



STEADFAST IN THE FACE OF TREMORS



Notes

INTRODUCTION

Do you know, ancient Greeks believed that Poseidon the great Olympian god of the sea, earthquakes and storms caused earthquakes. The Japanese believe that Namazu, a giant catfish causes earthquakes, while the Mongolian believe that the world sits on the back of a frog. When the frog stumbles, an earthquake happens. In Hindu mythology, four elephants hold the earth. A tortoise holds these elephants. When the tortoise switches the foot on which it stands due to fatigue, the movement causes an earthquake.

Science, however, tells us that earthquakes are caused by tectonic plates rubbing together. This is a naturally occurring earthquake. There are, however, other types of earthquakes, as well, like the volcanic, collapse and explosion earthquakes.

India has been divided into four zones viz. Zone V, IV, III and II according to the seismic zoning map of India. Of these, Zone V, is the highest earthquake prone area. The Rann of Kutch in Gujarat and East India fall under this zone. In contrast, zone II is the least seismic zone. The magnitude of an earthquake is measured based on the energy release and intensity of shaking or tremors. The Richter scale measures the strength of earthquakes which is expressed in numbers like 6.4 or 7.1.

In this lesson, you will read a story based on the incident of the earthquake in Bhuj, Gujarat that was of magnitude 6.9 on the Richter scale and which left behind a trail of destruction.



LEARNING OUTCOMES

After completing this lesson, the learner-

- prepares an awareness programme to minimise damage during an earthquake;

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- reads and responds officially to emails;
- uses vocabulary associated with earthquakes and collapsed structures appropriately;
- uses articles, determiners, modals of obligation and passive voice according to the context;
- completes basic information about earthquakes;
- correctly pronounces compound words with two syllables;
- writes a brief description of an emergency based on visual and verbal inputs.

5.1 LET'S READ

In the preceding lessons, you have had a lot of reading practice- first listening to the audio recording by scanning the QR codes given followed by reading aloud the same pieces. In this section, we bring you a story about the terrible Gujarat earthquake that shook the town of Bhuj. Enjoy reading the story and do the exercises that follow.

When the Earth Rumbled and Heaved

It was a lazy morning in Bhuj, a town in Gujarat. It was the 26 of January 2001, a national holiday. Everyone had a day off. People sat around, relaxed, looking forward to watching the Republic Day parade on television. Men sat about soaking up the pleasant winter sun while the women got the snacks ready.

The children, not to be held indoors, ran off to play in the open ground, ready to run home when the parade began. Indeed, the parade was a magical **spectacle** for all: a grand display of the country's achievements that **kindled** love for one's country.

The small teashops, near the main road, like Gajjubhai's *Chai Wai*, were **buzzing** with activity. Endless cups of tea were being prepared, served and sipped over an exchange of news and small talk. Among the tea drinkers were Mehram Singh, who had brought a **consignment** of scooters to the town and Bhulabhai who was hawking Kutch shawls and scarves.

All around was a general feeling of well-being. More so for Manuben and Nafisaben. Their literacy classes, for the women of the nearby village, were to be inaugurated this day. These women, whose embroidery, mirror work and scarves in vivid colours brightened up the dull Kutch landscape, were sadly **unlettered**. But they had a growing awareness for literacy and had sought Manuben and Nafisaben's help with the literacy classes. The two women were more than happy to do so.

"We shall begin our classes on the Republic Day," they had declared.

Books and other learning material had been organized and transported to Ganeshbhai's office, the patwari at the village and patron of the literacy programme. Kirtibhai, the octogenarian and Sushilaben, the champion of women's empowerment had agreed to inaugurate the classes.

Their anklets tinkling, Manuben and Nafisaben walked on, smiling and greeting people on their way to Ganeshbhai's house. They passed streets and homes. Strains of music from the radio, snatches of chatter, women's laughter, men's **banter**, drifted to their ears. What a peaceful morning!

Soon they had left the town and were out in the fields. And thence on to a rocky patch where the craftswomen spread the dyed scarves and garments to dry: vibrant red, bright yellow, leaf green and rich brown. And far towards their left lay the port and the vast **azure** blue sea.

On the way stood some traditional bhungas with circular bases and thatched roofs. Then came the village. It wore an air of festivity. People were decked up in their traditional **finery**. The village Panchayat office where the patwari sat, was festooned and decorated to celebrate the Republic Day and the inauguration of the Mahila classes.



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Glossary

- i. **consignment**- a quantity of goods delivered somewhere
- ii. **unlettered**- unable to read
- iii. **banter**- friendly comments and jokes
- iv. **azure**- bright blue in colour like the sky
- v. **spectacle**- an impressive performance
- vi. **kindle**- to make something, such as interest or emotion, feeling start to grow in somebody
- vii. **small talk**- polite conversation about ordinary or unimportant subjects



Kirtibhai and some village elders, sat on black and gold chairs decorated with brass bells. Others sat on a durry on the ground. Ganeshbhai, the patwari and his wife Girijaben were busy with the arrangements. The smell of gujias, sweets pakoras filled the air. Dholaks, sticks and tiny cymbals in a corner carried the promise of the garba and dandiya dances.

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Soon everyone was settled. The **preliminary** welcome over, Kiritbhai was invited to give his speech. Rising with difficulty on his **arthritic** ankles he began to speak.

Once on his feet, he was all spirit and fire. “We are skilled in the ways of agriculture, water management, fabric, wood work and design. Our looms turn out the most vivid patterns and designs. But...” he paused.

“...we are illiterate. We cannot read or write,” chorused the women.

“Right. The information that comes in the printed form is not available to us as we cannot read. It is necessary for everyone, I mean, everyone,” he stressed the everyone part of it and continued, “to become literate.” He spoke well.

After Kiritbhai’s speech, there were a few songs by the children and women.

Next, Sushilaben introduced the teachers, Manuben and Nafisaben, to the gathering, who told them briefly about their literacy programme and class-schedules.

A symbolic class was held, as well, wherein Sushilaben read out the word ‘pani’ in Gujarati. Water was a **precious commodity** here.

“Let us have the *garba* before the snacks!” said the women.

Soon the place was transformed with women dancing in circles and clapping their hands. As the pace quickened, they picked up their sticks. Round and round they went, their sticks clicking and their skirts **swirling**. The *dholaks* beat louder over people’s rising voices.

Was that a rumble? One could not tell. The thumping of feet, the beat of the *dholaks* and the clicking of the sticks drowned every other sound. There was another rumbling sound. No one paid much attention to it. The dance continued but the women felt uneasy. Were they feeling dizzy a bit too early in the dance? They felt the ground move beneath their feet.

Then the earth heaved and shook. The dancing women were thrown off balance and fell onto the ground. They felt as if they had been placed on a huge swing that swayed from side to side. The *shamiana* swayed like a boat on a rough sea.

Glossary	
finery- brightly coloured and elegant clothes and jewellery especially worn on special occasions	preliminary- happening before a more important action or event
festooned- decorated with flowers, coloured paper etc. often as a part of celebration	arthritis- suffering from arthritis, stiff

precious commodity - something thing that is very useful but difficult to get	swirling - moving around quickly in a circle
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INTEXT QUESTIONS 5.1

I. The story opens on a happy note. Complete the table describing the different characters, their state of mind and what they were looking forward to.

S. No	Characters in the story	State of mind	Looking forward to...
1.	The people of Bhujand contented on a	theparade
2.	Children	free, with no	playin.....and..... to watch theparade
3.	Men in Gujjubhai's shop	relaxed on a	generally catching up on about
4.	Manuben and Nafisaben	eager and enthusiastic of their Mahila Literacy classes
5.	expectant and happy	the beginning of a newin their lives



Notes

I. Match the phrases in column A with those in column B to make sentences true to the story. Then read aloud the correct sentences.

S. No.	Column A	Column B
1.	The parade made everyone...	a) ...unable to read and write.
2.	People often stopped to have tea and ...	b) ...the Republic Day and the inauguration of the literacy classes.
3.	Manuben and Nafisaben could conduct the literacy classes because....	c) ...everyone was engrossed in the dance and the music was loud.
4.	The village women were skilled craftswomen but...	d) ...feel proud of their country.
5.	One thing common between Ganeshbhai and Kirtibhai was that	e) ...exchange news at Gujjubhai's teashop.
6.	People in the village were celebrating both...	f) ...it was brightened by their multi-coloured clothes and colourfully painted buildings.
7.	The landscape was generally dull but...	g) ...they were literate themselves.

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8.	No one noticed the first tremors because...	h) ...both encouraged women's empowerment and literacy programmes.
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5.2 READING TEXT

Now read the rest of the story and do the exercises that follow.

“Earthquake! Earthquake!” everyone shouted as the **truth sank in**. Everyone ran helter-skelter trying to locate their family members. “Baa.. baa...”

“Chunri!”

“Sito!”

“Baapu!”

“Faibaa!”

Cries **rent the air** as everyone called out to friends and relatives. Leaving their slippers behind people ran towards their homes to check on their relatives.

CRACK!! THUD! The double-storeyed Panchayat office collapsed in a cloud of dust and falling rubble. Another large mansion crumbled and settled on its knees like a horse **fatigued**.

The earth's heaving and shaking continued for almost thirty seconds, which appeared to be a lifetime. There was rumbling, cracking and snapping all around as the brick and concrete houses gave way. Lintels, balconies and rafters hung loosely in different stages of destruction. Death would soon follow as people were caught under the falling rubble.

Many huddled together under the open sky, away from the **descending** houses and roofs. Dust, **gravel**, and cement flew and settled all around. The huge *karai* of hot oil that was meant to fry the *pakor*s in, fell, spilling hot oil and scalding those nearby. Gujiyas rolled about and got squashed under feet.

It took only thirty seconds, a mere thirty seconds, for lives and achievements of a lifetime to be wiped out. Shocked and unbelieving, Manuben and Nafisaben stared at the devastation around. Then the thought struck. Their homes back in the town! They ran towards the town.

“We shall come with you, Nafisaben.” said some villagers. Together, they **sprinted** towards the town.

They passed the *bhungas* again. Surprisingly, these were unbroken and still **upright**, challenging the fury of nature. When they reached the rocky patch, they found a huge rock had split into two and a deep fissure gaped up at them.

“What’s this?” Manuben pointed to a bluish stream that flowed out of the fissure.

“Don’t touch it, Manuben,” shouted one of the men. “God knows what this is.”

The earth seemed to be frothing at the mouth like a person having an **epileptic seizure**. They ran on.

There was **devastation** all around. Once proud concrete structures in pale pinks, creams, whites and beige(s) with decorative grills and windows, now bit the dust. In their own destruction they had caused the deaths of those who called them homes. Huge cracks and **fissures** had appeared on the roads. All colour and life seemed to have drained out of Bhuj. Everything was dusty and grey.

Aghast, Nafisaben stared at what had once been her home. Somewhere beneath the debris lay her husband and son. Shantiben, one of the accompanying women, held her tight as sobs escaped her lips. **Wails** rent the air till they were smothered by the dust and cement flying around from collapsed buildings.

Manuben went to the next street where her house stood. In the melee she noticed her children in the street. Cricket had saved their lives for they had been out into the open playing. She held them close and stood dumbfounded. Her husband and old father-in-law were somewhere under the fallen staircase and lintels.



Notes

Glossary	
truth sank in- truth was fully understood	sprinted- ran very fast
rent the air- sounded piercingly	upright- standing vertically, not lying down/fallen
fatigued- (horses) that are exhausted	epileptic seizure- epileptic fit that causes the body to shake uncontrollably
descending- coming down from a higher to lower level, falling	fissures- long deep cracks
gravel- small stones used in making the ceiling of a house	wails- long loud cry expressing pain or sadness

But this grief was not hers alone. Everyone around her had the same pain. Shocked, she stared at the devastation around her. Unbelieving, she sank on her knees.

As she stared at the debris of their homes, she noticed something move. Was it a hand underneath the rubble? She looked again. Sure enough, it was a hand and it moved helplessly from under the rafter of a door.

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Manuben straightened herself. Rising from the rubble she said, “We must do something. There is someone under the rafter. Let us get her out.” With bare hands they heaved and pulled. It was not easy but they kept trying. Finally, they got her out. Her chemistry book still clutched in one hand, Sheela was laid out on a **makeshift** bed of a dusty mattress.

“*Bhagwan ka laakh shukra hai.* She is alive,” said Mehram Singh, the truck driver who had joined them to help.

Soon the army jawans arrived and took control of the situation.

There was work to be done. Manuben ran to look for her friend. As if on cue, Nafisaben was running towards her. “*Behen,* we must do something,” they said together.

All this while the villagers had been following them. “What needs to be done?” said Gajjubhai.

“Where do we begin?” asked Kamalaben.

“To think of it, we were to begin our classes today,” another woman mused sadly.

“Yes, **we shall** begin our classes today,” announced Nafisaben drinking back her tears.

“So, we shall,” Manuben echoed her.

Soon in the open, under the huge banyan tree their class began. But it was not a drill in the alphabet but in rescue and first aid. The men organized themselves in removing whatever rubble they could to extricate people. The women took a lesson or two in first aid. They tended to the injured before the army took them to the makeshift hospitals. Soon the little corner was throbbing with activity as people worked **in tandem** with the army.

Guided by the jawans, Manuben gave instructions. Everyone worked without argument or delay. Manuben’s classes had begun in earnest. Only one lesson needed no teaching—that was the lesson of brotherhood and humanity. Isn’t this what education is all about?

melee- a situation in which a crowd of people are rushing or pushing each other	echoed- repeated what somebody said
makeshift- used temporarily for a particular purpose	in tandem- work together



INTEXT QUESTIONS 5.2



Notes

- I. Find from the story words/phrases which mean the following
1. a scene of great destruction or damage:.....
 2. pieces of wood, metal, brick etc. that are left after something has been destroyed:
 3. travelling or going somewhere with someone:
 4. too shocked to speak:
 5. held tightly:
 6. a way of learning something:
 7. free somebody from a place where they are trapped:.....
 8. beating or working with a strong regular rhythm:
- II. Select the right options to complete the statements below.
1. The thirty seconds of the earth’s heaving and shaking appeared to be a lifetime because...
 - a. no one had a watch to note the time.
 - b. it was a very frightening experience.
 - c. people had to stand still after the energetic dance.
 2. People were caught under the falling rubble since...
 - a. they had no time to escape from the falling structures.
 - b. bricks and stones were raining from the skies due to an earthquake.
 - c. everyone ran inside when the earthquake struck.
 3. The bhungas were unharmed as...
 - a. they were situated away from the scene of the earthquake.
 - b. they had a very deep foundation and strong walls made of rocks.
 - c. they had light structures and circular bases.

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4. All colour and life seemed to have drained out of Bhuj because...
 - a. dust from a thunderstorm covered everything.
 - b. dust from the falling buildings had covered everything.
 - c. everything had been painted a dull grey.
5. However, many children survived the earthquake since...
 - a. they had gone to the seaside that morning.
 - b. they could run out of the buildings very quickly.
 - c. they were playing cricket in the open.
6. The lesson of humanity and brotherhood did not need teaching because...
 - a. people joined in the effort of saving lives without being asked.
 - b. people had learnt these lessons before in school and college.
 - c. the concept of helping others had to be learnt by people themselves.

5.3 COMMUNICATION THROUGH EMAILS

- I. Read the email seeking the help of the NDRF after an Earthquake in Chamoli. You will notice that some of the parts of the email are very similar to the parts of the official letter you learnt to write in Lesson 4. **Label the different parts of the email.**

From: Tanmaya Rai <raitanmaya@gmail.com>

Sent: 23 April, 2019 13:21

To: Anjan Kumar, Deputy Commandant <deputycommandant16battalion@gmail.com>

Cc: Ranjana Joshi <sdmchamoli@yahoo.com>

Subject: Re: Assistance in managing the aftermath of a devastating earthquake

Sir,

You would be aware that an earthquake of magnitude 6.1 on the Richter scale struck in the towns of Sutol and Gairi of Chamoli district at 11.56 am IST today. Having triggered landslides, the earthquake has caused widespread devastation and loss of life. Much of the motorable road from Gairi to Sutol has been lost due to the landslide caused by the earthquake.

It is feared that many houses have been destroyed and many vehicles and persons have been trapped under the falling stones and rubble. The local police are doing their best but their efforts seem insufficient.

We would be grateful if the battalion under your command could provide reinforcement by way of sending NDRF personnel to extricate people from under the rubble and deploying helicopters to transport the injured to hospitals in Srinagar and Dehradun.

Since time is of the essence we look forward to an early response from your end.

Please feel free to contact us in case you need any clarifications. We can be contacted at the following numbers 9012345670 and rgmg@gmail.com

Thanks and regards

Tanmay Rai
District magistrate
Chamoli District
Uttarakhand

Now complete the response to Tanmay Rai's mail with appropriate phrases from the box.

is requested, has been discussed, has been decided, has been disrupted,
be made, has been made, are also provided, is understood, may be contacted

From: Anjan Kumar <deputycommandant16battalion@gmail.com>

Sent: 23 April 2015 13:45

To: Tanmay Rai <raitanmaya@gmail.com>

Cc: Umesh Nautiyal <Commandant16battalion@gmail.com>, Ranjana Joshi <sdmchamoli@yahoo.com>, Rajeev Sharma <assistantcommandant16battalion@gmail.com>

Subject: Re: Assistance in managing the aftermath of the earthquake in Chamoli

Sir,

At the outset, please accept our heartfelt concern for the residents of Sutol and Gairi of Chamoli District. From your mail it(1)..... that due to the loss of the highway, communication(2)....., apart from the loss of property and, possibly life.

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The issue(3)..... in house and it (4)..... to deploy five helicopters for reconnaissance and for transporting of the NDRF team as well as goods. They would be reaching Chamoli in another half an hour.

Since the rescue work might take a day or two it(5)..... that arrangements for the stay of three officers and thirty jawans(6)..... We would be thankful if space and arrangements for cooking and other basic facilities like bathrooms and toilets(7).....

Assistant Commandant Rajeev Sharma,(8)..... in- charge of the NDRF rescue team to Chamoli and will be in touch with you very soon. He(9)..... at ...(number).....(10).....over WhatsApp or email.

Do let us know if there is anything else that we can do.

Jai Hind

Anjan Kumar
Deputy Commandant
16 Battalion NDRF
Gadarpur, Rudrapur
Uttarakhand

5.4 LET'S LEARN NEW WORDS

I. Given below is a description of an earthquake taken from an awareness programme. Complete it using the correct words in the blanks. You may use words from the box. A word may be used more than once.

Epicentre, tectonic plates, crust, aftershock, faults, Richter scale, Friction, Seismic waves , magnitude, fault zones

I. **A Tectonic Earthquake**

The Earth's outer skin or crust is not a continuous surface. Instead, it is composed of massive segments called(a)..... Earthquakes occur along the boundaries between tectonic plates or at the site of cracks within the plates, which are called ...(b)..... These tectonic plates move constantly. The edges of these plates slide against each other in these.....(c)..... and the (d)..... caused thereof, can slow them down. This causes a lot of pressure to be built

up over time. When the force of the movement finally overcomes the(e)....., sections of the(f).....suddenly break or become displaced. The pent -up pressure is released in the form of(g)..... causing an earthquake.

The intensity of the shaking and the pressure of the(h)..... is measured on the(i)..... and is expressed in numbers like 5.5 or 6.7. The higher the number the higher the(j)..... of the earthquake. The location in the Earth on the surface where the earthquake starts is called the(k).....

There may be a smaller earthquake soon after the bigger one. It is called an(l)..... There may be more than one such earthquakes after a huge earthquake has occurred.

After completing the paragraph, read it aloud in front of your group.



Notes

ACTIVITY 5.1

I. Match the words/phrases given in Box A with those given in Box B. Write the correct word/phrase in the space provided.

A	B
1. Victims who are trapped and pinned inside a collapsed structure:	a. mechanism of injury
2. Use of disaster-trained search dogs and handlers for location of victims:	b. entombed victim
3. Sensitive equipment used to listen for a victim's response in collapsed structures:	c. fibre-optic search device
4. Very small camera on a flexible arm that allows viewing in a confined space:	d. buddy system
5. When two rescuers work in a team being constantly in touch with each other:	e. reconnaissance
6. The process of gathering information regarding a specific situation:	f. canine search
7. A type of collapse void in which one end of a floor or roof section collapses while the other end remains secure to the wall:.....	g. acoustic search device
8. The forces placed on the victim's body by the collapse:	h. lean-to

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- II. Complete the sentences below by using the terms you have just learnt in Activity Column B.
1. When information about the cloudburst reached NDRF, helicopters were deployed for so that a suitable rescue strategy could be planned.
 2. It was essential to inform the doctors about the to enable them to plan suitable medical intervention.
 3. When hailing did not help, the jawans deployed the mode to sniff out the buried victims.
 4. It was only after the men used they could make out the buried persons under the collapsed staircase.
 5. There was no way the could be rescued before the crane lifted the fallen lintel under which she was caught.
 6. The men used crowbars and cutters to remove the portion of the ceiling that was in a position.
 7. It was dangerous for a jawan to enter the collapsed building through the gap in the rubble but there was no other jawan free to deploy the
 8. The seemed useless due to the shrill sounds of the busy drills and the cutters all around.

5.5 LET'S LEARN LANGUAGE

I. Use of Passive forms of Verbs

The passive forms of verbs are used with a specific purpose. Below are the reasons for

- i. using the passive form, and
- ii. not mentioning the subject or the doer of action.
 - Used in formal official use
 - Used in reporting an event or news where an incident or event is most important
 - When the doer/s is/are understood or obvious
 - When there may be multiple doers

Read the two emails given above and mark the verbs that are in the Passive voice e.g. *has been lost, has been decided.*

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I. Write the sentences in the spaces provided. Maintain the order in which they occur.

1. Much of the motorable road from Gairi to Sutol has been lost due to the landslide caused by the earthquake.

(Used in reporting an event)

2.(.....)

3.(.....)

4.(.....)

5.(.....)

6.(.....)

7.(.....)

8.(.....)

9.(.....)

II. Below is a report taken from a newspaper. Complete it using the right form of the verb (active or passive) given in the brackets. Use the appropriate tense forms. After completing, read it aloud.

A day after the collapse of the suspension bridge on the Machchu river in Morbi town of Gujarat, the toll.....(a).....(climb) to 134 on Monday, including 40 women and children. While rescue operations(b)....(be) still on, officials(c)....(say) that at least two persons.....(d).....(be, report)missing. Of those injured, 73(e).....(be, discharge), while 17(f).....(be) still undergoing treatment.

Meanwhile, nine persons(g).....(be, arrest) on charge of culpable homicide not amounting to murder. These(h).....(include) two managers of a company which(i).....(be, award) the contract to maintain and manage the bridge.

The 135-year-old- suspension bridge(j).....(collapse) on Sunday evening, four days after it(k).....(be, reopen) following repair and renovation work.



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Gopal Kateshiya, Sohini Ghosh & Rashi Mishra, The Indian Express, November 1, 2022

5.6 MODALS OF OBLIGATION**Notes**

Modals of obligation are **must, should, ought to, have to**. **Must** is used for personal obligation while **have to** is used for general obligation.

You **must** see a dentist for your toothache.

You **have to** pay the rent by the 5th of every month.

Here are a few sentences taken from an awareness programme. The modals have been incorrectly used. Replace them with appropriate modals of obligation.

1. When you feel the tremors of an earthquake, you may run out doors into the open.
2. You may give the information about the residents of a collapsed building to the rescue team. This will help them to extricate people from the collapsed structure.
3. We have to drop to the floor and take cover under a study desk or table when an earthquake strikes.
4. We will not use elevators during an earthquake.
5. In any situation we cannot panic but stay calm and take necessary action.
6. If we are driving, we may pull to the side of the road and stop.
7. We can never enter a partially damaged building because the aftershocks may cause rubble or broken parts to fall.
8. People must listen to the instructions of the rescue team and cooperate with them for their own safety.

ACTIVITY 5.2

With your experience in the NDRF, you will be able to give safety tips to people in the following situations in this event of an earthquake-

1. a building with glass panes
2. an earthquake prone building
3. steep hillside
4. flyovers and bridges

- 5. old weak structure
- 6. false ceilings and posts

Try to use modals of obligation like must/must not, ought to or should in your sentences. You may use ideas from the box below.

You may begin the sentences like this:

In the event of an earthquake, you... /During an earthquake you...

- | | | |
|-----------------------------|---------------------|--|
| a. move away from | b. stay away from | c. remain inside |
| d. not remain near the edge | e. not try to cross | f. take the fastest and safest way out |

- 1. During an earthquake we must move away from a building with glass panes.
- 2.
- 3.
- 4.
- 5.
- 6.

5.6.1 LET'S LISTEN

I. A mock drill was conducted on earthquake and fire at Govt. Sr. Sec. School, Kherian. Use the link given below to watch the video recording of the drill and listen to the commentary of a mock drill exercise in dealing with earthquakes.

https://www.youtube.com/watch?v=RVtiJ_WdNFc (Mock Drill on Earthquake and Fire, Govt. Sr Sec. School, Kherian)

Given below are some sentences that describe the right action to be taken during an earthquake. You must select the correct option to complete the sentences.

- 1. When you feel the first tremor, *take cover under your desk/run out of the room.*
- 2. Hold the *top/legs* of the table so that it does not slide away from you due to the shaking.
- 3. *When the tremors subside/During the earthquake* evacuate the building as quickly as you can.

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4. Cover your heads with your *handkerchiefs or dupattas/bags or thick books* to prevent getting hurt from falling objects or rubble.
5. *Run out of the building as fast as you can. /Take care to leave the building after checking your things are all right.*
6. After evacuation gather *inside your prayer hall/in the open ground away from the building.*
7. Gather *according to your family/ in any order you want* so that a head count can be done.
8. Senior persons should *count/call names of people* and report if anyone is missing.
9. *Everyone/Only a few representatives* should go and look for those left behind.
10. Carry the injured on your shoulders or makeshift stretchers to the *open area/nearby clinic.*
11. Provide *water and first aid/snacks and sweets* to the injured persons.
12. Extend whatever help *your friends/anyone who is injured* requires.
13. Make whatever arrangements you can to transport the heavily injured persons to the nearest hospital/ Wait for the hospital ambulance to transport the injured.

5.7 PRONUNCIATION**5.7.1 Pronouncing Compound Words**

You have already learnt to pronounce compound words in Lesson 4.

You will notice that compound words may be composed in the following ways, as well.

a. **Open compound words**

Word +word (with space between the words),e.g., real estate, newly formed, dining table

Phrasal verbs are compound verbs like blow up, end up, break out.

b. **Hyphenated compound words: (-)**

Two words with a hyphen between them,e.g., long-term, V-type

Open compound words may carry stress on different words. The syllable carrying the primary stress has a mark on the top (´) at its beginning as in ‘shut-in, ‘cave in, tail ‘end, front ‘desk.

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Look at the way the stress is indicated in the dictionary.

fringe benefit launch pad



In the words launch pad and fringe benefit, the first word is stressed, indicated by the tiny (´) stress mark before the words launch and fringe.

Now look at the word spinal cord. You will notice that the stress mark is now before the second word. Hence it will be pronounced as spinal CORD. In contrast in the word spinal tap the first word is stressed and will be pronounced as SPINALtap.

Notes

You will notice that there is a small mark at the bottom of the word spinal in spinal cord. This indicates the secondary stress. It only means that it is not as loud as the stressed word but has a mild stress all the same unlike some other words that do not have any stress at all.

spinal cord spinal tap



ICEcream CAVE in full MOON front DESK grand JURY grand MASTER

High school leaf MOULD left WING real ESTATE red TAPE spare PART

SPARK plug SPORTS shirt split SECOND tail END TEST tube TIME bomb

TIME zone

I. Hyphenated compound words also carry stress on different syllables/words

FOLLOW–up follow-ON full-SCALE FROST-bite FUN-loving

GLUE-sniffing PUSH-start PUSH-up razor-SHARP SHELL-shocked

Short-CIRCUIT SHUT-eye SHUT-in SNOW-blindness SPACE-age

II. Now, practice saying the following words-

real estate high rises weigh bridge cave in grand jury post office

check-in field trip long-term two-fold over-the-counter up-to-date

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Notes

5.8 LET'S SPEAK

Activity 5.3

I. Work in groups of four. Choose to describe an earthquake to the others in your group. Keep the description brief. Listen to the description of your group member and provide your assessment of the earthquake and the damage it cost. You may use words like: terrible, destructive, worse than, most frightening, not so devastating etc.

I feel the earthquake in....

I think the earthquake...

According to me the

Each member can take one minute to express himself/ herself.

5.9. LET'S WRITE

5.9.1 Writing Captions

Watch the video on earthquake awareness. Pay attention to the headlines and subtitles of every slide.

Part1: Indian NDRF Earthquake Awareness Camp

<https://www.youtube.com/watch?v=LFUtCk6qSQE>

You will notice that:

	A headline/ title	A subtitle /caption
1.	...is a name for a piece of writing, a step, an idea or a scene	...is an alternate headline or gives further explanation.
2.	...is shorter than a subtitle	
3.	...builds curiosity and tells the reader what the piece is about	... builds curiosity and tells the reader what the piece is about
4.	...provides a general idea	...addresses the reader/viewer directly
5.	...is short and crisp	...provides more information while using words economically
6.	...may use idioms and metaphors	...uses simple language that can be understood by all

Now watch Part 3 of the same series and write appropriate headlines and subtitles for the different aspects focussed upon.

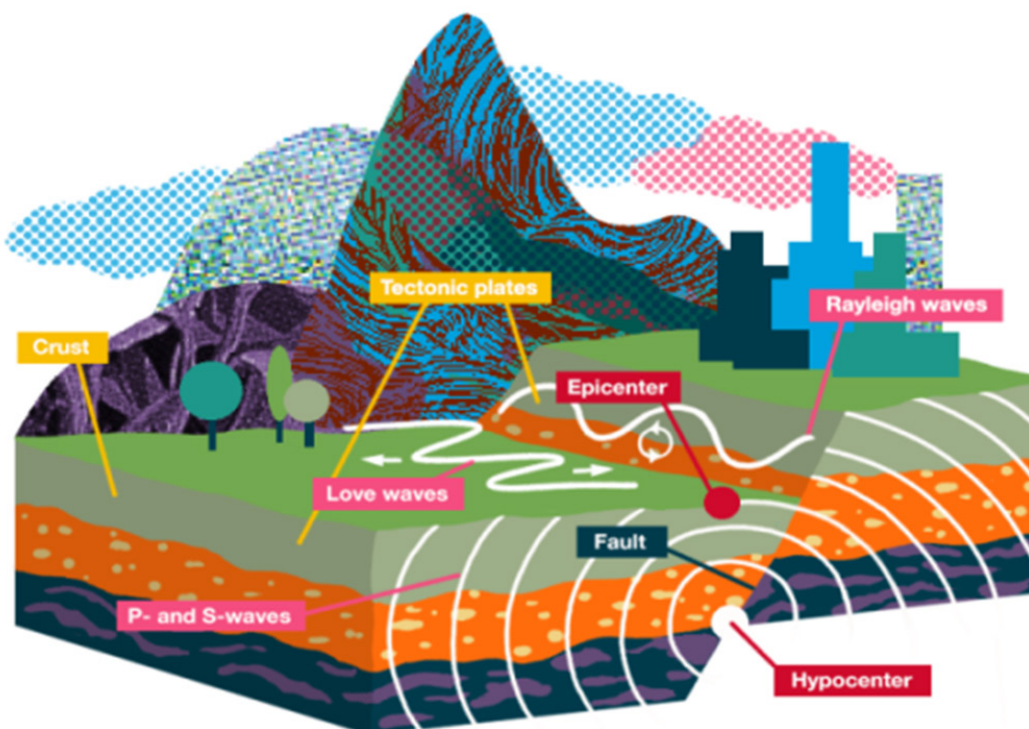
<https://www.youtube.com/watch?v=u0Af6KdcVb4>

Part 3 : Indian NDRF Earthquake Awareness Camp

5.9.2 Study the figure explaining the origin and occurrence of earthquakes taken from a presentation.

- Give it a heading.
- Complete the description stating what the figure is all about.

Heading:



Caption: The formation of a..... earthquake

Theplates that form the Earth'srub against each other at the lines. When the stress on the edge overcomes thethere is a break or a.....which releases the pent up energy in the form of waves. Theis where the waves originate. The Rayleigh waves flow along theand roll like ocean waves, but the motion is opposite. The point where the waves originate is called the

5.9.3 Look at the poster on Hazardous effects of an earthquake.

You will notice that-



Notes

Steadfast in the Face of Tremors



Notes

- The language is simple.
- The main message is conveyed without giving reason or cause
- Only key words are used.
- Pictures are simple and self-explanatory
- Articles and words like ‘there’ in the beginning are done away with

APRIL IS EARTHQUAKE PREPAREDNESS MONTH

ARE YOU READY?

The **U.S. Geological Survey (USGS)** and **Clear Channel Outdoor (CCO)** have teamed up to remind Southern Californians about the importance of earthquake preparedness – especially in quake-prone SoCal.

**BEFORE
AN
EARTHQUAKE
HITS**

It Starts with Science
USGS scientists are working with partners to better prepare & learn more about earthquakes in Southern California

Plan
Better understanding of preparedness & policies needed to protect us

Prepare
Increased public awareness & protection against the dangers earthquakes pose

Recover
Increased resiliency & ability to recover after a quake strikes

**DURING
A QUAKE**

1

DROP!

2

COVER!

3

HOLD ON!

**AFTER
THE
SHAKING
STOPS**

Prepare for aftershocks

Check for injuries

Check for fires or damage

Check for structural damage

Evacuate to safety if necessary

**5.10 DO YOU KNOW?**

- There are several million earthquakes annually
- An earthquake can affect the length of a day
- Ponds, canals and lakes may give a nasty smell and become slightly warmer before an earthquake
- Inca and traditional Japanese architecture were designed with earthquakes in mind
- The Pacific Ocean is the root of most earthquakes
- Animals change their behaviour just before an earthquake
- A British engineer John Michell first identified the cause of earthquake!

**WHAT YOU HAVE LEARNT****Being forewarned is to be forearmed**

- Earthquakes are a natural phenomenon and we can do nothing to prevent them.
- What we can do is prevent the loss of property to some extent, by building earthquake resistant buildings, employing both scientific and indigenous knowledge to do so.
- We can reduce injuries and loss of life by taking safety measures and by making provisions for the same if we are living in an earthquake prone zone.
- It is thus imperative for institutions, residential societies, and offices to carry out earthquake drills time and again to make the people earthquake- ready.
- Perhaps, we cannot prevent the damage totally but we can certainly minimise it.
- Awareness programmes should thus be an essential part of every person's education.

Now complete the response to Tanmay Rai's mail with appropriate phrases from the box.

From: Anjan Kumar <deputycommandant16battalion@ gmail.com>

Sent: 23 April 2015 13:45

To: Tanmay Rai <raitanmaya@gmail.com>

*Notes*

Steadfast in the Face of Tremors



Notes

Cc: Umesh Nautiyal<Commandant16battalion@gmail.com>, Ranjana Joshi <sdmchamoli@yahoo.com>, Rajeev Sharma assistantcommandant16battalion@gmail.com

Subject: Re: Assistance in managing the aftermath of the earthquake in Chamoli

Sir,

At the outset, please accept our heartfelt concern for the residents of Sutol and Pairi of Chamoli District. From your mail it is **understood** that due to the loss of the highway, communication **has been disrupted**, apart from the loss of property and, possibly life.

The issue **has been discussed** inhouse and it **has been decided** to deploy five helicopters for reconnaissance and for transporting of the NDRF team as well as goods. They would be reaching Chamoli in another half an hour.

Since the rescue work might take a day or two it **is requested** that arrangements for the stay of three officers and thirty jawans **be made**. We would be thankful if space and arrangements for cooking and other basic facilities like bathrooms and toilets **are also provided**.

Assistant Commandant Rajeev Sharma, **has been made** in- charge of the NDRF rescue team to Chamoli and will be in touch with you very soon. He **may be contacted** at ... (number).....over WhatsApp or email.

Do let us know if there is anything else that we can do.

Jai Hind

Anjan Kumar
Deputy Commandant
16 Battalion NDRF
Gadarpur, Rudrapur
Uttarakhand

ACTIVITY 5.1**5.5 LET'S LEARN LANGUAGE**

- I. A Write the sentences in the spaces provided. Maintain the order in which they occur.
1. has been lost, caused by. (*Reporting an event or news*)

2. is feared, have been destroyed, have been trapped (*The cause or the doer is understood*)
3. can be contacted (*official use*)
4. is understood, has been disrupted. (*doer understood, event more important*)
5. has been discussed, has been decided (*doer understood*)
6. is requested, be made. (*doer understood, doer understood + multiple doers*)
7. are also provided. (*doer understood*)
8. has been made (*doer understood, official use*)
9. can be contacted (*doer understood*)

II. Below is a report taken from a newspaper. Complete it using the right form of the verb (active or passive) given in the brackets.

- (a.) has climbed (b.) are (c.) say (d.) are reported (e.) have been discharged
 (f.) are (g.) have been arrested (h.) include (i.) were awarded (j) collapsed
 (k.) had been reopened

5.6

I. Below are a few sentences taken from an awareness programme. Some modals have been incorrectly used. Replace them with appropriate modals of obligation.

1. must
2. should/must
3. must
4. must
5. must/should not
6. must
7. must
8. must.

ACTIVITY 5.2

I. Write down safety tips with regards to the following. Try to use modals of obligation in your sentences.



Notes

Steadfast in the Face of Tremors



Notes

1. In the event of an earthquake/During an earthquake...
2. ...you/we must/ought to stay away from building with glass panes.
3. ...you/we must/should/ought to remain inside an earthquake resistant building.
4. ...you/we must not/ought not to remain near the edge of a steep hillside.
5. ...you/we must not try to cross flyovers and bridges.
6. ...you/we must/ought to move away from false ceilings and posts.
7. ...you/we must/should take the fastest and safest way out of an old weak structure.

5.6.1 LET'S LISTEN

Given below are sentences that describe the right action to be taken during an earthquake. Select the right words to complete the sentences. Strike out the unnecessary words.

Remember these important POINTS

1. When you feel the first tremor or the earthquake alarm goes off, take cover under your desk.
2. Hold the legs of the desk or table so that it does not slide away from you due to the shaking.
3. When the tremors subside evacuate the building as quickly as you can.
4. Cover your heads with bags or any thick books or things to prevent getting hurt from falling objects or rubble.
5. Run out of the building as fast as you can.
6. After evacuation gather in the open ground away from the building.
7. Gather patiently so that a head count can be done.
8. Any senior person should count the people and report if anyone is missing.
9. Only a few representatives should go and look for those left behind.
10. Carry the injured on your shoulders or makeshift stretchers to the open area.
11. Provide water and first aid to injured.
12. Extend whatever help anyone who is injured requires.

13. Make whatever arrangements you can to transport the heavily injured students to the nearest hospital.

5.7 PRONUNCIATION

- I. Look up the dictionary and pronounce the words below by placing the stress on the correct word/syllable.

real estate (REAL estate) high rise (HIGH rise), swing bridge (swing BRIDGE)
cave in (CAVE in), grand jury (grand JURY) post office (POST office)

check-in (CHECK- in) field trip (FIELD trip), long-term (long TERM) two-fold (TWO -fold), over-the-counter (over-the- COUNTER)

up-to-'date (up -to-DATE)



Notes

5.8 LET'S WRITE

Writing subtitles and captions

Part 3 : Indian Ndrf Earthquake Awareness Camp

1. Title: Interventions After the Earthquake
2. Subtitle: Assessing injury to people
3. Caption: Finding people who have been injured
4. Subtitle: Locating the injured: canine search
5. Caption: Locating people not obvious to the eye with the help of sniffer dogs
6. Subtitle: Providing lifesaving intervention and first aid
7. Title: Providing support to the injured parts of the body
8. Subtitle: Providing lifesaving intervention and first aid-1
9. Caption: Checking the basic physiological parameters pf the injured
10. Subtitle: Providing first Aid and support to the injured
11. Caption: Ensuring proper first aid and assisting the less injured to the ambulance
12. Sub-title: Dealing with bone injuries
13. Caption: Using splints and other support to the injured limbs/parts of the body

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Notes

- 14. Subtitle: Transporting the victims/injured to the ambulance
- 15. Caption: Use of stretchers to carry those heavily or critically injured to the ambulance
- 16. Subtitle: Providing reassurance and comfort
- 17. Caption: Making the injured comfortable inside the ambulance and reassuring them
- 18. Subtitle: Demonstrating the use of kits
- 19. Captions: Carrying out a demonstration of how the kits are to be used

5.9.2

Heading: How Earthquakes happen/Origin of Earthquakes/How Earthquakes are Caused

Caption: The formation of a tectonic earthquake

The **tectonic** plates that form the Earth’s **crust** rub against each other at the **fault** lines. When the stress on the edge overcomes the **friction** there is a break or a **crack** which releases the pent up energy in the form of **seismic** waves. The **epicentre** is where the waves originate. The Rayleigh waves flow along the **surface** and roll like ocean waves, but the motion is opposite. The point where the waves originate is called the **hypocentre**.



ANSWERS TO INTEXT QUESTIONS/ ACTIVITIES

INTEXT QUESTIONS 5.1

I.

S. No	Character in the story	State of mind	Looking forward to...
1.	The people of Bhuj	relaxed and contented on a holiday	the Republic Day parade
2.	Children	free, with no restrictions	Playing cricket and waiting to watch the Republic Day parade
3.	Men in Gujjubhai’s shop	relaxed on a national holiday	generally catching up on news about each other
4.	Manuben and Nafisaben	eager and enthusiastic	inauguration. of their Mahila Literacy classes

5.	The village women	expectant and happy	the beginning of a new phase in their lives
----	--------------------------	---------------------	--

Steadfast in the Face of Tremors

II. Match the phrases in Column A with those in Column B to make sentences true to the story.

- | | | | |
|------|------|------|------|
| 1. d | 2. e | 3. g | 4. a |
| 5. h | 6. b | 7. f | 8. c |

INTEXT QUESTIONS 5.2

I. Find from the story words/phrases which mean the following

- | | | |
|----------------|--------------|-----------------|
| 1. devastation | 2. debris | 3. accompanying |
| 4. aghast | 5. clutched | 6. Drill |
| 7. extricate | 8. throbbing | |

II. Select the right options to answer the questions below.

- | | | |
|------|------|------|
| 1. b | 2. a | 3. c |
| 4. b | 5. c | 6. a |

INTEXT QUESTIONS 5.3

Communication through emails

- | | | |
|----------------------|-----------------------|--------------------------|
| 1. is understood | 2. has been disrupted | 3. has been disassembled |
| 4. has been decided | 5. is understood | 6. be made |
| 7. are also provided | 8. may be contacted | 9. has been made |
| 10. 9212123232 | | |

5.4 Let's learn new words

I. Tectonic Earthquake

- | | | |
|---------------------|---------------|-----------------|
| a. tectonic plates, | b. faults | c. fault zones, |
| d. friction | e. friction | f. crust |
| g. seismic waves | h. earthquake | i. Richer scale |
| j. magnitude | k. epicentre | l. after shock, |



Notes

Steadfast in the Face of Tremors



*Notes***Activity 5.1**

I. Match the words/phrases given in Column A with those given in Column B. Write the correct word/phrase in the space provided

1. b. entombed victim
2. f. canine search
3. g. acoustic search device
4. c. fibre-optic search device
5. d. buddy system
6. e. reconnaissance
7. h. lean-to
8. a. mechanism of injury

II. Complete the sentences below by using the terms you have just learnt in Exercise II.?

1. reconnaissance
2. mechanism of injury
3. canine search
4. fibre-optic search device
5. entombed victim
6. lean to
7. buddy system.
8. acoustic search device