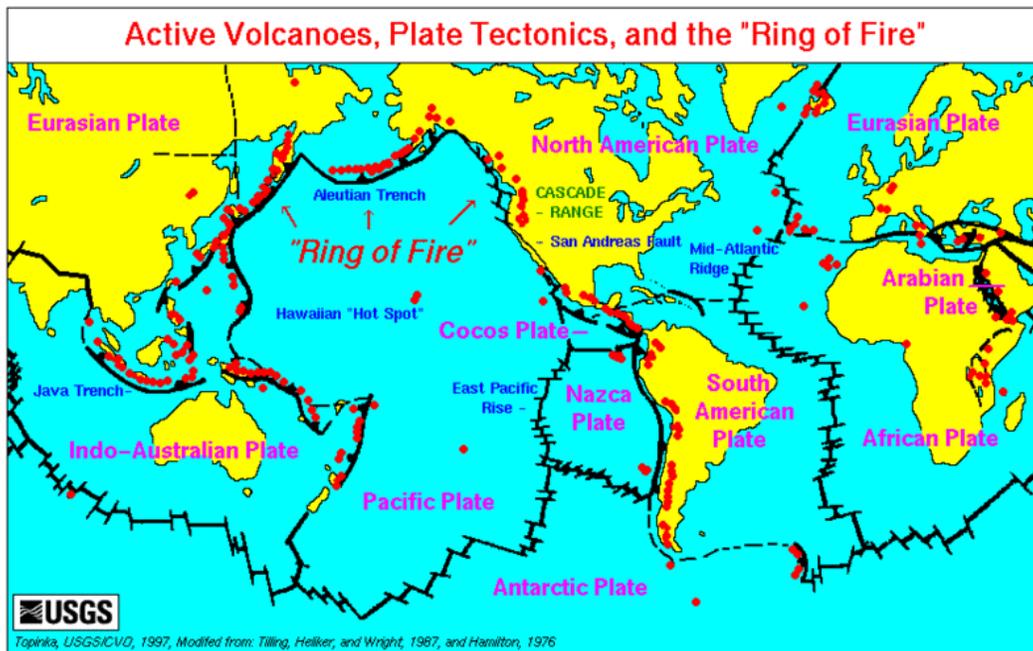


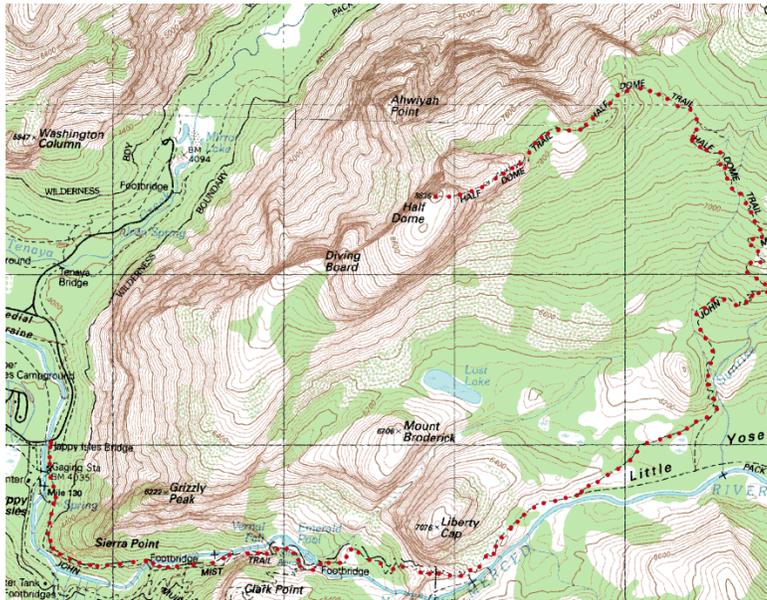
The Variety of Maps

By ReadWorks

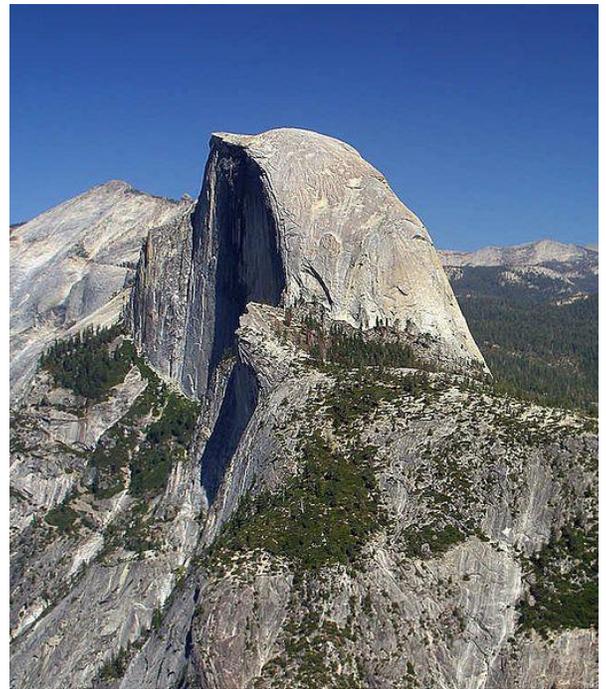


Maps are known for helping us figure out how to get to a certain location: which road do I take to the ice-cream parlor? How do I get from my house to my best friend's? But maps can show us a lot more than just roads and cities. Different types of maps are created to provide various kinds of information about the earth.

For example, some maps mark the borders of tectonic plates. Tectonic plates are large pieces of the earth made up of the earth's crust and some of the mantle below the crust. The crust and mantle are layers of the earth. Other maps indicate where vents known as volcanoes are located and movements of the earth's crust known as earthquakes occur. In the map above, you can see not only the borders of different tectonic plates but also an area known as the Ring of Fire. The Ring of Fire is an area in the basin of the Pacific Ocean where a large number of volcanic eruptions and earthquakes take place. The Ring of Fire is unique because the plate boundaries on which it lies are part of highly populated areas, like the West Coast of the U.S., the Philippines, and Japan. As you can see, most of the other borders between plates are in the middle of various oceans.

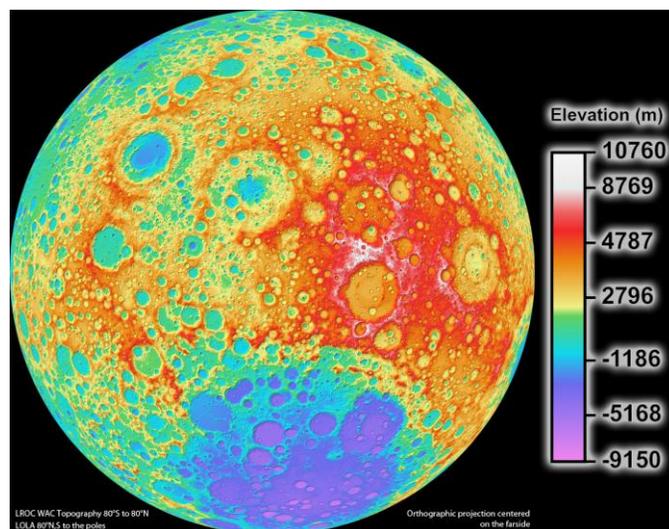


An elevation map of Half Dome, in Yosemite National Park



Yosemite's Half Dome: You can see how steep the slope of the peak is. This is represented by the extremely dense cluster of lines on the elevation map.

Maps can show other features of the earth, too, not just volcanoes and the earth's different segments. Elevation maps show us how high the land is. Some of them look like the ripples in a pond when you throw a pebble into the water, or like the rings of a tree. The rings show elevation—the closer together they are, the higher the land. If the rings are really far apart, the land is nearly flat in that area. Other elevation maps use color to illustrate where mountains are, changing color or getting darker or lighter as the peaks rise.



A color-based elevation map of the moon

Maps can be used to represent any place. Maps aren't limited to land, either—maps of oceans and lakes sometimes show how deep the water is in different areas by using darker coloring for deeper sections.

Cartographers—people who make maps—can even map moving things. Think of weather maps. They use color to show where it's raining, where it's snowing, and where there might be hurricanes or thunderstorms. With computers, it's gotten easier to make features of these maps move, to show where clouds producing rain or snow are going to travel.

People use maps to understand much more than distance and location: they are not just for keeping us from getting lost!

Name: _____ Date: _____

1. According to the passage, which of the following can maps show?

- A the way plates move
- B the way volcanoes form
- C how earthquakes occur
- D borders of tectonic plates

2. What does this passage list?

- A This passage lists different effects of volcanic eruptions.
- B This passage lists different cartographers.
- C This passage lists different examples of maps.
- D This passage lists different ways maps are created.

3. Some maps indicate where volcanoes are located and earthquakes occur. Other maps show the weather in an area. Furthermore, certain maps called elevation maps show how high the land is.

What can be concluded about the way people use maps based on this information?

- A People use a variety of maps to show or learn a variety of information about the earth.
- B People are more likely to use weather maps than elevation of maps.
- C Maps that show where volcanoes are located have evolved from elevation maps and weather maps.
- D Maps are very similar no matter what kind of information about earth they are illustrating.

4. How would an elevation map of an area with hills differ from an elevation map of an area with mountains?

- A The rings in the elevation map of an area with hills are farther apart. The rings in the elevation map of an area with mountains are closer together.
- B The rings in the elevation map of an area with hills are closer together. The rings in the elevation map of an area with mountains are farther apart.
- C The rings in the elevation map of an area with hills are thicker. The rings in the elevation map of an area with mountains are thinner.
- D The rings in the elevation map of a hill are brighter. The rings in the elevation map of a mountain are darker.

5. What is the main idea of this passage?

- A The closer the rings on an elevation map, the higher the land.
- B Some elevation maps use color to illustrate where mountains are, changing color or getting darker or lighter as the peaks rise.
- C The Ring of Fire is an area in the basin of the Pacific Ocean where a large number of volcanic eruptions and earthquakes take place.
- D Different types of maps are created to provide various kinds of information about the earth.

6. Read the following sentences: "Other elevation maps use color to **illustrate** where mountains are, changing color or getting darker or lighter as the peaks rise."

As used in the passage, what is the meaning of the word "**illustrate**"?

- A to show
- B to explain
- C to draw
- D to photograph

7. Choose the answer that best completes the sentence below.

Elevation maps show how high the land is in different ways. _____, some elevation maps use rings and others use color.

- A On the other hand
- B For example
- C Although
- D Because

8. What does an elevation map show?

9. Name at least two of the different things weather maps can show.

10. Maps that show distance and location can be used by people to keep from getting lost. Name one other type of map mentioned in the passage and give an example of how it can help people.
