Local Landforms Grade 3

Natural Features of the Earth's Surface

CLASSROOM CULMINATIONS LEARNING PACKAGE

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Introduction

The Local Landforms curriculum is a place-based look at landforms that aims to help young learners begin to understand the landforms around them, how they came to be, and how they change. Through the arts, students will make connections between landforms, erosion, and weathering and the everyday landscapes of their lives.

How to Use this Resource

The Local Landforms Curriculum Package has 3 Components:

Part 1. Classroom Beginnings: Recommended for use in the classroom prior to the Field Experience.
Part 2. The Local Landforms Field Experience Curriculum: A facilitated curricular experience.
Part 3. Classroom Culminations: Recommended for use in the classroom following the Field Experience.

Local Landforms Grade 3: Content & Curricular Competencies

Science	Students will learn about the following: Major local landforms Local First Peoples knowledge of local landforms Observable changes in the local environment caused by erosion and deposition, by wind, water, and ice	Questioning and Predicting Demonstrate curiosity about the natural world Observe objects and events in familiar contexts Planning and Conducting Make observations about living and non-living things in the local environment Sort and classify data and information using drawings
Arts Education	Students will learn about the following: Visual Arts: elements of design Processes, materials, technologies, tools, and techniques used to support art activities Choreographic devices	Exploring and Creating Choose elements processes, materials, movements, technologies, tools, techniques and environments of the arts Create artistic works collaboratively and as an individual using ideas inspired by imagination, inquiry, experimentation, and purposeful play Communicating and Documenting Apply learned skills, understandings, and processes in next contexts Experience, document, and share creative works

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About the Local Landforms Classroom Beginnings Learning Package

The Local Landforms Classroom Beginnings Learning Package will introduce basic landforms and concepts of erosion and deposition through the arts and scientific experimentation.

Lessons in this Resource

Lesson 1: Local Landforms Photo Scavenger Hunt
Lesson 2: Erosion and Weathering Scavenger Hunt

Lesson 1: Local Landforms Photo Scavenger Hunt

Purpose

This activity will give students the opportunity to integrate what they've learned about landforms and translate it to their understanding of places just around their school.

Materials

- ☐ IPads
- ☐ Laptops
- ☐ Copies of the Instructions

Time: 3, 45 Minute Sessions

Procedure

1. Tell student they will be going on a scavenger hunt to identify local landforms around the school.
2. Students can work either independently or in a small group.
3. Give each group a copy of the instructions.
4. Set clear boundaries for their scavenging.
5. Once all photos have been collected, have student transfer those images to a Powerpoint Slideshow.
6. Invite students to use their Landform Dictionaries or to lookup definitions for inclusion in their slideshow.

Evaluation

See the "Local Landforms Group Evaluation" below.

Local Landforms Photo Scavenger Hunt

Names: _____

Directions:

1. Find an example of each landform listed below.

2. Take a photo of each landform with an IPAD. You need to have a minimum of 5 photos.
   - ☐ Hill
   - ☐ Valley
   - ☐ River
   - ☐ Mountain
   - ☐ Island
   - ☐ Glacier
   - ☐ Coast

3. Upload your photos into a Powerpoint. Put 1 landform on each slide.

4. Label each slide. Each slide should have the name of the landform and a definition of that landform.

5. Share your slideshow with your teacher.

Local Landforms Slideshow Group Evaluation

Names: _____

Directions: For each question, circle the number that reflects your answer.

How many photos do we have? 1 2 3 4 5 or more

How many slides do we have? 1 2 3 4 5 or more

Is each photo labeled correctly? 1 2 3 4 5 or more

How many photos have a correct definition?

1 2 3 4 5 or more

Teacher Total = /20

Local Landforms Slideshow Group Evaluation

Names: _____

Directions: For each question, circle the number that reflects your answer.

How many photos do we I have? 1 2 3 4 5 or more

How many slides do we have? 1 2 3 4 5 or more

Is each photo labeled correctly? 1 2 3 4 5 or more

How many photos have the correct definition?

1 2 3 4 5 or more

Teacher Total = /20

Lesson 2: Erosion/Weathering/Deposition Relay & Scavenger Hunt

Background

Rocks and minerals make up about 45% of the soil in a healthy garden. Minerals are a vital part of soil and determine soil structure. The mineral component of soil is created through weathering, erosion, and deposition. Soil creation and landscape changes occur over a long period of time. During this lesson, students will observe soil, act out the processes that form the mineral part of soil, and figure out how to minimize the adverse effects of erosion.

Objective

- Model the processes of weathering, erosion, and deposition
- Develop methods to mitigate the effects of erosion

Location: Outside / School Garden

Materials

- Science notebooks or journals
- LEGO, blocks, or another stackable object, one per student
- Large, open space
- Optional: trowel, hand lenses, tray or cookie sheet, cones

Time: 2, 60 Minute Lessons

Procedure

1. Pre-Activity Questions:
    a) Why is soil important to the school garden?
    b) Do you see rocks in the soil?
    c) What size and shape are they?
    d) Are rocks always the same size and shape?
    e) How did rocks get into the soil?
    f) Where did they come from?
2. Before beginning the relay, have students examine the soil closely. Either provide a soil sample from the garden or give each student a trowel to dig in a dormant garden bed. Each student should observe and feel the soil, answering the following questions? Do they see any rocks in the soil? What size are the rocks? How much of the soil do they think is rock? Where did the rocks come from? After the students have observed the soil for about 5 minutes, bring the class back together.

Lesson 2: Erosion/Weathering/Deposition Relay & Scavenger Hunt

Procedure (continued)

3. Lead a discussion about how the rocks got into the soil. Remember the rocks could be very fine clay particles. Weathering is when rocks are broken down into smaller particles because of natural forces like wind, water, freezing, and living things acting on them. Show a picture of a weathered statue or headstone. Erosion is when those smaller particles of rock are moved from one location to another. Examples include rivers carrying silt and landslide. Deposition is when the particles of rock moved by erosion and weathering are dropped off at a new location.
4. For the relay, students are going to be forces of change - wind and water. Divide the class into four teams. Each team gets one block or LEGO per member.
5. Next, create the playing field, or landscape, for the relay. You will need open space that is approximately 20'x30', depending on how far you want your students to race.
6. Mark off one end of the playing space with cones and have each team create a structure or tower with their blocks on the line.
7. At the opposite end of the field and across from their tower of blocks, the teams should line up. If available, place a tray at the start of each team's line.
8. Explain that the students are about to become wind and water and change the "landscape" or their tower of blocks.
9. One at a time, students walk or run to the opposite end of the field. Students take one block (weathering), carry it back to the group (erosion), and drop it off on the tray (deposition), yelling out each geological process as it occurs. Students have to build the tower on the tray.
10. The first team to build a new structure, with all their blocks, wins.
11. Wrap up the relay by asking students what processes the game was mimicking. How would real weathering, erosion, and deposition be different from the game? Would these geological processes take the same amount

Additional Activities & Follow Up

Go on an erosion, weathering, and deposition scavenger hunt. There are 2 templates below. The scavenger hunt works particularly well after a rainy day or watering session. Have each student find an example of erosion, weathering, and deposition, if possible. Explore the garden, schoolyard, and outside of buildings. Which processes were easiest to find?

Names_____

Erosion, Weathering, & Deposition Scavenger Hunt

Directions: Use your observation skills to find these examples of erosion and weathering. You may work with a partner.

	What do you see?	Describe it in words.
Weathering		
Erosion		
Deposition		

Erosion & Weathering Scavenger Hunt

Directions: Use your observation skills to find these examples of erosion and weathering. You may work with a partner.

- ☐ A rock the size of your fist
- ☐ A rocks the size of you
- ☐ An acorn or other nut
- ☐ Uprooted or fallen trees
- ☐ An Insect: _____
- ☐ Sign of recent strong winds during a storm
- ☐ Sign that humans have cleared up the path after a storm (i.e. cut down tree trunk on either side of a path)
- ☐ Large holes in trees where animals live
- ☐ Tree that has been struck by lightening
- ☐ Is there a sign of human caused erosion (i.e. pathways)?

  _____
- ☐ Estimate how tall the tallest trees are that you can see (compare them to the height of your house/school).

  _____
- ☐ What sounds can you hear? (birds, traffic)
- ☐ Describe the colour of the rocks? _____
- ☐ Where are the biggest rocks located?

  _____