

Name Key

Weather Causes Study Guide

Identify the type of heat transfer:

1. transfer of heat by direct contact of molecules conduction
2. transfer of heat through empty space in the form of waves radiation
3. transfer of heat by the circulation (rising and sinking) of fluids convection
4. touching a hot stove conduction
5. sitting by the fireplace radiation
6. furnace heating your home convection

Air Pressure:

7. Does high pressure air rise or sink? sink
8. Does low pressure air rise or sink? rise
9. What kind of weather does high pressure bring? clear skies, dry ☺
10. What kind of weather does low pressure bring? clouds, precipitation ☹
11. Where is air pressure the greatest? sea level / surface
12. Where is air pressure the weakest? higher up from the surface
13. What layer of the atmosphere does weather occur? troposphere

Land/Sea Breezes

14. Which absorbs radiation from the sun faster, land or water? land
15. Which loses heat faster, land or water? land
16. When do sea breezes occur? during the day
17. Where is high pressure air located in a sea breeze? over the ocean (cooler - sinks)
18. Where is low pressure air located in a sea breeze? over land (warmer - rises)
19. When do land breezes occur? at night
20. Where is high pressure air located in a land breeze? over land (cooler - sinks)
21. Where is low pressure air located in a land breeze? over the ocean (warmer - rises)
22. Study p. 27-37 in ISN

Winds

23. Winds are caused by high pressure air moving toward low pressure air.
24. Be able to identify the polar easterlies, prevailing westerlies, and trade winds on a diagram.
25. Study p. 27-37 in ISN
26. Global winds curve due to the Earth's rotation which is known as the Coriolis Effect

Fronts

27. Air masses are large bodies of air with similar humidity and temperatures
28. The boundary where two air masses meet is called a front.
29. Study p. 27-37 in ISN
30. What kind of front occurs when a cold air mass collides with a warm air mass resulting in severe weather followed by cooler temperatures and clear skies? Cold front
31. What kind of front occurs when a warm air mass glides on top of a retreating cold air mass resulting in lingering showers followed by warmer temperatures? warm front