

Weather Webquest

Name: _____

The Atmosphere

Go to <http://www.ducksters.com/science/atmosphere.php>

The earth is surrounded by a _____ of gases called the _____. The atmosphere is very _____ to life on _____ and does many _____ to help protect life and help _____ to survive.

The atmosphere absorbs the _____ from the _____ and keeps the heat _____ the atmosphere helping the _____ to stay warm, called the _____ Effect.

1. What gasses that make up the atmosphere (give the percentages!)

2. What are the five main layers of the atmosphere?

3. Which layer is closest to space? _____

4. Which layer is the hottest layer? _____

5. Which layer is the coldest layer? _____

Clouds

Go to <http://www.weatherwizkids.com/weather-clouds.htm>

6. What are clouds? _____

7. Why some clouds gray, but some clouds are white? _____

Fill in the blanks on the following Chart:

Cloud Group	Cloud Height	Cloud Types
High Clouds = _____	Above _____ feet	_____ Cirrostratus Cirrocumulus
_____ Clouds = Alto	_____ feet to 18,000 _____	Altostratus Alto cumulus
_____ Clouds = _____	Up to _____ feet	_____ Stratocumulus Nimbostratus

-Cirrus clouds are the most _____ of the high clouds. They are composed of _____ and are _____, _____ clouds blown in high winds into _____ streamers.

-Stratus clouds are _____ grayish _____ that often cover the _____ sky. They resemble _____ that doesn't _____ the ground. _____ mist or _____ sometimes _____ out of these _____.

-Cumulus clouds are _____, puffy clouds that look like _____ of floating _____. Cumulus clouds are often called "_____". The base of each cloud is _____ and the _____ of each cloud has _____ towers.

The Water Cycle

USE YOUR NOTES FOR WATER CYCLE TO ANSWER THE QUESTIONS

Use the six important processes definitions to answer the following questions.

- 8. What occurs when a gas is changed into a liquid? _____
- 9. What is the water that runs off the surface of the land, and flows downhill into streams, rivers, ponds and lakes called? _____
- 10. What is the process of evaporation through plant leaves called? _____
- 11. What is the opposite of evaporation? _____
- 12. What is the process of liquid turning into a gas called? _____
- 13. What is it called when rain drops fall to the earth? _____

Fronts

Go to http://www.phschool.com/atschool/phsciexp/active_art/weather_fronts/ Click on each type of front and read the description and watch the simulation.

- 14. When do cold fronts occur? (read the description at the top for cold front) _____
- 15. A) Draw a stationary front in the box below: _____ B) Draw a warm front in the box below: _____

- 16. Describe what happens in an occluded front. _____

Go to <https://eo.ucar.edu/kids/sky/air5.htm>

- 17. A _____ front is a warm-cold air _____ with the colder air replacing the warmer. As a cold front moves into an area, the _____ cool air pushes under the _____ warm air that it is _____.
- 18. What color is represented on a weather map for cold? _____ Draw what it might look like on the map:
- 19. A _____ front is the boundary between _____ and cool (or cold) air when the warm _____ is replacing the cold air. _____ air at the surface _____ above the _____ air mass, making _____ and storms.
- 20. What color is represented on a weather map for warm? _____ Draw what it might look like on the map:

Storms

Go to <http://www.exploringweather.com/hurricanes.html>

- 21. How long can a hurricane be? _____
- 22. How fast are the average winds in a hurricane? _____
- 23. How fast do hurricanes move? _____
- 24. Draw a picture of a hurricane:

Weather Webquest

Click on tornadoes on the top bar.

25. What is a tornado? _____

26. About how many devastating tornadoes are there in a year? _____

27. (Under the video(that doesn't work))What is a tornado called before it reaches the ground?

Click on Thunderstorms on the top bar.

A _____ is a storm with _____ and _____. It's produced by a _____ cloud, usually producing _____ winds, _____ rain and sometimes _____. The _____ ingredients used to make a thunderstorm are _____, unstable _____ and lift. You need moisture to form _____ and rain. You need _____ air that is relatively _____ and can rise _____. Finally, you need _____. This can form from _____, sea _____ or mountains.

Winds/Climate

Go to <http://www.eschooltoday.com/winds/types-of-winds.html>

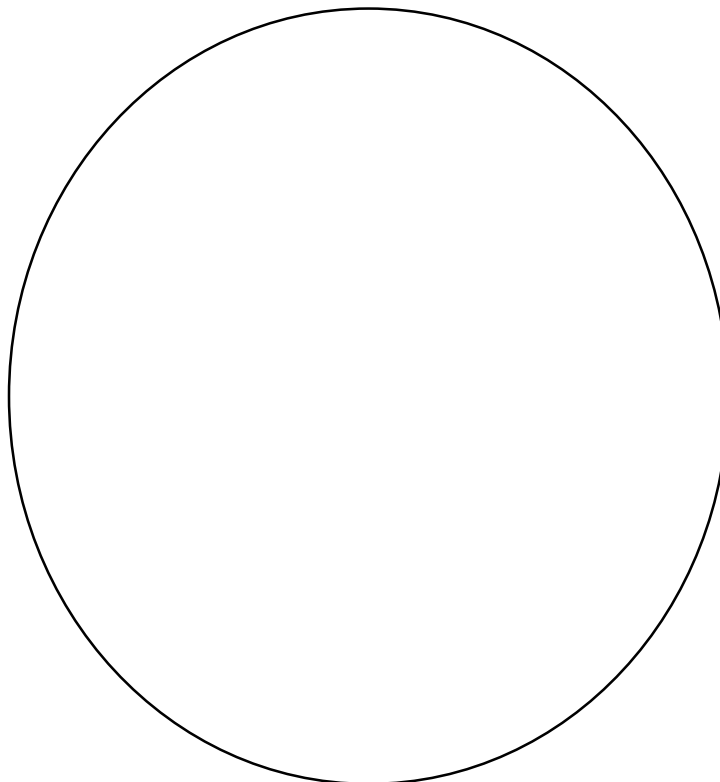
Local Winds

_____ winds are those that are _____ as a result of _____ such as mountains, _____, water _____ and so on. They usually _____ very often and the _____ forecast people talk about this _____ on the TV everyday. They can move from _____ to extreme _____ in just hours. Good examples of _____ winds are sea _____ and land _____, and mountain and valley breezes. Local _____ cover very short distances.

Global Winds

_____ winds are really _____ air masses that are _____ mainly as a _____ of the earth's rotation, the _____ of the earth and the sun's _____ power.

Label the circle below with the winds, longitude degrees, and arrows.



Weather Webquest

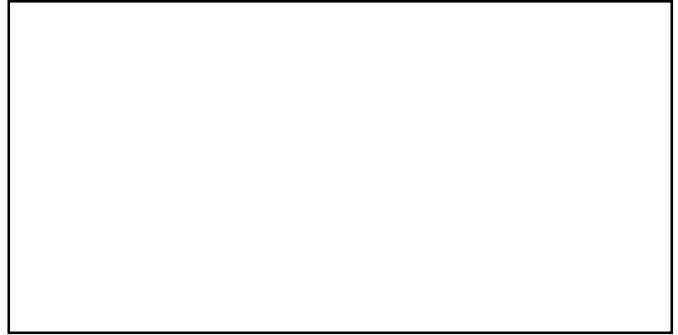
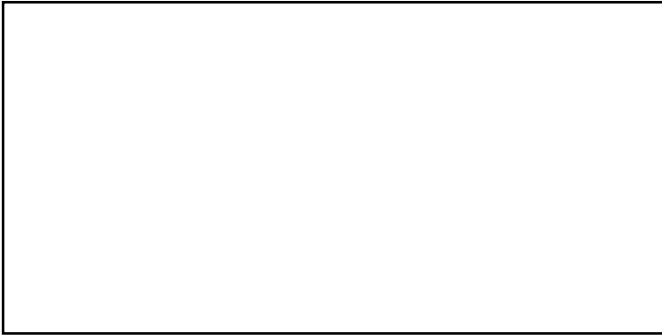
28. What is a doldrum? _____

Click on Land and Sea Breezes on the left

29. Does water or land take more time to heat up? _____

Draw the sea breeze

Draw the land breeze



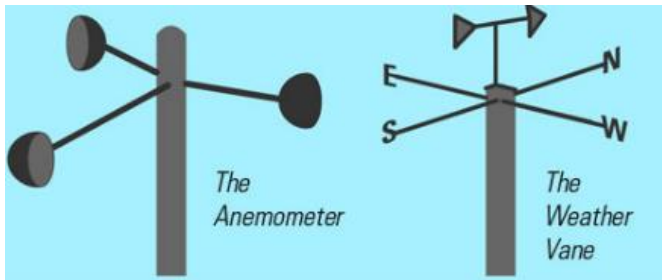
30. Describe how the sea breeze occurs: _____

31. Describe how the land breeze occurs: _____

Weather Tools

Go to <http://www.weatherwizkids.com/weather-instruments.htm>

32. What is an ANEMOMETER used to measure? _____
33. What is a WIND VANE used to help with? _____
34. What are some noticeable differences between the weather vane and the anemometer?



35. What does a thermometer measure? _____
36. Describe a SLING PSYCHROMETER. _____

37. What does a barometer measure? _____

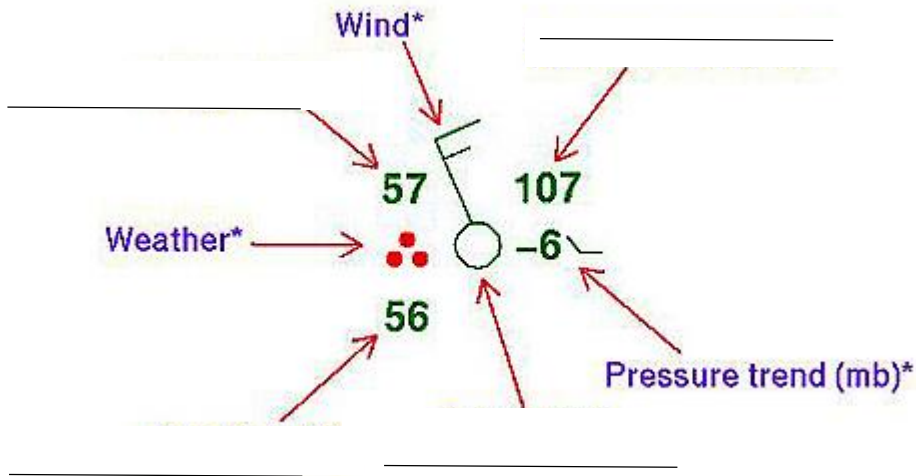
38. What does a rain gauge measure? _____
39. What is a compass used for? _____

Weather Maps

Go to <http://www.weatherwizkids.com/weather-forecasting.htm>

Weather _____ are used on my _____ maps as shorthand for the _____ at weather observing _____.

Label the following blanks:



40. How is a high pressure represented on a map? _____

41. What is a low pressure system? _____

42. How is a low pressure represented on a map? _____

43. What is the definition of humidity? _____

Fill in the blanks for the chart:

1.) _____ latitudes (P) - _____ poleward of 60 _____ north and south
2.) Tropical _____ (T) - located within about _____ degrees of the equator
3.) _____ (c) - located over _____ land masses, _____
4.) Marine (m) - _____ over the _____

44. What is a front? _____

45. Draw what a cold front would look like on the map below...what color would it be? _____

46. Draw what a warm front would look like on the map below...what color would it be? _____

47. Draw what a stationary front would look like on the map.

Weather Webquest
Greenhouse Effect

Go to <http://climatekids.nasa.gov/review/greenhouse-effect/>

48. How is a greenhouse warmed? (even during the winter months!!) _____
_____ atmosphere does the same thing as the _____. Gases in
the _____ such as carbon _____ do what the _____
of a _____ does. During the _____, the _____ shines
through the atmosphere. Earth's _____ warms up in the sunlight. At _____,
Earth's _____ cools, releasing the _____ back into the air. But
_____ of the heat is _____ by the greenhouse gases in the
_____. That's what keeps our Earth a _____ and cozy
_____ degrees Fahrenheit, on _____.

49. (Not on the website you are looking at but it's in your head from what we previously learned!!) Hint- The sun's rays heating earth is radiation, so what is the way in which heat travels in liquids and gases allowing warm particles to expand/become lighter and rise and cool particles to contract/become heavier and sink causing circulation of heat energy?? _____ (conduction or convection?? Google it if you don't know, but don't lose your current webpage because you need it for the last paragraph!

Is it warm in here or is it just me?

You might think _____ degrees Fahrenheit is pretty _____. Or, you might think that's warm. It _____ on what you are used to. That temperature would _____ all the Arctic ice. Yes, it's colder than _____ degrees in a lot of places, and hotter than _____ degrees in a lot of _____, but 59 is the _____ of all of the places.