**Giant Traveling Map Lesson**

**TITLE / AUTHOR:**

**I Can See Clearly, Now! - The Continental Divide and Colorado’s Watersheds**

/ Kevin Hoskin

**COLORADO ACADEMIC STANDARDS / SUITABLE DISCIPLINES:**

* Social Studies, Civics Fourth Grade Standard 1, Grade Level Expectation 1: Give examples of issues faced by the state and develop possible solutions (DOK 1-3)
* Social Studies, Civics Fourth Grade Standard 1, Grade Level Expectation 2: Provide supportive arguments for both sides of a current public policy debate (DOK 1-3)
* Social Studies, Geography Fourth Grade Standard 1, Grade Level Expectation 1: Answer questions about Colorado regions using maps and other geographic tools (DOK 1-2)
* Social Studies, Geography Fourth Grade Standard 2, Grade Level Expectation 1: Describe how the physical environment provides opportunities for and places constraints on human activities (DOK 1-2)

**OBJECTIVES:**

Students will:

* Using the **Legend**, identify the Continental Divide and river’s symbols on the Giant Map
* Directly experience the meaning of **watershed**
* Observe and demonstrate the effect of the Continental Divide on Colorado’s watersheds
* Compare the amounts of water flowing west versus the amount flowing east in Colorado

**RECOMMENDED GRADES:** Fourth

**TIME NEEDED:** 20 – 30 minutes

**MATERIALS:**

* Giant Map Legend

**PREPARATION:**

* NA

**RULES:**

* Shoes are not allowed on the map. Please have students remove shoes before walking on the map.
* No writing utensils on the map.
* No sliding on the map.

**DIRECTIONS:**

1. Sit on the southern edge of the map.
2. Discuss the map **Legend**, and what it is used for.
3. Discuss the **Continental Divide**: where it is and what it does. Identify it on the Giant Map.
4. Identify rivers on the Map (note: not all the rivers have a name label, but that’s fine for this activity.) Explain that dotted blue lines represent **ephemeral** rivers, rivers that may only flow during spring runoff or during times of abundant rain.
5. Explain that about 80% of Colorado’s natural precipitation flows **west** from the Continental Divide towards the Gulf of California and the Pacific Ocean, while 20% flows **east** to the Gulf of Mexico. This creates a 4 out of 5 ratio.
6. After identifying the Continental Divide and rivers on the map, have kids stand up in groups of five. Out of each group of five, four will find the start of a river on the Continental Divide that flows west, while one will find a river that flows east. For large classes, more than one student can be on the same river, just close to the start (headwaters). Have students face west or east at the Continental Divide, depending on which side of the Divide they are on. **Note: The Rio Grande flows *south* out of Colorado, but eventually flows into the Gulf of Mexico, so it is part of the eastern watershed.**
7. Have the next group of five join the first, until all students are on the Map, facing east or west. Point out the ratio of 80% on the west side, and 20% on the east side. On the signal **“precipitation”**, every student follows their river to the edge of the map, stops and sits down.
8. Discuss how the rivers would continue into neighboring states. Also, students could discuss the *amounts* of water, where they ended up, towns they noticed along their “trip” and so on.

**MODIFICATIONS:**

* Line up one set of students on the western boundary of the state, facing west, and another set of students on the eastern boundary of the state facing east. Have each group back up slowly, staying shoulder to shoulder, until their heals are on the continental divide. Once there, have the students raise their hands high overhead until (almost) touching the other side. Ask which way water will flow. Approach students with a dishpan, dumping the empty basin over the divide.

**EXTENSIONS:**

* Colorado Digital Atlas

<http://education.maps.arcgis.com/apps/PublicGallery/index.html?appid=c51608846a7f435d94fd921667382d81> or search Colorado Digital Atlas: Exploring Colorado’s Rivers, Rivers of Colorado, Studying Colorado’s Annual Precipitation

* Pair with the Colorado Population Giant Map lesson; talk about the implications of water vs population centers.
* Research water diversions from the western slope to the eastern slope; what they mean, and why they were created.