

## **Comparing the Canadian Rockies and the Colorado Rockies Geography Unit Plan**

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### **Description:**

This unit will introduce students to the Rocky Mountain Region of Canada and Colorado. Students will have opportunities to compare the physical geography, physical characteristics, climate, and resources of the region. Students will use a variety of materials to research and learn about both areas. Maps, resource materials, Venn diagrams, student created maps, and internet will be used. The students will also be able to use the knowledge they obtain in this unit with other sixth grade learning experiences such as the Outdoor Education experience.

### **Grade Level:**

Sixth Grade

### **Subject:**

Social Studies

### **Duration:**

The unit plan consists of a pre- and post-assessment along with four student activities. The activities will consist of approximately five to six teaching periods, additional extensions are included.

### **Goal:**

The goal of this unit is to provide students a broad general knowledge of the geography of the Canadian Rockies in comparison with the region of the Rockies in which they live.

### **Objectives:**

Objective for each individual activity are include with each activity plan.

## **Standards:**

Colorado and District Standards –These activities meet standards for geography.

1. Students know how to use and construct maps, globes, and other geographic tools to locate and derive information about people, place, and environments.
2. Students know the physical and human characteristics of places, and use this knowledge to define and study regions and their patterns of change.
3. Students understand how physical processes shape Earth's surface patterns and systems.
4. Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict.
5. Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources.
6. Students apply knowledge of people, places, and environments to understand the past and present and to plan for the future.

## **Background:**

This is an independent unit. Background knowledge needed for independent lessons is provided as the unit progresses.

## **Pre-Assessment**

### Goal:

Students will be tested on their knowledge of a Canadian region.

### Objectives:

Students will write a short descriptive essay which will include the following elements:

- Life in the Canadian city of Calgary
- What is similar between Calgary and Denver
- What is different about Calgary and Denver

### Materials:

- Large map which includes home city (Denver) and Canadian city (Calgary)
- Pencil and Paper
- Chalk board

### Procedure:

The teacher will ask students which major city they live in or near. A brief discussion regarding characteristics of the region should take place, revolving around climate, landforms, jobs as a result of resources, etc. The teacher will then ask if any of the students know of any cities in Canada. Teacher should point out on map where Canada is. The teacher can write down on the chalk board any cities that students come up with. The teacher should introduce the city of Calgary to the students, by pointing out its location on the map.

The teacher can choose to ask about any characteristics about this city, and write down any information or misinformation presented. Since this is a pre-assessment, this step is not necessary, but could be interesting and helpful in discovering what gaps there are in student knowledge. The teacher will then give the students a prompt - Using at least two paragraphs, write about the following: Pretend that you lived in Calgary. How would your life be similar and different than if you lived in Denver.

### **Activity 1**

#### Goals:

Students will be able to identify a physical region that is shared by both Canada and the United States.

#### Objectives:

Through a mapping activity, students will:

- Recognize that the Rocky Mountains is a landform

Locate the Rocky Mountains as they stretch through Canada and the United States, south to Mexico

- Locate Calgary on a map
- Identify Canadian landforms in and around the region of the Canadian Rockies
- Use mapping skills in using a key, scale, topography, and appropriate colors for landforms (e.g. blue is the universal color for water)

#### Materials:

- Large physical map of North America
- Blank physical map of the Canadian Rockies region: 1 per student
- Colored pencils
- North American Atlases: 1 per student

### Procedure:

The teacher will ask students if they know where the Rocky Mountains are. After acknowledging that the Rocky Mountains do stretch through Colorado, and close to the Denver Metropolitan area, students will be asked if they know where they begin and where they end. The teacher will ask for a volunteer to locate the Rocky Mountains on the large physical map. Ask the student how they know what they are locating is actually the Rocky Mountain Range. The teacher should illustrate the fact that the Rocky Mountains are clearly shown on the physical map through their location, name, as well as color or topography. With help, the student volunteer should be able to demonstrate that the Rocky Mountains actually stretch from Mexico, through the United States and Colorado, through Calgary, and terminate in northern Canada.

Students should be now taught that the Rocky Mountains is actually a landform: a physical and locatable characteristic of geology. Furthermore, the Rocky Mountains are actually known as the Canadian Rockies in Canada.

Students will be given their blank physical maps of the Canadian Rockies region, and told that they will be using colored pencils to fill in the physical features of their maps. They will also use and label a key, locate the Canadian Rockies, Calgary, two other cities, and color in topographic features including altitude and water forms. Model as necessary.

## **Activity 2**

### Goal:

The goal of this activity is for students to be able to illustrate an understanding of the geographic feature of mountains as a landform.

### Objectives:

The student will:

- Review landforms using 2 column notes, based on their work from Activity 1.
- Create a data base of information on characteristics of Colorado Rockies geography.
- Develop a similar data base for characteristics of the Canadian Rockies using the internet.
- Students will use this knowledge of mountain landforms in future lessons to understand where many valuable resources come from, and how the mountains effect movement and climate.

### Background:

Students will have used physical maps of the geography of the Colorado Rockies and the Canadian Rockies to develop background knowledge of where and what this physical geography is and what it “looks” like.

### Materials:

- Overhead for 2 column notes: 1 per student
- Student fact sheet with geographic questions of the Canadian Rockies: 1 per student
- Student fact sheet with geographic questions of Colorado Rockies
- State map of Colorado
- Physical geography materials of Colorado
- Student access to the Internet

### Procedure:

- 1) In a large group setting the teacher will review with student’s knowledge gained in Activity 1. (Understanding elevation and relief used to identify mountain landforms on physical maps.) Review will be conducted through the use of two column notes.  
Example: Vocabulary/ Main Ideas                      Details/ Examples/ Explanation  
                  1. landforms: color                                      brown – darkest shading/steepest relief  
                  2. Rocky Mountains .                                      extend from Mexico to N. Canada
- 2) Following brief review, students will break into small groups (no larger than four) to use the state map of Colorado and resources available on the physical geography of Colorado to complete activity page.

Activity Page - Students will identify specific geographic questions like:

- Highest peak in Colorado
- Major cities
- Major rivers
- Direction rivers flow
- Minerals and mining being conducted in the local Colorado Rockies Region
- Major bodies of water nearby
- Major cities in addition to Denver

Once students have completed this activity page a data base on characteristics of the Colorado Rockies will have been created that students can use in future lessons to compare and contrast with the Canadian Rockies.

- 3) Following the completion of the activity page students will be given and similar activity page using the same specific geographic questions; however, the questions will pertain to the Canadian Rockies. In this activity the students will be required to complete the activity independently and obtain all the information from the internet. The teacher can bookmark appropriate sites for students to use prior to beginning this portion of the activity.

Possible Extension Activity:

Compare and contrast the two Regions of the Colorado Rockies using a Venn diagram, addition two column notes, or another type graphic organizer.

### **Activity 3**

Goal:

The goal of this lesson is to teach the students how to read a resource map and interpret the information.

Objectives:

- The students will be able to read a resource map of western Canada and identify resources found in the Canadian Rockies.
- The students will be able to read a resource map of Colorado and identify resources found in the Colorado Rockies.
- Students will create their own 3-D resource maps using this information.

Materials:

- Resource map of western Canada and resource map of Colorado. One of each for every four students.
- Tag board, one sheet for every two students.
- Small dry food items, e.g. Lucky Charms, pretzels, Cheerios, etc.

Procedures:

1. Divide students into groups of four and give each group a resource map of western Canada and one of Colorado.
2. Go over the parts of a map covering the title, key and compass rose.
3. Have students identify where the Rockies are on their maps and start to identify the resources found in each area.
4. Have students in groups break into pairs with one pair drawing a relief map of the Colorado Rockies and one pair drawing a map of the Canadian Rockies.

5. Using the small food items, each pair of students will make a key for their maps and then glue the items on their map showing where each of the resources are found. For similar resources they need to use the same food item to represent that resource.

#### Wrap-up:

Each group will present their maps to the class telling what they used to represent their resources.

#### Assessment:

Students will fill in a Venn diagram showing which resources are found in the Canadian Rockies, which are found in the Colorado Rockies and which are found in both.

### **Activity 4**

#### Goal:

The goal of this lesson is to teach students how to read a climate map and interpret what the map shows.

#### Objective:

The students will:

- Compare how the climate, environment, population, economies, resources, and physical characteristics in Calgary, Alberta, Canada and Denver, Colorado, USA are both similar and different.
- Create a Venn diagram listing the similarities and differences in these categories, between the two regions.

#### Duration of Activity:

One 50-minute class period.

#### Materials:

- Every student will need their own Classroom Atlas of the World. (Must include maps with all the characteristics of both regions.)
- Overhead of maps of two different regions.
- One Venn diagram for every student.
- One overhead of Venn diagram.
- Optional colored pens or pencils to distinguish between regions.

### Procedures:

1. Display overhead of maps on overhead and teach students how to read this type of map. Review what a key is and go over color meaning.
2. Create a sample Venn diagram with the class using the sample maps.
3. Pass out Venn diagrams and atlases to each student.
4. Have each student find Denver Colorado and Calgary Alberta maps in the atlas.
5. Students will then fill out the Venn diagram placing the similarities and differences in their proper location on the diagram.
6. Assessment will be to review each diagram for accuracy.

### Possible extension:

Have students discuss why these characteristics are similar or different. May have students do a homework writing assignment discussing the possible causes of these differences.

### **Post Assessment**

#### Goal:

Determine the understanding students have of the geography and culture of Calgary.

#### Objective:

Students will create a journal entry that demonstrates understanding of the geography and culture of Calgary.

#### Materials:

Notebook paper  
Blue or black ink pen.

#### Procedure:

Students will write a one page journal entry explaining what life is like in Calgary. They must explain what job they have, where they would live, what resources they have to live off of, and what the climate and geography around them is like.

The journal entry must be clearly written with proper mechanics. Spelling and grammar will count. Your entry will be due at the beginning of the next class. See rubric for grading criteria.

Grading Rubric:

Assessed on a scale of 1 to 4, with 4 being the highest.

4. Students must completely develop their journal entry to include every aspect discussed. The entry must be at least one page long. There will be little or no spelling or grammar errors. Characteristics discussed must be completely accurate.
3. Students must completely develop their journal entry to include most aspects discussed. Entry is one page long. Few spelling and grammar errors. Entry is mostly accurate.
2. Students Journal entry has some aspects discussed. Entry at least  $\frac{3}{4}$  pages long. Many spelling and grammar errors. Entry is some what accurate.
1. Journal entry inaccurate. Spelling and grammar errors take from paper. Less than  $\frac{3}{4}$  pages long.