

1. Some energy from the sun passes through Earth's atmosphere and is absorbed by land, making the land warmer. The air in contact with the land also warms up as thermal energy is transferred from the land to the air. Which process transfers heat energy from the land surface to the air?
- A) radiation
 - B) conduction
 - C) convection
 - D) reflection

Correct answer(s): B

2. The energy in Earth's atmosphere drives the variety of weather patterns that occur. What is the ultimate source of the energy in Earth's atmosphere?
- A) rotational energy
 - B) wind energy
 - C) solar energy
 - D) gravitational force

Correct answer(s): C

3. Air at the poles tends to flow close to the surface toward the equator. What can you conclude about the characteristics of this polar air?
- A) low pressure, warm
 - B) high pressure, cool
 - C) high pressure, moist
 - D) low pressure, dry

Correct answer(s): B

4. Heat is transferred between ocean water and the air directly above it. What process transfers the heat from the water to the air?
- A) convection
 - B) reflection
 - C) conduction
 - D) radiation

Correct answer(s): C

5. Most solar energy passes through the atmosphere and reaches Earth's surface. Which process transfers energy from the sun to Earth's atmosphere?
- A) conduction
 - B) reflection
 - C) convection
 - D) radiation

Correct answer(s): D

6. Which of these is a direct result of differential heating of water in the oceans due to solar energy?
- A) ocean currents
 - B) formation of glaciers
 - C) tides
 - D) differences in salinity

Correct answer(s): A

7. Sunlight is always shining on some part of Earth's surface. What happens to most solar energy that reaches Earth?
- A) It is trapped by greenhouse gases.
 - B) It is reflected back into space by clouds.
 - C) It is absorbed or reflected by the land, water, and air.
 - D) It is absorbed by the atmosphere.

Correct answer(s): C

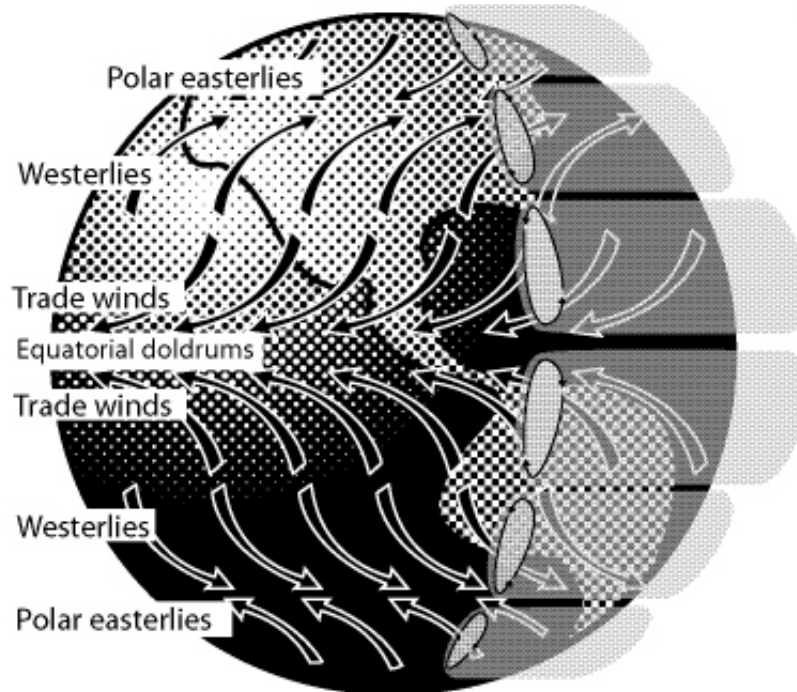
8. Some places on Earth experience strong daily winds while others experience light winds. Which of the following explains what causes wind?
- A) changes from land surfaces to water surfaces
 - B) differences between cloudy areas and clear areas
 - C) differences in air pressure from region to region
 - D) changes from high altitudes to low altitudes

Correct answer(s): C

9. Which correctly compares how land and water are affected by the sun's energy?
- A) Neither land nor water change temperature.
 - B) Land changes temperature more quickly than water.
 - C) Water changes temperature more quickly than land.
 - D) Both land and water change temperature at the same rate.

Correct answer(s): B

10. Earth's global winds move in large circular patterns called convection cells. Which best describes the movement in a convection cell?



- A) Air masses move from areas of low pressure to high pressure.
- B) Air masses move from areas of high pressure to low pressure.
- C) Wind blowing in both counter-clockwise and clockwise patterns around Earth.
- D) Air moves in straight paths around Earth's surface.

Correct answer(s): B

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