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International Leadership Institute

A Lesson on English

Natural Disasters

All over the world, people must live with the consequences of natural disasters. What are some of the best-know disasters, and where do they occur? How do people deal with these disasters? Is there any way to predict, prepare for or prevent natural disasters?

BLIZZARDS

According to **NOAA**, the US National Oceanic and Atmospheric Administration, a blizzard is a serious snowstorm with three main characteristics:

1. *sustained or gusty winds of 35 mph (56 kph) or more;*
2. *falling or blowing snow creating visibilities at or below ¼ mile (.4 kilometer);*
3. *these conditions persist for at least three hours.*

Blizzards are dangerous due to extremely limited visibility, strong winds, and the wind-chill factor, a term for how the combination of wind and low temperature feels on the skin. Exposure to extreme cold can cause hypothermia, frostbite and, in some cases, death. With poor visibility, people get lost; if snow blows across the roads, they get out of their cars to walk to safety. As hypothermia sets in, they become disoriented and walk in circles, getting colder and colder till they fall in exhaustion.

Blizzards often trigger avalanches in high mountains, and may also cause floods with their winds and precipitation. When the snow melts, more floods may wash over the land.

Weather professionals can predict blizzards, but can't say exactly when they will hit. People often ignore blizzard warnings, gambling that they will "beat the storm." The aftermath of a blizzard takes weeks and months, and thousands of dollars; governments must remove the snow, deal with floods, and make up time lost when schools, airports and businesses close. Blizzards can strike anywhere, but are most common in northern parts of the USA and Canada, northern Europe and Russia.

TORNADOES

According to **NOAA**, tornadoes are among the most violent storms. A tornado is defined as a violently rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph (402 kph) or more. Damage paths can be in excess of one mile wide and 50 miles (80 kilometers) long.

Tornadoes can occur any time of year. They can be created by thunderstorms, tropical storms and hurricanes, and are often preceded by strong winds and hail. Most tornadoes worldwide occur in the US, with many also throughout Europe. All continents are susceptible to tornadoes.

The destructive power of tornadoes is well-known. They can rip the topsoil from farmland, pull buildings and vehicles into the air and drop them somewhere else, and cause the deaths of people and animals caught in their paths.

Weather professionals can predict conditions that are likely to produce tornadoes, and issue watches (stay alert) and warnings (a tornado has been spotted). But tornadoes are fickle: they may take one house and leave the others intact. The only way to be safe is to take shelter underground.

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"A Lesson on English" is a series of short lessons created for people who want to become fluent in conversational English. The lessons are practical and useful for students learning English in a traditional classroom setting or on their own.

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Natural Disasters

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TSUNAMI

A tsunami is a series of ocean waves caused by any large, abrupt disturbance of the sea-surface. Earthquakes cause most tsunamis, but a tsunami can also be generated by landslides, volcanic activity, or by meteor impact. If the disturbance is close to the coastline, a tsunami can cause death and destruction among coastal communities within minutes.

A very large disturbance, such as the magnitude 9.0 earthquake off the Sumatra coast in 2004, can generate waves that cause devastation thousands of miles away. Tsunami waves can be very long (as much as 60 miles, or 100 kilometers) and as far as one hour apart. They can cross entire oceans without great loss of energy. The Indian Ocean tsunami traveled 3,000 miles (nearly 5,000 kilometers) to Africa, arriving with sufficient force to kill people and destroy property.

All oceanic regions of the world can experience tsunamis, but the Pacific Ocean is especially vulnerable because of the many large earthquakes associated with the "Ring of Fire" along its margins. About 35 years ago, 24 countries around the Pacific set up the Pacific Tsunami Warning System, in which a group of seismic monitoring stations and a network of tide gauges are used for detection and warning.

EARTHQUAKE

According to the US Geological Service, "Neither the USGS nor any other scientists have ever predicted a major earthquake. They do not know how, and they do not expect to know how any time in the foreseeable future."

The complete unpredictability of earthquakes makes them especially frightening. Aftershocks are usually felt, but they, too, cannot be predicted.

Earthquakes are sudden movements of the earth, caused by the abrupt release of strain that has accumulated over a long time. They occur deep underground when faults, or fractures in rock layers, move. When an earthquake occurs on one of these faults, the rock on one side of the fault slips with respect to the other. The fault surface can be vertical, horizontal, or at some angle to the surface of the earth .

While many earthquakes occur in the "Ring of Fire," they can occur anywhere, at any time. Earthquake preparation includes adherence to strict building codes, to minimize damage if an earthquake occurs. Even so, earthquakes can devastate a region for many years to follow.