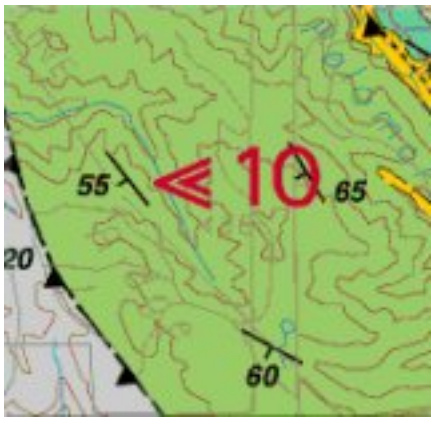
Name: _____

Dirt Maps



Do you think every place on Earth has the same type of soil or dirt? If you said no, then you are right. In fact, our planet has various types of features depending on the climate and location of the area. To keep track of these earth materials, scientists use **geologic maps** and **soil maps.**

Geologic maps show the location and types of geologic features in an area. With these maps, scientists can locate different types of rocks, faults, folds, and other geologic structures. These maps are different from topographic maps because they are made on top of **base maps.** Base maps include the actual land features of an area. Cartographers usually design base maps so they are printed in light colors or with gray lines. The purpose is to make sure the information on the geologic map can be read easily.

With every type of map, there are specific ways of measuring and labeling its features. On geologic maps, you have **geologic units.** Geologic units describe the rock type and the volume or amount of that rock within that area. To show differences in geologic units, cartographers use different colors. If the rocks are within the same age range, then they are given different shades of the same color. Each geologic or rock unit is assigned a letter code. The letter code has one capital letter and one or more lowercase letters. The capital letter stands for the age of the rock. The lowercase letters stand for the type of rock.

Geologic maps also have special symbols. **Contact lines** are used to show the point or **contact** where two geologic units meet. There are two common types of contacts called **faults** and **depositional contacts.** Faults appear where rocks move past one another. Depositional contacts appear where one layer of rock forms above another layer. **Strike** and **dip** symbols are used for rock beds. Strike symbols show the direction the rock beds run. Dip symbols show the angle of the rock beds. Who knew rocks were so complicated?

Soil maps are used to classify and map the different types of soil in an area. The **National Resources Conservation Service (NRCS)** is the government agency responsible for soil mapping. The NRCS is a part of the **United States Department of Agriculture (USDA).** When soil maps are made, they are usually made for a county within a state.

Scientists use field surveys to get information about an area's soil. On these surveys, scientists find out information about the properties of the soil. They write a **text** about the area's land features and climate. The scientists then design tables that list the types and amounts of soil in that area. Now, they are ready to map out the area. Similar to geologic maps, one part of the soil map shows the layout of the different types of soil in the area. The other part gives specific information about each type of soil.

There are different industries and people who use soil maps. Farmers, agricultural engineers, and land

management businesses use these maps to learn more about soil properties in an area. Knowing about soil properties helps these industries to conserve our soil and plan for responsible future use of the soil.

Dirt Maps

Questions

_____ 1. Geologic maps show _____ in an area.

A. Seismic activity
B. Soil properties
C. Geologic units
D. Aquatic units

2. What is the main idea of this article?

_____

_____

3. Why is it important for scientists to make geologic maps?

_____

_____

4. How are depositional contacts different from faults?

_____

_____

5. Farmers, agricultural engineers, and land management businesses use soil maps. Why would landscapers use soil maps?

_____

_____

6. Describe each section of a soil map.

_____

_____

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_____ 7. Strike symbols are used to show the _____.

A. Direction rock beds run in an area
B. Angle of tilt of rock beds in an area
C. Depth of a fault in an area
D. Height of a depositional contact in an area

8. What is the purpose of a base map?

_____

_____

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How many of these can you write about? Think! Write! Check all the ones you answered.

- ☐ Think about the soil in your backyard. Write a poem that describes the properties of your yard's soil. Be creative!
- ☐ There are many types of soil on our planet. Are certain types of soil found in different areas? Use the internet to locate a current soil map (visit the USDA website http://soils.usda.gov/) for your state. What types of soil are found in your state? Does the location of the soil depend on the area of the state? Write an essay that explains the types of soil and the properties of the soil found in your state.

Don't stop writing. Use a blank piece of paper to continue.