



Geological Careers

Grade 5 Lesson Plan

Lesson #3: Geological Careers

Duration: 60 mins + time for independent research

Subject: Science, Social Studies

Topic: Geological Formations and their Associated Careers

Overview

Natural resources continue to shape the economy and identity of different regions in Canada, including the Peace Region of British Columbia. Students explore the different careers that focus on the geological landscape in Canada, including the Peace Region and the Tumbler Ridge UNESCO Global Geopark (TRUGG).

Lesson Objectives

Students will be able to:

- Access prior knowledge of geological formations in the TRUGG (and Peace Region)
- List the employment opportunities that exist as a result of the wealth of natural resources in the TRUGG
- Explain the importance of natural resources as a source of economic strength in Canada
- Conduct research on a profession of their choosing (that exists in the TRUGG) with regard to the landscape and geological factors present

Curriculum Connections

Please see the *TRUGG Education Toolkit Curriculum Connections Matrix* for specific connections of this lesson to the B.C. Curriculum for Grade 5.

Materials

- Class set of computers/laptops with access to the Internet (including www.tumblerridgegeopark.ca) and other resources to support student research
- *Careers and Geological Formations Mingler Activity Handout*
- *Canada and its Geological Formations Student Handout* (from Lesson 2)
- *Geological Careers Inquiry Report Student Handout*

Teacher Prep

- Arrange access to laptops/computers, the Internet and other resources to support student research.
- Print and photocopy a class set of the *Geological Careers Inquiry Report* Student Handout.
- Have *Canada and its Geological Formations* Student Handouts (from Lesson 2) ready to distribute back to the class.
- Review the instructions, print and cut out the different pictures from the *Careers and Geological Formations Mingler* Activity Handout.
- Review the Background Information (and other resources as needed) to ensure you have a clear understanding of key concepts explored in this lesson.

Background Information

Within Canada, many natural resources and industries are tied tightly to the geological formations of the land. Some natural resources are used as energy sources, while others are used as raw materials for refinement into useful products. In this lesson, several industries within the TRUGG and related to natural resources, energy, and geology are explored, including:

1. Metallurgical Coal
2. Fossilization
3. Natural Gas
4. Wind Power

Moreover, students will investigate several careers related to these industries within the TRUGG, including:

1. Tourism
2. Geologists and Engineers
3. Tradespeople

Encourage students to think critically and communicate effectively about the variety of natural resources in Canada, and the careers that may be supported within each region that they study. Students can work in partners or groups on this assignment, as desired, and will need to have access to the Internet and/or the library.

Note that students may need considerable guidance with regard to the inquiry and research process. You may wish to provide support on specific skills, such as identifying key words and search terms for research and understanding the different geological formations. Students can work in pairs or small groups, as desired.

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

Lesson Activities

Introduction/Hook:

1. Shuffle and distribute one image from the *Careers and Geological Formations Mingler* Activity Handout to each student.
2. Have students mix and mingle with one another, trying to find their match between career and geological formation.
3. Once each student has found their match, have each pair summarize:
 - a. Which career and geological formation they represent
 - b. Why they are an appropriate match
 - c. Bonus: Where in the Tumbler Ridge area or in B.C. might you find this career and geological formation?

Activity 1:

1. In small groups, ask students to discuss the following question (which can be written on the board):

How are natural resources important as a source of economic development in Canada?
2. Engage students in a class discussion about their ideas. Record some of their ideas on the board.
3. Ask the students to think of jobs and careers that exist in Canada related to the geology and landscape.

Activity 2:

1. Building on learning from Lesson 2, distribute (or ask students to retrieve) their *Canada and its Geological Formations* Student Handout, and have them review it.
2. Distribute the *Geological Careers Inquiry Report* Student Handout and review it with the class. Introduce that students will learn about a profession of interest to them (within the Tumbler Ridge UNESCO Global Geopark) and conduct research to complete an inquiry report.
3. Ask students to identify a topic for their research inquiry. They can think back to the careers from the hook's mingler game, as well as the recent class discussions, for ideas.
4. Provide Internet access (and/or access to other resources) to support student research. Students can follow the Inquiry Report to help guide their research process.

Closure:

1. Ask students to share their research findings with a partner. Discuss interesting findings as a class.

Assessment/Evaluation

- Observe the students during the hook and other lesson activities, and assess their ability to access prior knowledge, conduct research effectively and work cooperatively in groups.
- Review and assess each student's *Geological Careers Inquiry Report* Student Handout.

Extensions

- Using the information gathered for their Inquiry Report, students create a poster, report, webpage etc. about their selected career.
- Instead of (or after) the mingler, have students who receive a career act out what their work entails. The students who have geological formations need to try to determine which career matches with their geological formation.