

SOME TYPES OF NATURAL DISASTERS



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SOCIAL SCIENCE PROJECT



EARTHQUAKE

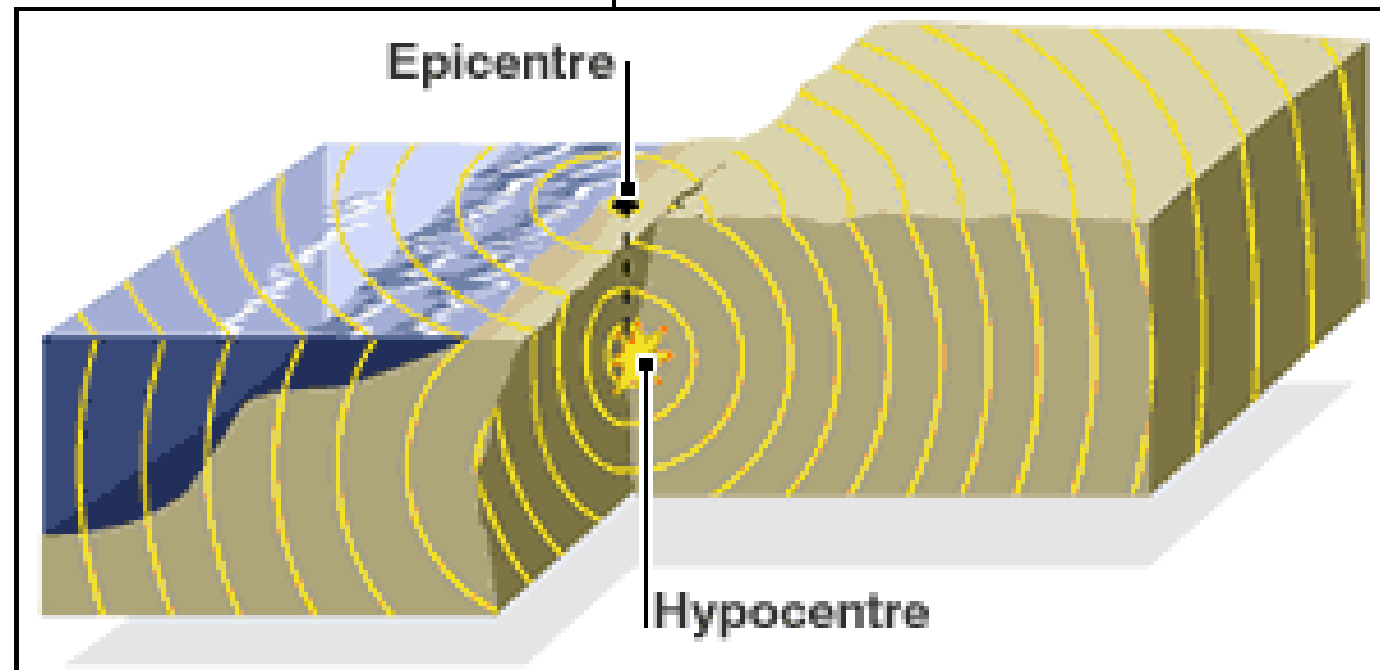
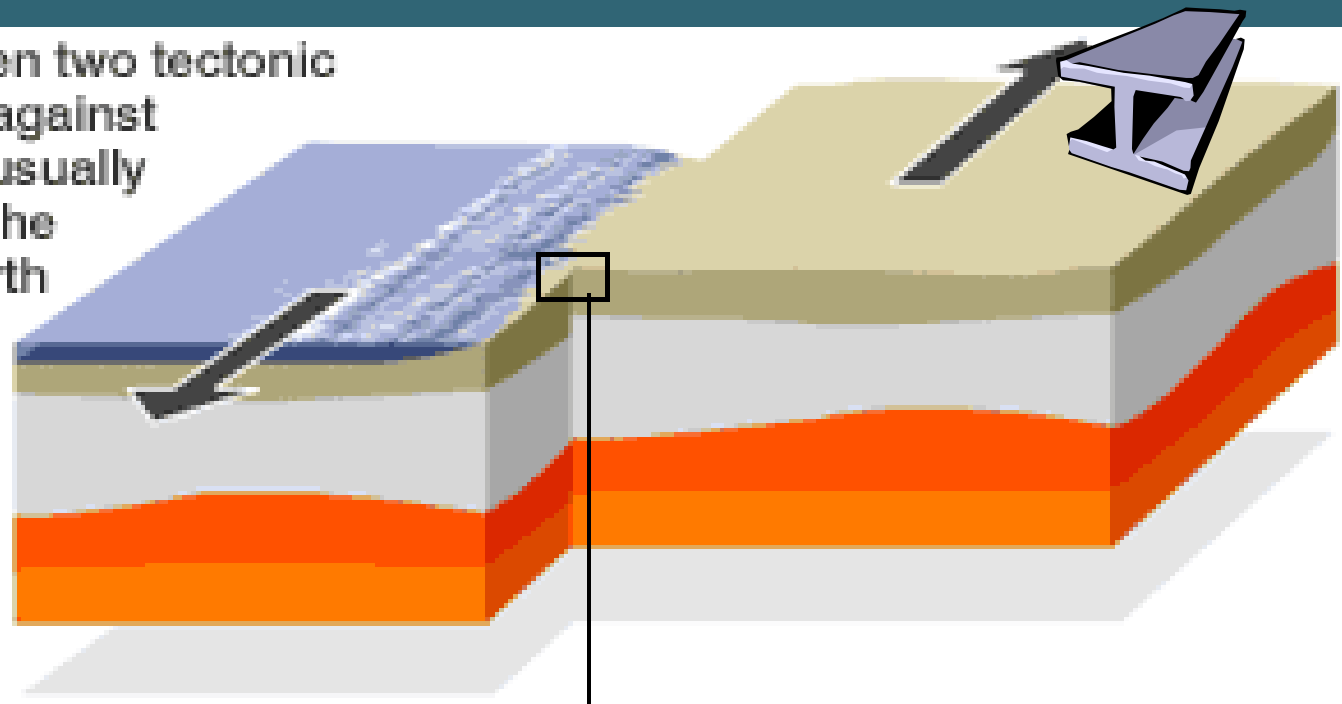


EARTHQUAKES is a sudden release of energy accumulated in deformed rocks causing the ground to tremble or shake.



EARTHQUAKES

Earthquakes occur when two tectonic plates move suddenly against each other. The rocks usually break underground at the hypocentre and the earth shakes. Waves spread from the epicentre, the point on the surface above the hypocentre. If a quake occurs under the sea it can cause a tsunami.



How earthquake is caused

- ◇ The continental crust is made up of very light rocks.
- ◇ The crust of the earth is very thin and consists of huge interlocking blocks of rocks called tectonic plates.
- ◇ These plates float on a layer of semi liquid rocks called mantle. These semi liquid material helps in the movement or floating of tectonic plates.
- ◇ These plates either converge or diverge. Huge pressure is built up due to the collision of plates.
- ◇ Faults are created in the crust due to the release of pressure.
- ◇ These movements cause vibration due to which earthquakes occur.
- ◇ Earthquakes can cause huge ocean waves called tsunamis.

Destructive Effects

- ***The earthquakes waves bring cracks in the surface of the earth.***
- ***The earthquakes can block the flow of rivers.***
- ***The earthquake can cause landslides***
- ***They can destroy houses and buildings.***
- ***They can cause widespread fires.***

Constructive Effects

- ***It helps in formation of block mountains and rift valleys due to the occurrence of faults***
- ***Formation of hot springs.***
- ***Formation of bays and gulfs due to submergence in the coastal areas.***
- ***Emergence of shore areas provide fertile land for agriculture.***

PRECAUTIONS

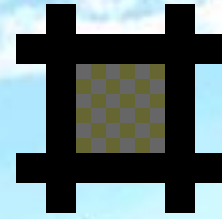
- *Do not stay near window, bookcases, cabinets, mirrors hanging pots and fans, during or immediately after an earthquake.*
- *Leave your home or school building and move to open fields or parks.*
- *Keep away from high rise buildings.*
- *Do not sit inside the car.*

STUDENTS: FIND FURTHER INFORMATION

- *Contact a structural engineer and discuss about earthquake resistance of the building you live in.*
- *Distribution of earthquakes in India for the past 100 years.*
- *List down the actions that could be taken in your school and home to reduce vulnerability to earthquake damage. Discuss with your teacher.*

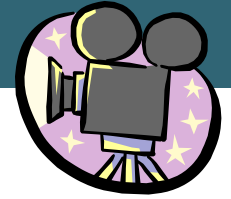


FLOODS



FLOODS are temporary inundation of large regions as a result of an increase in reservoir, or of rivers flooding their banks because of heavy rains, high winds, cyclones, storm surge along coast, tsunami, melting snow or dam bursts.





How floods are caused?

1 Heavy rain falls onto waterlogged ground

Flood occur when water overflows beyond its normal course.

Floods can also caused due to –

2 Rainfall cannot soak in so runs down into river

1. Blocking of river channel by land slides.
2. Strong tides and storms in the sea.
3. Cyclones and tsunamis over the water bodies.
4. Change in the course of a water.

5. River rises dramatically and bursts its banks, flooding valley floor

6. Wrong design of a canal, a dam or an embankment.

7. Less discharging capacity of the channel.

7. Deforestation.

Effects of Floods

- **Physical damage** : structures damaged by washing waters, landslide triggered on account of water getting saturated. Boats and fishing equipments may be lost or damaged in coastal areas .
- **Casualties and public health** : people and livestock deaths caused by drowning ,very few serious injuries. Outbreak of epidemics, diarrhea, viral infections and malaria are common.
- **Water supplies** : contamination of water(wells, ground water, piped water supply)
- .clean drinking water may become scarce.
- **Crops and food supplies** : sudden food shortage can be caused due to loss of entire harvest and spoiling of stored grains when saturated in water. floods may also affect the soil characteristics. the land may turn infertile due to erosion of top layer or may turn saline if sea water floods the area

PRECAUTIONS

1. Know about the location and routes to closest safe shelters.
2. Keep a first aid kit handy.
3. Keep medicines for snake-bites and diarrhea.
4. Strong ropes for tying things.
5. A radio, torch, matches, candles, spare batteries, etc.
6. Waterproof bags for packing clothes.
7. Bamboo sticks to ward off snakes.
8. Remove cattle to higher places.

Students:find further information

1. The beneficial effects of flooding.
2. How sand bag stacking are built and what makes them more effective.
3. Understand and learn more on how flood forecasting and warnings are done.
4. Soil conservation practices will help in saving the precious top soil in flood prone areas.
5. Types of flood-control measures.

DROUGHT

- *DROUGHT-is an insidious natural hazard that results from a departure of precipitation from expected or normal that, when extended over a season or longer period of time, is insufficient to meet the demands of human, plant and animal activities.*

How droughts are caused in India?

- Weak southwest monsoons.
- Late arrival or early withdrawal of monsoons.
- Prolonged breaks in the monsoons during the rainy season.

Effects of drought

- Drought-different from other natural disasters-do not cause any structural damages.The typical effects include: loss of crop, dairy, timber and fishery production.
- Increase in energy demand for pumping water.
- Reduced energy production.
- Increased unemployment-loss of biodiversity-reduced water-air and landscape.

Precautions

- ❖ *The development of rainwater harvesting harvesting structures.*
- ❖ *Promote water shed programmes and drip irrigation.*
- ❖ *Increase forest cover through plantations.*
- ❖ *Adopt drought resistant type of crops.*
- ❖ *Producing alternative crops in drought conditions.*



Students find further information



Contact your nearest agricultural department and learn about watersheds.

Study various domestic rainwater harvesting methods.

About various government programs that are operative in drought affected areas.

Interlinking of major rivers in India and find out if it helps in drought mitigation.

