

# QUESTIONS

FOR THOUGHT, DISCUSSION, & FURTHER STUDY

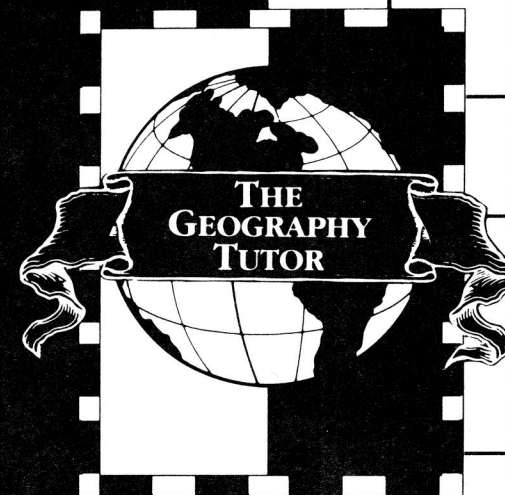
1. What is Weather?
2. What is meant by atmospheric pressure?
3. What is climate?
4. How does climate affect our purchase of clothing?
5. How does climate affect the production of goods for a given area?
6. How does elevation affect the climate of an area?
7. How do large bodies of water affect the climate of an area?
8. What is the "rain shadow" affect and how do mountains contribute to it?
9. What are prevailing winds?
10. What causes the changes in the seasons?
11. Why do the Northern and the Southern hemispheres experience opposite seasons?
12. What are the equinoxes and solstices? How do they affect weather?
13. Which layer of the atmosphere does weather occur in?
14. What causes a warm front?
15. What causes a cold front?
16. What causes a stationary front?
17. What causes thunderstorms?
18. What is a tornado and how do the different names for tornadoes help in determining where this type violent weather is located?
19. How does a waterspout compare to a tornado?
20. What is a Monsoon?

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**WEATHER  
& CLIMATE**

**VOL 5**

## "WHO, WHAT, WHERE IN THE WORLD?" WEATHER AND CLIMATE

**Atmosphere** - A mixture of gases that encircle the Earth.

**Atmospheric Pressure** - The pressure exerted by the weight of the atmosphere on the Earth's surface.

**Climate** - Average weather in a given area over a long period of time.

**Climatologist** - A scientist who studies the Earth's climate regions.

**Cold Front** - When cold air overtakes a warm air mass.

**Cyclone** - A large weather system that rotates counterclockwise in the Northern hemisphere and clockwise in the Southern hemisphere.

**Equinox** - One of two times each year when the earth reaches the place in its orbit when the sun appears directly over the Equator at noon (on or about March 22 and September 22)

**Exosphere** - The outermost zone of the Earth's atmosphere.

**Front** - The boundary between two air masses of different temperatures and humidity.

**Hurricane** - A rotating tropical storm with winds measuring at least 74 miles per hour.

**Leeward** - The side facing away from the prevailing winds.

**Mesosphere** - One of the layers of the Earth's Atmosphere that lies between 50 and 80 Kilometers above the Earth.

**Meteorologist** - A scientist who uses information he/she gathers about atmospheric conditions to forecast or predict the weather.

**Meteorology** - The science that deals with the study of the atmosphere and the weather.

**Monsoon** - A seasonal change in the direction of the prevailing winds; They cause wet and dry seasons throughout regions such as Southern and Southeastern Asia and portions of West Africa.

**Prevailing Winds** - Winds at a certain place or in a given region which occur in a certain direction at a higher frequency than any other directions.

**Rain Shadow Effect** - Effect caused by mountains that block rain - bearing winds and therefore cause one side of

the mountain to receive more rain and the leeward side to be more arid.

**Revolution** - The act of the Earth traveling around the sun once each year.

**Seasons** - Times of the year that are defined by special climatic conditions.

**Solstice** - When the sun's direct rays reach their maximum Northern or Southern Latitudes (on or about June 22 and December 22).

**Stationary Front** - When cold air and warm air meet and neither air mass moves.

**Stratosphere** - One of the layers of the Earth's atmosphere; It is approximately 15 to 50 Kilometers above the Earth; A large amount of the Ozone in the atmosphere is located here.

**Thermosphere** - The layer of the Stratosphere which occurs at approximately 80 Kilometers above the Earth.

**Thunderstorms** - Violent rainstorms accompanied by strong winds.

**Topography** - The surface features of the Earth including Relief, Terrain, Vegetation, Soils, Etc.

**Tornado** - An extremely violent whirlwind, or rotating column of air, that covers a relatively small area at one time.

**Tropical Depression** - Includes Thunderstorms and a developed low pressure center.

**Tropical Storm** - More intensified than a Tropical Depression with winds measuring at least 39 miles per hour.

**Troposphere** - The lowest of the layers of the Earth's atmosphere.

**Typhoon** - One of the names for a rotating tropical storm with winds of at least 74 miles per hour; these storms are called typhoons in the western pacific region.

**Warm Front** - When warm air meets a cold air mass.

**Waterspout** - Columns of rotating wind that come down from a cumulus cloud to a large body of water.

**Weather** - The momentary conditions of the atmosphere (Includes Temperature, Atmospheric Pressure, Wind, Humidity, Precipitation and Cloudiness).

**Windward** - The side facing the prevailing winds.

1. List the factors that refer to weather.
2. Discuss how changes in weather, over along period of time, affects the climate of an area.
3. List the factors that affect climate.
4. List ways in which the climate on an area affects the way we live our lives.
5. Chart the weather of two (2) or more places on the same degree of latitude at different elevations. Compare them. Determine the reasons for the differences.
6. List the factors that affect seasons.
7. Compare the three (3) types of weather fronts.
8. Compare and contrast different types of violent weather.
9. List the times of the year the various types of violent weather usually occur and the reasons for their occurrences.
10. Trace the development of a hurricane from its origins in the Atlantic and Eastern Pacific Oceans to its return to a thunder storm.
11. Discuss which aspects of violent weather are responsible for the majority of the damage caused.