Name _____ **Date** _____

WEATHER and CLIMATE

Types of rainfall

Read the passage and answer the questions about relief rainfall in a COMPLETE sentence.

Relief rainfall is influenced by the height of the land. The north-east trade winds pick up water vapour as they travel across the warm sea. When they get to Jamaica and come into contact with the Blue Mountains, they are forced to rise. As the warm moist air rises, it cools. As it cools, the water vapour condenses to form water droplets. These droplets join together to form clouds. As further cooling takes place, the tiny droplets of water in the clouds come together to produce bigger droplets of water which fall as rain. So, the windward side of Jamaica gets a lot of rainfall while the opposite side - the leeward side - gets much less rain because by the time the winds reach it, they have lost most of their moisture. The dry air descends and warms, so the clouds evaporate. Places on the leeward side are referred to as being in the rain shadow.

A. Why are the winds named the north-east trade winds?

_____

B. Which element of weather causes the water vapour in the air to condense?

_____

C. Where do the winds get the water vapour from?

_____

D. What causes the winds to rise as they reach the island?

_____

E. What explains the amount of rain on the leeward side of the mountains?

_____

F. Looking at a map of Jamaica, which parishes are on the windward side of the Blue Mountains?

_____

G. Which parishes experience dry conditions because of their location in relation to the Blue Mountains?

_____

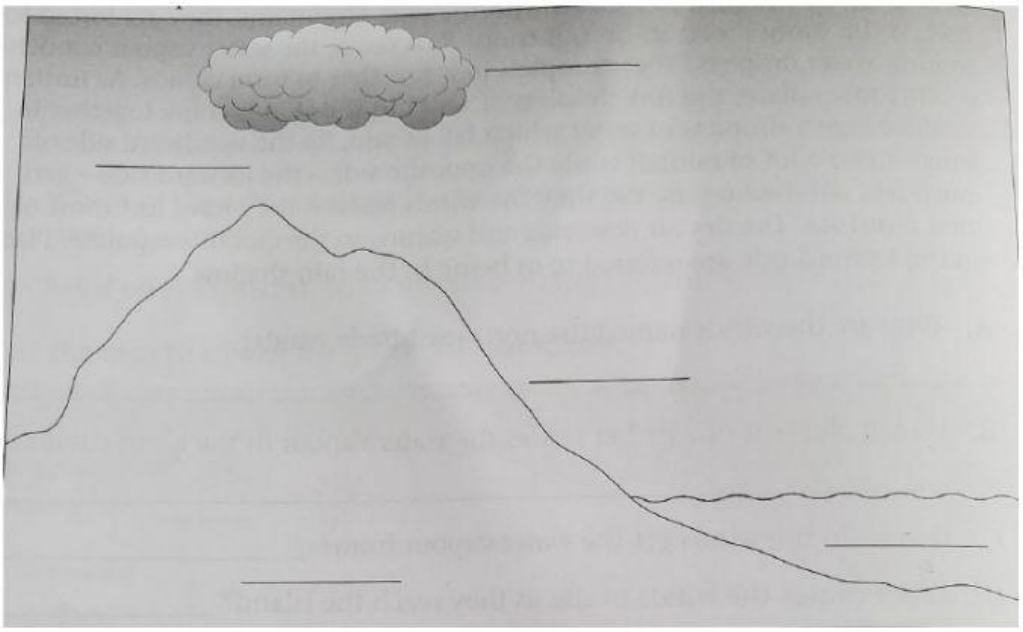
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H. Which crops are most likely to enjoy the constant supply of rainfall on the windward side of the mountains?

_____

Use the passage above to help you label the diagram below of relief rainfall.

Complete the blanks with the following labels: **land, sea, wind, cloud, rain.**



Weather hazards

Hurricanes

Label the following sentences from a to h to show the correct sequence of events that leads to a hurricane.

Use the diagram below to help you.

1. Winds spiral upwards in an anti-clockwise direction, around the 'eye'. _____

2. Thunderstorms occur as masses of moist warm air meet and rise. _____

3. Cool air rushes in to replace warm air that rises at the surface of the water. _____

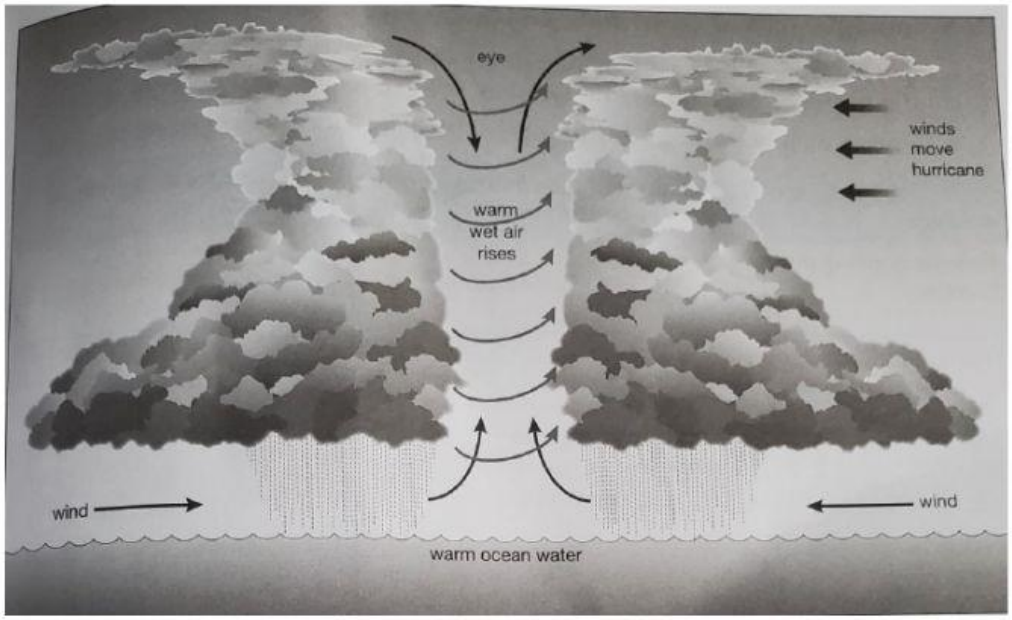
4. The ocean water is heated by the Sun. 5. As the air cools, clouds are formed. _____

6. More cumulonimbus clouds form high above the ocean and water droplets fall as rain. _____

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7. Some of the ocean water evaporates and becomes a gas called water vapour. _____

8. The warm wet air rises and cools. _____



The effects of weather hazards

Weather hazards affect us in negative ways and sometimes we have to make changes to our lifestyle to cope. Complete the table below. Write the type of weather hazard usually responsible for each of the consequences listed. **drought, hurricane, flood**

Consequences of weather hazards	Hazard
Water shortages for weeks or months	
Many homes and business places lose their roofs	
Families stock up on non-perishable foods	
Rivers dry up and animals starve	
A large increase in the number of bush fires	
Widespread power cuts because power lines are down	
A severe shortage of vegetables and ground provisions	
Roads are flooded	
Storm surges result in buildings being washed away	
Scheduled water lock-offs	
Massive landslides cause communities to be cut off	
People are relocated to higher ground	

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