

Questions: Activity Sheet on Climate and Topographic Factors

Use the handout on factors that influence climate to answer the following questions that relate to the different locations given on the Neumann's World continent map.

1. What location would have the coldest yearly climate? _____ What factor was the cause for the answer you chose?

2. What factor would cause location C to have a greater annual rainfall amount than location D?

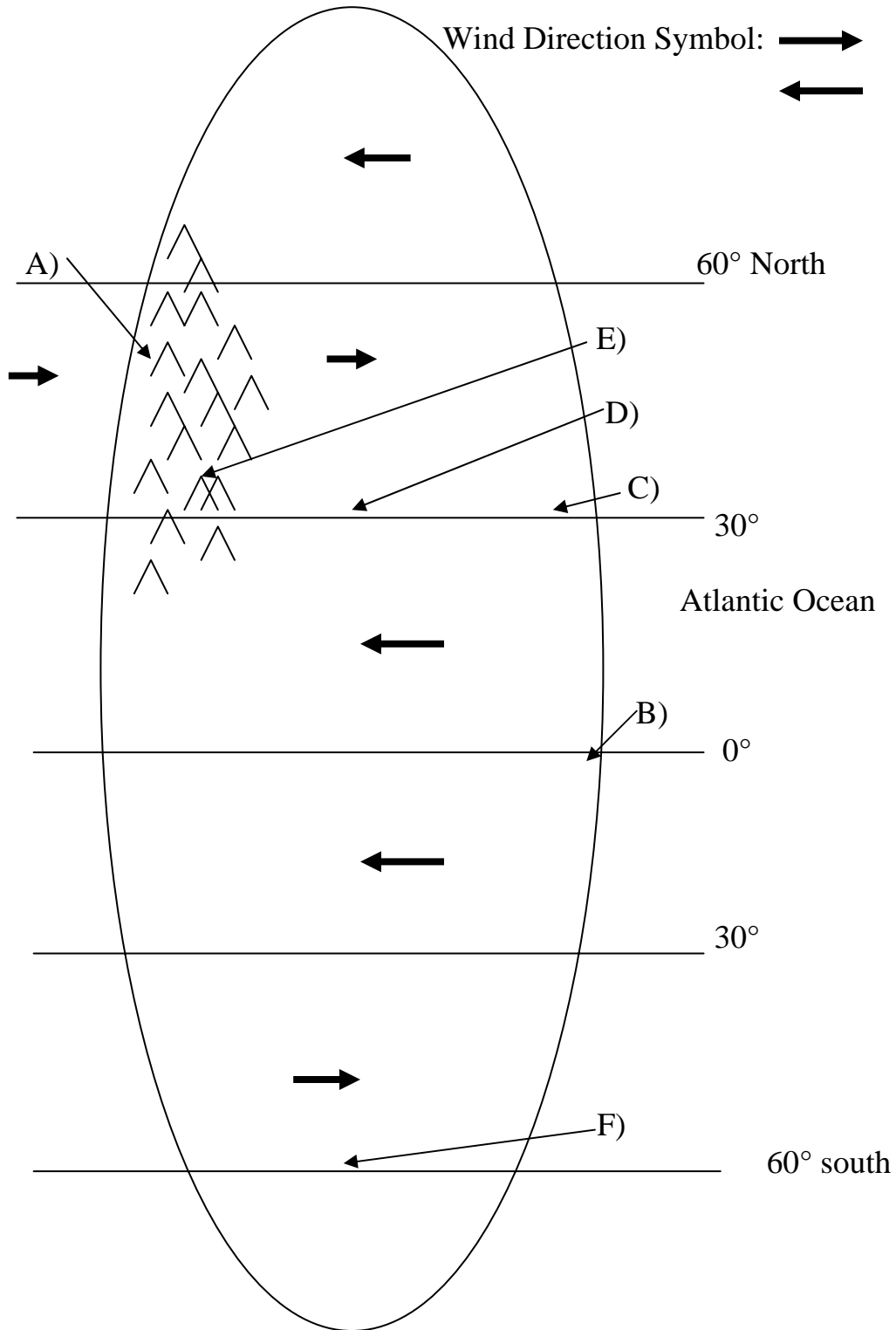
3. What factors would cause location E to be colder than locations D and C?

4. What location would have the warmest average temperatures? _____ Explain your answer.

5. Which location, C or D, would have a greater range in temperature during the year? _____ Explain your answer.

6. Describe the climate location A would have. Use supporting details from the explanation handout.

Neumann's World Continent Map



Explanation of Topographic Features and Climate

Temperature Factors:

1. Elevation- the higher you go in altitude the colder the temperatures become.
2. Longitude- as you move further from the equator the colder the temperatures become
3. Nearness to large bodies of water- large bodies of water will help moderate temperature differences so that you don't get as great of temperature changes.
4. Nearness to centers of large land masses- locations near the center of a large landmass tend to have wide ranges in temperatures, both between seasonally and day and night.
5. Location relative to large mountain ranges- Windward sides of mountain ranges are cooled, while leeward sides are warmed.
6. Ocean currents- ocean currents tend to warm temperatures of eastern coastal areas and cool temperature of western areas.

Precipitation Factors:

1. Nearness to centers of large landmasses- Location near the center of a large land mass tend to have dry climates.
2. Nearness to large bodies of water- Areas near large bodies of water tend to have a higher than average rainfall amounts, especially areas on the windward side of the large body of water.
3. Location relative to a large mountain ranges- Windward sides of mountains tend to receive higher than average precipitation, while the leeward sides receive lower than average precipitation.
4. Latitude- Belts of low pressure centered at latitudes of 0° and 60° N and S produce generally higher precipitation amounts. Belts of high pressure centered at latitudes of 30° N and S produce dry climates.

ANSWER KEY

1. F - Latitude location, because of the distance from the equator would be the major factor that would influence temperature the most.
2. Location C is nearer to a large body of water, which will cause the precipitation amounts to be higher there. Location D is located inland on a high pressure belt, which would cause low precipitation amounts.
3. The major factor would be elevation the higher the location the colder the temperature. A second factor would be that location E longitude is a little further from the equator.
4. Location B- The main factor is the latitude location being at the equator causes, in general, the warmest average temperatures.
5. Location D- The nearness to the center of large landmasses generally causes greater temperature difference.
6. Location A's climate generally would have cooler temperatures because of the latitude location and the cooler ocean waters from the western location. The precipitation amounts will be high because of the location to the low pressure belt and the location is on the windward side of the mountain range.