

Energy Transfer In The Atmosphere (p. 435 – 438)

I. Energy From The Sun

1. What provides most of Earth's energy?

- The Sun (winds, ocean currents, plants)

2. What three things can happen to energy received by Earth from the Sun?

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1. Reflected back into space by clouds
 2. Absorbed by atmosphere.
 3. Absorbed by land

II. Heat

1. Define the term heat.

Heat – energy that flows from an object with a higher temperature to an object with a lower temperature

2. In what three ways is heat energy transferred through the atmosphere?

1. Radiation
2. Conduction
3. Convection

3. Define the term radiation.

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Radiation – energy that is transferred in the form of rays or waves

4. List three examples of heat transfer due to radiation.

1. Campfire
2. Sun
3. Heat Register

5. Define the term conduction.

Conduction – transfer of energy that occurs when molecules bump into one another (or from within)

6. Molecules in warmer objects move ^{faster} ~~slower~~ than molecules in colder objects.

Circle One :

True

False

7. List three examples of heat transfer due to conduction.

1. Hot Sand
2. Rubbing Hands
3. Touching A Pan

8. Define the term convection.



Convection – transfer of heat by the flow of material
(hot rises; cold sinks)

9. List three examples of heat transfer due to convection.

1. Fronts 2. Ocean Currents 3. Apartment

10. Cooler, denser air sinks, while warmer, less dense air rises.

Circle One :

True

False

III. Temperature (Not in the book.)

1. The average amount of energy in motion of each particle of a substance is called

temperature.

2. Temperature is a measure of how hot or cold a substance is.

Circle One :

True

False

3. Air temperature is usually measured with a(n) thermometer.

4. How does a thermometer work?

Alcohol
Bulb
DEMO

- When the temperature increases, the liquid in the bulb expands and rises in the column.
(When temp. ↓; liquid contracts)

IV. The Water Cycle

1. Define the term hydrosphere.

Hydrosphere – describes all the waters of Earth
(Biosphere = living; Geosphere = land)

2. Match each term with the correct definition.

1. A. - Evaporation A. Phase change from a liquid to a gas
2. C. - Condensation B. Any form of water that falls from clouds
3. B. - Precipitation C. Phase change from a gas to a liquid

Sublimation – phase change (solid → gas)

Deposition – phase change (gas → solid)

Dinosaur
Pee