A sudden movement of a part of the earth's surface is known as an **earthquake**. Sometimes the earthquake is so severe that it causes cracks in the walls of buildings, buildings collapse and trees get uprooted. A large number of people lose their lives by getting trapped under heavy slabs of buildings, trees, etc. An instrument that measures and records the details of an earthquake is called a **seismograph**. The intensity of an earthquake is measured on a **Richter Scale**. This scale has 10 levels. The owermost level or 1 denotes a quake which is of a low intensity. Such quakes do not cause any kind of damage. The higher level of 8 or more denotes a massive earthquake. These quakes cause severe devastation all around. The arthquake at Bhuj in Gujarat is one such example of a massive earthquake.

o protect yourself from a quake, move out of the building immediately, stand at place where there is no tree or building, because during a massive earthquake, ese may fall. If within the house, take shelter under a bed or a kitchen unter. Do not stand near a window as the glass may shatter.

any days after a massive earthquake, we sometimes feel small shocks that ake the ground repeatedly. Such small shocks are called **aftershocks**. After e earthquake in Kashmir in 2005, the aftershocks were felt for many days.

Earthquakes happen when parts of the earth's surface move against each other. This can cause buildings to shake and even collapse.

INTEXT BOX – 2

1. Which type of volcano can be most destructive and why?

Dormant volcanoes can be most destructive because it can be forgotten and erupt any time, people can develop colonies around them.

2. How is the intensity of an earthquake measured?

The intensity of an earthquake is measured on a Richter Scale. This scale has 1-10 levels. '1' denotes a quake of low intensity and 8 or more denotes a massive earth-quake.

What you have learnt

- Events which lead to loss of living and non-living things are called calamities.
- Earthquakes, volcanic eruptions, floods, droughts, etc., are some of the natural calamities.
- In drought there is an extreme shortage of water which results in death of humans and animals.
- Tsunami is a series of high waves of water caused by underwater quakes, volcanic eruptions and many other disturbances.
- Waves in a tsunami travel very fast and strike against any object suddenly leading to massive damage.
- Volcanoes are the cracks in the earth's crust through which lava comes out.
- Dormant, active and extinct volcanoes are the three types of volcanoes, classified on the basis of the frequency of eruption.
- A high intensity earthquake causes vast devastation of life and property.

New words you have come across in this lesson:

Calamities : events that lead to loss of living and non-living things
Drought : a condition in which there is severe shortage of water on land
Earthquake : a sudden movement of a part of the earth's surface
Aftershocks : small shocks that shake the ground repeatedly for few days after the quake
Volcanoes : cracks in the earth's surface which throw out lava

Practice Time

A. Fill in the blanks.

1. Famine is a severe drought condition.
2. Afforestation reduces the chances of drought.
3. Underwater quakes are the common cause of tsunami.
4. An instrument that measures earthquakes is called seismograph.
5. The highest level on Richter Scale denotes a massive earthquake.
6. Volcanoes that have not erupted for a long time but can erupt sometime in the future are called dormant volcanoes.

B. Write T for true and F for false statements.

1. Molten magma comes out of a volcano. T
2. Earthquakes of low intensity cause massive damage. F
3. Tsunami is mainly caused by underwater earthquakes. T
4. Mount Aso is one of the largest active volcanoes. T
5. Small shocks after a massive earthquake are called shivers. F

C. Answer the following questions.

1. What is a calamity? Mention any three calamities.
2. What is drought? How can it be prevented?
3. Mention the types of volcanoes.
4. Why should we not enter any building after an earthquake?
5. What is Richter Scale? Which level on this scale shows a massive quake?

D. Match the following.

Column A		Column B
1. Famine	1 – v	(i) Molten magma
2. Richter Scale	2 – iv	(ii) Tsunami
3. Volcano	3 – i	(iii) Active volcano
4. Undersea quake	4 – ii	(iv) Intensity of quake
5. Barren island	5 – iii	(v) Severe shortage of food

Activity Time

Find out the names and locations of as many volcanoes as you can.

Find out where massive earthquakes have occurred in the world apart from India.