



Junior Geologists

ECE Activity Plan

Activity #3: Junior Geologists

Duration: 60 mins

Subject: Science, Music, Sensory, Math

Topic: Exploring Rocks and Learning about Geologists

Overview

Learners explore rocks and learn about what a geologist does by sorting a variety of rock samples and cleaning them.

Aims/Objectives

- Sort through rocks of similar colours and develop their skills related to shapes and colours
- Develop their fine motor skills by sorting through rocks and placing them in small openings
- Engage in a rock cleaning activity which allows them to learn about what geologists do
- Explain what a geologist is (someone who studies rocks and earth)

Materials

- Class set of plastic, clear cups with lids (alternatively, you can use bottles with lids)
- Groups of rocks with similar colouring (e.g. black, white, grey, brown)
- Paint, brushes and cups of water
- Baking trays
- A station set up with 'dirty rocks'
- *Geologists in the Field* images

Teacher Prep

- Print out the attached document that shows geologists in the field.
- Collect groups of rocks of similar colours (brown, black, white, grey).
- Set up a station/table with dirty/muddy rocks on baking sheets. Have paintbrushes and cups with warm water as well.
- Set up a second station with 4 clear, plastic cups with lids on them. Cut a small slit/opening on the lid. Place the collected rocks in a pile.

Background Info

Geologists are scientists who study the Earth as it exists today. Some geologists study rocks and minerals, while others focus on dinosaurs, volcanoes, water, soil or other aspects of Earth's geological history.

Geologists are very busy in Tumbler Ridge and the Peace Region of B.C. and have found fascinating discoveries in some rocks, including dinosaur bones and fossils. They are also an important part of many industries in the region, including mining, oil and gas, and agriculture.

Geologists spend a lot of time in the field surveying the land and collecting samples to study. This activity plan helps young learners understand what a geologist does by using tools to examine, clean and sort rock samples.

Activities

Introduction/Hook:

1. Ask learners to meet at the carpet and show them the *Geologists in the Field* images. Ask them to describe what the people in the pictures are doing and why they might be doing this work (you can also read information from the Background Info section above). Explain that today we will be learning about our local environment by exploring the different types of rocks found there.

Geology Stations:

1. Introduce the two Geology Stations/Centres set up in the classroom and the materials at each. Divide learners into two groups and send each group to one of the following stations:
 - A. Geologists at Work
 - i. Learners will find baking trays set up for each child with a pile of 'dirty' rocks on it. They are to work as geologists and use their tools (paintbrushes) to clean the rocks and look for evidence of fossils.
 - ii. Demonstrate how to clean the rocks: first, you dip the 'tool' (paintbrush) into the cup of water and then you 'paint off' the dirt so that your rock is clean. Once it is clean, you can put it in a pile. Continue this with the other rocks.
 - B. Geologists Rock Sorting
 - i. Learners will find 3-4 clear cups with lids and a pile of rocks. The lids have pre-cut slits/openings at the top.
 - ii. They are to sort the rocks by colour and then put all rocks of a certain colour in each cup.

Closure:

1. Invite your learners back to the carpet for a sharing circle about what they learned geologist do as part of their job. Ask learners why they think we need geologists. What can they help us to find? Ask learners what their favourite station was and why they enjoyed it.

Assessment/Evaluation

- Assess understanding by observing learners at the station activities and listening to the responses of each learner during shared circle time to see if they have a general idea of who geologists are and what they do.

Extensions

- Make Musical Rock Shakers
 - Provide paint trays, thin brushes and warm water, along with a clear cup (or bottle if a clear cup is unavailable) of rocks in it.
 - Learners can decorate their cup with lines, dots, squiggles or whatever they wish.
 - Once dry, learners can put a lid on their cup or, alternatively, the lid on their bottle and shake the cups/bottles gently.
- The teacher can take the students on a nature walk to locate small rocks of their own to 'add' to their rock sorting and exploration.