



As the word disaster strikes our ears, it awakens fear and dread in our mind. Disasters are also commonly known as a calamity, happenings and catastrophes. Along with disasters, one always thinks of destruction and loss. We are aware of the risks of disasters. The reasons for planning for scarcity and relief operations must be taken into account and the details of the circumstances responsible for it, since this information is very useful for our rescue operations. Experts in disaster management have divided disasters into two parts. Let's know its types and their various forms in detail.

Disasters		
Natural Disasters		Man-made Disasters
Earthquake	Flood	Fire
Volcanic eruption	Tsunami	Industrial Accidents
Drought	Hurricane	Bomb-blasts
Forest Fire		Road accidents
		Riots

The above events are destructive and damaging. forecast of flood, tsunami, hurricanes and drought is possible. So there is time to rescue and casualties can be avoided. As predicting earthquakes, volcanic eruptions and forest fires is not possible they are likely to wreak havoc.

Here we will learn natural disasters like earthquake, hurricane, tsunami, flood and drought as well as road accidents among man-made disasters.

Earthquake

Generally, vibrations experienced on the earth's surface is called earthquake. A geological process that takes place in the earth's crust is responsible for this phenomenon. Areas with a weak surface of the earth are considered to be an earthquake prone area. Such areas can be identified but accurate earthquake prediction is not possible. So when this disaster takes place, we have to bear an heavy loss of life and property.



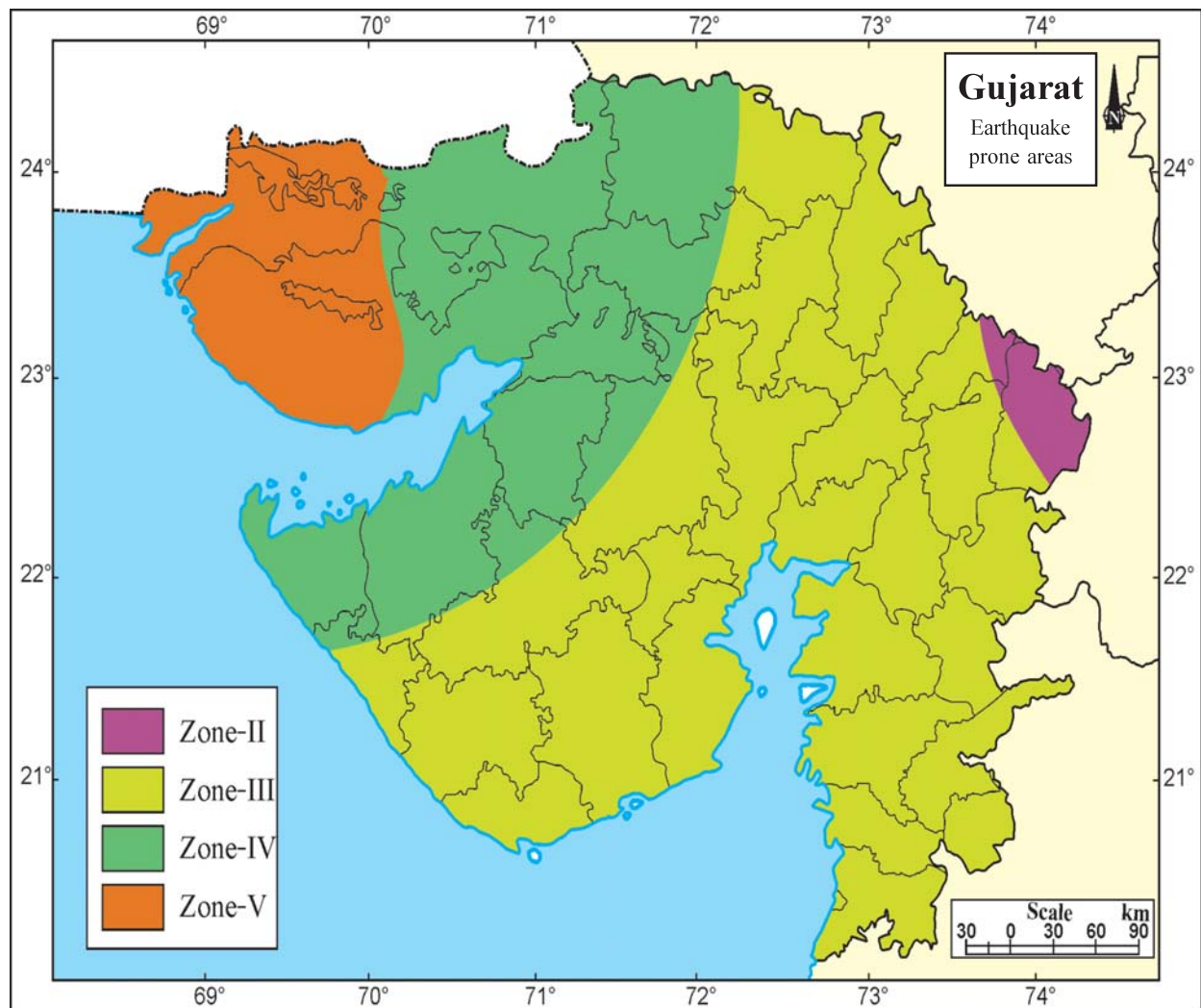
Earthquake

Precautions to be taken at the time of the earthquake

What to do	What not to do
Sit under the bench in the classrooms.	Not to shout and panic.
Stay away from electric pole and wires.	Not to use elevator to get down from tall buildings.
Know about the authentic news through radio and T.V.	Not to switch-on devices like gas or electricity in the house without surity.

Activity

Use the given map to compile a list of districts in Zone IV and V, which are at maximum risk of possible earthquakes in Gujarat.



Like to know

The intensity of an earthquake is measured in units called Richter Scale. The greater the intensity, the more destruction occurs.

Earthquake in Gujarat - Chronicle

No.	Date	Place	Richter scale intensity
(1)	16 June, 1819	Kutch	8.2
(2)	12 July, 1915	Anjar (Kutch)	6.1
(3)	26 January, 2001	Kutch	7.6/7.7

Cyclone

Enormous atmospheric storms arise from the conditions of an imbalance in the atmospheric air pressure. It is known as a hurricane or cyclone. Where the cyclone strikes, it creates heavy destruction and havoc. Heavy destructive effects are experienced in the East-coast of India, Malabar Coast and in the coast of Kutch and Saurashtra in Gujarat.

Precautions to be taken during the cyclone

Before Cyclone	During Cyclone	After Cyclone
Accurately know the details of the cyclone-prone areas.	Close the doors and windows on getting the warning.	Don't go out, even though weather seem clear and the winds are off. Sudden wind and rain may occur.
Migrate according to the instructions of the department.	If you are in the school, don't go out of the classroom.	Stay away from hanging and open wires.
If you are in a low-lying area, near the sea, go to the high-lying areas.	If you are in the vehicle, park it away from electric pole, tree, and away from sea and remain inside the vehicle.	Don't be an obstacle in relief and rescue work by gathering with curiosity.
Keep food, torch, drinking water, clothes, radio, necessary medicine ready.	Follow strictly the instructions of the management of the rescue centres.	Return home only after getting instruction from the department.
Turn off the electricity and gas connections.	Relieve animals from hooks. If they are released they can save themselves.	Be helpful in relief and rescue work.
Listen to the radio for the accurate information.	Do not take shelter under hoardings or trees.	Do not make phone-calls except call for help. Due to unnecessary calling the network will disrupt and rescue work also gets disturbed.



Tsunami

The Tsunami is a catastrophic wave caused by an earthquake or volcanic eruption at the bottom of the sea or ocean or by a large scale landslide in the ocean. However, the tsunami is caused by earthquake at the bottom of the ocean. In short, seismic ocean waves are known as Tsunami. When these waves come to the shore extending in the curved shape from their place of origin, it becomes more destructive. As its speed decreases along the shore, it assumes higher altitude. The shoreline becomes a wall of water and moves ahead resulting in scary destruction. However, now with the help of modern satellite-based equipments, an accurate estimate of the tsunami can be made so that people from the affected area can be shifted timely and casualties can be prevented. At the same time, it is a fact that all the countries do not have such technology or equipments.



Tsunami

Like to know

The Catastrophic tsunami that took place on 26th of December, 2004, claimed the lives of about 2 lakh people from Indonesia, Thailand, India, Srilanka etc. on the coastal territories of the Indian oceans.

Precautions to be taken during Tsunami

Before Tsunami	During Tsunami	After Tsunami
Move away from the seashore.	Don't leave high-lying places.	Act according to the correct details that come on radio, television, or social media.
Act according to the instructions given on radio, television, or social media.	Don't try to watch the tsunami.	Move to vacated areas, after getting instructions from the department. Sometimes, higher waves may come afterwards.
If the wave of the sea rises abnormally strange sounds are heard, these are pre-warning signs so immediately move away from the shore.	Strictly follow the instructions given by the department.	If you are not sure about the safety of your house, don't enter.
Keep valuable items, food, drinking water, medicine, torch etc ready.	Even high-rise buildings on the shore are not safe shelters So avoid going there.	Report about the breakdown of water, gas or electricity connection to the department.



Know This

This type of sign is for the areas which are prone to Tsunami.

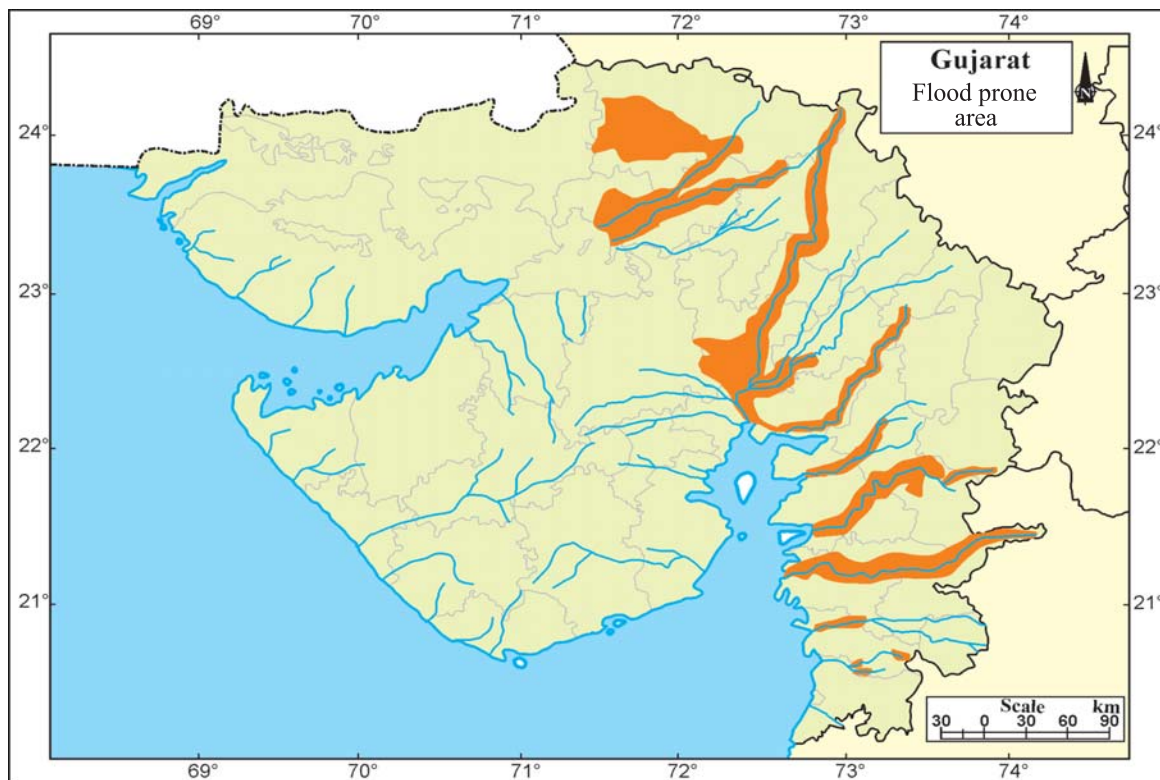


Flood

Due to continuous rain or deluge, large waterlogged area is known as flood. Generally, we associate this event with the river. Man made constructions that are made by neglecting natural slope, obstruction of natural drainage is also responsible for floods. In large cities, due to heavy rain, sometimes the the water logging like situation takes the form of flood.



Flood



Activity

Based on the given map of Gujarat, know the details of the flood prone areas with the help of the teacher.



Precautions to be taken during flood

Before flood	During flood	After flood
Be aware of flood-prone areas at the local level.	Turn off the connections of gas and electricity of the house.	Don't eat food that is made from floodwater.
Keep information of high areas and migrate there during the flood.	When your vehicle gets stuck in the flood, immediately move out of it and form a group of 7 to 8 people, hold one another's hand and try to move out of the flow.	Use boiled water. Don't go out without knowing that the roads are open.
Act according to the warning given by the flood department.	Relieve animals from hooks. If they are released they can save themselves.	Beware of the infestation of snakes and scorpions.

Activity

- Make a list of the areas which get flooded in your village or city.
- Know the details from your elders how the rainwater of your village or city is drained out.
- Organise a discussion-seminar for the solutions of the steps that should be taken to solve the flood problem.

Drought

Drought is a natural disaster that is destructive and leaves its bad effects for a long time. This catastrophe is linked with water and food which are very essential for the survival of the entire ecosystem. Drought is a characteristic of monsoon climate. This problem arises when there is little or no rainfall in the year. In the situation of scarcity agriculture and the ecosystem suffer a lot due to lack of water and the problem of food grains for human beings and fodder problems for pet animals are created. Earlier heavy casualties used to occur because of starvation in drought but in modern time, with proper management, casualties can be prevented.



Drought

Steps to be taken in the time of Drought

Before the Drought	During the Drought	After the Drought
Plan according to the available quantity of water, promote drip irrigation.	to arrange the distribution of the food grains at subsidised rates.	Give priority to future plans of water harvesting work.
Introduce rationing system for the grains.	Stop the construction work except urgency.	Plan for buffer stock of the grains.
Prohibit banquet to prevent wastage of the grains	Take preventive measures against hoarding of grains and fodder.	To connect the rivers to stop the water flowing into the oceans.



Effects of disaster

- (1) Disasters like an earthquake, flood, tsunami, hurricane, cause huge loss of life and property at a large scale.
- (2) It takes years to reconstruct roads, houses, public amenities in disaster affected areas.
- (3) Families who have lost their loved ones during disaster, are deeply saddened and depressed.
- (4) Families who have lost their bread winners face great problems.
- (5) In a disaster, people who become permanently disabled, have a severe problem of rehabilitation.

The impact of disaster is seen more or less on all people but its worst effect is seen on poor and needy people. To reduce its destructive effects on human life, as well as its destructive intensity, steps such as precaution, public awareness and well equipped department should be taken. Some incidents or disaster are manmade. If we take precaution or remain alert, such incidents can be prevented. Often, in times of disasters, instead of being helpful in relief and rescue work people create obstacle or block the work by stopping their vehicles and start taking videos with their mobile phones. Due to this, it creates risk for lives of the affected. In such times, we must be helpful to the system in relief and rescue work.

After learning about natural disasters, we will learn about road accidents among man-made disasters.

In today's fast paced and technological age road accidents are on rise. Almost every day we travel by road to go to school, college, office, shop, relatives and friends. We need to be safe on the roads. India has the highest number of deaths due to road accidents in the world. Road accidents have dangerous effects on the development of Indian life and economy. In such cases road safety refers to the methods and measures used for the safety of road users.

Important Points for Road Safety	
What to do	What not to do
1. If there is a pavement on the road, walk on the pavement on either side of the road. Walk on your right side in case pavement is not there.	1. We should not cross the road in a hurry and jump the railing or the divider.
2. Use zebra crossing, foot overbridge and sub-way to cross the road.	2. No stunts should be performed while driving.
3. Young children should cross the road with the help of elders.	3. Do not stand or turn without giving proper signals.



4. Cross the road safely when the vehicle is at a distance from you.

5. The bicycle should be kept in good condition while using it and it should be ridden on the left side of the road.

6. Parents and students should be informed about traffic rules and traffic help line numbers (local number) by school authorities. Ex. School bus, School van.

4. Do not board or get down from a moving vehicle.

5. Do not drive a car without wearing seat belt and helmet on a two wheeler.

6. Do not play games on the road. Do not play games around parked vehicles.









Zebra Crossing



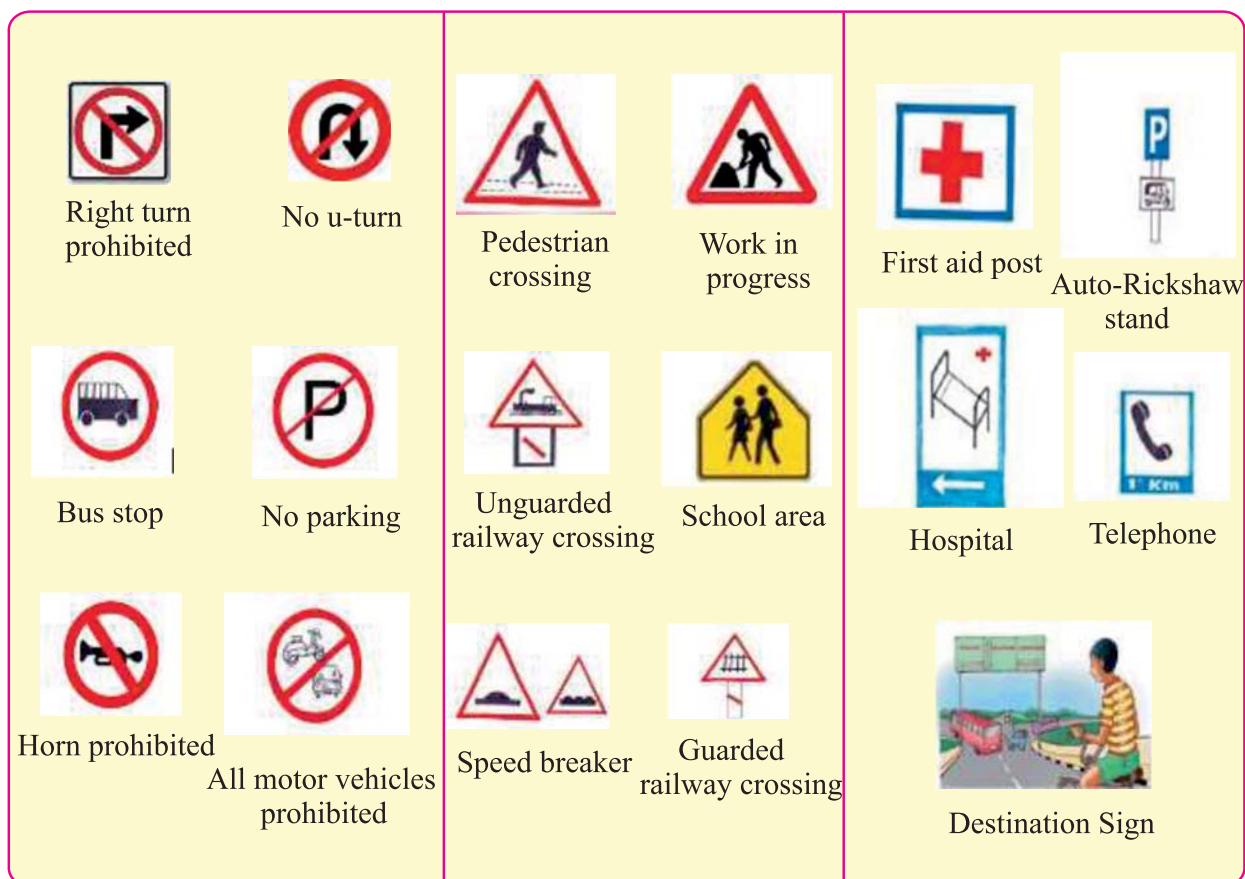
Cyclist

Traffic Signs

- Collect information on important traffic signs as a part of road safety.
- There are three types of traffic signs as follows :

Mandatory signs	Warning signs	Informatory signs
Gives instruction regarding what to do and what not to do during the journey.	Warns the user of the road about the forthcoming road situation.	These signs give information about direction and destination to the users.
These signs have to be followed strictly. These signs are usually shown in a circle.	These signs are usually shown in triangles	These signs are usually shown in rectangular shape.
 No entry	 Narrow bridge	 Eating place
 One way	 Cross road	 Petrol pump





Know This

Locust Epidemic : Biological Disaster

Locust belongs to the insect class. More than 11,000 species are found. It also likes to live in cluster (together in groups). In 2019-2020, its infestation was found in the desert area of Gujarat and some districts on the edge of the desert- Kachchh, Banaskantha, Patan. Locust found in Gujarat is known as desert locust or voracious locusts. The locust of

this species strikes in millions in the form of cluster. During its lifespan, it eats a thousand times more of its weight. Wherever it lands in its migration path, it destroys the whole crop of that area by making crop, green plants, leaves of trees as its food. In the areas where infestation of locust takes place, a drought like condition occurs due to a shortage of grains. However, in today's time of modern transport facility, grains are imported from another region to avoid its scarcity.

The locust can be eradicated by spraying a special pesticide as per the instructions of the department of agriculture.



Locust



Exercise

1. Fill in the blanks :

- (1) Disasters are commonly known as calamity, happening or
- (2) Vicious/wanton atmospheric storm is known as hurricane or
- (3) Destructive waves created by earthquakes at the bottom of the ocean are known as
- (4) Bicycle should be ridden on the..... side of the road.

2. Match the following :

(A)

- (1) Earthquake
- (2) Flood
- (3) Car
- (4) Two wheeler

(B)

- (A) can be predicted.
- (B) cannot be predicted.
- (C) cap and slipper
- (D) Seatbelt
- (E) Helmet

3. Answer the following questions in one-two sentences each :

- (1) Give any four names of the natural disasters.
- (2) What is a Cyclone ?
- (3) Which are the reasons responsible for floods ?
- (4) How many types of traffic signs are there? Name them.

4. Answer the following questions :

- (1) What precautions should be taken during the earthquake ?
- (2) State the effects of disasters.
- (3) What are the difficulties faced in the cities while passing through areas with heavy vehicular traffic? Describe your experience.

Activity

- Draw the picture of Tsunami waves in your notebook seeing from your textbook.
- Find out various wildlife areas on the globe as well as in the worldmap. Discuss what is happening in those areas. Show how many forests are on the verge of extinction.
- Which department needs to be contacted in case of fire accident. Find out details and phone number of it.
- April 14, is celebrated as the 'National Fire Service Day'. Let the students organize a mockdrill for fire accident in school.
- Visit a nearest fire station of the area and collect information about the work done by this department.
- Collect information about the actions to be taken to turn off the power supply when there is fire due to short circuit.
- Collect information and pictures about a recent fire accident from the Newspaper and prepare a report.
- Visit the following website with the help of your elders or teachers to know more details : www.gsdma.org

