

NATURAL DISASTERS AND PHENOMENA

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- A natural phenomenon is any state or process known through the senses rather than by intuition or reasoning.
- A natural disaster is a major adverse event resulting from natural processes of the Earth.

DIFFERENCES BETWEEN NATURAL DISASTERS AND PHENOMENA

- ▶ When natural erosion or human mining makes the ground too weak to support the structures built on it, the ground can collapse and produce a sinkhole.
- ▶ For example, the 2010 Guatemala City sinkhole which killed fifteen people was caused when heavy rain from Tropical Storm Agatha, diverted by leaking pipes into pumice bedrock, led to the sudden collapse of the ground beneath a factory building.

SINKHOLE



- ▶ An electromagnetic pulse , is a short burst of electromagnetic energy.
- ▶ The term "electromagnetic pulse" is commonly abbreviated EMP.
- ▶ EMP interference is generally disruptive or damaging to electronic equipment, and at higher energy levels.
- ▶ Types of natural EMP event include:
 1. Lightning electromagnetic pulse
 2. Electrostatic discharge
 3. Meteoric
 4. Coronal Mass Ejection



ELECTROMAGNETIC PULSE

- ▶ A thunderstorm is a type of storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder
- ▶ They are usually accompanied by strong winds, heavy rain and sometimes snow, sleet, hail or, in contrast, no precipitation at all.
- ▶ There are four types of thunderstorms: single-cell, multicell cluster, multicell lines, and supercells.

THUNDERSTORM



- An Aurora, sometimes referred to as a polar light, is a natural light display in the sky, predominantly seen in the high latitude regions.
- Auroras are produced when the magnetosphere is sufficiently disturbed by the solar wind that the trajectories of charged particles in both protons precipitate them into the upper atmosphere where their energy is lost.
- The colours of the aurora are red, green, blue, ultraviolet, infrared, yellow and pink

AURORA POLARIS



- ▶ It is a powerful electric discharge made during a thunderstorm.
- ▶ The electric current is very hot and causes the air around it to expand very quickly, which in turn makes thunder.
- ▶ Sometimes it happens between clouds. Often in the rain, it goes from cloud to ground.
- ▶ It can strike a person. About 2000 people are struck by lightning each year. About 50 to 100 lightning bolts strike the Earth every second.
- ▶ Lightning has hit the Empire State Building as many as 500 times a year.

LIGHTNING



- An earthquake is the result of a sudden release of energy in the Earth's crust that creates seismic waves.
- At the Earth's surface, earthquakes manifest themselves by vibration, shaking and sometimes displacement of the ground.
- Earthquakes are caused mostly by slippage within geological faults, but also by other events such as volcanic activity, landslides, mine blasts, and nuclear tests.

EARTHQUAKE



- A tsunami is also known as a seismic sea wave.
- Is a series of waves in a water body caused by the displacement of a large volume of water, generally in an ocean or a large lake.
- Earthquakes, volcanic eruptions and other underwater explosions, landslides and other disturbances above or below water all have the potential to generate a tsunami.

TSUNAMIS

