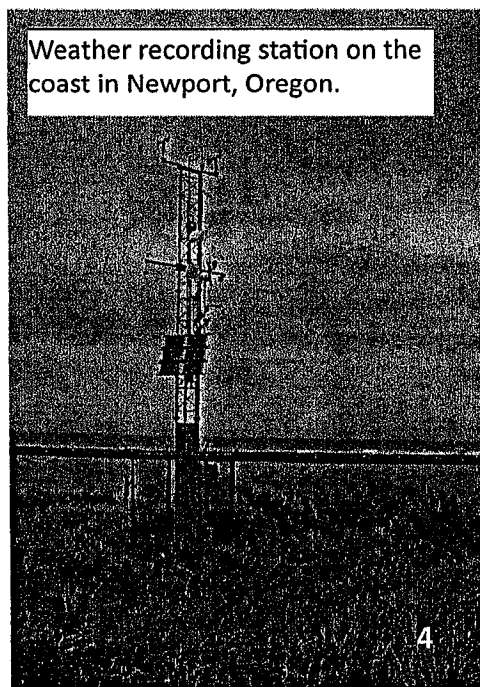
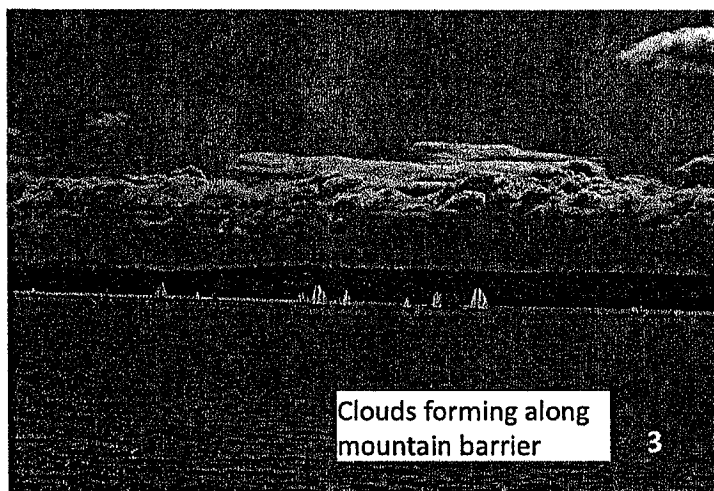
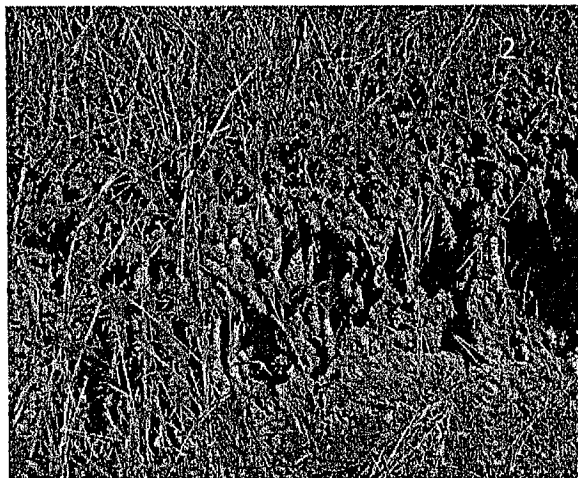


Cacti growing on a south-facing slope on Whidbey Island, in northwestern Washington State.



Topic: Weather Photographs

Name _____

Use the photographs on the previous page to answer the questions below

1. The cirrus clouds in photograph 1 indicate an approaching _____ front.
2. Will the air pressure in the Kootenay Lake area in the photo rise or drop as the front approaches?

3. What type of clouds will follow the cirrus clouds? List 2 types.

Finally, the cloud arrives that produces the majority of rain as the front moves through
- a _____ cloud.

4. In photograph 2, cacti grow on a southwest facing slope in sandy glacial till. This slope is an excellent example of a microclimate. Define microclimate.

5. A relatively high mountain range to the west of the above area is partly responsible for the microclimate along this slope. How do mountain barriers affect climate conditions on the leeward side of the mountain?

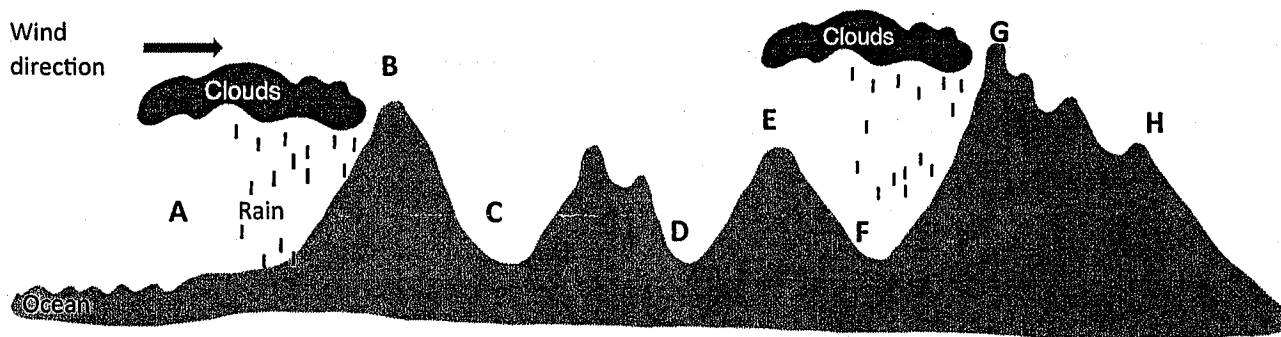
6. Aspect has also played a role in making the climate along this slope considerably different from the surrounding area. Define aspect.

Explain how aspect affects average temperatures in this area.

7. In photograph 3 heavy clouds obscure the tops of the Coastal Mountains in Vancouver. Why have the clouds formed along the mountains only and the rest of the sky is clear?

8. Air forced to climb over a mountain barrier produces _____ precipitation.

Use the diagram below to answer questions 9 - 14



9. Which location experiences the coldest temperatures?

10. Which location experiences the greatest amount of annual precipitation?

11. A temperature inversion would most likely occur at location _____

Explain why.

12. Which of the map locations would experience the least annual precipitation?

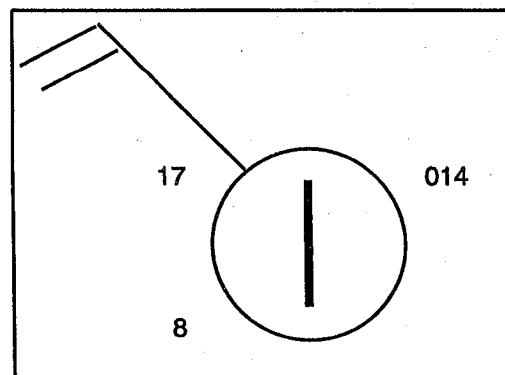
13. Air pressure would be the lowest at location _____

14. Of the interior valleys C and D, which one would be the driest? _____

15. Photograph 4 shows a typical weather station used to record weather conditions.

A person who analyzes data recorded by a weather station is known as a

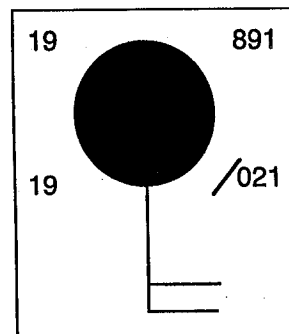
16. Use the weather station on the right to give as accurate an account of the weather as possible.



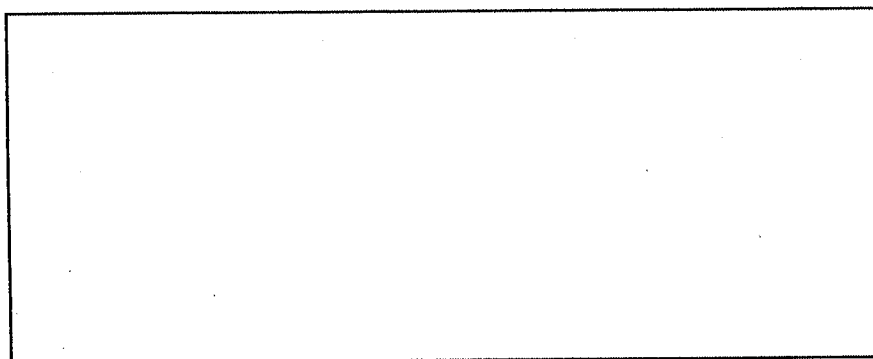
Topic: Weather Knowledge Tester

Name _____

1. Use the information from the weather station on the right to give as thorough a description of the weather as possible.



2. Draw a detailed cross-section of a warm front. Name at least 3 clouds on your drawing.



3. Define the following terms:

anemometer _____
 barometer _____
 meteorologist _____
 dew point _____
 insolation _____
 El Niño _____

4. Name the cloud that builds vertically in the sky, causes heavy localized precipitation along cold fronts, and often is associated with hail and thunderstorms. _____

5. Following a cloudless and windless night in early spring or fall, fog can often be a problem for British Columbia motorists as they drive to work in the morning. By 10 or 11 a.m. the fog has dissipated only to reappear by late afternoon. Give the name for this type of fog. _____
 Why does the fog disappear by late morning and then reappear by late afternoon?

Topic: Weather Knowledge Tester

Name _____

6. Explain why in late November or early February this type of fog can sometimes last for days with no relief in sight.

7. What part of Canada experiences the greatest number of tornadoes? _____

8. In normal years, the coastlines of Ecuador, Peru and Chile in South America are among the richest fishing grounds on the planet. This all changes during years when a strong El Niño pattern develops. What causes the fishing to abruptly end to where fishermen can barely feed their families?

9. How does El Niño impact the great migrations of zebras, gazelles, and wildebeest in Africa, over 12,000 kilometres away?

10. During a strong El Niño, the southwestern desert regions of the United States can receive many times more rain than average. Rain that comes in the form of torrential downpours at times can cause serious problems in desert regions. Explain why.

Fill in the blanks choosing the correct term from the box below.

doldrums	depression	anemometer	typhoon
leeward	greenhouse	orographic	insolation
ozone	stratosphere	cumulonimbus	aspect
rain shadow	isobars	saturated	windward
altitude	storm surge	nimbostratus	albedo
cumulus	absolute humidity	land breeze	dew point
jet stream	troposphere	sea breeze	cyclone
evaporation	anticyclone	barometer	air mass
polar front	water vapour	thermometer	cirrus
conduction	Coriolis Effect	meteorologist	dew

1. Turbulent layer of the atmosphere in which clouds, storms, and precipitation are found.

2. An example of a microclimate. _____
3. A high cloud consisting of ice crystals. This cloud indicates an approaching warm front.

4. Area of calm found along the equatorial low pressure belt. _____
5. These lines join areas of equal atmospheric pressure. _____
6. The dry side of a mountain range. _____
7. _____ is a high pressure centre.
8. This cloud is the rainmaker along a warm front. _____
9. Air that has reached 100% relative humidity is _____.
10. Name for a hurricane in the China Sea. _____
11. This instrument measures atmospheric pressure. _____
12. Cause of much flooding in a hurricane. _____
13. Part of the atmosphere which contains the ozone layer. _____
14. A low pressure centre may be referred to as a _____ or a _____.
15. Precipitation created when air is forced to climb over a mountain barrier. _____
16. The amount of water vapour present in a body of air. _____
17. Excessive heating of land along the ocean shore during summer months results in a
_____.
18. A large body of air that has consistent moisture and temperature conditions is known as
_____.

Topic: Terminology

Name _____

19. A white puffy cloud that may have a dark flat base. _____
20. Condensed water vapour is called _____.
21. This instrument measures wind speed. _____
22. Fast moving upper atmosphere air that flows west to east. _____
23. Incoming solar radiation from the sun is called _____.
24. The gaseous form of water. _____.
25. This term refers to the amount of solar radiation absorbed or reflected by a surface.

26. The process of heat transfer from a warm surface to a cooler one is called _____.
27. Air that has 100% relative humidity has reached _____.
28. The rainy side of mountain ranges. _____
29. A vertical cloud that may produce heavy localized rain, hail, thunder and lightning.

30. The leading edge of cold arctic air is the _____.
31. This instrument measures air temperature. _____
32. This gas absorbs large amounts of harmful incoming ultraviolet radiation. _____
33. _____ refers to the compass direction that a slope faces.
34. During summer months along ocean shores, the land cools rapidly as the sun sets. During the night the air over the ocean is warmer than the air over the land and this temperature difference results in a
_____.
35. Can be thought of as the first step in the hydrologic cycle. _____
36. A scientist who deals with weather forecasting. _____
37. Curving of global winds to the right in the northern hemisphere and to the left in the southern hemisphere is caused by _____.
38. As _____ increases, air pressure and temperature decrease.
39. Term referring to the dryness of leeward mountain slopes. _____