



Neighbors in the Desert

Activity Summary

On a map of the Sonoran Desert Bioregion - Tucson Basin Area (provided), students will locate and color rivers, mountain ranges, countries and towns. Students will also conduct exercises and answer questions using a legend as their guide. They will measure distances between locations using a scale of miles and use cardinal directions to describe where places are in relation to one another.

Bringing it Together

Objectives

Students will:

- practice map reading skills such as direction, distance, and use of legends.
- locate and identify towns, countries, bodies of water, and mountain ranges on a map of the Sonoran Desert.
- visualize where, in reference to them, other "children of the desert" live.

Materials

- Teacher's Master Map of the Sonoran Desert Bioregion - Tucson Basin Area
- Student Journals
- Crayons or colored pencils

The Sonoran Desert includes about 120,000 square miles (312,000 square km) of land. Since traveling to every place in the desert is difficult, students may get a perspective of the size of the area as well as their location in relation to everything and everyone else in the Sonoran Desert by studying a map. Mapping skills involve math, art, geography, and social sciences in a fun and relevant way. Also, a sense of direction is an important skill to have in the desert. The idea of distance is addressed in terms of both time to get

somewhere and specific lengths. An important aspect of this activity is relating what students see on a map to the real world. To reinforce cardinal directions, the class will go out-of-doors and note the various directions.

Before you begin this activity, you may want to review what makes a desert a desert (from the previous activity). Reminding students that there are deserts all around the world and again referring to a world map can also set the stage for focusing on the Sonoran Desert.

Note:

If you have an overhead projector and transparency copy capabilities at your school, you may wish to make one copy of the labeled master map onto transparency paper and project it for the whole class to share as you conduct this exercise. If you cannot make an overhead transparency, you may want to make several copies of the labeled master for students to reference.

Activity Procedure

1) Review with students some of the things they remember from the previous activity. Remind them that other classes all around the Sonoran Desert are participating in the same activities. Do any students remember where these other schools might be?

2) Instruct each student to open their Student Journals to the “Map of the Sonoran Desert Bioregion - Tucson Basin Area.” Tell them that this activity is about their “Neighbors in the Desert” -- the various people who live in the Sonoran Desert. Their neighbors include children who also get hot and thirsty, who find shade under mesquite trees, and who are also painting their initials with water on the sidewalk to study evaporation. Some of their desert neighbors live close by and speak the same language. Some live close by but speak a different language. Some live far away. This activity will give students an idea of where in relation to them, their neighbors in the desert are located. Students will also look at other features of their desert home such as mountain ranges and rivers in the desert.

3) Orient students to their maps. Ask students to share with the class what they think are the key features of the map. Call on a student to locate the town in which your school is located. Have all students find the following key features on their maps: *north arrow, boundary lines, scale of miles and legend*. Point out that items in the legend are represented with symbols. Review the different items and their symbols on the legend (*international boundaries, rivers, towns, roads*) and have students find examples on the map of each. Note: you may call upon students to come up to the front of the class and point out the examples.

4) Next, give students time to color their maps and to label the places and features listed in the left hand margin of this page (the features are also listed in the Student Journals). Direct them to choose an appropriate color for the features (river, towns, mountains, etc.) and consistently use that color on their maps. As a helpful key, students should also color their map legends with the same colors they used on their map features. Students should also locate and label south, west and east.

Map Features:

South, East, West
Tohono O’odham Nation
Mexico
U.S.A.
Sonora
Arizona
Tucson
Sells
Nogales
Santa Cruz River
Pantano Wash
Tanque Verde Wash
Rillito River
Baboquivari Mountains
Rincon Mountains
Santa Catalina Mountains
Santa Rita Mountains
Tucson Mountains
Saguaro National Park
Rincon Mountain District
Tucson Mountain District

5) When students have completed their maps, review them as a class. Remind them that students from all around the Sonoran Desert, including students from Mexico and the Tohono O'odham Nation are participating in this program. Explain that they will be learning more about their neighbors as this program progresses. What do students currently know about each of these cultures?

6) Other Mapping Activities:

Scale of Miles. Show students how to use the scale of miles using a ruler or piece of paper lined up and marked like the scale on the maps. (Depending on their background with this type of activity, you may want to practice by having them draw lines of specific lengths using their rulers.) These exercises might also be best conducted together as a class. Using the scale of miles, measure the following distances:

Saguaro National Park (Rincon Mountain District) to Saguaro National Park (Tucson Mountain District)

Tucson to Nogales

Tucson Mountains to the Santa Catalina Mountains

Rincon Mountains to the Santa Cruz River

Baboquivari Mountains to the Santa Catalina Mountains

Direction. Review the cardinal directions with the students. Explain that most maps are oriented with north at the top, are their maps like this? Who found south, east and west? What else do students know about these directions? From which direction does the sun rise, set? Referring to the map, ask questions that require directional answers such as the following: (note that directions can be “north-west” or “south-east”, etc.)

Is Mexico north or south of the United States?

Which direction from our school is the Santa Cruz River?

Are the Baboquivari Mountains east or west of Tucson?

Which direction from our school is the U.S. - Mexico border?

Which direction from here are the Santa Catalina Mountains?

Which direction from Tucson is the Tohono O'odham Nation?

Taking it Home and Other Extensions

Many cultures have legends and stories involving the cardinal directions. The directions have an important significance to the Tohono O'odham. Each direction has a representative color: Red - West; Yellow - East; Black - South; White - North. There are also specific meanings and legends regarding the directions. Students may be aware of some legends or stories that involve directions. Have students share these with the class. Ask students to ask their parents about stories in reference to the cardinal directions. What do each of the directions make them think of?

Have students create a map of an area they are very familiar with (likely around their home or school). They may make a legend and label different items on their map. Have students create symbols for things that are important to them (their home, themselves, a secret hideout, etc.) and to place these on their map.

Remind students that north, south, east, and west are not just places on a map but are real, physical directions outside on the earth. Go outside with the students and have them orient themselves to the cardinal directions. You can do this by referring to where the sun sets (west) or you may use a compass to find north. Make sure students are comfortable with all the directions (you may have them point north, south, east, and west). Next, have students point to the direction and answer the following questions listed below:

Cardinal Directions:

Which way do you go home? Which direction is that?

Which way is the school office from here? Which direction is that?

Which way are the Santa Catalina Mountains? Which direction is that?

While outside you may ask some more thoughtful questions such as:

Which direction is the school office from the classroom?

Which direction is this tree (point) from that cactus (point)?

Learning about the National Park Service

"The National Park Service cares for special places saved by the American people so that all may experience our heritage".

Students should be aware of the natural, historical and cultural history of the United States and the importance of preserving these things for future generations. The primary goal of the National Park Service is just that, to protect and preserve America's heritage. In this activity, each student will choose one National Park Service area to learn about. It can be anywhere in the United States. (Use the enclosed map to help them pick a park). Have your students write to their park for brochures and detailed information. Brochures are also available by writing to the U.S. Department of the Interior, National Park Service, Public Inquiries Office, P.O. Box 37127, Washington D.C. 20013-7127. Other sources of information include your school or local public library.

Hang the enclosed National Park System map in your classroom and let your students explore and learn about their national parks.



Map of the Sonoran Desert Bioregion (Tucson Basin Area)

