Name _____ Class _____ Date _____

Section 1 Review

Chp 2: Earth A Unique Planet pgs. 29-32

SECTION VOCABULARY

asthenosphere the solid, plastic layer of the mantle beneath the lithosphere; made of mantle rock that flows very slowly, which allows tectonic plates to move on top of it

crust the thin and solid outermost layer of the Earth above the mantle

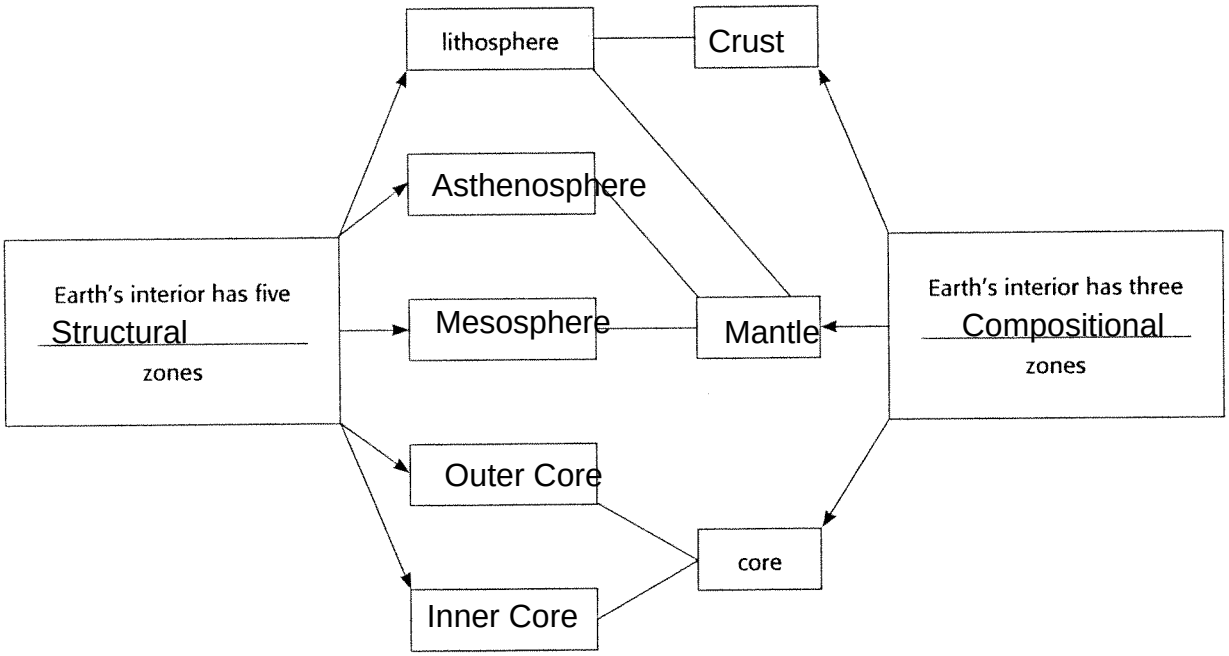
core the central part of the Earth below the mantle

lithosphere the solid, outer layer of Earth that consists of the crust and the rigid upper part of the mantle

mantle in Earth science, the layer between Earth's crust and core

mesosphere literally the "middle sphere"; the strong, lower part of the mantle between the asthenosphere and the outer core

1. Organize Complete the concept map below to show the relationship between Earth's compositional zones and structural zones.



2. Apply Concepts A compass needle is a very small magnet that can move. Why can you use a compass to determine direction on Earth?

Earth is a giant magnet. The compass needle lines up with Earth's magnetic field

3. Analyze Ideas Why would you weigh less on a high mountain peak than you would at sea level?

You weigh less the further you are from Earth's center

When you are on the high mountain peak, you are further from Earth's center

Name _____ Class _____ Date _____

Section 1 Review

Chp 3: Finding Locations on Earth pg. 57-6

SECTION VOCABULARY

latitude the distance north or south from the equator; expressed in degrees **longitude** the angular distance east or west from the prime meridian; expressed in degrees	**meridian** any semicircle that runs north and south around Earth from the geographic North Pole to the geographic South Pole; a line of longitude **parallel** any circle that runs east and west around Earth and that is parallel to the equator; a line of latitude

1. **Compare** What is the difference between a meridian and a parallel?

   A meridian is a line of longitude. It connects the North and South Pole

   A parallel is a line of latitude. it goes from east to west and is parallel to the equator

2. **Define** What is the prime meridian?

   Line of longitude that represents 0 degrees. Goes through Greenwich, England

3. **Explain** Why is it important for an airplane pilot to know about great circles?

   Great circles are the shortest way to get from one point to another over Earth's curved surface.

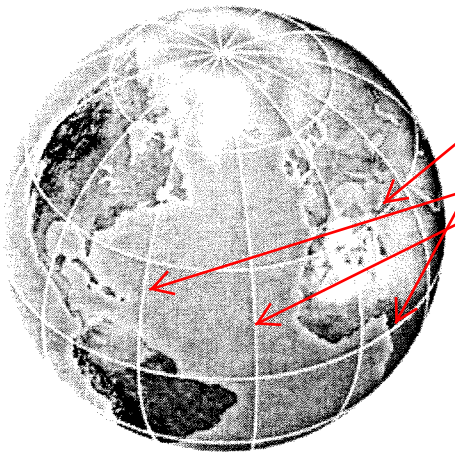
4. **Explain** Why doesn't the needle on a compass point directly to the North Pole?

   The magnetic field of Earth is not exactly lined up with Earth's geographic poles

5. **Infer** Explain why the equator is a great circle.

   It divides the Earth into a North hemisphere and a South hemisphere

6. **Apply Concepts** Label the meridians and parallels on the globe shown below.



Name _____ Class _____ Date _____

Section 2 Review

Chp. 3: Mapping Earths Surface pg. 61-66

SECTION VOCABULARY

isogram a line on a map that represents a constant or equal value of a given quantity	**remote sensing** the process of gathering and analyzing information about an object without physically being in touch with the object
legend a list of map symbols and their meanings	**scale** the relationship between the distance shown on a map and the actual distance
map projection a flat map that represents a spherical surface	

1. Describe Complete the table below to describe the three main types of map projections.

Map Projection	How It Can Be Made	Areas of Least Distortion	Areas of Greatest Distortion
Cylindrical	Cylinder wrapped around a globe	Around the equator	Areas near the poles are most distorted.
Azimuthal	Place a piece of paper so that it touches the globe at only one point.	Close to point where map touches globe	Farthest away from point touching the globe
Conic	cone shape placed on a globe	area near the parallel that the cone touches	Areas far from the parallel the cone touches are most distorted.

2. Infer What is one advantage of remote sensing over field surveying?

Measures can be done much more quickly and more often

3. Explain How can a legend help you read a map?

Tells you the meaning of colors and symbols on a map

4. Apply Concepts The scale on a map is given as the following: "One centimeter equals 10 meters." What kind of scale is this? If two areas are 40 m apart in real life, how far apart will they be on the map?

Verbal scale 40m = 4 cm on map

5. Compare How are isotherms and isobars the same? How are they different?

Isotherm - line that connects same temperature on a map

Isobar - line that connects same barometer pressure on a map

Name _____ Class _____ Date _____

Section 3 Review

Chp 3: Types of Maps pgs. 66-72

SECTION VOCABULARY

contour line a line that connects points of equal elevation on a map	**relief** the difference between the highest and lowest elevations in a given area
elevation the height of an object above sea level	**topography** the size and shape of the land surface features of a region, including its relief

1. **Explain** A small topographic map contains the following contour lines (in meters): 40, 50, 60, 70, 80, 90. What is the relief of the map? What is the contour interval?

90m - 40m = 50 m contour interval = 10 m

2. **Infer** How could a topographic map be useful for a hiker?

helps them plan their hike to find the most suitable route

3. **Apply Concepts** An Earth scientist is studying the geologic history of an area. She wants to know when different rock layers in the area formed. Which kind of map should she use? Explain your answer.

Geologic maps show rock types and ages of rocks in an area

4. **Identify** What are two ways people use soil maps?

Helps with land planning and uses and helps people conserve soil

5. **Compare** Complete the table below to compare topographic maps, geologic maps, and soil maps.

Type of Map	What Colors Represent on the Map	What Lines Represent on the Map
Topographic map	black = roads and buildings; blue = water; green = forest; red = major highways	elevation changes
Geologic Map	different geologic units	rock types and ages
Soil Map	Different soils in an area	places where different kinds of soil touch

6. **Identify** Give two examples of how people can use maps to help the environment.

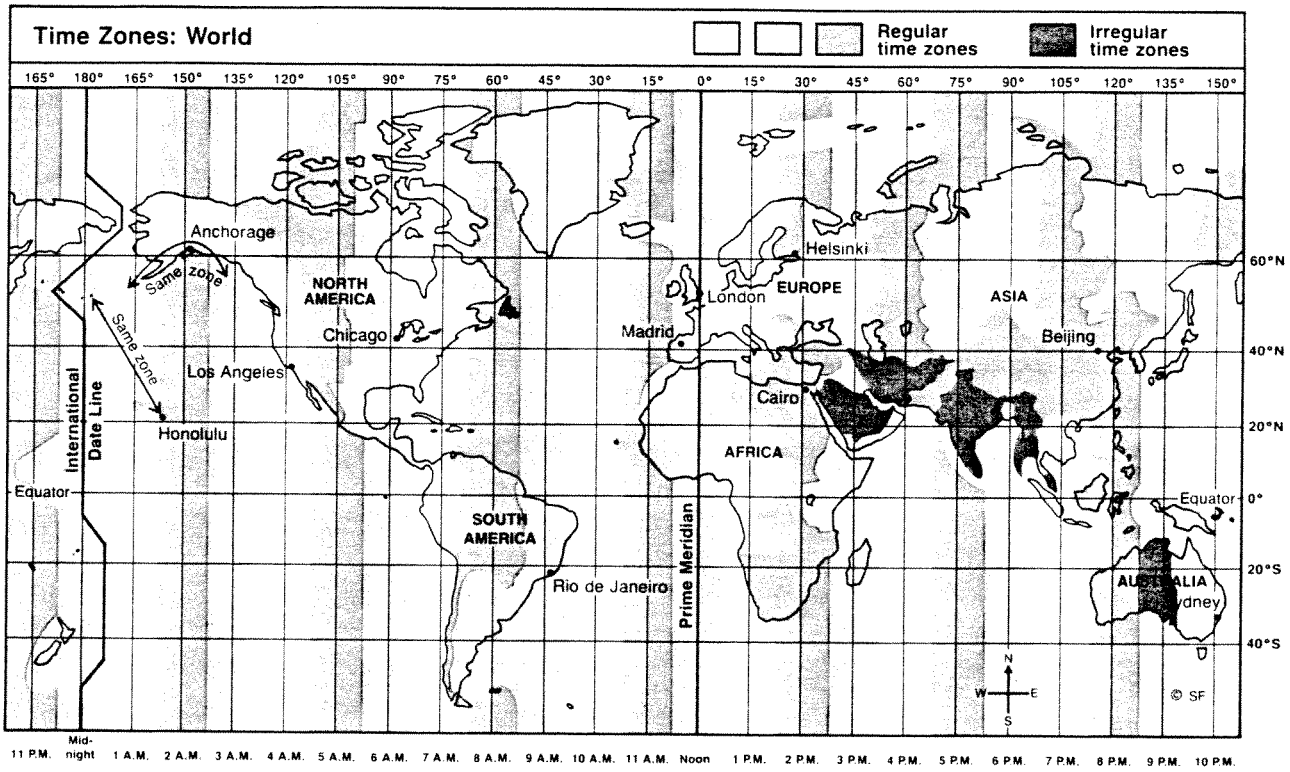
Soil maps help with land use planning and soil conservation

Groundwater maps help to protect groundwater from pollution

Name _____ Class _____ Date _____

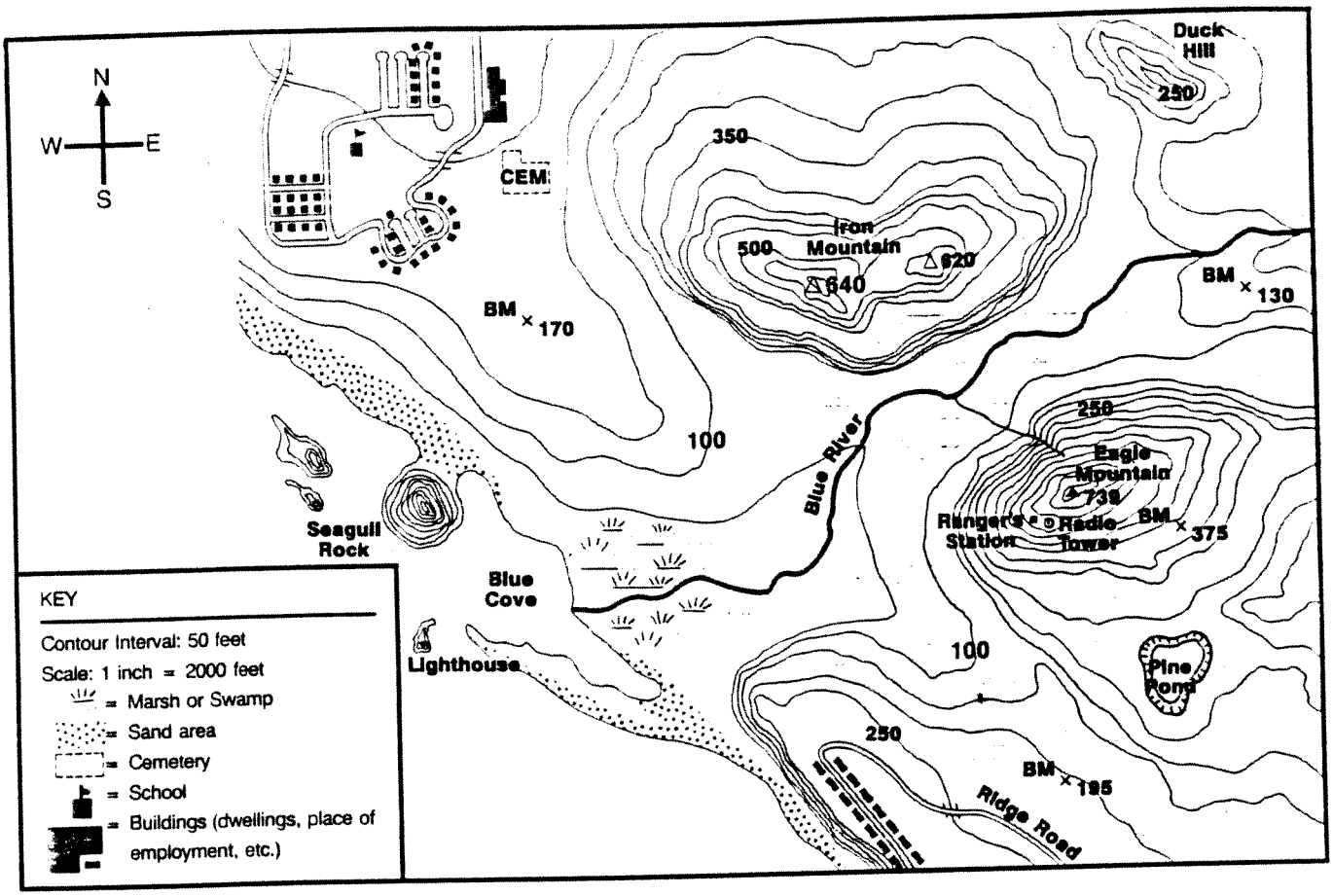
CHAPTER 3 Tools of Earth Science

Use after Section 2-5.



Part A. Use the time zone map above to answer the following questions.

1. The meridians that run north and south measure longitude.
2. The lines that run east and west measure latitude.
3. What is the name of 0° longitude? Prime Meridan
4. If it is midnight at 180°W, what time is it in the following cities?
   - **a.** Anchorage _____
   - **b.** Chicago _____
   - **c.** Rio de Janeiro _____
   - **d.** London _____
   - **e.** Cairo _____
   - **f.** Beijing _____
5. What is the significance of the 180° meridian?
   International Date Line
6. Find the cities at the following latitude and longitude.
   - **a.** 35°N, 120°W L A
   - **b.** 40°N, 7°W Madrid
   - **c.** 60°N, 30°E Helsinki
   - **d.** 40°N, 90°W Chicago
   - **e.** 35°S, 150°E Sydney
   - **f.** 60°N, 150°W Anchorage
7. The 0° latitude is also called the Equator.
8. Why is the International Date Line a jagged line?
   So as to not divide a country into two different days



Part B. Use the topographic map above to answer the following questions.

1. In which direction does the Blue River flow? southwest How can you tell?
   Contour lines decreases in elevation in a southwest direction
   Contour lines form V shapes that point in a SW direction
2. Describe three features of Iron Mountain.
   a. Two peaks 620 ft and 640 ft
   b. North slope is more gentle slope
   c. South slope is more steep slope
3. Can you see Pine Pond from Iron Mountain? No How do you know?
   Eagle Mt is over 100 feet taller than Iron Mt and would block the view
4. What is the approximate elevation of the cemetery? 150-200 ft
5. Describe the land where the Blue River empties into Blue Cove. Marsh or swamp
6. What is the approximate elevation of the Ranger's Station on Eagle Mountain? 650-700 ft
7. From which direction would it be easier to climb Iron Mountain? Why?
   The north slope is more gentle as indicated by the further spaced contour lines
8. How would you describe the slope of Seagull Rock? smooth, symmetrical slope (cone)