

Name: _____

Period: _____

Wind and Pollution Review

Section 3 know:

Wind

Coriolis effect

Trade winds

Westerlies

Polar easterlies

Jet stream

Sea Breeze

Land Breeze

Section 4 know:

Air Pollution

Acid Precipitation

Particulate matter

Photochemical smog

Great smog of London

Section 3 Review

In the space provided, write the letter of the description that best matches the term or phrase.

_____ 1. Coriolis effect

a. prevailing winds that blow from west to east between 30° and 60° latitude in both hemispheres

_____ 2. global winds

b. the curving of the path of a moving object from an otherwise straight path due to Earth's rotation

_____ 3. wind

c. air that moves from high pressure to low pressure

_____ 4. westerlies

d. prevailing winds that blow from East to West between 60° and 90° latitude in both hemispheres

_____ 5. polar easterlies

e. prevailing winds that blow from 30° to 0° latitude in both hemispheres

6-10 Fill in the blank

sea breeze

high

low

heats

greater

cools

6. The _____ the difference of air pressure, the _____ speed of air movement.

7. Air pressure moves from areas of _____ pressure to areas of _____ pressure.

8. Land _____ and _____ faster than water.

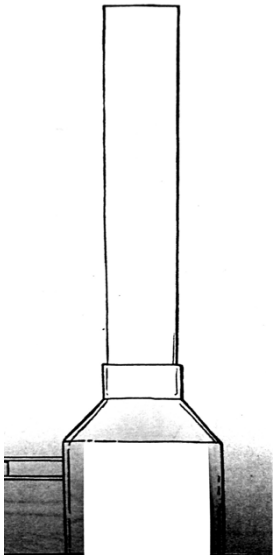
9. Water holds _____ much longer than land does.

10. A(n) _____ is wind that blows from the sea to the land due local temperature and pressure difference.

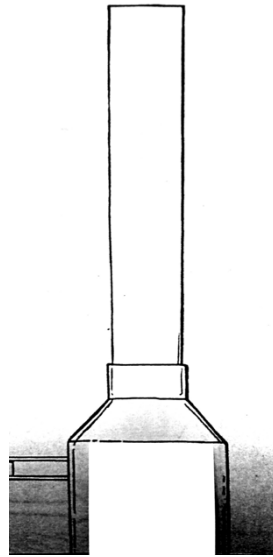
11. Describe what would happen if there was no Coriolis affect and why.

12-13. Draw a labeled diagram of both the cold water and hot water convection tube. Use arrows to show the movement of the smoke. Additionally, describe the speed and concentration of the smoke.

Cold



Hot



speed:

concentration:

speed:

concentration:

14. In the heating and cooling of Earth's surface lab, which surface heated faster during the day?

15. In the heating and cooling of Earth's surface lab, which surface held heat longer at night?

16. In the heating and cooling of Earth's surface lab, which surface heated slower during the day?

17. In the heating and cooling of Earth's surface lab, which surface cooled faster at night?

18. A land breeze blows during the _____ from _____ to

_____.

19. A sea breeze blows during the _____ from _____ to

_____.

20. Circle in the picture below where the air becomes dense and sinks due to its coldness.



21. Circle in the picture below where the air becomes less dense and rises due to heat.



22. What heat transfer is demonstrated by the interaction of air at the poles and the equator?

23. What effect causes the curving of global winds? _____

24. City A and City B are at the same altitude. The daytime temperature in City A is 19 degrees Celsius and 35 degrees Celsius in City B.

a. Which city has higher air pressure?

b. How do you know?

25. Using the picture below identify the prevailing winds that flow over both the North and South Pole.



Key	
①	Eastern United States
②	Europe

26. Label the Equator (0°), 30°N , 30°S , 60°N , 60°S , 90°N (North Pole), 90°S (South Pole) on the diagram below.

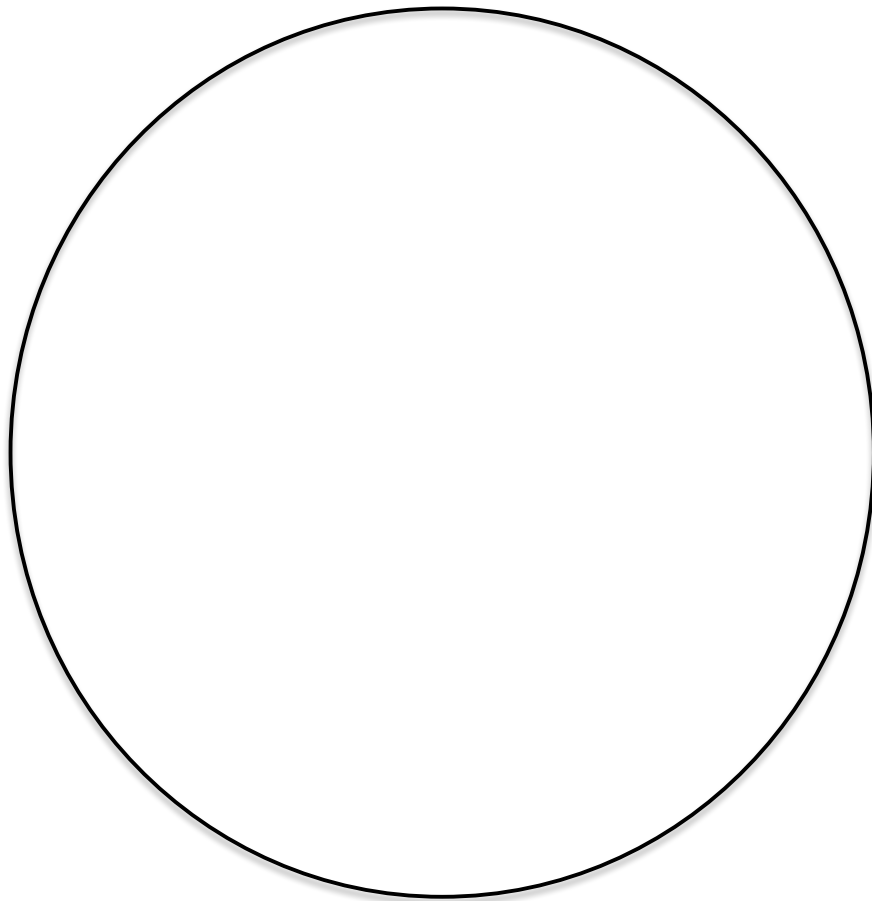
27. Draw arrows showing which direction the winds blow in each area of the globe.

28. Label each zone with one of the following names:

- Polar Easterlies
- Trade Winds
- Prevailing Westerlies

29. Which winds affect Madagascar (island off the coast of Africa, 18.7669°S)? _____

30. What direction do they blow? _____



Section 4 Review

1. Provide 1 similarity and 1 difference between smog and acid precipitation.

a. Similarity _____

b. Difference _____

2. What is name given to the combination of moisture and sulfur oxide? _____

3. What danger does particulate matter pose to humans?

4. What is air pollution that forms from the interaction between chemicals in the air and sunlight?

5. Name 3 sources of pollution caused by human activity?

6. Provide 1 problem when the wind blows pollution in an area and 1 problem when the wind doesn't blow pollution.

When the wind blows pollution:

When the wind doesn't blow pollution:

7. What weather event caused the Great Smog of 1952, how did it cause it?
