JUNIOR GEOLOGY PROGRAM

PROGRAM OVERVIEW

The Junior Geology Program aims to help students investigate the characteristics and physical properties of rocks and minerals. Students will be introduced to the rock cycle process and learn to recognize how we use rocks and minerals in everyday life. Along with introducing the basics of energy, students will explore specific energy types, various sources of energy, and the role of energy within the school, home, or local community. Students will also learn about the traditional usage of rocks and minerals by Canada's Indigenous Peoples. Based on specific curriculum outcomes, the associated hands-on activities will stimulate discussions in class and enhance students' understanding of both the Indigenous perspective and the scientific perspective on geology.

AUDIENCE

Grade 1 – Grade 4

ALBERTA CURRICULUM CONNECTIONS

Social Studies

Grade 1 My World: Home, School, and Community
Grade 1 Moving Forward with the Past: My Family, My History, and My Community
Grade 2 A Community in the Past
Grade 4 Alberta: A Sense of the Land

Science

Grade 2 Hot and Cold Temperature
Grade 3 Rocks and Minerals

Program Objectives

At the end of the lesson:

- Students will understand the different types of rocks and minerals.
- Students will understand society's application for rocks, minerals, and energy.
- Students will have participated in hands-on activities and engaged in constructive discussions.
- Students will understand the history of rock and mineral usage in traditional indigenous culture.

Program format

Total Duration ~ 1 hour 25 minutes

1. **Geology & Energy Lecture ~ 30 minutes**
   - Introduction to Forms and Sources of Energy
   - Examine the Rock cycle
   - Differentiate between rocks and minerals
   - Understand Indigenous perspective on rocks and minerals

2. **Activity – Choose Your Favourite Rock! ~ 15 minutes**
   - Students will choose one type of rock or mineral and make a poster about the specimen. Students will learn to classify and compare rocks and minerals and recognize the usefulness of various rocks and minerals in our daily lives from this activity.

3. **Activity – How well do you know about Rocks and Minerals? ~ 10 Minutes**
   - Students will play a fun game of scavenger hunt based on what they learned in the Geology & Energy Lecture.
   - https://www.flippity.net/sh.php?k=1UwZFmI72MYRiOtM18fqt37MnRVYxuL4L72upMxJeI4o

4. **Activity – Grow your Own Crystal! ~ 20 Minutes – 1 day (Optional)**
   - Learn how to grow crystal at home! Students will learn about how molecules interact and stack together to form crystals.

5. **Activity – Inukshuk Stone Figures ~ 10 Minutes**
   - Students learn to interpret figures made by the Indigenous Peoples in Canada and learn about their history and cultures by researching and creating the iconic Inukshuk Stone figures. Students will explore the cultural significance of the Inukshuk figures and create one using modelling clay or play-doh.