

Subsidence Made Simple

Focus/Overview

This lesson focuses on subsidence. In order for students to get the a visual picture of subsidence, this activity is easy and fun to complete.

Learning Objective(s)

The learner will:

- define subsidence
- discuss what subsidence does to an area

Louisiana Grade Level Expectations

8:GLE-7	Explain how or why specific regions are changing as a result of physical phenomena (G-1B-M3)
8:GLE-8	Identify and describe factors that cause a Louisiana region to change (G-1B-M3)
8:GLE-14	Analyze, evaluate, and predict consequences of environmental modifications on Louisiana landforms, natural resources, and plant or animal life (G-1D-M1)
8:GLE-15	Analyze the benefits and challenges of the Louisiana physical environment on its inhabitants (G-1D-M2)
8:GLE-67	Analyze historical data using primary and secondary sources (H-1A-M4)
8:GLE-75	Locate and describe Louisiana's geographic features and examine their impact on people past and present (H-1D-M4).

Materials List

- **BTNEP Vanishing Wetlands Video:** [Clip Four](#)
- 1 puzzle per group

Background Information

Subsidence drowns the marsh, causing chemical changes in wetland soils, which eventually kills marsh vegetation. This causes a chain reaction that destroys many of our natural resources.

Advance Preparation

- View BTNEP Video Vanishing Wetlands [Clip 4](#)
- Puzzles for groups of students

Procedure

1. Show the [Clip 4 – Vanishing Wetlands](#). Give them the definition of subsidence. Ask them to tell you how the video made them feel about subsidence.
2. Tell the students that they will see how surface subsidence happens.
3. Distribute the puzzle to each group.

BTNEP Connection

Habitat, Changes in Living Resources, Water Quality, Economic Development

Grade Level

8th

Duration

15-minute classes

Subject Area

Science, History, Geography

Extension Areas

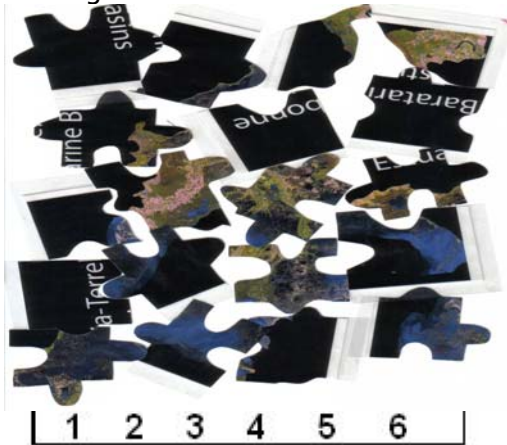
Extension area detailed in the activity/lesson.

Vocabulary

Original Source (if applicable)

- Cally Chauvin
- LUCEC

4. Tell the students to dump out the puzzle pieces into a pile and then lay the entire puzzle pieces touching each other. Use a ruler to measure the width of the area. See diagram:



Envision a family activity such as working on a jigsaw puzzle. When you lay out all the pieces, the puzzle covers a relatively large space.



After being put together (=making the "rough edges" fit closer), the puzzle occupies much less space.

5. The teacher explains the following:

- When soil particles fit closer together, they occupy less space so the surface sinks or subsides.
- When water is removed from soil, the spaces where the water was are now filled with air so the soil particles move closer together and the surface subsides.
- When organic matter (such as leaves, peat, etc.) decomposes, soil subsides as particles move into the spaces where the organic matter was.
- When plants die and their roots decay, soil subsides as the particles move closer together.

Assessment

- Have the students answer in a journal or sheet of loose leaf paper, the following:
In your own words describe what subsidence means to you.

Websites/References/Resources:

www.btnep.org

<http://www.loyno.edu/~lucec/mrderosion.html#1>

Natural and Human-Caused Factors

