

Overviews of Critical Challenges

1 Resources at school and home (3 sessions)

This challenge introduces students to natural resources and their products. Students list different products (e.g., pencils, books, chalk, desks) found in their classroom and collectively determine the resource(s) from which each is made. Students then research a room in their home, looking for ten different products and identifying the natural resource(s) from which each was produced. Students use a point system to judge the importance of the various products found in their home. Based on these calculations, students determine the two most important resources found in the home. As a concluding activity, students reflect on the role of natural resources in their lives.

2 Plotting Canada (2 sessions)

This challenge involves a board game where students plot latitude and longitude coordinates in an effort to plan a continuous trip across as much of Canada as possible. In the process, students learn the names and locations of Canadian provinces, territories and their capital cities. The challenge begins with an introductory demonstration on the main concepts related to our system of geographic coordinates (e.g., hemisphere, Equator, Prime Meridian, latitude, longitude). Supported with these concepts, students are introduced to the rules of “Plotting Canada,” playing the game initially with a partner and subsequently as the sole team member.

3 Our most valuable resources (5 sessions)

In this two-part critical challenge, students study the wealth of natural resources across Canada. Students research the resources of an assigned province/territory. Results of this research are placed on drawn maps of the various regions, which are pieced together and posted as one large map of Canada. In the first critical challenge, students rank the three most valuable resources in their province/territory, considering the personal, economic and environmental effects. In the second critical challenge, each group prepares an outline and delivers a presentation to the class justifying its ranking.

4 Developing Canada’s resources (3 sessions)

In this challenge, students use information gathered from the previous presentations and several rounds of additional information to decide which two resource industries Canada should further develop and what that development might involve. Throughout, students are encouraged to be open-minded in reconsidering their answers. Students begin by graphing the results of the cross-country assessment of valuable resources. They then consider the negative effects of various resource industries and finally draw lessons from a demonstration on renewable and non-renewable resources. At each juncture, students are invited to re-think their choice of top two resources and their plans for resource development.

5 Resources then and now (3 sessions)

In this challenge, groups of students examine British Columbia’s forestry, mining or fishing industry in the past and present. Students gather information about the resources available, the methods and technology used and the products developed. They note the similarities and differences between past and current situations. They then determine, in light of the personal, economic and environmental effects, the most significant difference in resource supply, technology and products. Groups from each industry share their results with the rest of the class.

6 Addressing our resource problems (2 sessions)

In this critical challenge, students confront the problems facing three of British Columbia’s natural resource industries—forestry, mining and fishing. In groups, students learn of problems facing one of these industries and propose solutions that are environmentally and economically sound. They then rank order the top three solutions for their selected industry and justify their ranking. All groups share their results with the rest of the class.

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Harvesting our resources (5 sessions)

In this two-part challenge, students learn about the positive and negative effects (environmentally and economically) of harvesting methods used in the forestry, fishing or mining industries in British Columbia. After reading about and conducting additional research into three different harvesting methods for their industry, students summarize the positive and negative effects of each method in a poster. Using this information, students individually rank the harvesting methods for each resource industry.

7

Playing the Natural Resources Game (2 sessions)

In the final challenge, students simulate the decisions faced by those managing British Columbia's resource industries. Based on their research of various methods for harvesting minerals, trees and fish, students play a game where they invest shares in these industries and experience the consequences of their decisions over several years (rounds). Half-way through the game, students re-evaluate and modify their investment strategy for harvesting each natural resource. As an extension, students may develop their own game cards depicting the various events and consequences facing these resource industries.
