extension activity.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content



TEXAS SCIENCE — Extension Activity

Fourth Grade: Weather Patterns Over Time

	Lesson Time	5E
Weather vs. Climate Report Broadcast	60 minutes	Elaborate

Materials:

- Classroom Technology

Lesson Guide/Plan:

Allow students more time to research their location's weather and climate from their Weather vs. Climate Report. Then, students will draw and color a map to use during their own meteorology report. Provide classroom technology and virtual background software for them to perform/present their own television broadcast.

Description of the specific location and hyperlink to the exact location of the currently adopted content.

N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.

This resource is found online, Unit 13, Teacher Resources, Unit Printables, "Climate Brochure"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2036

Publisher's rationale for this change if different from overall rationale.

This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

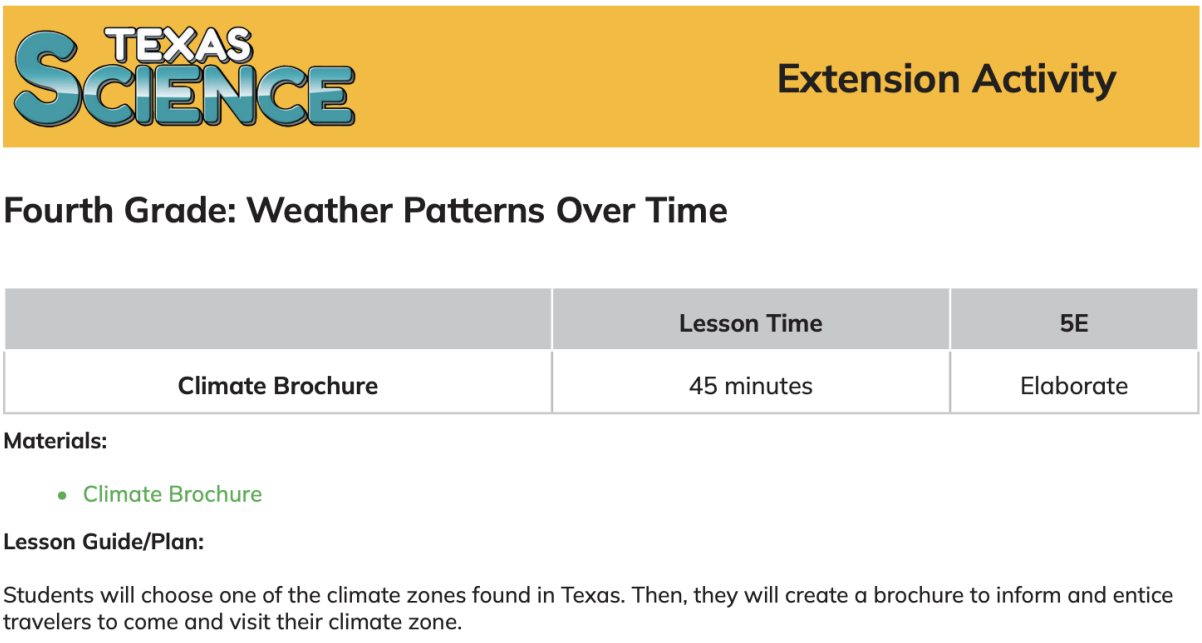
Publisher's description of this change if different from overall description.

This resource explains the extension activity.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content



TEXAS SCIENCE Extension Activity

Fourth Grade: Weather Patterns Over Time

	Lesson Time	5E
Climate Brochure	45 minutes	Elaborate

Materials:

- Climate Brochure

Lesson Guide/Plan:

Students will choose one of the climate zones found in Texas. Then, they will create a brochure to inform and entice travelers to come and visit their climate zone.

Description of the specific location and hyperlink to the exact location of the currently adopted content.

N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.

This resource is found online, Unit 17, Teacher Resources, Unit Printables, "Fertilizer Extension Activity" https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.

This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.

In this activity students will read about fertilizer and complete an activity using the information they

read.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content

Name: **Date:**

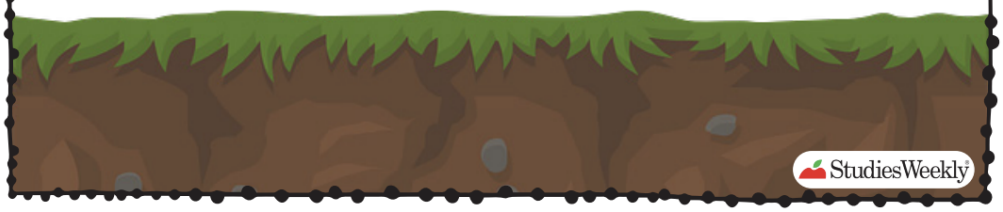
Fertilizer

Read the article about fertilizer, then complete the worksheet.

Image courtesy of USDA-NRCS

Plants need plenty of sunshine, water, and air to grow. But what about dirt? If a plant can survive without dirt, why is that the most common method of planting seeds? The answer is soil. You may think dirt and soil are the same, but dirt is actually missing one very helpful ingredient. Soil contains rich nutrients and minerals that act like plant vitamins. When dead plants and animals decay, their broken-down parts leave nutrients in the soil for plants to absorb. Plants also receive minerals, such as potassium, nitrogen, and phosphorus, from the soil. When plants grow, they use up the minerals and nutrients in the soil. If those vital materials are not replenished, the plants will eventually die. Nature replaces minerals over time. However, the process is gradual and slow. When farmers and gardeners grow food in controlled settings, they don't give nature enough time to do its work.

To solve this problem, farmers and gardeners use fertilizer. Fertilizer is made up of minerals that are naturally found in soil. When people apply fertilizer to soil, they are replenishing the minerals that plants need to survive. They also add fertilizers to speed up the growing process. This is why you see people spreading fertilizer on their lawns and gardens. Some plants have actually evolved ways of providing minerals for themselves. Venus flytrap plants decompose flies to help make up for a natural lack of minerals in the soils they commonly live in. That's just another way for plants to get their essential nutrients and minerals.

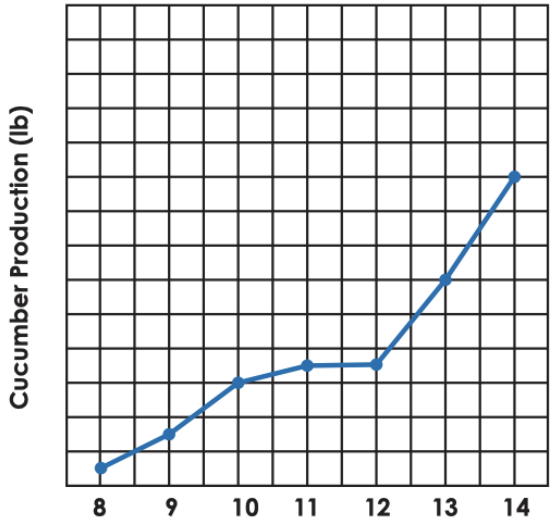


StudiesWeekly

Name: Date:

Fertilizer

This line graph shows a cucumber plant's yield over six weeks. During weeks 8-10, Farmer Denise fed the cucumber plant only water. During weeks 10-12, she fed the plant a mixture of water and Fertilizer A. During the remaining weeks, she fed the plant a mixture of water and Fertilizer B. Use the information from the graph to answer the questions that follow.



Rank each method in order of effectiveness, and explain your reasoning.

What would you recommend that Farmer Denise use on her other cucumber plants?

StudiesWeekly

ANSWER KEY

Fertilizer

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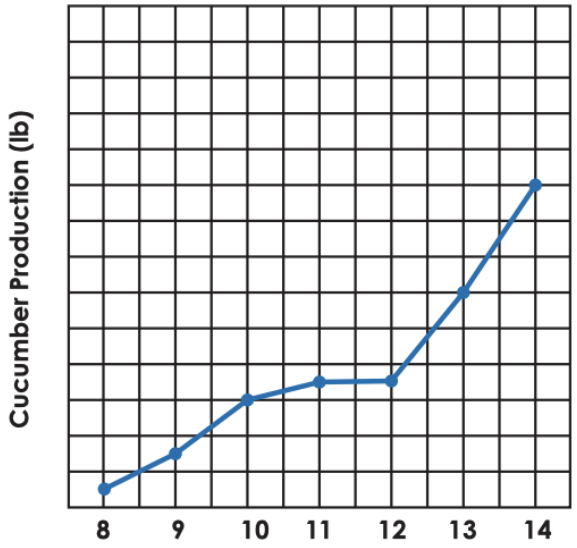

Rank each method in order of effectiveness, and explain your reasoning.

1. water and Fertilizer B; 2. water; 3. water and Fertilizer A. On the graph, the lines got much steeper after the mixture of water and Fertilizer B was introduced, indicating that the mixture resulted in the production of more cucumbers. Fertilizer A must have had a negative effect on growth because production slowed down. The line for week 10 was very shallow and the line for week 11 was completely flat (no growth).

What would you recommend that Farmer Denise use on her other cucumber plants?

Farmer Denise should use the mixture of water and Fertilizer B on her other cucumber plants.

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Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 17, Teacher Resources, Unit Printables, "The Sun's Energy Makes Sugar Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit learning about how energy from the sun becomes food.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Extension Activity

Fourth Grade: Engineering Design: Producers Make Food

	Lesson Time	5E
The Sun's Energy Makes Sugar!	30 minutes	Explain

Materials:

- Plant with large leaves
- aluminum foil

Lesson Guide/Plan:

1. Engage: Read the article. This article highlights the crosscutting concept of Energy and Matter. Review what students have learned about energy in the past. Help students understand the difference between solar energy and chemical energy.
2. Explore/Engaging in Argument from Evidence: Bring a healthy plant with several large leaves to class. Explain to the students that you are going to wrap a couple of the leaves on this plant in aluminum foil. Have students reread the article, and ask them: What might happen to a plant if its leaves are covered? **(Answers will vary. Do not give students the answer at this point; allow them to brainstorm freely. The leaves are going to turn yellow and start to die because they can't get sunlight for photosynthesis.)**
3. Elaborate: Have students draw the plant in their interactive notebooks. Next to their drawing, ask them to write a prediction about what will happen to the plant when some of its leaves are covered with aluminum foil. Wrap a few of the plant's leaves in aluminum foil. Put the plant in a spot where it can get sunlight and continue to water it. In a couple days, take the aluminum foil off of the leaves and show students the plant.

The Sun's Energy Makes Sugar!	**Lexile® measure**	410L-600L
	Word Count	170

Energy is all around us. There are many types and forms of energy. What types of energy do you already know? One type of energy is solar energy. Solar energy is light from the sun. The Earth relies on energy from the sun to support life, especially plant life. Plants rely on the sun's energy to make sugar and grow.

How do plants turn solar energy into sugar? Well, energy can change types. For plants to use solar energy on Earth, it must be converted into chemical energy. Chemical energy is the type of energy found in sugar in fruits. How is solar energy transformed into chemical energy? Sunlight falls on plants' leaves. The leaves of plants act like solar panels, changing sunlight into chemical energy. This process is called photosynthesis. Then, the plants store that chemical energy. When we eat plants, the chemical energy stored in them becomes part of our bodies. We then use it for growing, moving, breathing, and more. All life depends on the sun's energy.

The Sun's Energy Makes Sugar!

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Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 21, Teacher Resources, Unit Printables, "Inherited Traits Guess Who Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2045

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit by playing a game about family traits.

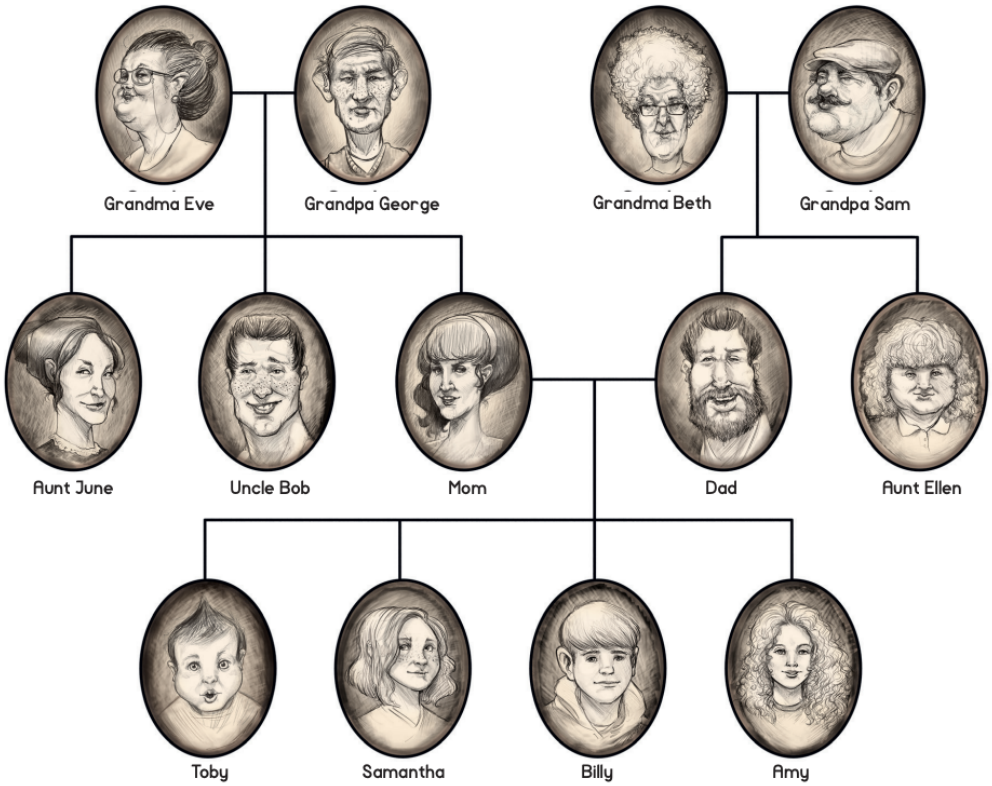
Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

Name: _____ **Date:** _____

Inherited Traits Guess Who

Use the family tree to help answer the questions about inherited traits below.

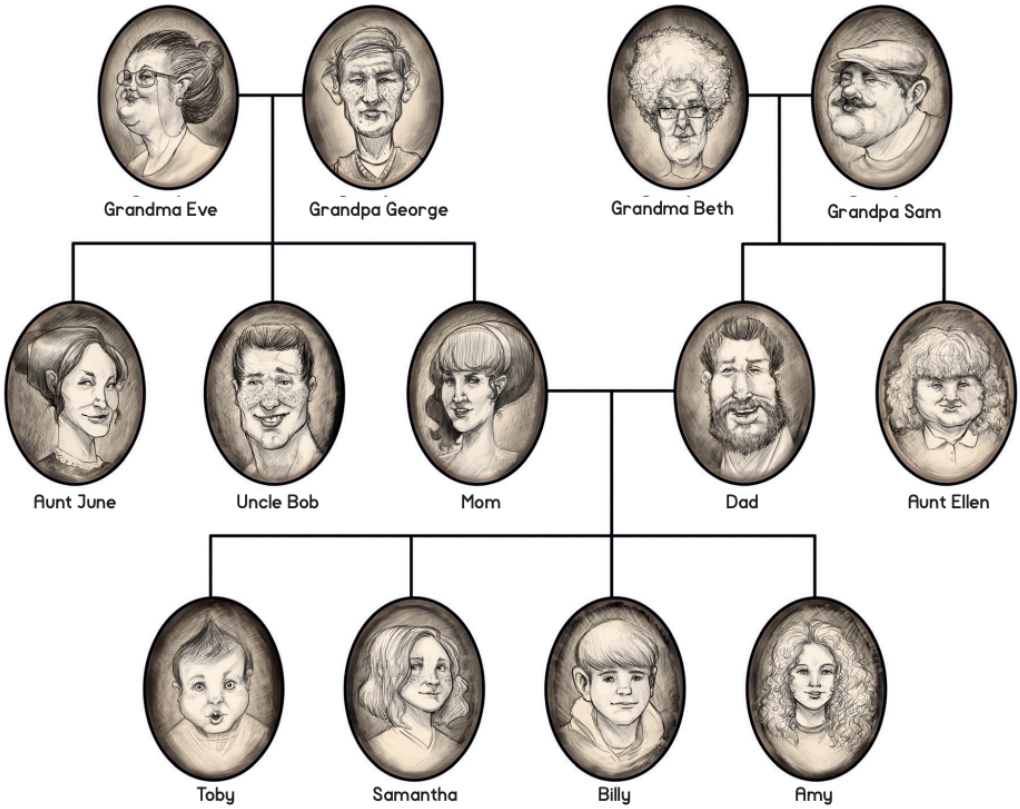


Specific trait:	From which family member do you think they inherited that trait?	Does anyone else in the family have that trait?
Amy has CURLY HAIR		
Samantha has FRECKLES		
Billy has LIGHT HAIR		
Toby has DARK HAIR		
Samantha has a SHARP CHIN		
Billy has BIG EARS		
DAD has FACIAL HAIR		

Name: _____ **Date:** _____

Inherited Traits Guess Who ANSWER KEY

Use the family tree to help answer the questions about inherited traits below.



Specific trait:	From which family member do you think they inherited that trait?	Does anyone else in the family have that trait?
Amy has CURLY HAIR	Grandma Beth	Aunt Ellen
Samantha has FRECKLES	Grandpa George	Uncle Bob
Billy has LIGHT HAIR	Grandma Beth	Aunt Ellen, Samantha, Amy
Toby has DARK HAIR	Mom & Dad	Grandpa Sam, George, Eve, June, Bob, Toby
Samantha has a SHARP CHIN	Mom	Aunt June
Billy has BIG EARS	Grandpa George	None
DAD has FACIAL HAIR	Grandpa Sam	None

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 21, Teacher Resources, Unit Printables, "Wellness: Celebrate Differences"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2045

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TENNESSEE SCIENCE **Wellness Connection**

Fourth Grade: Physical Characteristics of Organisms

Activity 5 | Phenomenon Explanation

WELL **Being a Good Citizen**

	Lesson Time	5E
Celebrate Difference	30 minutes	Elaborate

Materials:

- **Different and Alike Intro** video
- **Comparing Cultures** printable

Lesson Guide/Plan:

1. Read the article "Celebrate Difference" as a class.
2. Ask students what your classroom would be like if everyone looked and acted exactly the same. **(Answers will vary. Some answers might include: It would be pretty boring and there would be no new ideas or inventions.)** Explain that everyone's minds work differently and so they come up with different ideas and answers to problems. That is how our world works and gets better.
3. 3. Help students understand that there are some things that we all have in common, and there are some things that make us different. Ask students to raise a hand if they go to school. Explain that this is one thing that makes us alike.
4. Show students the Different and Alike Intro video.
5. Ask: What were some of the ways the video said we were alike and different?
6. Explain that you are going to present four options. Students will choose which option they like most, then go to the corner you designate for that option.
7. Ask: Which do you like best: math, drawing, reading, or science? Students should think about their choice before walking quietly to a corner. Briefly point out the different opinions and likes. Some students have things in common.
8. Give each student the **Comparing Cultures** printable. Have each student fill in the left-hand side with information about their culture and color that half of the figure to look like them. Next, have them find a partner and fill in the right-hand side with information about their partner's culture. Have the partner color that side of the figure to match themselves. Hang these up for students to view.
9. Have the students place this paper into their interactive notebooks when they are finished.

Celebrate Differences	**Lexile® measure**	410L-600L
	Word Count	67
We are all members of a community. Every member is different. No one deserves to be treated unkindly because of their differences. Let's celebrate what makes us unique. Ask respectful questions to learn about other people. Observe the ways we are alike as well as how we are different. Take a look at yourself, too. What do you love about being you? Share it with the world!		

Wellness

Studies Weekly

PLANTS AND ANIMALS: ACTIVITY 1

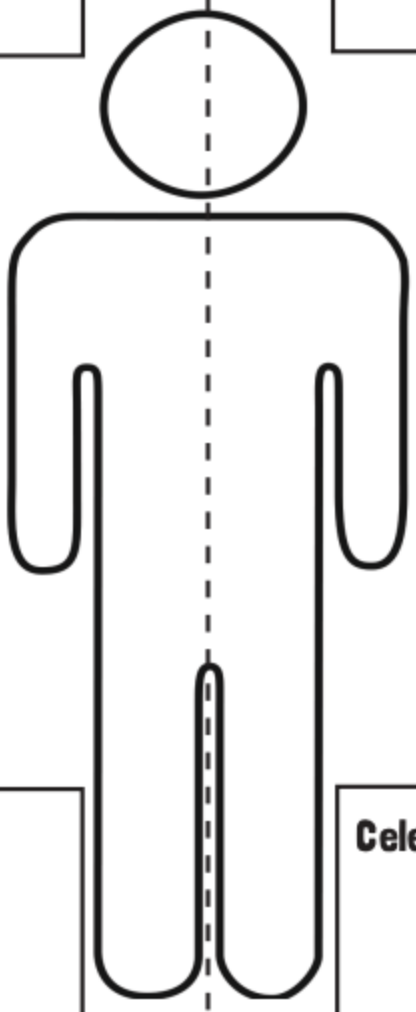
Celebrate Differences

We are all members of a community. Every member is different. No one deserves to be treated unkindly because of their differences. Let's celebrate what makes us unique. Ask respectful questions to learn about other people. Observe the ways we are alike as well as how we are different. Take a look at yourself, too. What do you love about being you? Share it with the world!

Name: _____

Comparing Cultures

Directions: Fill in the left-hand side of the paper with information about your culture, and color that half of the figure to look like you. Next, find a partner. Fill in the right-hand side of the paper with information about their culture. Color that side of the figure to match your partner.



Name	Name
Favorite Food	Favorite Food
Language	Language
Celebration	Celebration

StudiesWeekly

Name: _____

Directions: Answer the following questions. Be sure to use complete sentences and give supporting reasons.

What are some things you like about your partner's family culture?
What are some things you like about your partner?

_____

_____

_____

_____

_____

_____

_____

_____

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 17, Teacher Resources, Unit Printables, "The Steps of Photosynthesis Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2044

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit by learning about photosynthesis.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Extension Activity

Fourth Grade: Engineering Design: Producers Make Food

	Lesson Time	5E
The Steps of Photosynthesis	30 minutes	Explain

Materials:

- Highlighters (one per student)
- Recipe Card

Lesson Guide/Plan:

1. Engage: Read the article.
2. Explore: Have students highlight the three ingredients used in photosynthesis in the article. When they have found all three ingredients, they should raise their hand. Once everyone has highlighted the ingredients and raised their hands, instruct students to list the ingredients under "Ingredients" on the recipe card.
3. Have students highlight the two products of photosynthesis in the article and raise their hand when they are done. Once everyone has highlighted the products and raised their hands, instruct students to list the products under "Recipe Makes" on the recipe card.
4. Have students find the steps of photosynthesis in the article. Instruct them to summarize these steps under "Directions" on the recipe card.

The Steps of Photosynthesis	**Lexile® measure**	610L-800L
	Word Count	222

Now you may be wondering: What steps does the process of photosynthesis follow? What ingredients do plants need to go through the process?

Step #1: Plants get water through their roots. Water is the first ingredient.

Step #2: Plants inhale carbon dioxide through the stomata in their leaves. Carbon dioxide is the second ingredient.

Step #3: Plants collect solar energy in their leaves. Sunlight is the third and most important ingredient. When you have a lot of energy, do you like to run around and play? Energy, like solar energy from sunlight, makes things move. That makes sunlight responsible for really getting photosynthesis started!

Step #4: Plants take the first two ingredients and use the solar energy from sunlight to create change. When you combine ingredients and use the oven to make a cake, you are changing all of the liquid elements into one solid thing. Similarly, plants change carbon dioxide (gas) and water (liquid) into sugar (solid) through photosynthesis. The sugar that plants make is called glucose. Glucose is the first product of photosynthesis.

Step #5: Plants store the glucose that they produce. The sugar that you taste in fruit is made by the sun!

Step #6: Plants release oxygen into the air. Oxygen is the second product of photosynthesis. To stay alive, you breathe in the oxygen that plants release.

The Steps of Photosynthesis

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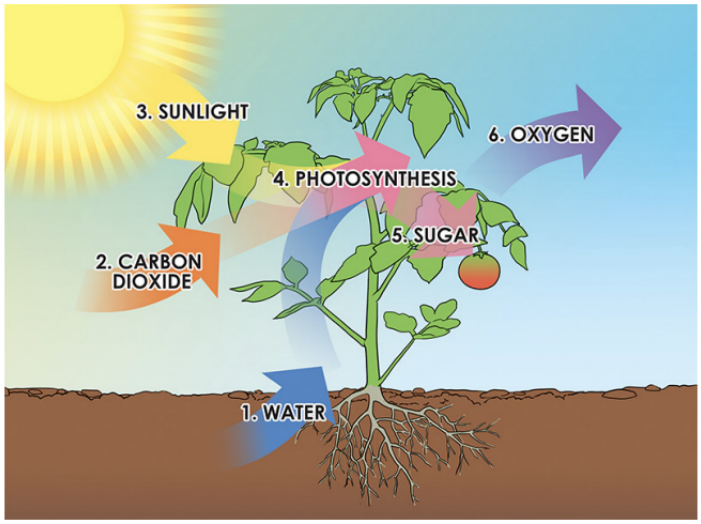

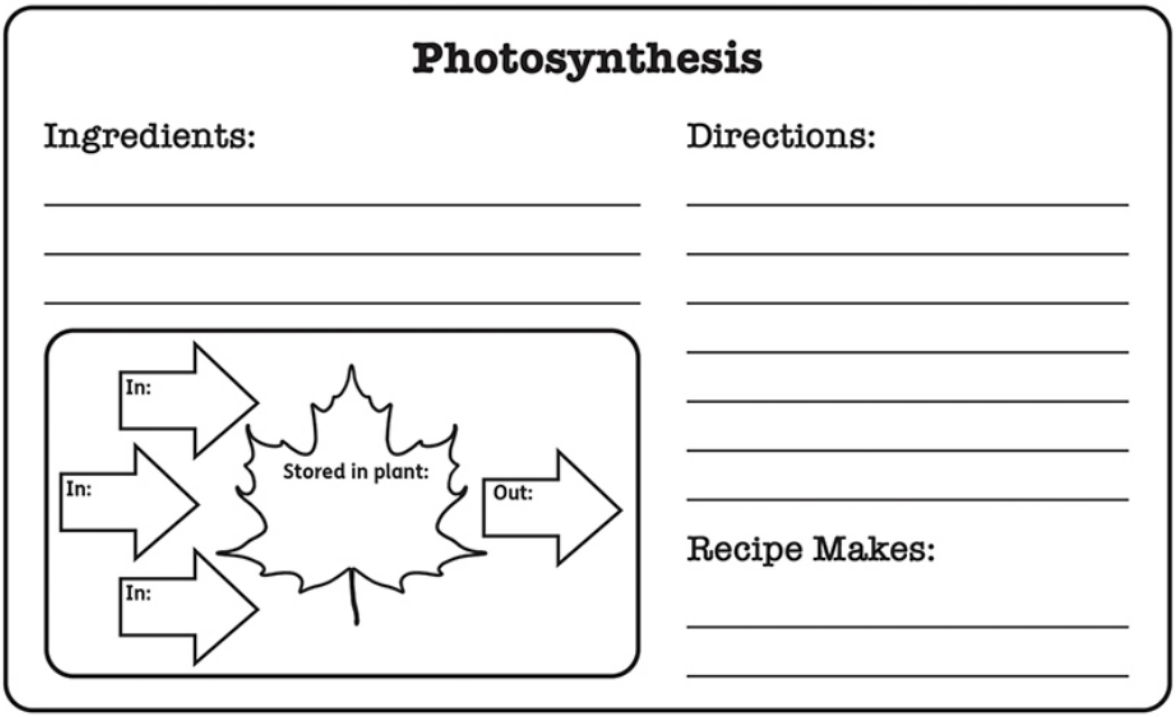

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - new resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online in the Teacher Resources of each unit. The exception is unit one in which there are four separate weeks, each containing their own resource. Proposed location by unit.

1,week1: 1,week1
1,week2: 1,week2
1,week 3:1,week3:
1,week 4:1,week4
2:The Junk Drawer
3:Mixtures and Solutions
4:Lava Lamps
5: Magnetism, Gravity, and Friction
6: Energy Transfer
7: Engineering Design: Conductors and Insulators
8:Electric Paths
9:Seasons in the Sun
10:Phases of the Moon
11:The Water Cycle
12:Engineering Design: Weathering, Erosion, and Deposition

13:Weather Patterns Over Time
14: Energy Resources
15:Energy Use and Conservation
16:Natural Resources and Properties of Rocks
17: Engineering Design: Producers Make Food
18:Matter and Energy in Ecosystems
19:A Changing Texas Environment
20:Plant Structures and Functions
21: Physical Characteristics of Organisms

Publisher's rationale for this change if different from overall rationale.

To provide an additional resource to support student learning. It is helpful for students to see a summary of what they have learned at the conclusion of the unit.

Publisher's description of this change if different from overall description.

We would like to add a Summary Video to every unit of instruction providing students with a summary of the science concepts learned in the unit. This is a student facing resource but under teacher control. The intent is for the teacher to assign this resource to students when they have concluded the activities of the unit. The purpose of this video is to help students see how all of the science concepts of the unit relate to the TEK, scientific and engineering practices and recurring themes and concepts. The objective is to reinforce student learning and strengthen the long-term durability of what they've learned.

Screenshot of Currently Adopted Content

N/A - new resource

Screenshot of Proposed Updated Content

This is a video so the content is the media provided.
1,week1: You Can Be a Scientist! You can Be an Engineer!: Summary Video
1,week2:https://cdn.studiesweekly.com/online/resources/pod_media/TX-04-SN_Unit-1_Summary_RecurringThemesAndConcepts%20_24-01-13_720.mp4
1,week3: What Do Scientists Do? Summary Video
1,week4: What Do Engineers Do? Summary Video
2: The Junk Drawer: Summary Video
3: Mixtures and Solutions: Summary Video
4: Lava Lamps: Summary Video
5: Magnetism, Gravity, and Friction: Summary Video
6: Energy Transfer: Summary Video
7: Conductors and Insulators: Summary Video
8: Electric Paths: Summary Video
9: Seasons in the Sun: Summary Video
10: Phases of the Moon: Summary Video
11: The Water Cycle: Summary Video
12:Weathering, Erosion, and Deposition: Summary Video
13: Weather Patterns Over Time: Summary Video
14: Energy Resources: Summary Video
15:https://cdn.studiesweekly.com/online/resources/pod_media/TX-05-SN_Unit-

15_Summary_ThereIsNoUInTexas_360p.mp4
16: Natural Resources and Properties of rocks: Summary Video
17:https://cdn.studiesweekly.com/online/resources/pod_media/TX-04-SN_Unit-17_Summary_ProducersMakeFood%20-%20JS_24-01-05_720.mp4
18: Matter and Energy in Ecosystems Summary Video
19: A Changing Texas Environment: Summary Video
20: Plant Structures and Functions: Summary Video
21:https://cdn.studiesweekly.com/online/resources/pod_media/TX-04-SN_Unit-5_Summary_MagnetismGravityAndFriction_360p.mp4

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 10, Teacher Resources, Unit Printables, "Moon Chart Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2047

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit by keeping a moon journal.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

Fourth Grade: Phases of the Moon

	Lesson Time	5E
Moon Chart	20 minutes	Elaborate

Materials:

- the Moon Chart template

Lesson Guide/Plan:

1. Students will use the template provided to keep a moon journal. Each night, students will observe the moon and record the shape the moon appears.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 10, Teacher Resources, Unit Printables, "Space Timeline Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2047

Publisher's rationale for this change if different from overall rationale.

This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.

In this activity students will extend the learning from the unit by reading about NASA and space exploration.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content

Fourth Grade: Phases of the Moon

	Lesson Time	5E
Space Timeline	20 minutes	Elaborate

Materials:

- Space Timeline Printable

Lesson Guide/Plan:

1. Students will read the space timeline and answer questions about how NASA researched and investigated Earth's moon.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 14, Teacher Resources, Student Support Resources, What Are Renewable Resources? Content Video
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2039

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

The video had the incorrect opening credits page.

Publisher's description of this change if different from overall description.

The opening page had the incorrect publication title and now has the correct title "Texas Science"

Screenshot of Currently Adopted Content

This is a video resource, click on the link to view it.
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-

8dc1193cd594/publications/513/teacher-resources?unit_id=2039#

Screenshot of Proposed Updated Content

This is a video resource, click on the link to view it.
What are renewable resources Content Video

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 1, Week 3 , Teacher Resources, "Ask Questions: Teacher Instruction Page"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2031&week_id=17448

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.

Some of the stations in this activity were improved, and the printable needed to be updated to reflect those improvements.

Publisher's description of this change if different from overall description.

Steps 5c and 5d have improved examples for students to grasp the concept of asking questions in science.

Screenshot of Currently Adopted Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: What Do Scientists Do?

Ask Questions			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
20 minutes	Low	Low	Low

Materials:

- **Ask Questions Station Directions** printable

Lesson Guide

Prior to the Lesson:

1. Print out the printable **Ask Questions Station Directions**.
    - It is highly recommended to print out the station directions in color..
    - It is also highly recommended to print out 2-3 copies of station directions for Stations 1,2,3,and 5 for easier student access to the images and text during the rotations.
2. Place the instruction sheets at each station.

During the Lesson:

1. Divide the class into five groups.
2. Have groups rotate through the stations (three minutes per station).
3. Have students use their science notebooks to write down questions at each station.
4. Students should draw a line to separate the questions by station number in their notebooks as they rotate through the stations.
5. Stations are as follows:
    a. Station 1: Ask Questions Based on Observations
        - Students will look at the image and practice asking questions based on observations.
    b. Station 2: Ask Questions Based on Information from Text
        - Students will read the short article and ask questions based on information in the text.
    c. Station 3: Ask Questions Based on Events
    NOTE: This is the phenomenon station. However, students do not know this vocabulary word yet.
        - Students will observe the image of the northern lights and ask questions based on the phenomenon.
    d. Station 4: Ask Questions Based on Models
        - Students will observe the toy car and ask questions based on the model.
    e. Station 5: Ask Questions Based on Investigations
        - Students will read about the investigation results from a hypothetical experiment and ask questions.

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Teacher Instructions

Fourth Grade: What Do Scientists Do?

Ask Questions			
Activity Duration	**Activity Difficulty**	**Preparation Time**	**Preparation Effort**
20 minutes	Low	Low	Low

Materials:

- **Ask Questions: Station Directions** printable

Lesson Guide

Prior to the Lesson:

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   - It is highly recommended to print out the station directions in color..
   - It is also highly recommended to print out 2-3 copies of station directions for Stations 1,2,3,and 5 for easier student access to the images and text during the rotations.
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4. Students should draw a line to separate the questions by station number in their notebooks as they rotate through the stations.
5. Stations are as follows:
   a. Station 1: Ask Questions Based on Observations
      - Students will look at the image and practice asking questions based on observations.
   b. Station 2: Ask Questions Based on Information from Text
      - Students will read the short article and ask questions based on information in the text.
   c. Station 3: Ask Questions Based on Events
      NOTE: This is the phenomenon station. However, students do not know this vocabulary word yet.
      - Students will observe the image of a tornado and ask questions..
   d. Station 4: Ask Questions Based on Models
      - Students will observe the **model bridge** and ask questions...
   e. Station 5: Ask Questions Based on Investigations
      - Students will read about the investigation results from a hypothetical experiment and ask questions.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 6, Teacher Resources, Unit Printables, "Marbles the Game Extension Activity"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2049

Publisher's rationale for this change if different from overall rationale.

This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.

In this activity students will extend the learning from the unit by playing a marble game where they can observe energy transfer.

Screenshot of Currently Adopted Content

N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Extension Activity

Fourth Grade: Energy Transfer

	Lesson Time	5E
Marbles, the Game	20 minutes	Elaborate

Materials

- three-foot pieces of string (16)
- large marbles (16)
- small marbles (256)
- **Marbles, the Game** printable

Lesson Guide/Plan:

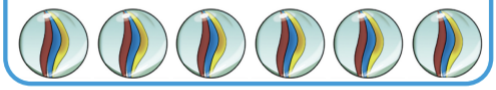
1. Provide pairs of students with the **Marbles, the Game** printable.
2. Have students read the directions for how to play the game and ask any clarifying questions as needed.
3. Give each pair of students one three-foot piece of string, one large marble, and 15 small marbles.
4. Have students play a game of marbles.
5. **Discuss:** When did you notice energy transfer during this game? (when the marbles collided)
6. **Discuss:** How did your knowledge of energy transfer help you play this game? **(Answers will vary, but students may suggest that, at certain moments, they wanted more or less energy to transfer, so the large marble needed to have more or less energy due to motion prior to the collision.)**
7. **Discuss:** When did you need more energy to transfer? How did you accomplish that? **(Answers will vary, but students may suggest that they needed more energy to transfer when they were trying to move multiple small marbles or when they needed to move the small marbles a further distance. Giving the large marble more energy due to motion will result in more energy transferred to the small marbles.)**

Name: Date:

Marbles, The Game

Goal:

Collect the most small marbles.



Materials:

- three-foot piece of string (1)
- large marble (1)
- small marbles (15)

Setup:

1. On the ground, make a circle using the piece of string.
2. Place the small marbles inside the circle.
3. You can organize the small marbles into a pattern, such as an X, leave them scattered around the circle, or push them into the center of the circle.
4. Sit or kneel outside of the circle.
5. To flick the big marble correctly:
   a. Wrap your pinky, ring, and middle fingers into your palm.
   b. Tuck your thumb into the hole between your middle finger and your palm.
   c. Place the marble on your middle finger.
   d. Roll your pointer finger around the marble to cradle it.
   e. Pull your thumb out of the hole in a flicking motion. This will flick the marble.

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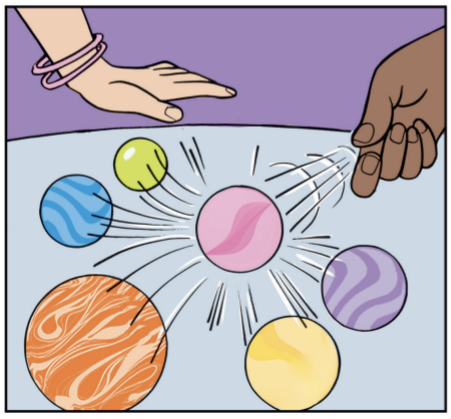
How to Play:

*This game is for two or more players.

1. Play marbles by using the big marble (the shooter) to knock small marbles out of the circle.
2. Start with Player 1.
   - Use the shooter to knock smaller marbles out of the circle.
   - If you knock any small marbles out of the circle and your shooter stays in the circle, then keep the small marbles. Continue using the shooter to knock the small marbles out of the circle until your turn ends.
   - Your turn ends if you do not knock any small marbles out of the circle or your shooter leaves the circle.
3. Player 2 gets to take a turn. Repeat the same steps as Player 1. Player 2's turn ends when the player does not knock any marbles out of the circle or their shooter leaves the circle.
4. When there are no small marbles left in the circle, the game has ended.
   - Count your small marbles to see who got the most marbles!



Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 6, Teacher Resources, Unit Printables, Gummy Bear Wave Model Extension Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2049

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit by modeling a wave with gummy bears.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

TEXAS SCIENCE — Extension Activity

Fourth Grade: Energy Transfer

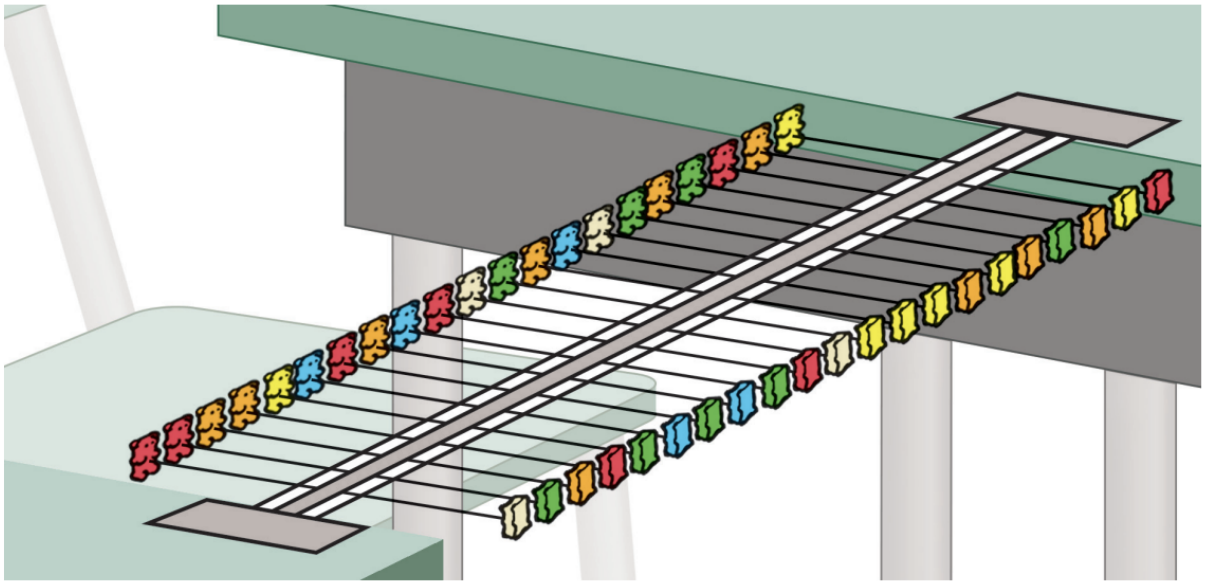
	Lesson Time	5E
Gummy Bear Wave Model	40 minutes	Explore

Materials

- two-foot pieces of duct tape (20)
- barbeque skewers (20)
- gummy bears (40)
- rulers (10).

Lesson Guide/Plan:

1. Have students work in groups of three.
2. Give each group of students two pieces of duct tape, 20 skewers, 40 gummy bears, and one ruler.
3. Have students place one gummy bear on each end of each skewer.
4. Have students lay out one two-foot piece of duct tape, sticky-side up.
5. Have students begin to place the skewers onto the sticky duct tape.
   - Skewers should be placed two inches apart.
   - The center of the skewers (or balance point) should be taped to the duct tape.
6. When all 20 skewers are aligned and spaced on the duct tape, have students lay down the second piece of duct on top of the skewers.
7. Have students use two desks (or another place in the classroom) to anchor their gummy bear model.
   - Tip: You may want to use extra duct tape or binder clips to secure the gummy bear models.
8. Have students experiment with making waves of different amplitudes and wavelengths.
   - The harder you tap on the gummy bear model, the higher the amplitude of the wave.
   - The more frequently you tap on the gummy bear model, the shorter the wavelength.
9. Call on students to share their observations.
10. Optional: You may choose to have students write a paragraph describing how they made the model and how they created waves with different amplitudes and wavelengths.



Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 3, Teacher Resources, Unit Printables, "Separating Mixtures Lab Procedure"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2034

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher's rationale for this change if different from overall rationale.
Materials list was updated so that the material is more accessible to teachers.

Publisher's description of this change if different from overall description.
All instances of "beaker" have been replaced with "container".

Screenshot of Currently Adopted Content
This resource is more than 5 pages, please click on the link to view the entire document.
https://cdn.studiesweekly.com/online/resources/printables/8963/Separating-Mixtures-Lab-Procedure_TX-04-SN_Unit-3.pdf

Name: **Date:**

Separating Mixtures Lab Procedure

Follow the steps for each procedure. Answer the questions using data (observations and measurements).

Procedure:

Oil in Water Mixture

1. Place the beaker with the oil-in-water mixture next to a clean beaker.
2. Using the plastic spoon, skim the oil off the surface of the water. Carefully observe how far you are putting the spoon into the mixture. You want to only spoon out the oil.
    a. Tip: Tilt the beaker to create a deeper pool of oil.
3. Dump the oil into the empty beaker.
4. Observe each of the separated ingredients: oil and water.

Did the physical properties of either the oil or water show signs of change after the mixture was separated? Explain.

Cinnamon Powder in Water Mixture

1. Place the beaker with the cinnamon-powder-in-water mixture next to a clean beaker.
2. Take one of the coffee filters and place it loosely over the opening of the clean beaker.
3. Use the rubber band to secure the coffee filter to the beaker.
    a. Tip: Make sure that the coffee filter can sag, or that it is not pulled too tight.
4. Slowly pour the cinnamon-powder-in-water mixture onto the coffee filter.
    a. Tip: Pour a small amount of the mixture, then wait for the water to pass through the filter before pouring more of the mixture.
5. Observe each of the separated ingredients: cinnamon powder and water.

How did the filter work?

Did the amount of water or cinnamon powder change after they were separated? Explain.

Screenshot of Proposed Updated Content

This resource is more than 5 pages, please click on the link to view the entire document.
https://cdn.studiesweekly.com/online/resources/printables/13786/Separating-Mixtures-Lab-Procedure_TX-04-SN_Unit-3.pdf

Name: **Date:**

Separating Mixtures Lab Procedure

Follow the steps for each procedure. Answer the questions using data (observations and measurements).

Procedure:

Oil in Water Mixture

1. Place the container with the oil-in-water mixture next to a clean container.
2. Using the plastic spoon, skim the oil off the surface of the water. Carefully observe how far you are putting the spoon into the mixture. You want to only spoon out the oil.
    a. Tip: Tilt the container to create a deeper pool of oil.
3. Dump the oil into the empty container.
4. Observe each of the separated ingredients: oil and water.

Did the physical properties of either the oil or water show signs of change after the mixture was separated? Explain.

Cinnamon Powder in Water Mixture

1. Place the container with the cinnamon-powder-in-water mixture next to a clean container.
2. Take one of the coffee filters and place it loosely over the opening of the clean container.
3. Use the rubber band to secure the coffee filter to the container.
    a. Tip: Make sure that the coffee filter can sag, or that it is not pulled too tight.
4. Slowly pour the cinnamon-powder-in-water mixture onto the coffee filter.
    a. Tip: Pour a small amount of the mixture, then wait for the water to pass through the filter before pouring more of the mixture.
5. Observe each of the separated ingredients: cinnamon powder and water.

How did the filter work?

Did the amount of water or cinnamon powder change after they were separated? Explain.

Unit Title: Mixtures and Solutions — Activity 4

StudiesWeekly

Description of the specific location and hyperlink to the exact location of the currently adopted content.
This resource is found online, Unit 15 , Teacher Resources, Assessments, “Energy Use and Conservation: Performance Task”
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2042

Description of the specific location and hyperlink to the exact location of the proposed updated content.
Same as above.

Publisher’s rationale for this change if different from overall rationale.
The incorrect performance task was uploaded.

Publisher’s description of this change if different from overall description.
The document now has the correct performance task.

Screenshot of Currently Adopted Content
This resource is more than 5 pages, please click on the link to view the entire document.
https://cdn.studiesweekly.com/online/resources/printables/9462/TX-04%20U15%20Performance%20Task_%20Energy%20Use%20and%20Conservation_a11yS.pdf

Update to Content Not Reviewed by SRP

Name _____ Date _____

Texas Science Studies Weekly: Fourth Grade

Power Plant Research Performance Task

4.11B

Task 1

Directions: Using the information provided and your knowledge of science, answer the questions.

Petersburg, Indiana Power Plant

The town of Petersburg, Indiana has a power plant that produces electricity using coal. Coal is a natural resource that is plentiful in the area. There are two coal mines within 10 miles of Petersburg. The people who live in Petersburg want their local power company to replace their coal power plant with one that uses a renewable resource, but the power company does not want to change their power plant.

A. Why do people in Petersburg want to replace their coal power plant?

_____

_____

_____

_____

B. The local power company does not want to change from coal to another natural resource. Why do you think they want to keep using coal?

_____

_____

_____

_____

Screenshot of Proposed Updated Content

Name _____ Date _____

Texas Science Studies Weekly: Fourth Grade

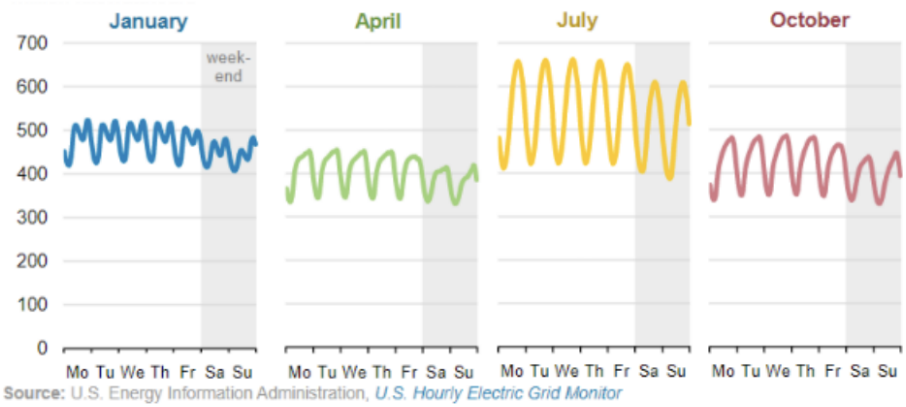
Energy and Natural Resources Performance Task

4.11B

Task 1

Directions: Using the information provided and your knowledge of science, answer the questions.

Graph 1: Average hourly U.S. electricity usage in million kilowatt hours



Source: U.S. Energy Information Administration, *U.S. Hourly Electric Grid Monitor*

A. What pattern do you notice repeating in all four months?

_____

_____

B. How could you explain that pattern?

_____

_____

_____

C. What causes the higher electricity use in July?

_____

_____

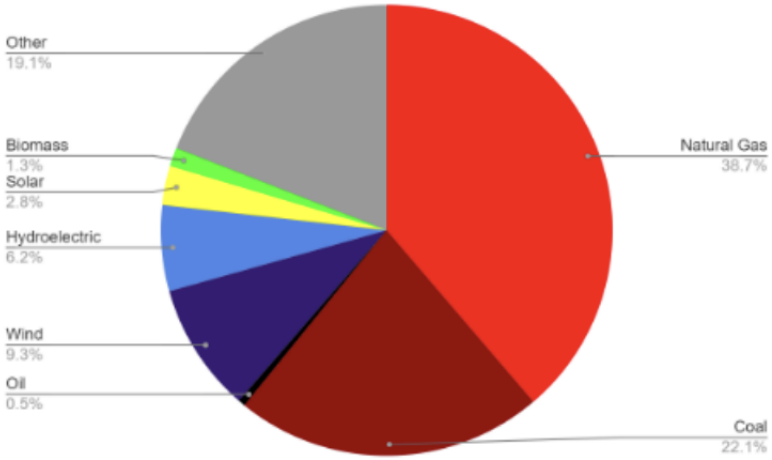
Task 2

Directions: Using the information and your knowledge of science, answer the questions.

Table 1: Amount of Coal and Natural Gas Needed to Produce U.S. Electricity Each Year

Natural Resource	Amount Used
Natural gas	12,000 million cubic feet
Coal	1,000 million pounds

Graph 2: Electricity Production by Energy Source



A. Explain how using natural gas and coal to produce most of the electricity we use affects the environment.

_____

_____

_____

B. How could we reduce the impact of producing electricity on the environment?

_____

_____

_____

Task 3

Directions: As you read the information provided, take notes in the table. Then, use the information to answer the question.

How Pillows are Made

There are many different materials and methods used to create pillows. Most modern pillows are made with polyester. Polyester is a type of plastic made from oil. There is a lot of processing that must occur to turn oil into polyester. Once the polyester has been made, it goes to a large factory. There are big machines that sew the pillow casing together and then stuff it with the polyester. Those pillows are then shipped around the world on trains and trucks to get to stores where you can purchase them! After you've used your pillow for a couple of years, it starts to lose its shape and needs to be replaced. You can't recycle polyester, and no one wants an old pillow, so most pillows get thrown away.

This isn't how pillows were made hundreds of years ago, though. Before modern technology, pillows were made of cotton stuffed with soft goose feathers. These pillows were handmade in the home and sewn by the families that used them. Goose feathers would be collected from the ground and cleaned before placing them inside the pillow. Goose feathers hold their shape longer than polyester, so the pillows could be used for much longer. When they did need to be replaced, the feathers could be returned to nature to be used by birds for nests and the cotton case could be reused as a rag or scrap material.

	Polyester Pillow	Feather Pillow
Natural Resources		
Manufacturing		
Transportation		
Disposal		

A. Compare the two pillows. Which pillow has a smaller impact on the environment? Be sure to use evidence to support your answer.

_____

_____

_____

_____

_____

B. How could you reduce the environmental impact of your polyester pillow?

_____

_____

_____

_____

_____

_____

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 6, Teacher Resources, Unit Printables, Waves Transfer Energy Extension Activity
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2049

Publisher's rationale for this change if different from overall rationale.
This activity is an opportunity to extend student learning beyond the core unit. It is currently missing.

Publisher's description of this change if different from overall description.
In this activity students will extend the learning from the unit by modeling a wave with a slinky.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

EXPLORE SCIENCE **Extension Activities**

Fourth Grade: Energy Transfer

	Lesson Time	5E
Waves Transfer Energy	[30 minutes]	Elaborate

Reading to Learn

1. Have students read the article "Waves Transfer Energy."
2. Have students circle the main idea: "A wave will only travel as long as it has the energy to transfer."
3. Call on a student to explain one example from the text that supports the main idea. Have the student explain the example in their own words.
4. Call on a student to explain another example from the text that supports the main idea.

Collaborative Learning

1. Clear a space in the classroom where you can stretch the Slinky® out (you may want to use the hallway if necessary).
2. Have two students each hold one end of the Slinky®. Spread the students out so that the Slinky® is stretched out but not taut.
3. Have one student create one wave in the Slinky®. Make sure the other student does not move their arm.
4. Have students observe the wave in the Slinky® and how long the wave continues.
5. Have one student wave their arm five times in a row while the other student holds the Slinky® still.
6. Have students turn to a partner and describe what they observed.
7. **Ask:** In which trial was there more energy to be transferred? How did you know? **(In the second trial, there was more energy to be transferred because the waves lasted longer.)**

Waves Transfer Energy	**Lexile® measure**	610L-800L
	Word Count	209

Suppose you had a piece of rope the length of the school hallway. If you were to start a wave at one end of the rope, would it continue all the way down the hall?

The answer is "no." A wave will only travel as long as it has the energy to transfer. Pretend you are holding the rope at one end and you give it one shake. It would create a wave that would travel until it ran out of energy. Suppose you picked up the rope and instead of one shake, you continue to shake it up and down for a minute. The wave would keep traveling along the rope until you stopped shaking it. In order for the wave to make it all the way down the hall, you would need enough energy for it to travel that distance.

Ripples in water are another example of this energy transfer. Suppose you drop a pebble into a lake. The ripples soon die out and the water surface becomes still again. This is because a pebble doesn't have that much energy to transfer. Once the energy is transferred, the wave stops. A larger rock will create more ripples that last longer. A boulder would create the most ripples.

Name: **Date:**

Waves Transfer Energy

Suppose you had a piece of rope the length of the school hallway. If you were to start a wave at one end of the rope, would it continue all the way down the hall?

The answer is "no." A wave will only travel as long as it has the energy to transfer. Pretend you are holding the rope at one end and you give it one shake. It would create a wave that would travel until it ran out of energy. Suppose you picked up the rope and instead of one shake, you continue to shake it up and down for a minute. The wave would keep traveling along the rope until you stopped shaking it. In order for the wave to make it all the way down the hall, you would need enough energy for it to travel that distance.

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Description of the specific location and hyperlink to the exact location of the currently adopted

content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 14, Teacher Resources, Unit Printables, "Wellness: How Can I Make Good Decisions"
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2039

Publisher's rationale for this change if different from overall rationale.
This resource was missing from the online platform.

Publisher's description of this change if different from overall description.
This resource is designed to help teachers integrate wellness into science instruction.

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

Fourth Grade: Energy Resources

Activity 1 | Phenomenon Introduction

WELL How Can I Make Good Decisions?

	Lesson Time	5E
How Can I Make Good Decisions?	25 minutes	Elaborate

Materials:

- N/A

Lesson Guide/Plan:

2. Have students read the article "Cooperation and Compromise" in groups and use the "Popcorn Reading" strategy.
    a. Students will read until they want to pause, then say the name of another student. This passes the reading to the next student. This will help students practice cooperating to read the article together.
    b. Students should highlight the definitions of "cooperating" and "compromise" in the text.
3. Watch the video "Why are cooperation and diligence important?" found in related media (Explore More).
    a. What are some benefits you saw in the video when people were able to cooperate?
    b. Students should pair and share the definition for cooperation in their own words.
3. Give each student a copy of the graphic organizer **Finding a Compromise** .
    a. Students should complete the graphic organizer individually or with a partner.

How Can I Make Good Decisions?	**Lexile® measure**	610L-800L
	Word Count	71
It helps to be adaptable when working and playing with others. Being adaptable means you are willing to cooperate and compromise when needed. Cooperating is working together to achieve a goal. Sometimes, when adapting, you have to look at different solutions. Then, you find a compromise that the group can agree on. Compromise is when some members of a group give up something so that everyone can agree on a solution.		

Wellness

StudiesWeekly

EVERGY RESOURCES: ACTIVITY 1

How Can I Make Good Decisions?

It helps to be adaptable when working and playing with others. Being adaptable means you are willing to cooperate and compromise when needed. Cooperating is working together to achieve a goal. Sometimes, when adapting, you have to look at different solutions. Then, you find a compromise that the group can agree on. Compromise is when some members of a group give up something so that everyone can agree on a solution.

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - new resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 12, Teacher Resources, Assessment
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2051

Publisher's rationale for this change if different from overall rationale.
Missing teacher resource for the Reading Comprehension questions.

Publisher's description of this change if different from overall description.
This resource will be added to support reading comprehension questions and answers for activities 2 and 3.

Screenshot of Currently Adopted Content
N/A - new resource

Screenshot of Proposed Updated Content

TEXAS SCIENCE

Reading Comprehension Answer Keys

Fourth Grade: Weathering, Erosion, and Deposition:

Activity 2 Weathering	**1.**	What is the most common form of weathering? a. ice b. wind **c. water** d. erosion
	2.	What happens when glaciers move? a. They slowly break down rocks that form the riverbed. b. Strong winds carry sand, and the sand chips away at rock. **c. They scrape the land, causing rocks to break.** d. Moving water can create a small temporary stream.
	3.	What type of weathering creates arches? a. ice b. streams c. wind d. water
Activity 3 Erosion	**1.**	What is dust made up of? a. tiny pieces of sand b. tiny pieces of ice **c. tiny pieces of rock** d. large pieces of rock
	2.	Where is Arches National Park? a. Texas b. Wyoming **c. Utah** d. Arizona
	3.	How long does weathering and erosion take? a. hundreds of years b. 50 years **c. thousands of years** d. 60 days

Name_____ Date_____

Texas Science Studies Weekly: Fourth Grade

Weathering, Erosion, and Deposition

Reading Comprehension

Activity 2: Weathering

1. What is the most common form of weathering?
    A. ice
    B. wind
    C. water
    D. erosion

2. What happens when glaciers move?
    A. They slowly break down rocks that form the riverbed.
    B. Strong winds carry sand, and the sand chips away at rock.
    C. They scrape the land, causing rocks to break.
    D. Moving water can create a small temporary stream.

3. What type of weathering creates arches?
    A. ice
    B. streams
    C. wind
    D. water

Activity 3: Erosion

1. What is dust made up of?
    A. tiny pieces of sand
    B. tiny pieces of ice
    C. tiny pieces of rock
    D. large pieces of rock

2. Where is Arches National Park?
    A. Texas
    B. Wyoming
    C. Utah
    D. Arizona

3. How long does weathering and erosion take?
    A. hundreds of years
    B. 50 years
    C. thousands of years
    D. 60 days

Description of the specific location and hyperlink to the exact location of the currently adopted content.
NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource will be found online, Unit 11, Teacher Resources, Student Support Resources
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2038

Publisher's rationale for this change if different from overall rationale.
A video is missing.

Publisher's description of this change if different from overall description.
Adding the video, Water in a Glass, Content Video, to the Explore More resources to support Activity 3.

Screenshot of Currently Adopted Content
NA

Screenshot of Proposed Updated Content
This is a video resource, the link is provided to view the entire resource.
https://cdn.studiesweekly.com/online/resources/pod_media/SCI_EX04_UN11_WaterInAGlass-Content-TX_FIX-360p.mp4

Update to Content Not Reviewed by SRP

Description of the specific location and hyperlink to the exact location of the currently adopted content.

NA - new content

Description of the specific location and hyperlink to the exact location of the proposed updated content.

This resource will be found online, Unit 12, Teacher Resources, Unit Printables
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2051

Publisher's rationale for this change if different from overall rationale.

A resource is missing.

Publisher's description of this change if different from overall description.

Adding the Engineering Design Rubric to support the evaluation of the Unit.

Screenshot of Currently Adopted Content

NA

Screenshot of Proposed Updated Content

Engineering Design Rubric

Skills	4 Advanced: Exceeds Expectations	3 Competent: Meets Expectations	2 Progressing: Partially Meets Expectations	1 Beginning: Does Not Meet Expectations	Score
Define	The student asks many questions, makes detailed observations, and gathers all important information from the engineering scenario in order to describe a given situation that people wish to change, why people want the situation to change, and the desired outcome of changing the situation. OR The student contributes many observations and/or questions to the group discussion.	The student asks a few questions, makes observations, and gathers information from the engineering scenario in order to clearly and simply define and describe the problem and why the problem should be fixed. OR The student contributes at least one observation and question in the group discussion.	With some guidance, the student asks a few questions, makes observations, and gathers information from the engineering scenario in order to clearly and simply define and describe the problem and why the problem should be fixed. OR The student contributes one observation or question in the group discussion.	The student is unable to define and describe the problem without significant support. OR The student does not contribute to the group discussion.	
Ideate	The student describes the features of the tool or object that would solve the problem based on scientific information, materials available, and potential related benefits to people and other living things. The student comes up with many different design ideas.	The student describes the features of the tool or object that would solve the problem based on scientific information and materials available. The student comes up with more than two different design ideas.	The student is able to describe the features of the tool or object that would solve the problem, but their descriptions are not based on scientific information and/or the materials available. The student comes up with one or two design ideas.	The student is unable to describe the features of the tool or object that would solve the problem without significant support. The student may come up with one design idea.	
Plan	The student develops a highly detailed and labeled model (sketch, drawing, or physical) of the object they plan to build. Their model includes the object and its shape and function. The student is able to explain how their object is designed to solve the problem.	The student develops a labeled model (sketch, drawing, or physical) of the object they plan to build. Their model includes the object and its shape and function. The student is able to explain how their object is designed to solve the problem.	The student develops an unlabeled model (sketch, drawing, or physical) of the object they plan to build. Their model does not include the object's shape and function. The student is able to explain how their object is designed to solve the problem with help from a peer.	The student is unable to develop a labeled model and explanation without significant support.	
Create	The student strictly follows their plan with attention to detail. The student creates their product using tools and materials provided to build a device or model that solves a specific problem. The student independently creates an effective product.	The student follows their plan to create their product using tools and materials provided to build a device that solves a specific problem. The student creates an effective product, with little or no guidance.	The student uses parts of their plan when creating their product with some guidance. Creation of the product doesn't follow all of the plan.	The student struggles to follow their plan. The student is unable to design and build without significant guidance.	

Description of the specific location and hyperlink to the exact location of the currently adopted content.
N/A - missing resource

Description of the specific location and hyperlink to the exact location of the proposed updated content.
This resource is found online, Unit 19, Teacher Resources, Assessments
https://online.studiesweekly.com/teacher/classrooms/18118e32-addf-40f5-b9d1-8dc1193cd594/publications/513/teacher-resources?unit_id=2048

Publisher's rationale for this change if different from overall rationale.
The student-facing assessment printable is missing

Publisher's description of this change if different from overall description.
Adding the Unit Assessment printable to the Teacher Resources

Screenshot of Currently Adopted Content
N/A

Screenshot of Proposed Updated Content

Name _____ Date _____

Texas Science Studies Weekly: Fourth Grade

A Changing Texas Environment

Unit Assessment

1. What is a fossil?

   A. an oddly shaped, weathered rock

   B. the oldest layer of rock in a formation

   C. how the landscape changes over time

   D. the remains or impression of an organism

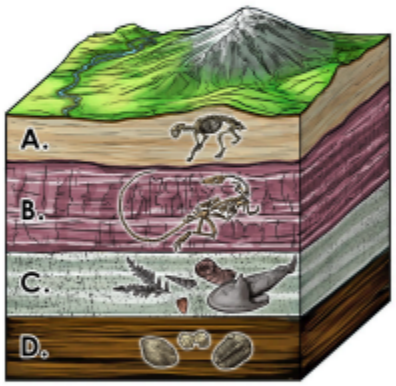
2. In what layer did the environment change from water to land?

   A. A

   B. B

   C. C

   D. D



3. This plant lived in a desert environment.

   TRUE FALSE

4. What explanation is supported by the evidence that fern, frog, and dinosaur fossils were found in Antarctica?

   A. Fossils can be moved by wind and water.

   B. Ancient ferns, frogs, and dinosaurs could survive very cold weather.

   C. Humans long ago brought the fern, frog, and dinosaur fossils to Antarctica.

   D. Antarctica was once warm enough for ferns, frogs, and dinosaurs to survive.

5. What description best fits the environment when the footprints were formed?

   A. It was a forest.

   B. It was underwater.

   C. It was very muddy.

   D. It was on a rocky cliffside.

6. Observe the fossils found high on a cliffside.

Identify any patterns and describe the past environment of the area. Use observations as evidence.

_____

_____

_____

_____

_____

7. Observe and group the fossils.

1

2

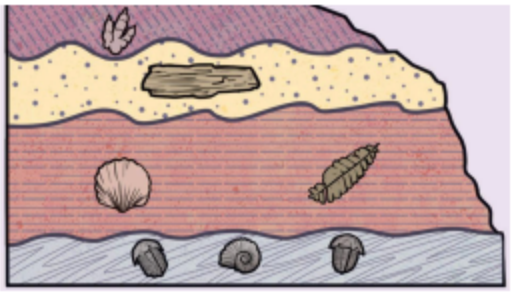
3

4

5

Evidence of Land Environment	Evidence of Water Environment

8. Observe the fossil layers.



Identify any patterns and describe how the environment changed. Use observations as evidence.

_____

_____

_____

_____

_____

9. Scientists only find fossils of extinct plants and animals.

TRUE FALSE

10. What description best fits the environment when the fossil was formed?

A. land covered with trees

B. coast covered with shells

C. swamp covered with ferns

D. ocean covered with coral

Description of the specific location and hyperlink to the exact location of the currently adopted content.

This resource is found online by selecting a grade, then in the Table of Contents, clicking on the blue Teacher icon to the right of the Unit and selecting Teacher Edition PDF.

Unit1 Week 1: https://cdn.studiesweekly.com/online/lesson_plans/TX-04-SN-EN-V2-UPDATE/Lesson%20Plan%20Week%201.pdf

Unit 1 Week 2: https://cdn.studiesweekly.com/online/lesson_plans/TX-04-SN-EN-V2-UPDATE/Lesson%20Plan%20Week%202.pdf
Unit 1 Week 3: https://cdn.studiesweekly.com/online/lesson_plans/TX-04-SN-EN-V2-UPDATE/Lesson%20Plan%20Week%203.pdf
Unit 1 Week 4: https://cdn.studiesweekly.com/online/lesson_plans/TX-04-SN-EN-V2-UPDATE/Lesson%20Plan%20Week%204.pdf
Unit2:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2033/Lesson%20Plan%20Unit%202.pdf
Unit3:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2034/Lesson%20Plan%20Unit%203.pdf
Unit4:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2035/Lesson%20Plan%20Unit%204.pdf
Unit5:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2032/Lesson%20Plan%20Unit%205.pdf
Unit6:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2049/Lesson%20Plan%20Unit%206.pdf
Unit7:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2050/Lesson%20Plan%20Unit%207.pdf
Unit8:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2041/Lesson%20Plan%20Unit%208.pdf
Unit9:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2043/Lesson%20Plan%20Unit%209.pdf
Unit10:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2047/Lesson%20Plan%20Unit%2010.pdf
Unit11:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2038/Lesson%20Plan%20Unit%2011.pdf
Unit12:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2051/Lesson%20Plan%20Unit%2012.pdf
Unit13:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2036/Lesson%20Plan%20Unit%2013.pdf
Unit14:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2039/Lesson%20Plan%20Unit%2014.pdf
Unit15:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2042/Lesson%20Plan%20Unit%2015.pdf
Unit16:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2052/Lesson%20Plan%20Unit%2016.pdf
Unit17:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2044/Lesson%20Plan%20Unit%2017.pdf
Unit18:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2040/Lesson%20Plan%20Unit%2018.pdf
Unit19:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2048/Lesson%20Plan%20Unit%2019.pdf
Unit20:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2037/Lesson%20Plan%20Unit%2020.pdf
Unit21:https://cdn.studiesweekly.com/online/unit_group_teacher_edition_pdfs/2045/Lesson%20Plan%20Unit%2021.pdf

Description of the specific location and hyperlink to the exact location of the proposed updated

content.
Same as above

Publisher's rationale for this change if different from overall rationale.

When resources are approved, they need to be included in an updated Teacher Edition

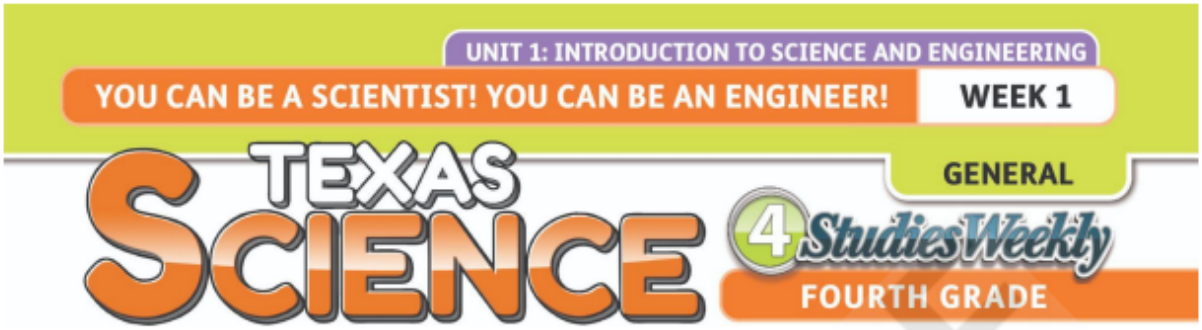
Publisher's description of this change if different from overall description.

Resources that are being requested for approval are now documented in the updated Teacher Editions. These include references to the Unit Summary and Overview Videos, Lesson Slides, STAAR Test Prep and other printables that extend student learning. None of the new references in the Teacher Edition are for TEKS-bearing materials.

Screenshot of Currently Adopted Content

Links to the currently adopted content are provided above

Unit 1 Week 1:



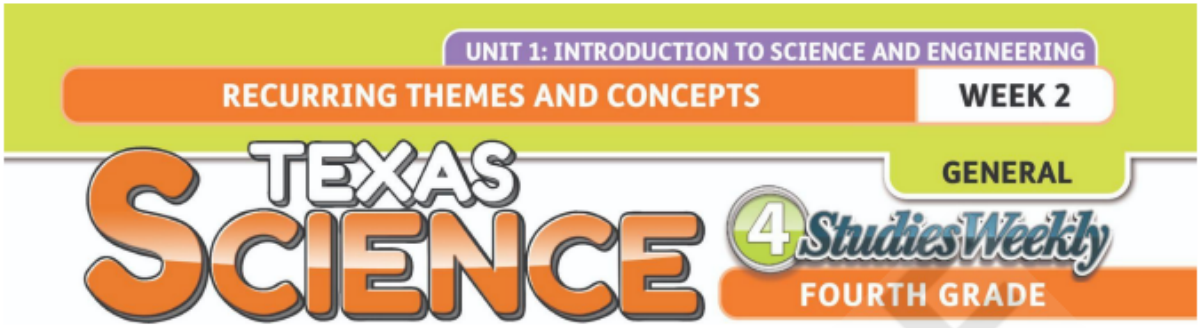
Unit Objectives

Students will be able to describe what science and engineering are and how they can be a scientist and an engineer by safely using tools, using teamwork, and adopting positive mindsets.

Activity Summary

		Lesson Time	5E	Page
Week 1: You Can Be a Scientist! You Can Be an Engineer!		**3 Hours 45 Minutes Total**		
Day 1 45 min.	**1. Who Are Scientists and Engineers?**	45 minutes	Engage	1.8
Day 2 45 min.	**2. Tools and Safety**	45 minutes	Explore	1.9
Day 3 45 min.	**3. Teamwork**	45 minutes	Explore/ Explain	1.13
Day 4 45 min.	**4. Growth Mindset**	45 minutes	Explore/ Explain	1.16
Day 5 45 min.	**5. Making Discoveries and Innovations**	45 minutes	Explore/ Explain	1.19
Optional: Extension Activities				1.21
	1. I Wonder	[20 minutes]	Elaborate	

Unit 1 Week 2:

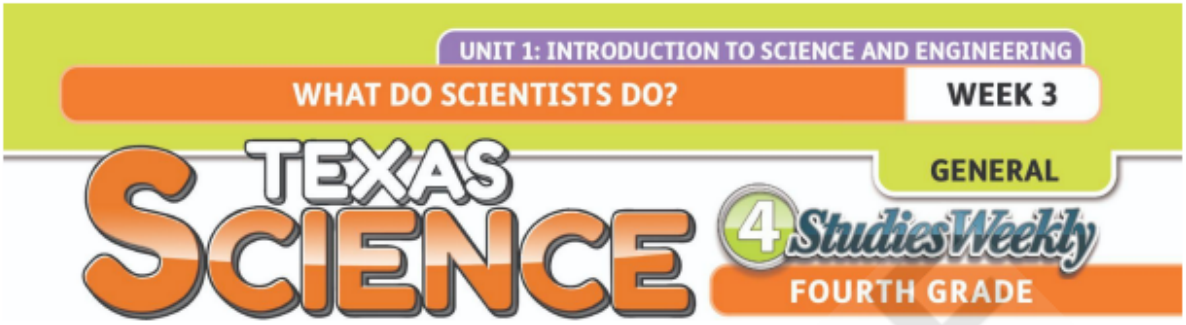


Unit Objectives
The student will be able to identify and understand recurring themes and concepts.

Activity Summary

		Lesson Time	5E	Page
Week 2: Recurring Themes and Concepts		**3 Hours 45 Minutes Total**		
Day 1 45 min.	1. The Lenses of Recurring Themes and Concepts	45 minutes	Engage	1.28
Day 2 45 min.	2. Cause and Effect and System and System Models	45 minutes	Explore	1.31
Day 3 45 min.	3. Structure and Function	45 minutes	Explore	1.34
Day 4 45 min.	4. Energy and Matter and Stability and Change	45 minutes	Explore	1.36
Day 5 45 min.	5. Scale, Proportion, and Quantity	45 minutes	Explore	1.40

Unit 1 Week 3:

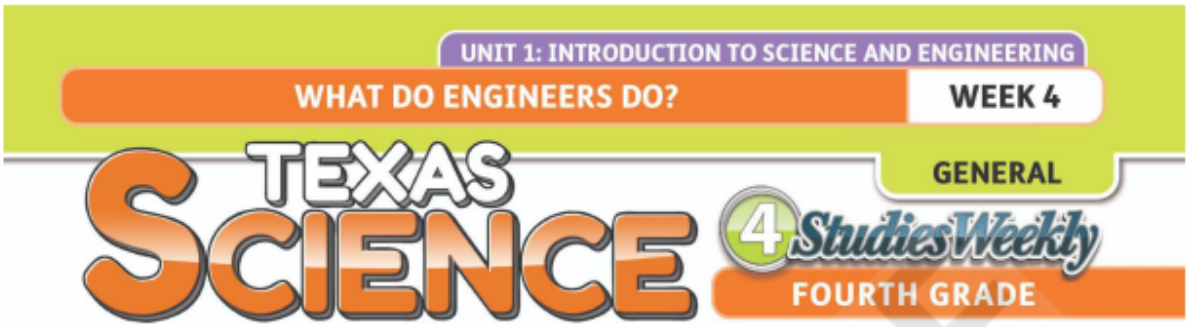


Unit Objectives
Students will be able to ask questions, plan and conduct descriptive investigations, develop and use models, collect and analyze data, and develop explanations.

Activity Summary

		Lesson Time	5E	Page
Week 3: Introduction to Science and Engineering		**3 Hours 45 Minutes Total**		
Day 1 45 min.	**1. Scientific and Engineering Practices**	45 minutes	Engage/ Explore	1.49
Day 2 45 min.	**2. Plan and Conduct Investigations**	45 minutes	Explore/ Explain	1.52
Day 3 45 min.	**3. Develop and Use Models**	45 minutes	Explore/ Explain	1.55
Day 4 45 min.	**4. Collect and Analyze Data**	45 minutes	Explore/ Explain	1.58
Day 5 45 min.	**5. Develop Explanations**	45 minutes	Explain	1.61
Optional: Extension Activities				1.64
1. Bar Graphs 2. Patterns 3. Line Plots		[20 minutes] [20 minutes] [20 minutes]	Elaborate Elaborate Elaborate	

Unit 1 Week 4:



Engineering Design Scenario	Alana forgot her backpack at home and has a lot of supplies to bring home for a science project.

Unit Objectives
Students will be able to identify and describe the steps of the engineering design process by defining a problem, designing and planning a solution, creating a prototype, testing a prototype, and identifying improvements based on criteria and constraints.

Activity Summary

		Lesson Time	5E	Page
Week 4: What Do Engineers Do?		**3 Hours 45 Minutes Total**		
Day 1 45 min.	**1. Engineering Design Process and Practices**	45 minutes	Define	1.72
Day 2 45 min.	**2. Ideate and Plan**	45 minutes	Develop	1.76
Day 3 45 min.	**3. Create**	45 minutes	Develop	1.78
Day 4 45 min.	**4. Test and Improve**	45 minutes	Optimize	1.80
Day 5 45 min.	**5. Communicate**	45 minutes	Optimize	1.83

Unit 2:

Science Standard 4.6A	Classify and describe matter using observable physical properties, including temperature, mass, magnetism, relative density (the ability to sink or float in water), and physical state (solid, liquid, gas).

Phenomenon	Items in a junk drawer need to be classified by their physical properties.

Unit Objectives

Students will be able to collect observations and measurements to classify and describe matter based on patterns of physical properties including temperature, mass, magnetism, relative density, and physical state.

SEP	RTC
4.1E: Collect Evidence Collect observations and measurements as evidence.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena

Unit 3:

Science Standard 4.6B	Investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids.

Phenomenon	When placed in warm water, some parts of an M&M® candy mix with the water, while other parts do not.

Unit Objectives	
Students will be able to investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids, by asking questions and identifying cause-and-effect relationships.	
SEP	**RTC**
4.1A: Ask Questions Ask questions based on observations or information from text, phenomena, models, or investigations.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Unit 4:

Science Standard 4.6C	Demonstrate that matter is conserved when mixtures such as soil and water or oil and water are formed.

Phenomenon	A lava lamp fizzes and swirls.

Unit Objectives

Students will be able to demonstrate and develop an explanation to show that matter is conserved when mixtures are formed by investigating and comparing different mixtures in order to collect data.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5C: Scale, Proportion, and Quantity** Use scale, proportion, and quantity to describe, compare, or model different systems

Unit 5:

Science Standard 4.7	Plan and conduct descriptive investigations to explore the patterns of forces such as gravity, friction, or magnetism in contact or at a distance on an object.

Phenomenon	When a magnet is placed on a refrigerator with sheets of paper, the sheets and the magnet slowly slide down the refrigerator.

Unit Objectives	
Students will be able to plan and conduct descriptive investigations to explore the patterns of forces such as gravity, friction, or magnetism in contact or at a distance on an object.	
SEP	**RTC**
4.1B: Plan and Conduct Investigations Use scientific practices to plan and conduct simple descriptive investigations.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

Unit 6:

EXPECTED STAAR Tested **Science Standard 4.8A**	Investigate and identify the transfer of energy by objects in motion, waves in water, and sound.

Phenomenon	Falling rain produces noise and waves when it hits the water on Lake Texoma.

Unit Objectives	
Students will be able to investigate and identify the transfer of energy by objects in motion, waves in water, and sound through the identification and explanation of cause-and-effect relationships.	
SEP	**RTC**
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena.

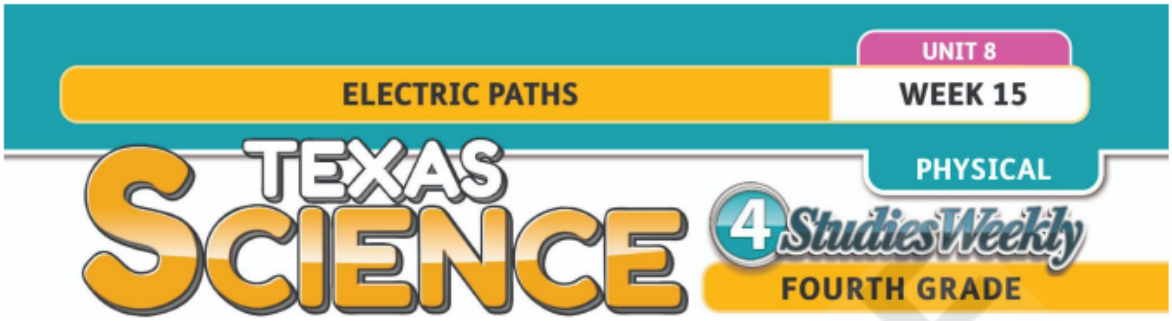
Unit 7:

Science Standard 4.8B	Identify conductors and insulators of thermal and electrical energy.

Engineering Design Scenario	**Week 13:** Natalia notices that her cup is too hot to hold when it contains hot chocolate and the hot chocolate cools off before she can drink it. **Week 14:** Jackson cut the cord to the porch lights in half with the clippers. Now the lights do not work.

Unit Objectives	
Students will be able to use engineering practices to design solutions to problems by investigating cause-and-effect relationships to identify conductors and insulators of thermal and electrical energy.	
SEP	**RTC**
4.1B: Design Solutions Use engineering practices to design solutions to problems.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Unit8:



Science Standard 4.8C	Demonstrate and describe how electrical energy travels in a closed path that can produce light and thermal energy.

Phenomenon	A lizard lies under a heat lamp in its tank.

Unit Objectives

Students will be able to demonstrate and describe how electrical energy travels in a path that can produce light and thermal energy by using models and cause and effect relationships to support explanations.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by models.	**4.5B: Cause and Effect** Identify cause-and-effect relationships to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 9:

EXPECTED STAAR Tested — **Science Standard 4.9A**	Collect and analyze data to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight.

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Phenomenon	Aleki notices that during the summer, it is light and warm outside after dinner, but as it turns to fall, it gets darker and colder.

Unit Objectives

Students will be able to collect and analyze data in the form of observations and measurements to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight to explain a specific phenomenon.

SEP	RTC
4.1E: Collect Evidence Collect observations and measurements as evidence to predict patterns.	**4.5A: Patterns** Identify and use patterns by analyzing data to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 10:

EXPECTED STAAR Tested — **Science Standard 4.9B**	Collect and analyze data to identify sequences and predict patterns of change in the observable appearance of the Moon from Earth.

Phenomenon	The moon appears to change shape from one night to the next.

Unit Objectives

Students will be able to collect and analyze data to identify sequences and patterns of change in the observable appearance of the moon from Earth and make predictions to explain scientific phenomena.

SEP	RTC
4.2B: Analyze Data Analyze data by identifying any significant features, patterns, or sources of error.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

Unit 11:

EXPECTED STAAR® Tested	**Science Standard 4.10A**	Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the sun as a major source of energy in this process.

Phenomenon	Earth has been recycling water since its creation approximately 4.5 billion years ago.

Unit Objectives

Students will be able to describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the sun as a major source of energy in this process by examining and modeling the parts of a system and their interdependence in the function of the system.

SEP	RTC
4.1G: Develop and Use Models Develop and use models to represent phenomena, objects, and processes.	**4.5D: Systems and System Models** Examine and model the parts of a system and their interdependence in the function of the system.

Update to Content Not Reviewed by SRP

Unit 12:

Science Standard 4.10B	Model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.

Phenomenon	**Week 20:** A sidewalk has been broken down, and the pieces create a hazardous area.

Engineering Design Scenario	**Week 21:** A sidewalk has been broken down, and the pieces create a hazardous area.

Unit Objectives

Students will be able to model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice through the investigation of cause-and-effect relationships and development of models and prototypes.

SEP	RTC
4.1G: Develop and Use Models Develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Unit 13:

EXPECTED STAAR Tested — **Science Standard 4.10C**	Differentiate between weather and climate.

Phenomenon	Alana visits the Chihuahuan Desert in El Paso, Texas, and it starts to rain.

Unit Objectives

Students will be able to differentiate between weather and climate by identifying and comparing patterns through mathematical calculations.

SEP	RTC
4.2C: Use Mathematics Use mathematical calculations to compare patterns and relationships.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 14:

EXPECTED STAAR Tested	**Science Standard 4.11A**	Identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources, such as wind, water, sunlight, plants, animals, coal, oil, and natural gas.

Phenomenon	Electricity can be made from natural resources.

Unit Objectives	
Students will be able to identify and explain the advantages and disadvantages caused by using Earth's renewable and nonrenewable natural resources.	
SEP	**RTC**
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5B: Cause and Effect** Investigate and predict cause-and-effect relationships in science.

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Unit15:

EXPECTED STAAR Tested — **Science Standard 4.11B**	Explain the critical role of energy resources to modern life and how conservation, disposal, and recycling of natural resources impact the environment

Phenomenon	Texans use more energy than can be produced by renewable energy alone.

Unit Objectives

Students will be able to explain the critical role of energy resources to modern life and how the conservation, disposal, and recycling of natural resources affect the environment by investigating the flow of energy from natural resources to end use.

SEP	RTC
4.3C: Communicate Explanations Communicate explanations individually and collaboratively in a variety of settings and formats	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena

Unit16:

Science Standard 4.11C	Determine the physical properties of rocks that allow Earth's natural resources to be stored there.

Phenomenon	Alana and Steven dig a hole but cannot find oil, coal, or natural gas.

Unit Objectives	
Students will be able to determine the physical properties of rocks using models to explain their structure and the function of storing natural resources.	
SEP	**RTC**
4.1G: Develop Models Develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.	**4.5F: Structure and Function** Explain the relationship between the structure and function of objects, organisms, and systems;

Unit 17:

Science Standard 4.12A	Investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter.

Phenomenon	**Week 27:** A plant starts to sprout on a paper towel before it is placed in dirt and continues to grow.

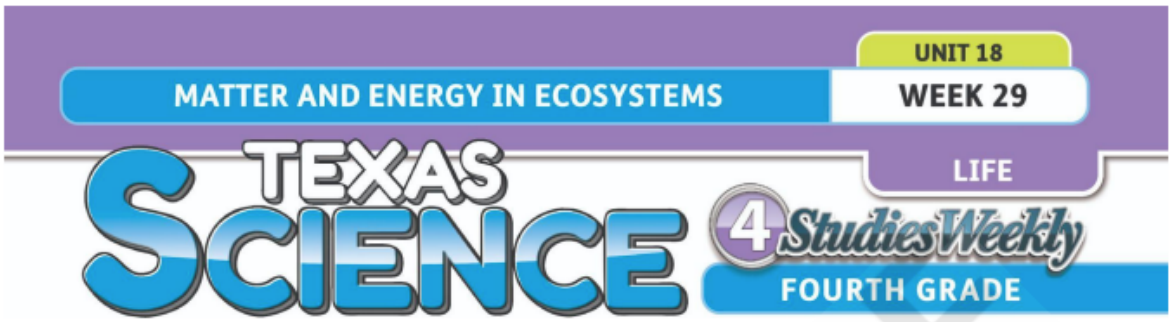
Engineering Design Scenario	**Week 28:** Natalia needs her plant to continue to grow without dirt.

Unit Objectives

Students will be able to investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter.

SEP	RTC
4.3A: Develop Explanations and Propose Solutions Develop explanations and propose solutions supported by data and models	**4.5E: Energy and Matter** Investigate how energy flows and matter cycles through systems and how matter is conserved;

Unit 18:



EXPECTED STAAR Tested **Science Standard 4.12B**	Describe the cycling of matter and flow of energy through food webs, including the roles of the sun, producers, consumers, and decomposers.

Phenomenon	Several animals eat from the same apple tree, while some apples are left to rot in the woods.

Unit Objectives	
Students will be able to develop a model to represent and describe how matter cycles and energy flows through a food web of producers, consumers, and decomposers.	
SEP	**RTC**
4.1G:Develop and Use Models Develop and use models to represent phenomena, objects, and processes.	**4.5E: Energy and Matter** Investigate how energy flows and matter cycles through systems and how matter is conserved.

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Unit19:

Science Standard 4.12C	Identify and describe past environments based on fossil evidence, including common Texas fossils.

Phenomenon	There are ocean fossils found in the desert of Big Bend National Park, but the closest ocean is almost 500 miles away.

Unit Objectives	
Students will be able to use fossil evidence to identify patterns and describe past environments.	
SEP	**RTC**
4.1E: Collect Evidence Collect observations and measurements as evidence.	**4.5A: Patterns** Identify patterns to explain scientific phenomena.

Unit 20:

EXPECTED STAAR Tested **Science Standard 4.13A**	Explore and explain how structures and functions of plants, such as waxy leaves and deep roots, enable them to survive in their environment.

Phenomenon	The copiapoa cactus is able to survive in the harsh desert of Chile.

Unit Objectives

Students will be able to explore and explain how structures and functions of plants, such as waxy leaves and deep roots, enable them to survive in their environment.

SEP	RTC
4.3B: Communicate Explanations Communicate explanations collaboratively in a variety of settings and formats.	**4.5F: Structure and Function** Explain the relationship between the structure and function of objects, organisms, and systems.

Unit 21:

EXPECTED STAAR Tested — **Science Standard 4.13B**	Differentiate between inherited and acquired physical traits of organisms.

Phenomenon	Horses at a farm look a lot alike.

Unit Objectives

Students will be able to collect and organize data to differentiate between inherited and acquired physical traits and describe how factors can cause organisms to either change or stay the same.

SEP	RTC
4.1F: Collect and Organize Data Record and organize data using pictures, numbers, words, symbols, and simple graphs.	**4.5G: Stability and Change** Explain how factors or conditions impact stability and change in objects, organisms, and systems.

Screenshot of Proposed Updated Content

As this is a replacement of the entire Teacher Edition and it is generally well over 5 pages per document, links to the updated Teacher Editions are provided here:

Update to Content Not Reviewed by SRP

Unit 1 Week 1:
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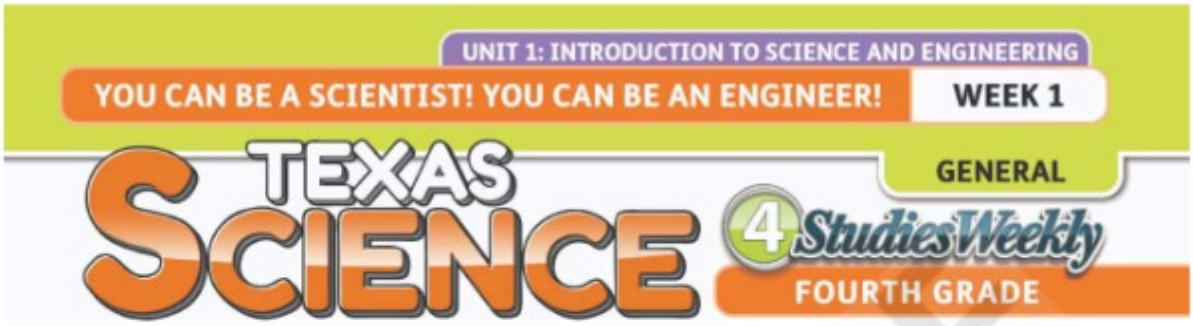

Unit Objectives

Students will be able to describe what science and engineering are and how they can be a scientist and an engineer by safely using tools, using teamwork, and adopting positive mindsets.

Activity Summary

		Lesson Time	5E	Page
Week 1: You Can Be a Scientist! You Can Be an Engineer!		**3 Hours 45 Minutes Total**		
Day 1 45 min.	1. **Who Are Scientists and Engineers?**	45 minutes	Engage	1.8
Day 2 45 min.	2. **Tools and Safety**	45 minutes	Explore	1.9
Day 3 45 min.	3. **Teamwork**	45 minutes	Explore/ Explain	1.13
Day 4 45 min.	4. **Growth Mindset**	45 minutes	Explore/ Explain	1.16
Day 5 45 min.	5. **Making Discoveries and Innovations**	45 minutes	Explore/ Explain	1.19
Optional: Extension Activities				1.21
	1. I Wonder	[20 minutes]	Elaborate	

Update to Content Not Reviewed by SRP

Unit 1 Week 2:
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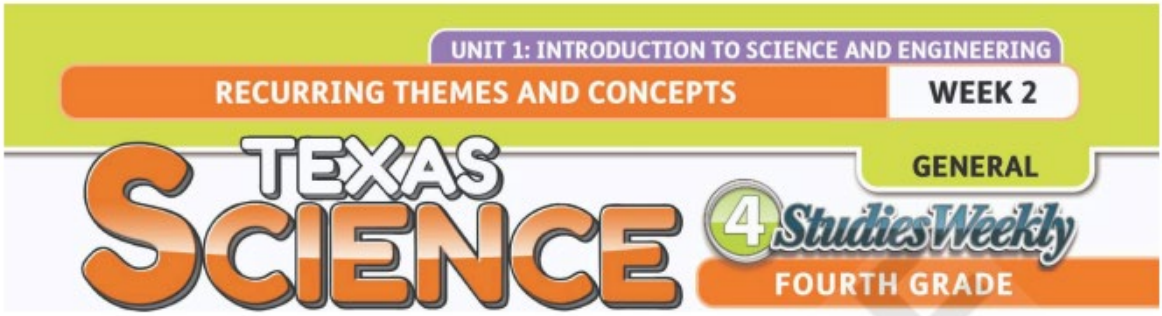

Unit Objectives
The student will be able to identify and understand recurring themes and concepts.

Activity Summary

		Lesson Time	5E	Page
Week 2: Recurring Themes and Concepts		3 Hours 45 Minutes Total		
Day 1 45 min.	1. The Lenses of Recurring Themes and Concepts	45 minutes	Engage	1.28
Day 2 45 min.	2. Cause and Effect and System and System Models	45 minutes	Explore	1.31
Day 3 45 min.	3. Structure and Function	45 minutes	Explore	1.34
Day 4 45 min.	4. Energy and Matter and Stability and Change	45 minutes	Explore	1.36
Day 5 45 min.	5. Scale, Proportion, and Quantity	45 minutes	Explore	1.40

Update to Content Not Reviewed by SRP

Unit 1 Week 3:
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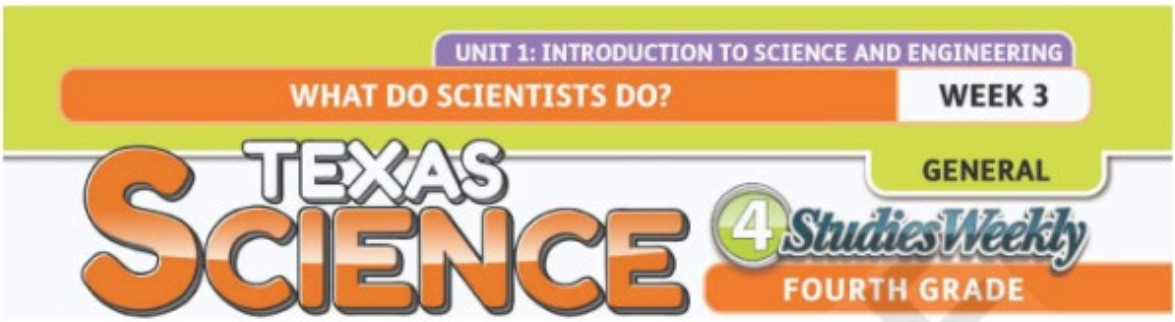

Unit Objectives
Students will be able to ask questions, plan and conduct descriptive investigations, develop and use models, collect and analyze data, and develop explanations.

Activity Summary

		Lesson Time	5E	Page
Week 3: Introduction to Science and Engineering		**3 Hours 45 Minutes Total**		
Day 1 45 min.	1. Scientific and Engineering Practices	45 minutes	Engage/ Explore	1.49
Day 2 45 min.	2. Plan and Conduct Investigations	45 minutes	Explore/ Explain	1.52
Day 3 45 min.	3. Develop and Use Models	45 minutes	Explore/ Explain	1.55
Day 4 45 min.	4. Collect and Analyze Data	45 minutes	Explore/ Explain	1.58
Day 5 45 min.	5. Develop Explanations	45 minutes	Explain	1.61
Optional: Extension Activities				1.64
	1. Bar Graphs 2. Patterns 3. Line Plots	[20 minutes] [20 minutes] [20 minutes]	Elaborate Elaborate Elaborate	

Unit 1 Week 4:
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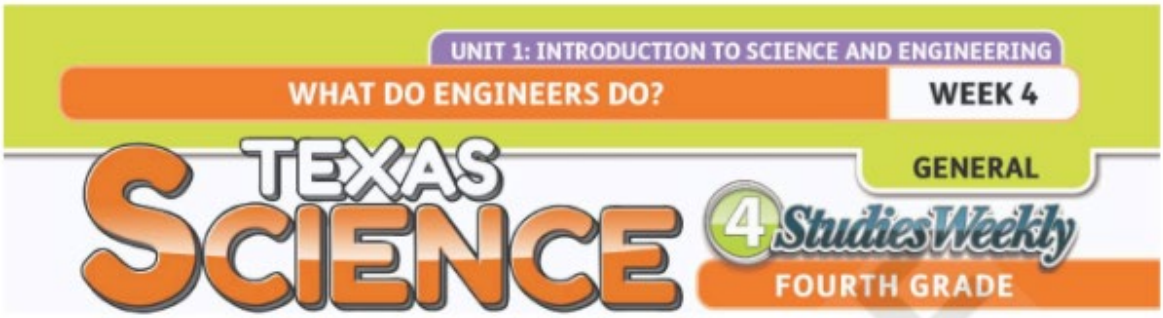

Engineering Design Scenario	Alana forgot her backpack at home and has a lot of supplies to bring home for a science project.

Unit Objectives

Students will be able to identify and describe the steps of the engineering design process by defining a problem, designing and planning a solution, creating a prototype, testing a prototype, and identifying improvements based on criteria and constraints.

Activity Summary

		Lesson Time	5E	Page
Week 4: What Do Engineers Do?		**3 Hours 45 Minutes Total**		
Day 1 45 min.	1. Engineering Design Process and Practices	45 minutes	Define	1.72
Day 2 45 min.	2. Ideate and Plan	45 minutes	Develop	1.76
Day 3 45 min.	3. Create	45 minutes	Develop	1.78
Day 4 45 min.	4. Test and Improve	45 minutes	Optimize	1.80
Day 5 45 min.	5. Communicate	45 minutes	Optimize	1.83

Unit 2:
https://drive.google.com/file/d/1Lss18LUagK8xKC44Ev8BI0b2FFiGB3qI/view?usp=drive_link

Science Standard 4.6A	Classify and describe matter using observable physical properties, including temperature, mass, magnetism, relative density (the ability to sink or float in water), and physical state (solid, liquid, gas).

Phenomenon	Items in a junk drawer need to be classified by their physical properties.

Unit Objectives

Students will be able to collect observations and measurements to classify and describe matter based on patterns of physical properties including temperature, mass, magnetism, relative density, and physical state.

SEP	RTC
4.1E: Collect Evidence Collect observations and measurements as evidence.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena

Unit 3:
https://drive.google.com/file/d/1h-ibQl0jIVeBMqdSP395WPvI5ix4MyZ4/view?usp=drive_link

Science Standard 4.6B	Investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids.

Phenomenon	When placed in warm water, some parts of an M&M® candy mix with the water, while other parts do not.

Unit Objectives	
Students will be able to investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids, by asking questions and identifying cause-and-effect relationships.	
SEP	**RTC**
4.1A: Ask Questions Ask questions based on observations or information from text, phenomena, models, or investigations.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Unit 4:
https://drive.google.com/file/d/1dajGUQBaAWQNrDFPn_etswuA4qkRyp1_/view?usp=drive_link

Science Standard 4.6C	Demonstrate that matter is conserved when mixtures such as soil and water or oil and water are formed.

Phenomenon	A lava lamp fizzes and swirls.

Unit Objectives

Students will be able to demonstrate and develop an explanation to show that matter is conserved when mixtures are formed by investigating and comparing different mixtures in order to collect data.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5C: Scale, Proportion, and Quantity** Use scale, proportion, and quantity to describe, compare, or model different systems

Update to Content Not Reviewed by SRP

Unit 5:
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Science Standard 4.7	Plan and conduct descriptive investigations to explore the patterns of forces such as gravity, friction, or magnetism in contact or at a distance on an object.

Phenomenon	When a magnet is placed on a refrigerator with sheets of paper, the sheets and the magnet slowly slide down the refrigerator.

Unit Objectives

Students will be able to plan and conduct descriptive investigations to explore the patterns of forces such as gravity, friction, or magnetism in contact or at a distance on an object.

SEP	RTC
4.1B: Plan and Conduct Investigations Use scientific practices to plan and conduct simple descriptive investigations.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 6:
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EXPECTED STAAR Tested — **Science Standard 4.8A**	Investigate and identify the transfer of energy by objects in motion, waves in water, and sound.

Phenomenon	Falling rain produces noise and waves when it hits the water on Lake Texoma.

Unit Objectives

Students will be able to investigate and identify the transfer of energy by objects in motion, waves in water, and sound through the identification and explanation of cause-and-effect relationships.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 7:
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Science Standard 4.8B	Identify conductors and insulators of thermal and electrical energy.

Engineering Design Scenario	**Week 13:** Natalia notices that her cup is too hot to hold when it contains hot chocolate and the hot chocolate cools off before she can drink it. **Week 14:** Jackson cut the cord to the porch lights in half with the clippers. Now the lights do not work.

Unit Objectives

Students will be able to use engineering practices to design solutions to problems by investigating cause-and-effect relationships to identify conductors and insulators of thermal and electrical energy.

SEP	RTC
4.1B: Design Solutions Use engineering practices to design solutions to problems.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

Update to Content Not Reviewed by SRP

Unit 8:
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Science Standard 4.8C	Demonstrate and describe how electrical energy travels in a closed path that can produce light and thermal energy.

Phenomenon	A lizard lies under a heat lamp in its tank.

Unit Objectives

Students will be able to demonstrate and describe how electrical energy travels in a path that can produce light and thermal energy by using models and cause and effect relationships to support explanations.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by models.	**4.5B: Cause and Effect** Identify cause-and-effect relationships to explain scientific phenomena.

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Unit 9:
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EXPECTED STAAR Tested — **Science Standard 4.9A**	Collect and analyze data to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight.

Phenomenon	Aleki notices that during the summer, it is light and warm outside after dinner, but as it turns to fall, it gets darker and colder.

Unit Objectives

Students will be able to collect and analyze data in the form of observations and measurements to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight to explain a specific phenomenon.

SEP	RTC
4.1E: Collect Evidence Collect observations and measurements as evidence to predict patterns.	**4.5A: Patterns** Identify and use patterns by analyzing data to explain scientific phenomena.

Unit 10:
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EXPECTED STAAR Tested — **Science Standard 4.9B**	Collect and analyze data to identify sequences and predict patterns of change in the observable appearance of the Moon from Earth.

Phenomenon	The moon appears to change shape from one night to the next.

Unit Objectives

Students will be able to collect and analyze data to identify sequences and patterns of change in the observable appearance of the moon from Earth and make predictions to explain scientific phenomena.

SEP	RTC
4.2B: Analyze Data Analyze data by identifying any significant features, patterns, or sources of error.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

Update to Content Not Reviewed by SRP

Unit 11:
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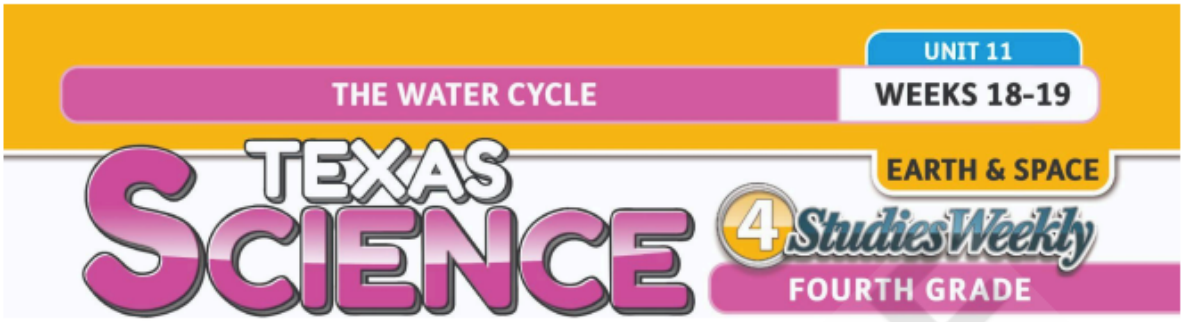

EXPECTED STAAR Tested — **Science Standard 4.10A**	Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the sun as a major source of energy in this process.

Phenomenon	Earth has been recycling water since its creation approximately 4.5 billion years ago.

Unit Objectives

Students will be able to describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the sun as a major source of energy in this process by examining and modeling the parts of a system and their interdependence in the function of the system.

SEP	RTC
4.1G: Develop and Use Models Develop and use models to represent phenomena, objects, and processes.	**4.5D: Systems and System Models** Examine and model the parts of a system and their interdependence in the function of the system.

Update to Content Not Reviewed by SRP

Unit 12:
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Science Standard 4.10B	Model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.

Phenomenon	**Week 20:** A sidewalk has been broken down, and the pieces create a hazardous area.
Engineering Design Scenario	**Week 21:** A sidewalk has been broken down, and the pieces create a hazardous area.

Unit Objectives

Students will be able to model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice through the investigation of cause-and-effect relationships and development of models and prototypes.

SEP	RTC
4.1G: Develop and Use Models Develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems.

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Unit 13:
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EXPECTED STAAR Tested — **Science Standard 4.10C**	Differentiate between weather and climate.

Phenomenon	Alana visits the Chihuahuan Desert in El Paso, Texas, and it starts to rain.

Unit Objectives	
Students will be able to differentiate between weather and climate by identifying and comparing patterns through mathematical calculations.	
SEP	**RTC**
4.2C: Use Mathematics Use mathematical calculations to compare patterns and relationships.	**4.5A: Patterns** Identify and use patterns to explain scientific phenomena.

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Unit 14:
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EXPECTED STAAR Tested — Science Standard 4.11A	Identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources, such as wind, water, sunlight, plants, animals, coal, oil, and natural gas.

Phenomenon	Electricity can be made from natural resources.

Unit Objectives

Students will be able to identify and explain the advantages and disadvantages caused by using Earth's renewable and nonrenewable natural resources.

SEP	RTC
4.3A: Develop Explanations Develop explanations supported by data and models.	**4.5B: Cause and Effect** Investigate and predict cause-and-effect relationships in science.

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Unit 15:
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EXPECTED STAAR Tested — **Science Standard 4.11B**	Explain the critical role of energy resources to modern life and how conservation, disposal, and recycling of natural resources impact the environment

Phenomenon	Texans use more energy than can be produced by renewable energy alone.

Unit Objectives

Students will be able to explain the critical role of energy resources to modern life and how the conservation, disposal, and recycling of natural resources affect the environment by investigating the flow of energy from natural resources to end use.

SEP	RTC
4.3C: Communicate Explanations Communicate explanations individually and collaboratively in a variety of settings and formats	**4.5B: Cause and Effect** Identify and investigate cause-and-effect relationships to explain scientific phenomena

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Unit 16:
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Science Standard 4.11C	Determine the physical properties of rocks that allow Earth's natural resources to be stored there.

Phenomenon	Alana and Steven dig a hole but cannot find oil, coal, or natural gas.

Unit Objectives

Students will be able to determine the physical properties of rocks using models to explain their structure and the function of storing natural resources.

SEP	RTC
4.1G: Develop Models Develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.	**4.5F: Structure and Function** Explain the relationship between the structure and function of objects, organisms, and systems;

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Unit 17:
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Science Standard 4.12A	Investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter.

Phenomenon	**Week 27:** A plant starts to sprout on a paper towel before it is placed in dirt and continues to grow.
Engineering Design Scenario	**Week 28:** Natalia needs her plant to continue to grow without dirt.

Unit Objectives

Students will be able to investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter.

SEP	RTC
4.3A: Develop Explanations and Propose Solutions Develop explanations and propose solutions supported by data and models	**4.5E: Energy and Matter** Investigate how energy flows and matter cycles through systems and how matter is conserved;

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Unit 18:
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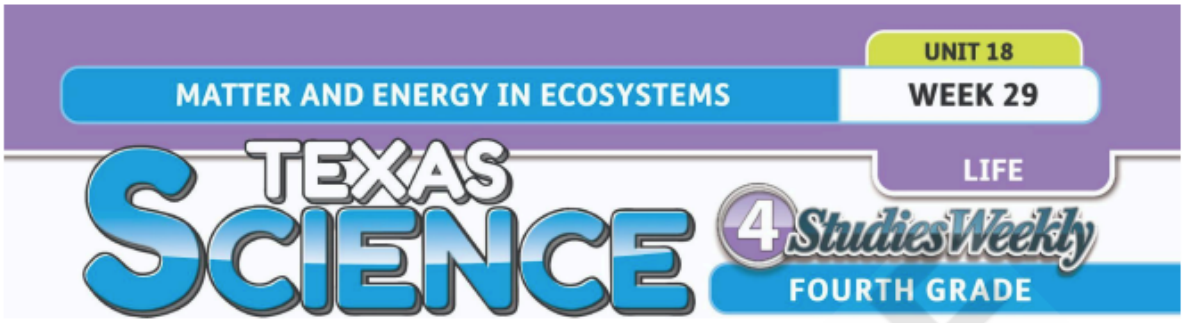

EXPECTED STAAR Tested — **Science Standard 4.12B**	Describe the cycling of matter and flow of energy through food webs, including the roles of the sun, producers, consumers, and decomposers.

Phenomenon	Several animals eat from the same apple tree, while some apples are left to rot in the woods.

Unit Objectives

Students will be able to develop a model to represent and describe how matter cycles and energy flows through a food web of producers, consumers, and decomposers.

SEP	RTC
4.1G:Develop and Use Models Develop and use models to represent phenomena, objects, and processes.	**4.5E: Energy and Matter** Investigate how energy flows and matter cycles through systems and how matter is conserved.

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Unit 19:
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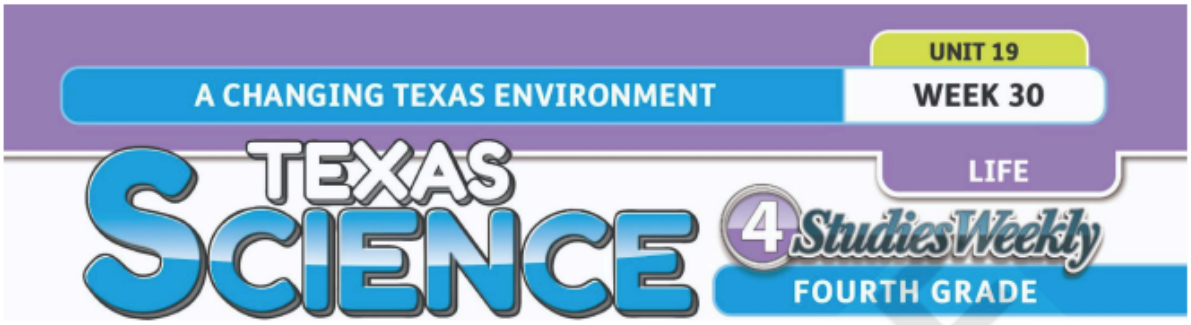

Science Standard 4.12C	Identify and describe past environments based on fossil evidence, including common Texas fossils.

Phenomenon	There are ocean fossils found in the desert of Big Bend National Park, but the closest ocean is almost 500 miles away.

Unit Objectives	
Students will be able to use fossil evidence to identify patterns and describe past environments.	
SEP	**RTC**
4.1E: Collect Evidence Collect observations and measurements as evidence.	**4.5A: Patterns** Identify patterns to explain scientific phenomena.

Unit 20:
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EXPECTED STAAR Tested — **Science Standard 4.13A**	Explore and explain how structures and functions of plants, such as waxy leaves and deep roots, enable them to survive in their environment.

Phenomenon	The copiapoa cactus is able to survive in the harsh desert of Chile.

Unit Objectives

Students will be able to explore and explain how structures and functions of plants, such as waxy leaves and deep roots, enable them to survive in their environment.

SEP	RTC
4.3B: Communicate Explanations Communicate explanations collaboratively in a variety of settings and formats.	**4.5F: Structure and Function** Explain the relationship between the structure and function of objects, organisms, and systems.

Update to Content Not Reviewed by SRP

Unit 21:
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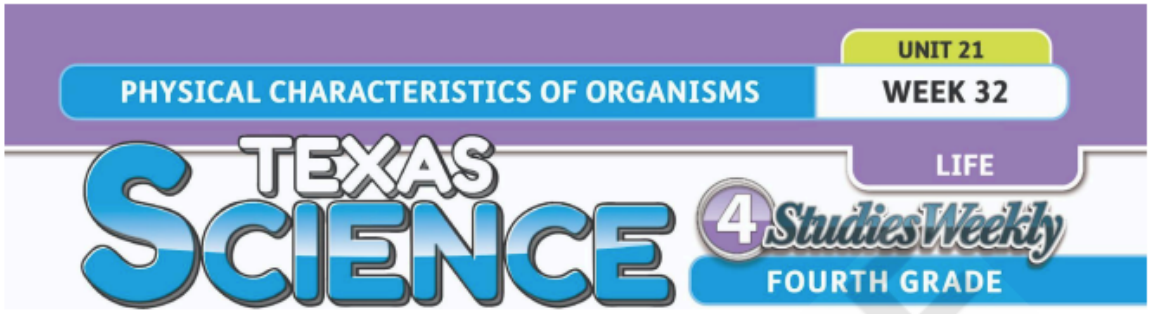

EXPECTED STAAR Tested — Science Standard 4.13B	Differentiate between inherited and acquired physical traits of organisms.

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Phenomenon	Horses at a farm look a lot alike.

Unit Objectives

Students will be able to collect and organize data to differentiate between inherited and acquired physical traits and describe how factors can cause organisms to either change or stay the same.

SEP	RTC
4.1F: Collect and Organize Data Record and organize data using pictures, numbers, words, symbols, and simple graphs.	**4.5G: Stability and Change** Explain how factors or conditions impact stability and change in objects, organisms, and systems.

Signature: By entering your name below, you are signing this document electronically. You agree that your electronic signature is the equivalent of your manual signature.

X Clayton Chamberlain

Date Submitted: March 11, 2024