

Exploring Earth's Features: An Introduction to Landforms

Geographical Landforms and Waterforms

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Grade Level	4th Grade	**Time Frame**	5 hours 30 minutes
Subject	Social Studies	**Duration**	5-6 periods
Course	Oklahoma Young Scholars/Javits		

Essential Question

What is a landform? What are specific identifying features of landforms? How do specific landforms differ from each other?

Summary

This lesson is about physical geography in the United States and focuses on major landforms and their features. Students will start by reviewing what they already know about landforms with a fun game called Kahoot. They will then create a model of an assigned landform using paper mache. After that, they will become experts on their assigned landforms and present their findings to the class. Students will also explore real-world examples of these landforms on Google Earth. Finally, they will draw a treasure map and create a story featuring the landforms they have learned about. The lesson is designed to be easy to understand and uses simple, everyday language to make it accessible to all students.

Snapshot

Engage: Students will complete a landform Kahoot.

Explore: Students will research a landform or waterform and then make a paper mache model.

Explain: Students will become the expert and teach their peers about the specific features of their landform.

Extend: Students will locate a variety of landforms on Google Earth.

Evaluate: Students will make a treasure map and create a story using their new knowledge of landforms and waterforms.

Standards

Oklahoma Academic Standards (Social Studies Practices (4th Grade))

5.PS1: Maps can help locate the different land and water features where people live and in other areas of Earth.

Oklahoma Academic Standards (Social Studies Practices (4th Grade))

4.2: The student will examine the physical geography and environments of the United States.
4.2.2: Identify major physical features in the United States and analyze how physical processes shape places.
4.2.2A: Identify and describe the physical characteristics of places, including the major landforms, bodies of water, vegetation and climates in the United States.

Attachments

- Google Earth Landforms—Exploring Earth's Features - Spanish.pptx
- Google Earth Landforms—Exploring Earth's Features.pptx
- Landform Treasure Map Examples—Exploring Earth's Features.docx
- Landform Treasure Map Examples—Exploring Earth's Features.pdf
- Landform and Waterform Definitions—Exploring Earth's Features - Spanish.docx
- Landform and Waterform Definitions—Exploring Earth's Features - Spanish.pdf
- Landform and Waterform Definitions—Exploring Earth's Features.docx
- Landform and Waterform Definitions—Exploring Earth's Features.pdf
- Paper Mache Landform Model Examples—Exploring Earth's Features.docx
- Paper Mache Landform Model Examples—Exploring Earth's Features.pdf

Materials

- Landform and Waterforms List and Definitions for the teacher (attached)
- Google Earth Assignment Slides (attached)
- Treasure Map example (attached)
- Paper Mache Model examples (attached)

- **Paper Mache:**
  - Hot water
  - Flour
  - Newspaper
  - Masking tape
  - Large Styrofoam plate
  - Any additional materials needed to shape the landform prior to Paper Mache
- **Treasure Map & Story:**
  - Printer paper that has been "distressed"

15 minutes

Engage

Teacher's Note

If the Kahoot provided does not fit the needs of your classroom for the landforms you are teaching over, feel free to create your own. Using the data from the Kahoot responses, you can tailor the landforms you are instructing over in your classroom.

Tell students they will be playing a Kahoot game to figure out their knowledge of landforms. Follow the link to the provided Kahoot and play the game. Students do not need to worry about knowing every answer. This is just a game to see what they already know about landforms.

60 minutes

Explore

Teacher's Note

This link to the Paper Mache recipe provides the recipe and the best practice tips for using Paper Mache. When students Mache, it is important they wipe all excess off their strip of newspaper so it will dry properly.

Students will each be assigned a landform . They will research the landform they are assigned and sketch a picture and label and write out the identifying features of their landform. They will then start the paper Mache activity. Landforms should be no bigger than the large Styrofoam plate provided.

Follow these instructions to help students create their Paper Mache landforms:

1. Allow students to create a base structure for their landform.
2. Once students have completed the base structure for their landform, they will then begin the first layer of Mache.
3. Students will apply three or four layers of paper Mache to their landform. Once the landform Paper Mache is dry, students can paint their landform accordingly and if needed, add labels.

60 minutes

Explain

Teacher's Note

It may take one to three class sessions to complete all of the presentations and give students ample time to draw and write in the Journals.

Allow students to do any additional research that is needed to complete their understanding of the features of their landform. They should have enough information written so they feel confident to teach the class about their landform. Once they are finished, let the students lead the class in a Gallery Walk, where each student will present about their landform.

After their presentations, have students get their journals. In their journals, instruct students to draw a small picture of each landform as it is presented. Students then write a definition for each landform next to or underneath the landform picture they drew.

45 minutes

Extend

Teacher's Note

The Google Earth slide worksheet includes instructions for taking a screenshot on a Chromebook. Attached is a copy of the Google slide deck that you can make as many copies as you need for your students. Each student or pair of students will complete their own slide deck.

Pass out the attached **Google Earth Landforms** worksheet to each student or pair of students. Navigate each student or pair of students to Google Earth and tell them that they will use Google Earth to locate a variety of landforms. Once each type of landform is found, students will take a screenshot of the landform and attach it to the corresponding assignment slides.

Optional Activity

For an additional extend activity you can have students create a card sort or a memory game using their definitions and pictures of the landforms.

60 minutes

Evaluate

Teacher's Note

Prior to students creating their treasure map, distress the paper to make it look aged. Using a black tea bag, briefly soak the paper in the tea and let it dry. Crumple and/or make small tears along the edges of the paper. You could also can use paper bags that have been cut and a bit crumpled.

Guide student writing by providing a prompt: “You are a pirate hiding your treasure, or you have found a map and are trying to locate the treasure.” Students will draw and color a treasure map using a minimum of 10 landforms they have learned. Students will then write a story about the treasure map they drew, detailing the features of at least 5 of their landforms.

Differentiation for Gifted Learners

There is the potential for students to make connections regarding landforms and weathering/erosion. Students can explore what kind of weathering or erosion would change landforms. Students may want to explore how landforms change over time through GOOGLE EARTH TIMELAPSE. https://earthengine.google.com/timelapse/.

Resources

- K20 Center. (n.d.). Gallery Walk https://learn.k20center.ou.edu/strategy/118
- K20 Center. (n.d.) Jigsaw https://learn.k20center.ou.edu/strategy/179
- K20 Center. (n.d.). Kahoot https://learn.k20center.ou.edu/tech-tool/637
- Google. (2019). *Google Timelapse*. Google.com. https://earthengine.google.com/timelapse/
  ?
- Holmes, M. (n.d.). *Paper Mache With Flour*. Instructables. https://www.instructables.com/Paper-Mache-With-Flour/
  ?
- *Kahoot!* (n.d.). Create.kahoot.it. Retrieved October 2, 2023, from https://create.kahoot.it/share/landforms/7643e197-ed01-41b5-8a8c-f799a909bc8b
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