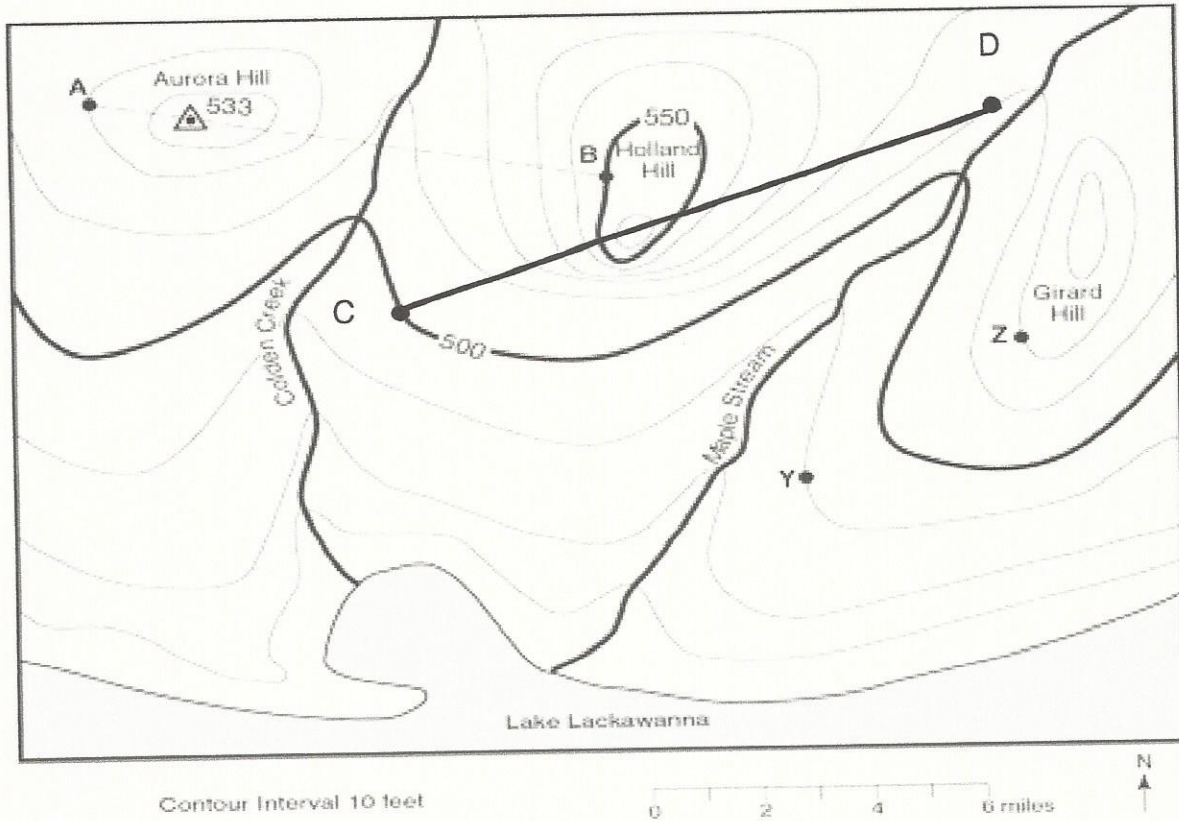
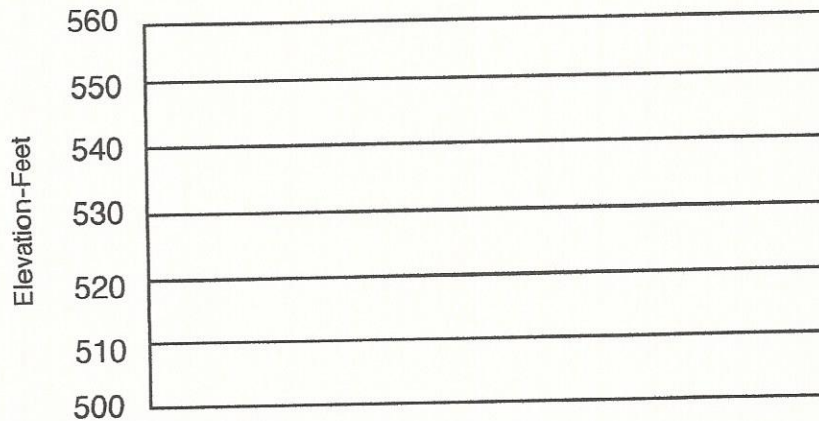


Topographic Maps

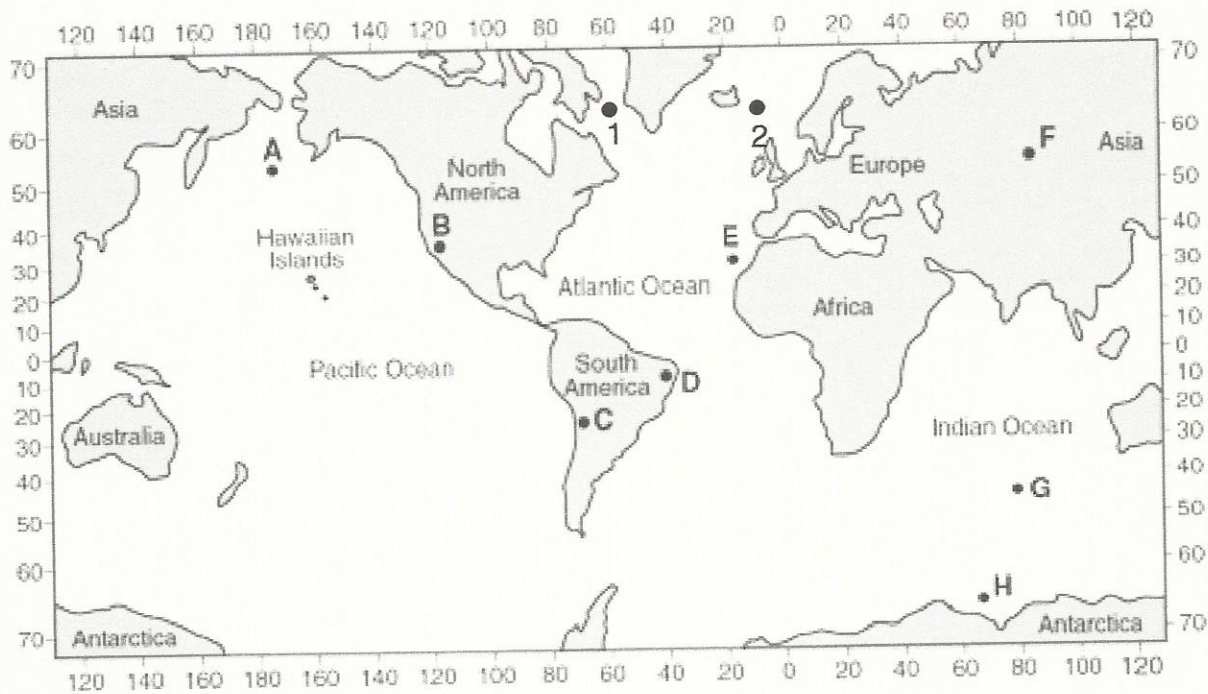


1. What is the direction of stream flow for Maple Stream? _____
2. Provide an evidence that supports your answer.

3. What is the highest possible elevation of Girard Hill? _____
4. Determine the gradient between points A and B. _____
5. Create a profile between points C and D

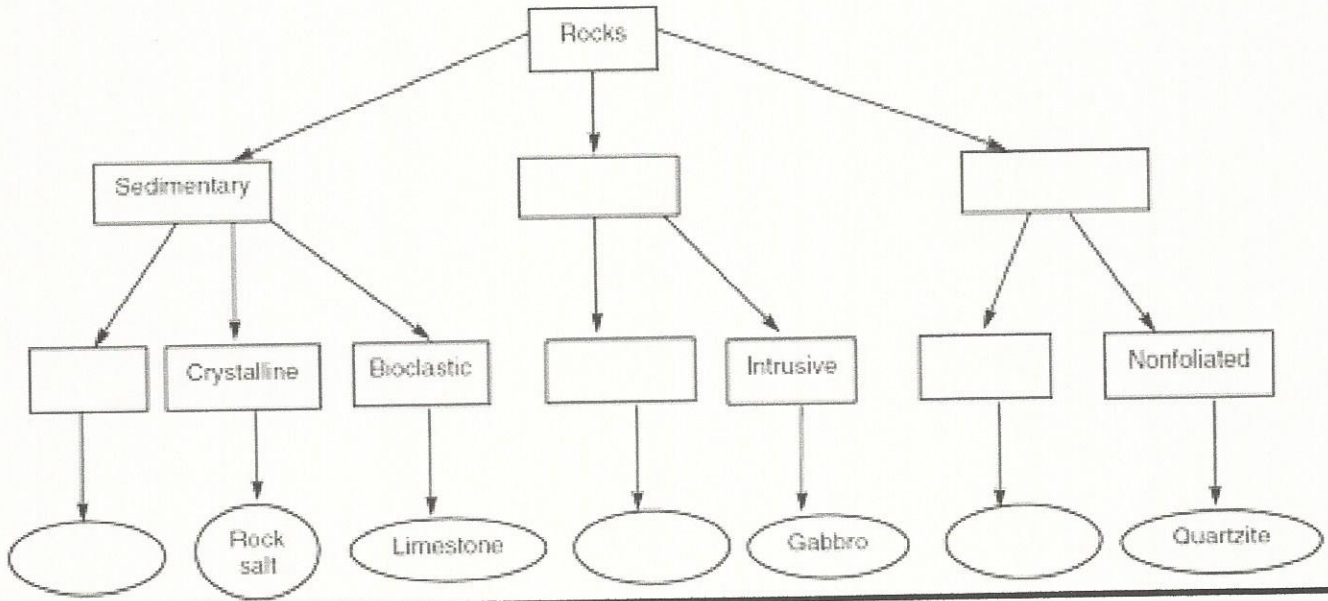


Latitude and Longitude

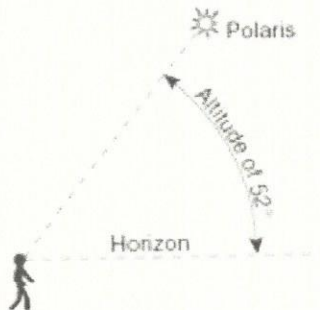


1. What is the latitude and longitude of point B? _____
2. What is the latitude and longitude of point C? _____
3. What is the latitude and longitude of point G? _____
4. How many degrees separates each time zone? _____
5. How many degrees of longitude are in each time zone? _____
6. As you go east, the time does _____
7. As you go west, the time gets _____
8. If its 6:00am at point 1, what time is it at point 2? _____
9. If the altitude of polaris is 42 degrees, what is your latitude? _____
10. If your latitude is 61 degrees North, what is your altitude of polaris? _____
11. What is the altitude of polaris if you latitude is 41 degrees south? _____
12. What latitude gets the most direct sun on June 21st? _____
13. What latitude gets the most direct sun on December 21st? _____
14. What latitude gets the most direct sun on March 21st? _____
15. What latitude gets the most direct sun on September 23rd? _____

Fill in the blanks from the flowcharts below.
Rock Classification Flowchart



Altitude of Polaris



1. What is the latitude of the observer? _____
2. Can you see Polaris in the southern hemisphere? _____
3. What is the point directly above the observer called? _____
4. As your latitude increases, what happens to your altitude of Polaris? _____
5. What type of relationship is that called? _____
6. If one travels from NY to Chicago, what happens to their altitude of Polaris? _____

Igneous Rocks

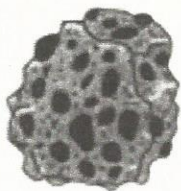


Igneous

1. What 2 processes produce an igneous rock? _____
2. Rocks that form inside the earth are....intrusive or extrusive? _____
3. Rocks that form at or near the surface are...intrusive or extrusive? _____
4. Igneous rocks are classified how? _____
5. Very coarse rocks are created where? _____
6. What is the color, density and composition of Granite?

7. What is the color, density and composition of Basalt?

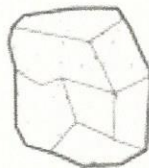
8. Name a coarse grained rock that contains the mineral pyroxene? _____
9. Name a vesicular rock that is glassy and floats in water? _____
10. Name an igneous rock that contains a lot of quartz? _____
11. Rocks that have large crystals formed....quickly or slowly? _____
12. Rocks that have very small crystals formed...quickly or slowly? _____
13. How are the crystals described with igneous rocks? _____

Sedimentary Rocks

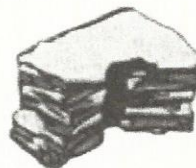
A
Conglomerate



B
Breccia



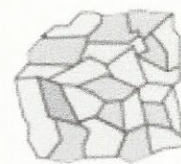
C
Sandstone



D
Shale



E
Limestone



F
Rock salt

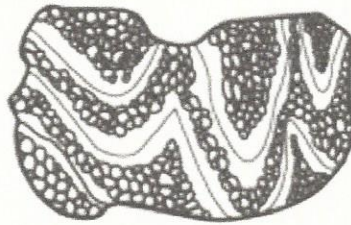
1. Which rocks above are clastic? _____
2. Which rock is organic? _____
3. Which rock is a chemical rock? _____
4. What are the 2 ways a chemical rock can form? _____
5. Describe the process for the formation of a clastic rock?

6. What is the particle size for a sandstone rock? _____
7. What is the difference between a conglomerate and breccia rock?

8. Which rock had particles that traveled further....conglomerate or breccia?

9. Which rock is made of particles with a diameter of 0.006-0.2cm? _____
10. Which bioclastic rock is made from dead plants? _____
11. What is the composition of rock gypsum? _____
12. How are clastic sedimentary rocks classified? _____
13. How are chemical rocks classified? _____

Metamorphic Rocks



Metamorphic

1. What rock is shown in the picture above? _____
2. What 2 processes produce a metamorphic rock? _____
3. What does foliation mean? _____
4. What type of foliation does Gneiss show? _____
5. What are the 2 types of metamorphism? _____
6. What sedimentary rock forms into Anthracite Coal? _____
7. What sedimentary rock forms into Quartzite? _____
8. What sedimentary rock forms into Marble? _____
9. What metamorphic rock shows the lowest grade of metamorphism? _____
10. What metamorphic rock shows the highest grade of metamorphism? _____
11. How are nonfoliated rocks classified? _____
12. What metamorphic rock is made of platy mica crystals? _____
13. What metamorphic rock can be made from various other rocks through the contact of magma? _____
14. What metamorphic rock is made from shale? _____