



Grade 02 Social Studies Unit 10 Exemplar Lesson 03: Changing the Environment

This lesson is one approach to teaching the State Standards associated with this unit. Districts are encouraged to customize this lesson by supplementing with district-approved resources, materials, and activities to best meet the needs of learners. The duration for this lesson is only a recommendation, and districts may modify the time frame to meet students' needs. To better understand how your district may be implementing CSCOPE lessons, please contact your child's teacher. (For your convenience, please find linked the TEA Commissioner's List of [State Board of Education Approved Instructional Resources](#) and [Midcycle State Adopted Instructional Materials](#).)

Lesson Synopsis

In this lesson, students learn about the ways that people modify their environment, along with the positive and negative consequences of those changes. Students also identify ways good citizens conserve the earth's natural resources.

TEKS

The Texas Essential Knowledge and Skills (TEKS) listed below are the standards adopted by the State Board of Education, which are required by Texas law. Any standard that has a strike-through (e.g. ~~sample phrase~~) indicates that portion of the standard is taught in a previous or subsequent unit. The TEKS are available on the Texas Education Agency website at <http://www.tea.state.tx.us/index2.aspx?id=6148>.

2.4 *History. The student understands how historical figures, patriots, and good citizens helped shape the community, state, and nation. The student is expected to:*

2.4A Identify contributions of historical figures, including Thurgood Marshall, Irma Rangel, John Hancock, and Theodore Roosevelt, who have influenced the community, state, and nation.

2.8 *Geography. The student understands how humans use and modify the physical environment. The student is expected to:*

2.8A Identify ways in which people have modified the physical environment such as building roads, clearing land for urban development and agricultural use, and drilling for oil.

2.8B Identify positive and negative consequences of human modification of the physical environment such as the use of irrigation to improve crop yields.

2.8C Identify ways people can conserve and replenish natural resources.

2.13 *Citizenship. The student understands characteristics of good citizenship as exemplified by historical figures and other individuals. The student is expected to:*

2.13C Identify other individuals who exemplify good citizenship.

2.13D Identify ways to actively practice good citizenship, including involvement in community service.

Social Studies Skills TEKS

2.19 *Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:*

2.19A Express ideas orally based on knowledge and experiences.

2.19B Create written and visual material such as stories, poems, maps, and graphic organizers to express ideas.

2.20 *Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings. The student is expected to:*

2.20B Use a decision-making process to identify a situation that requires a decision, gather information, generate options, predict outcomes, take action to implement a decision, and reflect on the effectiveness of that decision.

GETTING READY FOR INSTRUCTION

Performance Indicators

Grade 02 Social Studies Unit 10 PI 03

Draw a picture that illustrates ways people have modified the physical environment. Add call-out boxes to identify positive and negative consequences of the modifications people made. Explain the picture to a friend, giving examples of choices people could make and things they could do to overcome negative consequences.

Standard(s): 2.8A , 2.8B , 2.8C , 2.19B , 2.20B

ELPS ELPS.c.1C

Key Understandings

- People make choices about modifying the physical environment, and those choices have consequences.
 - Why do people modify their physical environment?

— What are the consequences, both positive and negative, of modifying the physical environment?

Vocabulary of Instruction






- physical environment
- modify/modification
- conserve
- replenish
- natural resource
- consequence
- irrigation
- crop yield

Materials

- butcher paper
- chart paper
- markers
- several photographs or pictures of the local community or use the pictures in the Handout: **Modifying the Environment**

Attachments

All attachments associated with this lesson are referenced in the body of the lesson. Due to considerations for grading or student assessment, attachments that are connected with Performance Indicators or serve as answer keys are available in the district site and are not accessible on the public website.

-  [Handout: Adding to the Mural \(1 per class, one cut-out per student\)](#)
-  [Teacher Resource: Modifying the Environment](#)
-  [Handout: Consequences of Modifying Our Environment \(1 per student\)](#)
-  [Handout: Consequences of Modifying Our Environment-KEY \(1 per student\)](#)
-  [Teacher Resource: Pictures of Irrigation and Crop Yield](#)

Resources

- Possible optional literature selections for conservation:
 - *The Lorax* by Dr. Suess
 - *Why Should I Save Energy* by Jen Green
 - *Why Should I Save Water* by Jen Green
 - *How to Help the Earth-by the Lorax* by Tish Rabe
 - *Wump World* by Bill Peet
 - *Dear Children of the Earth* by Schim Schimmel
- Websites for conservation:
 - <http://www.clarkswcd.org/Kids/KidsHome.htm>
 - <http://kids.nationalgeographic.com/kids/stories/spacescience/green-tips/>
 - <http://www.thewaterpage.com/water-conservation-kids.htm>
 - http://www.energystar.gov/index.cfm?c=kids.kids_index
 - <http://www.fs.fed.us/kids/>
 - <http://www.ecy.wa.gov/programs/swfa/kidspage/>
 - <http://www.ollierecycles.com/uk/index.html>
 - <http://www.sciencekids.co.nz/sciencefacts/recycling.html>
 - <http://www.recyclezone.org.uk/>
 - <http://greenguideforkids.blogspot.com/2008/01/3-rs-reduce-reuse-recycle.html>
 - <http://kids.niehs.nih.gov/explore/reduce/>
 - <http://www.connecticutplastics.com/resources/connecticut-plastics-learning-center/paper-plastic-and-more-a-kids-guide-to-recycling--environmental-conservation/>
 - <http://eartheasy.com/blog/2009/03/environmental-websites-for-kids/>
 - <http://dnr.wi.gov/org/caer/ce/earth/index.htm>
 - <http://www.nrdc.org/greensquad/>

Advance Preparation

1. Become familiar with content and procedures for the lesson.
2. Refer to the Instructional Focus Document for specific content to include in the lesson.
3. Select appropriate sections of the textbook and other classroom materials that support the learning for this lesson.
4. Preview available resources and websites according to district guidelines.
5. Prepare materials and handouts as needed.
6. Using butcher paper, create a mural of a countryside scene with trees, rolling hills, sky, and a river.
7. Print one copy of the Handout: **Adding to the Mural**. Cut out each item in the handout and place them in a container.
8. Cut the mural handout into slips, so that each student can draw one slip and add that item to the mural.
9. Take photographs or acquire photographs of the local community that show modifications people have made.

Background Information

In this unit, students will need to know the term “irrigation” which is a technological way to water crops. When the term “crop yield” is used, students will need to understand that this reflects the amount of crops harvested from the field. Students will be introduced to the concepts of conserving and protecting our natural resources as well as replenishing, which is to make full or complete again.

GETTING READY FOR INSTRUCTION

Teachers are encouraged to supplement and substitute resources, materials, and activities to meet the needs of learners. These lessons are one approach to teaching the TEKS/Specificity as well as addressing the Performance Indicators associated with each unit. District personnel may create original lessons using the Content Creator in the Tools Tab. All originally authored lessons can be saved in the “My CSCOPE” Tab within the “My Content” area.

INSTRUCTIONAL PROCEDURES

| Instructional Procedures ENGAGE – Mural | Notes for Teacher NOTE: 1 Day = 50 minutes Suggested Day 1 – 20 minutes |
|---|--|
| <ol style="list-style-type: none"> 1. Display the mural of a countryside scene with trees, hills, sky, and a river. Ask students to imagine what it would be like to be in that environment. Discuss what it would look like, sound like, feel like, and smell like. 2. Prepare the Handout: Adding to the Mural by cutting the elements apart, so that students can draw one of the cut-outs. 3. Tell students that they are going to be adding things to the mural. Instruct students to draw an item out of the container (from the Handout: Adding to the Mural). 4. Invite 4-5 students at a time to the mural to add their item. Remind students that this is not an art assignment; it is okay to make a quick line sketch. The purpose of the mural is to help us learn about the way people change their environment. 5. As students are drawing, discuss with the other students what modifications are being made to the environment in the mural and why people might modify the environment in that way (e.g., building a bridge helps people get from one place to another). 6. Continue allowing the students to take turns until all the slips of paper have been drawn. 7. After all students have added to the mural, ask students to imagine what it would be like to be in the modified environment. Discuss what it would look like, sound like, feel like, and smell like. 8. Ask the following questions: <ul style="list-style-type: none"> • How has the environment changed? (<i>Possible answers may include: added a bridge, a highway, a road, a farm, oil wells, houses, etc.</i>) • What are the benefits of adding a bridge to the environment? A highway? A farm? An oil well? A road? A mall? (<i>Possible answers may include: bridges, roads, and highways help people get from one place to another more easily; houses provide shelter; malls provide goods and services; oil wells produce natural resources we need; farms grow products we need, etc.</i>) • What are the negative consequences of adding these elements to the environment? (<i>Possible answers may include: the oil well destroys some of the vegetation; more roads and highways mean more cars are traveling, which increases traffic and air pollution; farms break up the natural landscape, etc.</i>) | <p>Materials:</p> <ul style="list-style-type: none"> • butcher paper • markers <p>Attachments:</p> <ul style="list-style-type: none"> • Handout: Adding to the Mural (1 per class; 1 cut-out per student) <p>Purpose:</p> <ul style="list-style-type: none"> • The purpose of this section of the lesson is for students to identify ways that people modify the environment. <p>TEKS: 2.8A; 2.19A, 2.19B</p> |
| EXPLORE – How We Change the Environment | Suggested Day 1 (continued) – 20 minutes |
| <ol style="list-style-type: none"> 1. Display photographs and pictures of the local community around the room. Alternatively, use the pictures from the Handout: Modifying the Environment. 2. Divide students into small groups and assign them a picture with which to start. Instruct students to discuss how people have modified the environment. Tell students they can take notes if they would like. 3. Every few minutes, instruct students to rotate to a new picture and to continue discussing what modifications have been made to the environment in the picture. | <p>Materials:</p> <ul style="list-style-type: none"> • several photographs or pictures of the local community or use the pictures in the Handout: Modifying the Environment <p>Attachments:</p> <ul style="list-style-type: none"> • Handout: Modifying the Environment (1 per |

Suggested Duration: 4 days

| | |
|---|---|
| | <p>class, optional)</p> <p>Purpose:</p> <ul style="list-style-type: none"> The purpose of this section of the lesson is for students to identify ways that people modify the environment. <p>TEKS: 2.8A; 2.19A</p> |
| EXPLAIN – Modifications | Suggested Day 1 (continued) – 10 minutes |
| <ol style="list-style-type: none"> Write the following title on the top of a piece of chart paper: “Ways People Modify Their Environment” Instruct students to think about all the ways the environment was modified in the pictures they just examined. Ask: What are some ways that people modify their environment? Record their responses on the chart paper. | <p>Materials:</p> <ul style="list-style-type: none"> chart paper <p>Purpose:</p> <ul style="list-style-type: none"> The purpose of this section of the lesson is for students to identify ways that people modify the environment. <p>TEKS: 2.8A; 2.19A</p> |
| EXPLORE/EXPLAIN – Positive and Negative Consequences | Suggested Day 2 – 50 minutes |
| <ol style="list-style-type: none"> Display the pictures of irrigation from the Teacher Resource: Pictures of Irrigation and Crop Yield. Ask: What is happening in the pictures? (<i>Possible answers could include that they are growing crops, watering their crops</i>) How is the physical environment being modified? (<i>Possible answers could include the following: land had to be cleared, soil was plowed to plant the crops and large amounts of water were used to irrigate the crops.</i>) Explain that the pictures are showing the practice of <i>irrigation</i> or watering. Ask: When might farmers need to water their crops? (<i>Possible answers could include when there is a drought and there is not enough rain.</i>) On a piece of chart paper, draw a T-chart. Label the left side “Positive Consequences” and label the right side “Negative Consequences”. Ask: What are some the benefits of crop irrigation? Discuss responses and record on the left side of the T-chart. (<i>Possible answers could include that they will grow more crops. More crops equal more food or in the case of cotton, more clothes.</i>) Display the pictures of crop yield from the Teacher Resource: Pictures of Irrigation and Crop Yield. Discuss that crop yield is the amount of crops harvested from the field. Discuss the effects of crop yield (both high and low crop yield). Ask: What are some of the harmful effects of crop irrigation? Discuss responses and record on the left side of the T-chart. (<i>Possible answers could include the following: irrigation uses lots of water, meaning less water in the environment; water shortages can affect other plants and animals.</i>) Divide students into five small groups and distribute the Handout: Consequences of Modifying Our Environment. Assign one of the information sheets in the handout to each group. Instruct students to read the information provided on their sheet. Instruct students to discuss and record the positive and negative consequences of their assigned modification. Reorganize the students into small groups, so that every group has someone who read a different modification on the handout. Students take turns presenting the positive and negative consequences of their modification. Other students take notes on their handouts. | <p>Materials:</p> <ul style="list-style-type: none"> chart paper <p>Attachments:</p> <ul style="list-style-type: none"> Handout: Consequences of Modifying Our Environment (1 per student) Handout: Consequences of Modifying Our Environment-KEY (1) Teacher Resource: Pictures of Irrigation and Crop Yield (1) <p>Purpose:</p> <ul style="list-style-type: none"> The purpose of this section of the lesson is for students to identify the positive and negative consequences of modifying the environment. <p>TEKS: 2.8B; 2.19A, 2.19B</p> |
| EXPLORE/EXPLAIN – Conserving Our Resources | Suggested Day 3 – 30 minutes |
| <ol style="list-style-type: none"> Review the concept of a natural resource from Lesson 02. Ask students to brainstorm 5 different natural resources and record them on chart paper. Display the word <i>conserve</i>. Ask: What does it mean to conserve? (<i>Possible answers could be to save, to take care of, to protect.</i>) | <p>Materials:</p> <ul style="list-style-type: none"> chart paper <p>Purpose:</p> |

Suggested Duration: 4 days

3. Explain that there are different ways we can conserve our earth's natural resources: by reusing, reducing, and recycling. We can also replenish resources through methods like planting trees.

4. Draw the following on a piece of chart paper:



5. Brainstorm and record 1-2 ideas for conserving natural resources in each section on the chart paper.

6. Students create the same chart in a notebook or on a piece of paper.

7. Students work with a partner or small group to record additional ideas in each category related to conservation.

8. Students share their conservation ideas with the class. Record their ideas on the class chart.

- The purpose of this section of the lesson is for students to identify ways to conserve and replenish natural resources

TEKS: 2.8C; 2.19A, 2.19B

Instructional Note:

- Science Process TEKS 2.1C states, "Identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal." Refer to 2nd grade CSCOPE Science Unit 04 to see what was learned about conservation in science.
- Alternative lessons: Read and discuss a children's book about conservation, visit kid-friendly websites about conservation, or watch a video about conservation (refer to Resources or References for suggestions).

ELABORATE – Citizenship and Conservation

Suggested Day 3 – 20 minutes

1. Ask students to recall what they learned about President Theodore Roosevelt and share one thing with a partner.
2. Roosevelt was a good citizen and he believed in conservation. He designated that thousands of acres of land become national parks. Ask: **How do national parks help conserve or replenish our natural resources?** (Possible answers could include that they protect the animals and plants from human destruction; there is little construction, so the water and air are cleaner, etc.)
3. Ask: **Who else do you know that is a good citizen and practices conservation of natural resources by reducing, reusing, replenishing, and recycling?** (Possible answers could include their parents, a teacher, a neighbor, etc.)
4. Tell students that they can make a decision about how they want to help conserve the earth's natural resources.
5. Review the decision-making process from Lesson 01. Instruct student to think about what has been learned about conservation and ask them to respond in writing to the following prompt:

- I have decided to help conserve our earth's resources by _____.

Purpose:

- The purpose of this section of the lesson is for students to understand that citizens can choose to help conserve the earth's natural resources.

TEKS: 2.4A; 2.8C; 2.13C, 2.13D; 2.19A; 2.20B

EVALUATE – Illustration Performance Indicator

Suggested Day 4 – 50 minutes

Grade 02 Social Studies Unit 10 PI 03

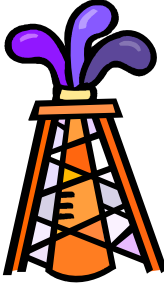











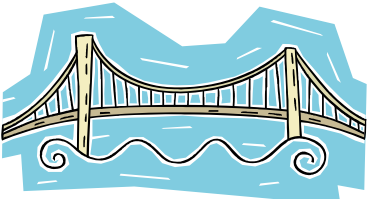


Draw a picture that illustrates ways people have modified the physical environment. Add call-out boxes to identify positive and negative consequences of the modifications people made. Explain the picture to a friend, giving examples of choices people could make and things they could do to overcome negative consequences.

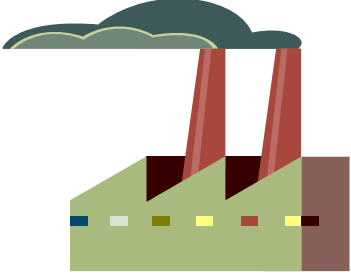




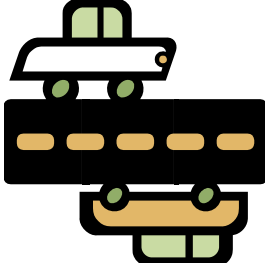
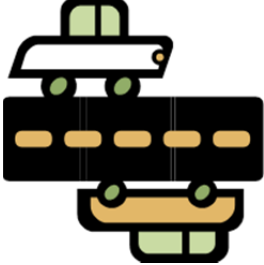

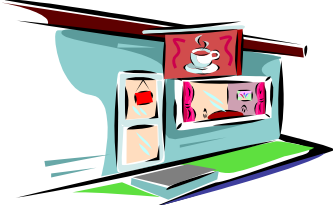
Standard(s): 2.8A , 2.8B , 2.8C , 2.19B , 2.20B

ELPS ELPS.c.1C

TEKS: 2.8A, 2.8B, 2.8C; 2.19B; 2.20B

Adding to the Mural

| | | |
|--|--|--|
|  <p>Oil well</p> |  <p>Farm</p> |  <p>Farm</p> |
|  <p>Highway</p> |  <p>Highway</p> |  <p>Railroad</p> |
|  <p>House</p> |  <p>House</p> |  <p>House</p> |
|  <p>House</p> |  <p>House</p> |  <p>House</p> |
|  <p>Bridge over the river</p> |  <p>Road</p> |  <p>Shopping mall</p> |

| | | |
|--|--|--|
|  <p>Factory</p> |  <p>Park</p> |  <p>School</p> |
|  <p>Grocery Store</p> |  <p>Parking Lot</p> |  <p>Street</p> |
|  <p>Street</p> |  <p>Football field</p> |  <p>Restaurant</p> |

Modifying the Environment











All: Microsoft. (Designer). (2010). Clip art [Web Graphic]. Retrieved from <http://office.microsoft.com/en-us/images/>

Consequences of Modifying Our Environment

Teacher directions:

1. Divide students into five small groups.
2. Assign one of the following information sheets to each group.
3. Instruct students to read the information provided on their sheet.
4. Instruct students to discuss and record the positive and negative consequences of the modification.

Mining



Mining is taking metal ore or minerals out of the earth. This is usually done with lots of equipment. Trees and plants have to be cleared away. This is a big change to the environment made by people. Many trees are cut down. And the landscape is changed forever. However, when we mine we get ore to make the metals products we need. Mining requires many workers, so it provides many jobs.

Positive consequences

Negative consequences

Drilling for Oil



Oil is found under land or even under the bottom of the ocean in collections called reservoirs. Oil is used to make gasoline to run our cars, plastic products and used to make energy. Drilling for oil takes lots of equipment and workers. It provides many jobs. Oil is a non-renewable resource. This means when we run out, there won't be any more. Drilling changes the environment. Drilling in the ocean can affect the habitats of sea animals. Drilling on land can cause land to be cleared.

Positive consequences

Negative consequences

Lumber



Trees are cut down and turned into lumber. Lumber is used to build things we need like homes and furniture. Wood is also used to make paper, like the notebook paper you use in school or the books you read. It takes a long time for trees to grow big and tall. It changes the environment when trees are cut down. Tree roots help hold soil in place when it rains. Trees provide clean air and a great view. Lumber companies provide jobs and products that people need.

Positive consequences

Negative consequences

Farms



Farms grow food that people need. Farms can provide everything from soybeans for tofu to eggs for omelets. Farms also raise animals for food. Farms change the environment. Farms need lots of water, so some farmers irrigate their land. Farms with animals have lots of waste that has to be disposed of. Land has to be cleared so that farmers have room to grow their crops. However, farms provide jobs and very important products. People need food!

Positive consequences

Negative consequences

Construction



All around us things are changing. There are new businesses, new roads, and new homes. All of these things have to be built. It requires many people and a lot of equipment to build these new things.

Construction provides many jobs. It also provides money to the city. However, it does change the environment. Land has to be cleared. Soil has to be moved. Animal habitat can be disturbed.

Positive consequences

Negative consequences

Consequences of Modifying Our Environment **KEY**

Teacher directions:

1. Divide students into five small groups.
2. Assign one of the following information sheets to each group.
3. Instruct students to read the information provided on their sheet and then discuss and record the positive and negative consequences of the modification.

Mining



Mining is taking metal ore or minerals out of the earth. This is usually done with lots of equipment. Trees and plants have to be cleared away. This is a big change to the environment made by people. Many trees are cut down. And the landscape is changed forever. However, when we mine we get ore to make the metals products we need. Mining requires many workers, so it provides many jobs.

Positive Consequences

- **Gives us the ore to make the products we need**
- **Provides jobs**

Negative Consequences

- **Trees are removed**
- **Digging up the ground and changing the landscape forever**

Drilling for Oil



Oil is found under land or even under the bottom of the ocean in collections called reservoirs. Oil is used to make gasoline to run our cars, plastic products and used to make energy. Drilling for oil takes lots of equipment and workers. It provides many jobs. Oil is a non-renewable resource. This means when we run out, there won't be any more. Drilling changes the environment. Drilling in the ocean can affect the habitats of sea animals. Drilling on land can cause land to be cleared.

Positive consequences

- Gives us gasoline for our cars
- Helps make plastic products
- Provides jobs

Negative consequences

- Changes the environment
- Affects the habitats of animals
- It might run out

Lumber



Trees are cut down and turned into lumber. Lumber is used to build things we need like homes and furniture. Wood is also used to make paper, like the notebook paper you use in school or the books you read. It takes a long time for trees to grow big and tall. It changes the environment when trees are cut down. Tree roots help hold soil in place when it rains. Trees provide clean air and a great view. Lumber companies provide jobs and products that people need.

Positive consequences

- **Helps us build our homes and furniture**
- **Used to make paper**
- **Provides jobs**

Negative consequences

- **Takes a long time for trees to grow back**
- **Soil could be washed away by rain**
- **Fewer trees to provide clean air**
- **Changes the looks of the environment (not as beautiful)**

Farms



Farms grow food that people need. Farms can provide everything from soybeans for tofu to eggs for omelets. Farms also raise animals for food. Farms change the environment. Farms need lots of water, so some farmers irrigate their land. Farms with animals have lots of waste that has to be disposed of. Land has to be cleared so that farmers have room to grow their crops. However, farms provide jobs and very important products. People need food!

Positive consequences

- **Provides us with food and products we need/want**
- **Provides jobs**

Negative consequences

- **Uses lots of water**
- **Land has to be cleared**
- **Lots of waste from animals**
- **Changes the environment**

Construction



All around us things are changing. There are new businesses, new roads, and new homes. All of these things have to be built. It requires many people and a lot of equipment to build these new things.

Construction provides many jobs. It also provides money to the city. However, it does change the environment. Land has to be cleared. Soil has to be moved. Animal habitat can be disturbed.

Positive consequences

- **Builds home, buildings, and roads**
- **Provides many jobs**
- **Provides the city money**

Negative consequences

- **Changes the environment**
- **Clears the land**
- **Moves soil**
- **Disturbs animal habitats**

Pictures of Irrigation and Crop Yield



