Climate



Physics of the Climate System

Match the descriptions with the appropriate element of the climate system.

____convection

____condensation

____latent heat

____freezing

____radiation

____conduction

____evaporation

____albedo

____melting

___specific heat capacity

- A. changing state from liquid to gas; a physical change
- B. energy transfer between objects in contact
- C. a measure of the amount of energy required to change the temperature of a substance; a physical property
- D. a measure of how much light a surface reflects
- E. changing state from liquid to solid; a physical change
- F. energy transfer by rising and falling fluids
- G. a measure of the amount of energy required to change the state of a substance; a physical property
- H. changing state from solid to liquid; a physical change
- I. changing state from gas to liquid; a physical change
- J. energy transfer by electromagnetic waves

Name Answer Key



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Match the descriptions with the appropriate element of the climate system.

a	tmosp	here

____heat sink

____carbon sink

___gyre

____convection cell

____prevailing winds

___El Niño

____jet stream

____greenhouse gas

____thermohaline conveyer

- A. a fast, high altitude current of air; located at the boundary between convection cells
- B. a gas that absorbs infrared radiation
- C. a periodic reversal of the prevailing winds and currents in the Pacific; warm water is pushed towards South America
- D. a large system of rotating ocean currents
- E. winds that usually blow from a single general direction
- F. the layer of gas surrounding the Earth
- G. a pattern of rising and falling convection currents in the atmosphere
- H. an object that requires a lot of thermal energy to change temperature
- I. a reservoir that accumulates and stores carbon compounds for an indefinite period
- J. a large circulatory pattern in the oceans, driven by differences in temperature and salinity



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Section



Living With a Changing Climate System

Match the descriptions with the appropriate element of the climate system.

____feedback loop

____albedo effect

____anthropogenic

____thermal expansion

____clean energy source

____Kyoto Protocol

____carbon footprint

____adaptation

____mitigation

Intergovernmental Panel on Climate Change (IPCC)

- A. a measure of the carbon dioxide emissions caused by a person, activity, or organization
- B. an international plan to control greenhouse gas emissions
- C. deliberately reducing an unwanted change
- D. an international organization that summarizes scientific research on climate change
- E. melting sea ice increasing the temperature of the ocean, which leads to more melting; a positive feedback loop
- F. resulting from human influence
- G. a process where the effects of the process influence the original process
- H. changing the way we live in response to a change
- I. a source of energy with no significant greenhouse gas emissions
- J. the increase in volume of a substance when its temperature increases





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