



Footprint Dinosaurs

ECE Activity Plan

Activity #1: Footprint Dinosaurs

Duration: 60 mins

Subject: Science, Art, Math

Topic: Dinosaurs in the TRUGG

Overview

Learners explore the Tumbler Ridge UNESCO Global Geopark (TRUGG) and its palaeontological history experientially. Using their own footprints, they make dinosaur artwork and review the triangle shape while doing so.

Aims/Objectives

- Learn about the local environment in the TRUGG and the dinosaurs that were found there, long ago
- Create dinosaurs through artwork using their feet and sponges
- Review the triangle shape

Materials

- Washable tempera paint (black, blue, green and one additional colour)
- Wash tubs
- Large construction paper
- Sponges (cut into triangles)
- Dinosaur book (see below for suggested titles)
- Foam shapes (circle, square, triangle, rectangle)

Teacher Prep

- Fill the tub with warm water for foot washing.
- Have a towel by the tub for foot drying.
- Have enough construction paper out for each student.
- Have black, blue, green and at least one additional colour paint ready in trays ready for use.

- Cut sponges into triangle shapes.
- Choose a dinosaur book to read. Some possible examples include:
 - *Dinosaur Roar!* – Paul and Henrietta Stickland
 - *How Do Dinosaurs Say Goodnight* – Jane Yolen and Mark Teague
 - *Sammy and the Dinosaurs* – Ian Whybrow and Adrian Reynolds
- Create an exemplar for the Art activity.

Background Information

A UNESCO Global Geopark is an area recognized as having internationally significant geological heritage. Geoparks aim to reconnect people to the earth through conservation, tourism, recreation, education and sustainable development. At present, there are 140 UNESCO Global Geoparks in 38 countries around the world.

In 2014, the Tumbler Ridge aspiring Geopark became a UNESCO Global Geopark. Located in Northeastern B.C., the Tumbler Ridge UNESCO Global Geopark (TRUGG) is notable for its remote, wilderness location. It is the first Global Geopark in western North America, and the first to represent the plate tectonics that led to the formation of the Rocky Mountains.

The TRUGG is a major attraction in the region, with a network of hiking trails to numerous geosites, including spectacular waterfalls, dinosaur tracks, mountain summits, sedimentary rock formations, caves and canyons. The Geopark also informs us about the sustainable use and need for natural resources, while promoting respect for the environment and the integrity of the landscape.

Two local children, Mark Turner and Daniel Helm, correctly identified a dinosaur trackway just below Tumbler Ridge on the banks of Flatbed Creek in 2000. This was the catalyst for an explosion of discoveries in creeks and canyons, in the alpine, at industrial sites, and at coal mines in the Geopark. Some of the bones discovered were from the following dinosaurs:

- Tyrannosaurid
- Dromaeosaurs
- Troodontids
- Hadrosaur
- Champsosaur

Please see the *Tumbler Ridge UNESCO Global Geopark Teacher Backgrounder* for more background and details on the Geopark.

Activities

Introduction/Hook:

1. Introduce the fact that dinosaurs lived on the Earth, including in part of B.C., a long time ago. Ask learners what they know about dinosaurs.
2. Read a storybook about dinosaurs. Some possible titles include:
 - *Dinosaur Roar* – Paul and Henrietta Stickland
 - *How Do Dinosaurs Say Goodnight* – Jane Yolen and Mark Teague
 - *Sammy and the Dinosaurs* – Ian Whybrow and Adrian Reynolds

Dinosaur Art:

1. Introduce the Dinosaur Art activity and materials. Model the process of choosing construction paper, removing a shoe and sock, and creating the artwork.
2. Invite learners to choose a piece of construction paper for background and take one shoe and sock off.
3. Have learners come up one at a time and choose paint colours for their dinosaur.
4. Help the learners to gently dip their foot in the tempera paint of their choosing and step on their paper, making a footprint (the heel becomes the dinosaurs 'head'). They then step into the wash tub to clean their foot.
5. Learners then use black tempura paint to add a dot for the eye and a smile by the mouth, and dip triangular shaped sponges into another colour of paint to make 'dinosaur scales' down the back of their footprint. They can also use the sponge and spread it on the paper to make the 'tail'.

Closure:

1. Show learners different shapes – a circle, square, rectangle and triangle and ask them which one they recognize as the one used for the dinosaur's scales.
2. Once students have guessed that they used a triangle shape, discuss what makes a triangle unique (it has only 3 sides that come together in 3 points).

Assessment/Evaluation

- Check for understanding by asking learners:
 - What is a dinosaur? When did they live on the Earth?
 - What does a triangle look like?

Extensions

- Learners can use crayons, markers, or paint to practice drawing triangles. Then, take them outdoors to look for the triangle shape in nature.