Name _____ Period _____ Date _____

UNIT 1 THE SUN SUPPLIES THE ATMOSPHERE'S ENERGY

# 1.2 Reading Study Guide B

* Section 1.2
* Section 2.1

**BIG IDEA** Earth's atmosphere is a blanket of gases that supports and protects life.

**KEY CONCEPT** The Sun supplies the atmosphere's energy.

## Review

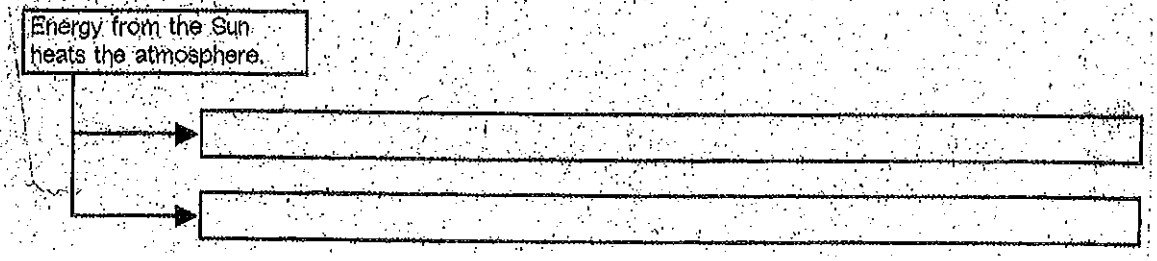
**1.** What are the two most plentiful gases in Earth's atmosphere?

_____

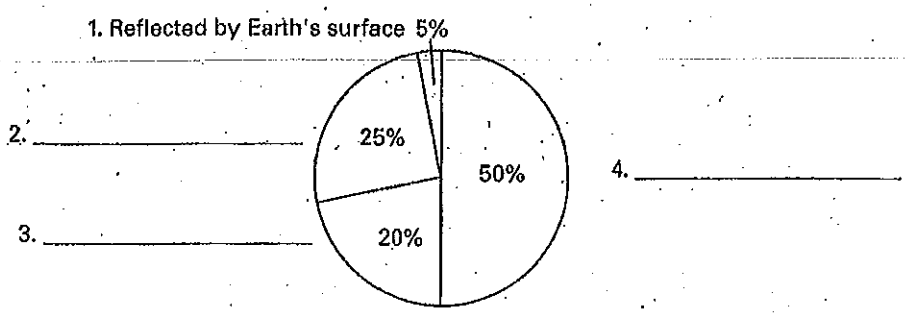
## Take Notes

### I. Energy from the Sun heats the atmosphere. (p. 16)

1. Fill in the chart with facts about sunlight that reaches Earth.




**2.** The circle graph shows the average amounts of solar radiation that are absorbed and reflected on Earth. Complete the graph by labeling its parts. Use diagram on page 17 to help you.




### II. The atmosphere moves energy. (p. 18)

**3.** List three ways that energy is moved from place to place.

_____

### A. Radiation (p. 18)

**4.** Fill in the blank to complete the statement about radiation.

Earth's surface becomes warmer when it is heated by _____ from the Sun.

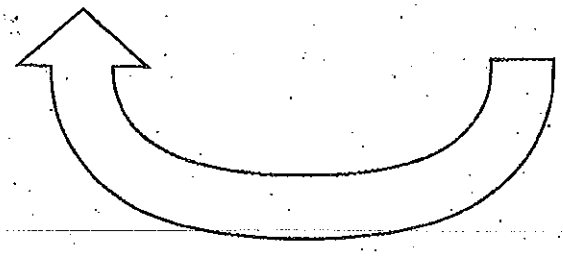
## B. Conduction (p. 18)

5. Explain why the bowl of this metal spoon gets hot after resting in a mug of very hot cocoa.

6. Explain why your feet might get hot if you are standing barefoot on the beach on a hot day.

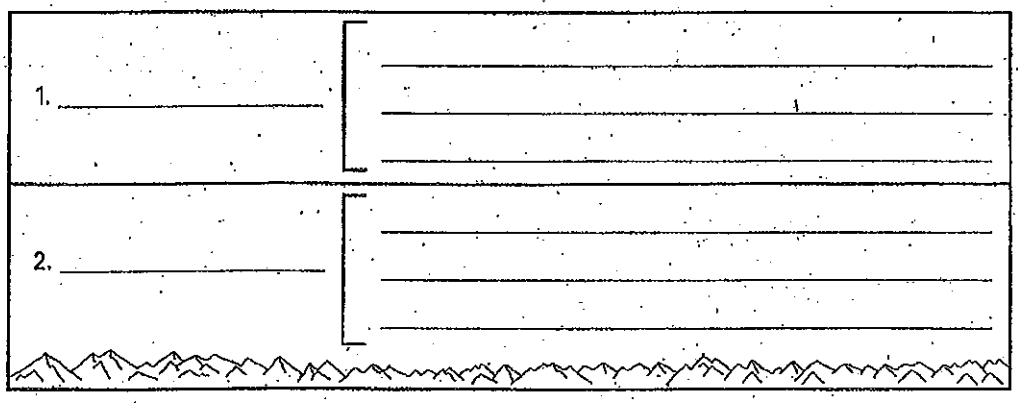
## C. Convection (p. 18)

6. Complete the diagram to show how convection works.



## II. The atmosphere has temperature layers. (p. 19)

7. The drawing shows the two lowest layers of the atmosphere. Label them. Write two facts about each layer.




8. Sometimes the tar of a newly paved road gets sticky on a very hot summer day. What causes this?

Name _____ Period _____ Date _____



SECTION 1.2 THE SUN SUPPLIES THE ATMOSPHERE'S ENERGY.

# Reinforcing Key Concepts

**BIG IDEA** Earth's atmosphere is a blanket of gases that supports and protects life.

**KEY CONCEPT** The Sun supplies the atmosphere's energy.

1. **Energy from the Sun heats the atmosphere.** Radiation from the Sun is either absorbed or reflected by Earth's atmosphere, clouds, and surface. Explain what happens to the radiation that is absorbed.

_____

_____

_____

2. **The atmosphere moves energy.** Energy moves through the atmosphere in several ways. Read each example of energy moving through the atmosphere. On the line, write radiation, conduction, or convection.

   **a.** You pick up the rock that has been warmed by the Sun. The rock warms your hand.

   _____

   **b.** The blacktop on the playground is warmed by the Sun.

   _____

   **c.** A person on a stepladder notices an updraft and that the air up near the ceiling is warmer than the air near the floor.

   _____

3. **The atmosphere has temperature layers.** In the chart below, fill in the characteristics of the troposphere.

| Characteristics of troposphere | |
|---|---|
| | |
| | |
| | |
| | |

# Air Pressure – Section 2.1, pp.43-44

Name _____ Date _____ Hour _____

1. Density is the mass of a substance divided by its volume. List these items from least to greatest density.

_____ _____ _____



2. When an air molecule bounces off an object, it _____ on the object.
3. Why does air pressure push in all directions?

_____

4. How does the movement of air molecules cause air pressure?

_____

_____

5. What happens to air pressure as you increase altitude in the atmosphere? Why does this happen?

_____

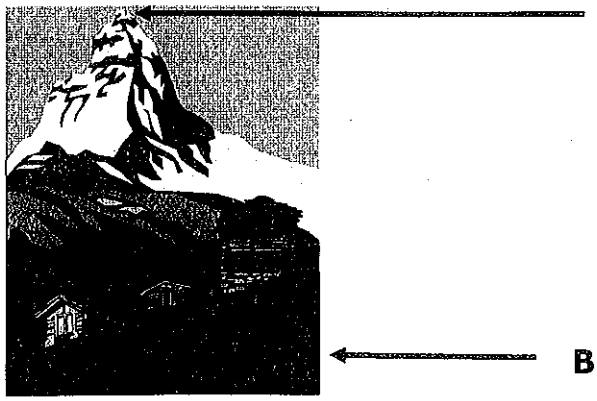
_____

_____

6. Which area in the picture should have the lowest air pressure? Explain why?

_____

_____




7. How is air density related to air pressure?

_____

_____