

REINFORCEMENT

Energy from the Sun

Text Pages _____

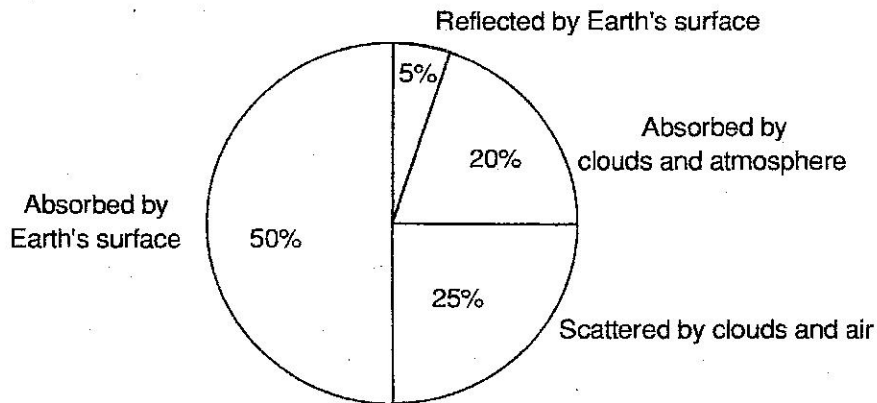
Complete the chart on the three types of heat transfer and their causes. Then answer the following questions on the lines provided.

Types of heat transfer	How they are produced
Radiation	produced by _____
Conduction	produced by _____
Convection	produced by _____

- In some home heating systems, warm air rises on one side of a room and forces cold air across the room where it sinks to the floor. What type of heat transfer is this? _____
- When you get in a closed car on a sunny day and the temperature inside is much warmer than outside, what type of heat transfer has taken place? _____
- If you put a frying pan on a burner on a stove and turn the burner on, the bottom of the frying pan gets hot. What type of heat transfer has occurred? _____

Answer the following questions using the information from the graph.

What happens to radiation coming to Earth from the sun?



- Why doesn't all radiation directed at Earth reach the surface? _____
- What percent of radiation is lost before reaching Earth's surface? _____
- What percent of radiation is lost after reaching Earth's surface? _____
- What factor in the atmosphere seems to have the greatest effect on radiation coming from the sun? _____

STUDY GUIDE

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Use the words in the box to fill in the blanks.

heat	three	absorb	radiation
sun	lower	reflects	density
waves	current	contact	conduction
rises	campfire	environment	temperature
space	surfaces	atmosphere	convection

The _____ is the source of all energy on Earth.

_____ different things happen to the solar energy that Earth receives.

Some escapes back into _____, some is absorbed by the _____, and some is absorbed by land and water _____.

Energy reaches Earth in the form of radiant energy, or _____. This process is the transfer of energy by _____. You experience radiation when you sit by a _____ and your skin becomes warm. The molecules of your skin _____ the energy and you feel _____.

Heat is the transfer of energy from an object with a higher _____ to an object with a _____ temperature. Some radiation isn't absorbed by the atmosphere or surface objects; it _____ off the atmosphere or surface.

_____ is the transfer of energy that occurs when molecules bump into one another. Heat is transferred through direct _____.

_____ is the transfer of heat that occurs because of _____ differences in the air. Because warm air has a lower density, it _____, while cold air, which has a higher density, sinks. This rise and fall of air sets up a circular movement called a convection _____. Convection currents and other processes that transfer energy control the _____ we live in.