Geology: Scavenger Hunt

ANSWER KEY

Exercise: 1

Instructions: Answer the questions below.

1. How does a topographic map represent elevation changes on a two dimensional surface?

A topographic map uses contour lines to represent changes in elevation. A contour line represents a particular elevation.

2. As contour lines on a topographic map get closer together, what does that tell us about how steep the slope is getting?

Closely spaced contour lines represent a steep slope while widely spaced lines represent a gentler slope.

3. When do contour lines cross each other?

Contour lines should never cross with one another.

4. Why do map projections cause distortion?

The earth is curved while maps are flat. Regions are projected onto a flat map to correct for real direction, shape, or area. In order to properly map the earth, a globe is required.

5. What is a Mercator?

A Mercator is the most common projection, but it distorts the size of the continents because it makes the earth at the poles just as wide as the earth at the equator.

6. What is a GPS and how does one work?

A GPS (Global Positioning System) uses a receiver to transmit a signal to satellites that are orbiting the earth. The GPS unit then uses the amount of time it takes for the satellite to receive its signal, and the satellite's position in the sky to calculate an exact latitude and longitude.

7. What can a person use a Geographic Information System (GIS) for?

Geographic Information Systems (GIS) can be used for many different purposes. Large amounts of data can be summarized in visual, easily understood formats. GIS is also used to analyze and map data. GIS has been used as tool for many types of people in many different professions.

8. A stream dropped in elevation 35 feet over a 2.0 mile span. What is the stream gradient?

17.5 feet/mile