



How Catastrophic Events Effect Ecosystems

There are many types of events that can be considered catastrophic. The catastrophic comes from a Greek word meaning “overturn.” Now it means “any sudden disaster.” Many people think of volcanic eruptions, tsunamis and earthquakes are the only type of catastrophic events that happen but there are several more that can affect us at any time.

Flooding occurs when the amount of water in an area increases to the point that the soil and stream channels are not able to absorb or contain the water. Floods can be caused by many different factors including heavy rains, snowmelt and hurricanes.

A tornado is defined by NOAA as a narrow violently rotating column of air that extends from the base of a thunderstorm to the ground. Tornadoes are the most violent weather related events and can leave a path of destruction up to 100 miles long. They can have winds up to 300 mph.

A hurricane is a large and powerful storm that has strong winds, heavy rainfall and storm surge. Flooding and tornadoes can also occur as the result of a hurricane. The pounding of large waves created by a hurricane impacts beaches and coastlines and the strong winds can damage buildings many miles inland from the coast.

When any of these catastrophic events occur the ecosystem is damaged. Plants and animals die, animals and humans lose their homes and the land is reshaped.



Directions:

1. Your teacher will give your table a set of before and after pictures of a flood, a tornado, a volcanic eruption and a hurricane.
2. Describe the ecosystem before the event occurred and how it changed after the event.

Hurricane

Ecosystem Before	Ecosystem After

Tornado

Ecosystem Before	Ecosystem After



Flood

Ecosystem Before	Ecosystem After

Volcanic Eruption

Ecosystem Before	Ecosystem After

Question:



Another catastrophic event is an earthquake. When an earthquake occurs on the sea floor a tsunami, an extremely large wave, can form. Predict what impact a wave 30 meters high crashing on to the beach would have on the coastal system.

Watch the video on the tsunami that occurred in Japan. Write three observations in the space below.

Name _____ period _____

EXIT TICKET

Catastrophic Events

1. How do catastrophic events affect ecosystems?

- A. They can kill animals and plants.
- B. Only humans are affected.
- C. There are no long lasting affects.

2. Which of the following is the definition of a hurricane?

- A. a narrow violently rotating column of air that extends from the base of a thunderstorm to the ground
- B. a large and powerful storm that has strong winds, heavy rainfall and storm surge
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