



2023

Disaster Risk Reduction In Schools

Classes 6 to 10

DISASTER RISK REDUCTION IN SCHOOLS

GUIDELINES FOR TEACHERS

FOREWORD

The Disaster Management course of the Central Board of Secondary Education aims to educate students about the concept of disasters, their causes, mitigation measures and develop an awareness towards reducing the occurrence of disasters. Though Disaster Management has been a part of the CBSE curriculum since many years, the need of the hour is to integrate the latest concept of Disaster Risk Reduction (DRR) with different subjects in the curriculum.

DRR has gained prominence globally, and integrating it into the school curriculum will foster a greater understanding of the environment, risks involved with disasters, and the need for preparedness and resilience among students and teachers. The DRR course will focus on equipping students with the skills to develop emergency response plans, put together emergency supply kits, and conduct drills and simulations. Disasters have a strong impact on an individual's emotions, so the course will emphasize coping mechanisms and approaches to face adversities.

Another objective of this course is to encourage a sense of civic responsibility and inspire students to contribute to their communities' disaster preparedness and response efforts. The course also aims to prepare young students to face life's risks by training them to use their thinking and decision-making skills to avert disasters and understand the consequences of their actions. Additionally, the course is designed to ensure students are aware of environment-friendly measures that reduce vulnerability to hazards. An effective DRR is more about reducing the risk of a disaster than just about managing a disaster.

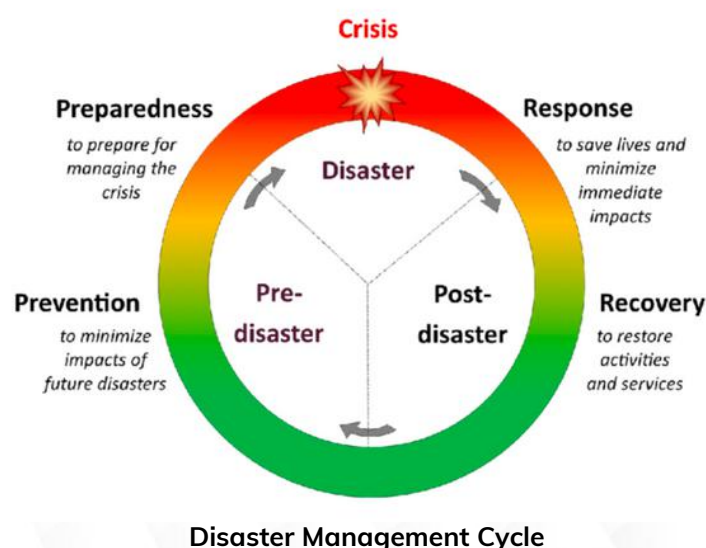
The purpose of integrating DRR with subjects in the school curriculum is to foster the all-inclusive approach. Here, the students will apply their understanding of the content-knowledge of the subject to help them develop necessary skills to manage disasters in their community. The activities integrated with the subjects will provide an opportunity for the students to think critically, work collaboratively and hone their communication skills.

Finally, the DRR course aims to empower students with the knowledge, skills and attitudes essential for reducing the risks posed by disasters and contributing to building safer and more resilient communities.

According to the Disaster Management Act 2005, a disaster is defined as “a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made cause, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area”. Disasters produce a range of impacts; these include direct, secondary and indirect effects. Direct effects include deaths, injuries and physical damage. Secondary effects include impacts such as releasing fire or hazardous material that is triggered by disasters. Indirect effects include the ripple effect resulting in blocking the flow of goods and services causing unemployment etc.

As per Disaster Management Act, 2005, “disaster management” means a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary for:

- (i) Prevention of danger or threat of any disaster;
- (ii) Mitigation or reduction of risk of any disaster or its severity or consequences;
- (iii) Capacity-building;
- (iv) Preparedness to deal with any disaster;
- (v) Prompt response to any threatening disaster situation or disaster;
- (vi) Assessing the severity or magnitude of effects of any disaster; evacuation, rescue and relief;
- (vii) Rehabilitation and reconstruction.



In recent decades, the focus of Disaster Management has shifted towards Disaster Risk Reduction (DRR). This approach emphasizes planning actions to reduce the risk posed by hazards before a disaster occurs. It puts more emphasis on prevention and preparedness in addition to the response and recovery phases of the Disaster Management Cycle.



The Sendai Framework for Disaster Risk Reduction (2015–2030) is an international document that was adopted by the United Nations (UN) member states in March 2015 at the World Conference on Disaster Risk Reduction held in Sendai, Japan. Teachers are advised to go through the website of UNDRR, UN Office for Disaster Risk Reduction which coordinates activities to create safer, more resilient communities in the world. This will help them to understand and implement these guidelines more effectively.

UNDRR envisions a world where disasters no longer threaten the well-being of people and the future of the planet. Sustainable development and the 2030 Agenda cannot be achieved without working towards that goal of building resilience. Their key message is – “it pays to invest in reducing the risks posed by disasters.” It’s time to break the cycle of disaster > response > dependency > repeat. In order to bring about this conceptual shift we need to switch focus from managing disasters to managing risk. “An essential step along this journey is acknowledging the fact that there is no such thing as a natural disaster. There are natural hazards that cannot be prevented, such as earthquakes, floods, droughts, and cyclones. But we can curb their destructive power—in other words, stop them turning into major disasters—through careful and coordinated planning that is designed to reduce people’s exposure and vulnerability to harm”.

Rationale for CBSE Guidelines for Teachers in Disaster Risk Reduction in Schools

India is a disaster-prone country that often experiences loss of life, grievous injuries and damage to property/ infrastructure due to earthquakes, floods, fires, accidents etc. Children are especially vulnerable to such incidents of disaster due to their tender age and dependency on care givers. Separation from parents and caregivers during or after a disaster causes loss of safety and security for children. Apart from the risk of death and injury as a consequence of natural and man-made disasters, children are also exposed to the perils of post disaster violence, abuse, exploitation and neglect. Therefore, it is crucial for schools to focus on building a culture of Disaster Management Awareness, empowering students to prevent disasters and know how to protect themselves in times of emergencies.

The CBSE has published a number of books on Disaster Management for Classes VIII to X and affiliated schools are expected to use them in their school curriculum. As per the Social Science syllabus a project on Disaster Management is to be done compulsorily by students in Class IX as part of their Social Science internal assessment. Hence, the responsibility of educating students about Disaster Risk Reduction strategies depends upon the keenness of the teachers and heads of



institutions and the passion with which they take up this subject. Schools should play a proactive role in creating awareness about Disaster Risk Reduction, empowering students to prevent disasters and protect themselves and others.

National Disaster Management Guidelines - School Safety Policy 2016 is a publication of the National Disaster Management Authority, Government of India which should be regularly referred to by every school. These guidelines emphasize the urgent need to strengthen risk resilience of schools in rural as well as urban areas of the country. The Guidelines stand for a vision of India where all children, their teachers, and other stakeholders in the school community are safe from any kind of preventable risks due to natural and man-made hazards that may threaten their well-being during the pursuit of education. The guidelines also suggest that the Central Board of Secondary Education, and other institutions involved in curriculum development need to include age appropriate theoretical as well as practical knowledge on risk of disasters, nationally and specifically about their own state. Practical training on health promotion and disease prevention concepts and health-enhancing behaviours and life skills is important.

These guidelines spell out the roles and responsibilities of different stakeholders for preparing plans, developing capacity, incorporating risk reduction in syllabus and improving co-ordination and synergy at all levels with respect to school safety and disaster preparedness. These guidelines are available on the official website of NDMA (<http://www.ndma.gov.in/images/guidelines/School-Safety-Policy.pdf>).

All requirements to ensure safety of children in schools mentioned in the said Policy of 2016 are statutory in nature and everyone involved in the process of ensuring safety of children are statutorily bound by the same. The Hon'ble Supreme Court, vide its order dated 14th August, 2017 in W.P. No. 483 of 2004, has directed that the School Safety Guidelines issued by NDMA have to be implemented in letter and spirit by all concerned authorities. Therefore, all the affiliated schools must take requisite measures to implement the School Safety Guidelines issued by NDMA.

The CBSE Guidelines on Disaster Risk Reduction are a step towards involving all teachers in the school, irrespective of the subjects they teach, in the urgent task of guiding their students to prevent disasters and protect them during emergencies. These guidelines identify class-wise and subject-wise topics in the NCERT textbooks prescribed for affiliated schools, which can be used by subject teachers to create awareness about Disaster Risk Reduction in their classrooms. Activity based sample lesson plans covering 5 to 6 chapters from each of the 5 main subjects (English, Hindi, Maths, Science and Social Science) of Classes 6 – 10 has been created to link the lessons to Disaster Risk Reduction topics.



Teachers may follow the suggested lesson plans or develop their own teaching-learning strategies suitable for their students. Classroom discussions on Disaster Risk Reduction should be conducted with a positive approach, helping students develop practical confidence to deal with hazardous situations.

This interdisciplinary approach will help students develop a holistic understanding of disaster management. For example, in science classes, teachers can discuss natural disasters and their scientific causes, while in social studies, they can explore the socio-economic impacts of disasters. Every subject teacher should allot at least one period per class per month in her regular timetable to teach a lesson by relating it to a topic of Disaster Risk Reduction in school.

It is expected that if all teachers follow these guidelines on Disaster Risk Reduction in Schools, it will help students:

- Learn about Disaster Risk Reduction principles and actively participate in DRR practices taught in school and outside.
- Take note of disaster risks in their own locality and actively seek solutions to prevent and reduce their impact.
- Prepare and implement the School Safety Plan by participating in mock drills and appropriate response strategies available in the school and community.
- Spread the knowledge on DRR acquired in school to their families and communities.

Children can play an active role as change-makers for resilience. They can participate in risk assessments, early warning systems, community-based actions, school evacuation protocols, and recovery plans, thereby contributing to reducing disaster and climate risk. They can also be advocates for DRR by raising awareness through social media campaigns and in-person activities. It is hoped that the CBSE guidelines for DRR will empower students to assess and understand their risks with a scientific temper and participate in actions to build resilience.

Schools can take further steps to ensure effective implementation of Disaster Risk Reduction in their schools:

1. **Teacher training:** It is crucial for teachers to receive appropriate training on disaster management and risk reduction strategies. Schools should organize workshops, seminars, and training sessions for teachers to enhance their knowledge and skills in this area. This will enable them to effectively impart disaster management education to students and respond appropriately during emergencies.



2. Engage students through practical activities: In addition to theoretical knowledge, practical activities and simulations play a crucial role in disaster management education. Teachers can organize mock drills, evacuation exercises, and first aid training sessions to familiarize students with emergency protocols. This hands-on approach will enable students to apply their learning in real-life situations.

3. Collaborate with local authorities and organizations: Schools should establish partnerships with local disaster management authorities, NGOs, and community organizations to enhance their disaster preparedness efforts. These external stakeholders can provide valuable resources, expertise, and support in conducting training programs, conducting risk assessments, and developing disaster response plans.

4. Involve parents and local community: Parents and the wider community play a vital role in ensuring the safety and resilience of schools. Schools should actively engage parents through awareness programs, workshops, and parent-teacher meetings to communicate the importance of disaster management education and encourage their participation in disaster preparedness activities.

5. Regular review and updating of guidelines: Disaster management guidelines should be reviewed periodically to ensure their relevance and effectiveness. As new risks emerge or as best practices evolve, the schools should update the guidelines accordingly and communicate these updates to all stakeholders. This will ensure that teachers stay informed about the latest approaches in disaster management and can adapt their teaching strategies accordingly.

Finally, every school should prepare an Annual School Safety Plan as per format given in annexure and upload it in their school website.

Disclaimer:

The content of this handbook has been meticulously crafted, curated, and scrutinized by teachers and school principals. The hazards identified as related to a particular subject-wise topic mentioned in the lesson plan are derived from their own experiences, perceptions, or from incidents reported in the news that have taken place in school settings. It is essential to recognize that all these experiences hold significant relevance for our students. They equip them with the knowledge of how to mitigate risks both for themselves and those around them, as well as how to effectively handle challenging situations when they encounter them.

Index



Index

Sr.No.	Content	Page
1	Social Science	9
2	Science	60
3	Mathematics	97
4	English	128
5	Hindi	171
6	DRR Journal Format	194
7	School Safety Policy Guidelines	198
8	DRR Mapping	209
9	Acknowledgment	211



Social Science

Disaster Risk Reduction

Class VI-X

Social Science

Table of Content

Social Science book & Chap No.	Topic	Book Pg. No.	Related DRR Topic	Pg. No.
Class-VI				
Social and Political Life-I Chap- 2	Diversity and Discrimination	13-22	Violence and riots due to Discrimination	13
Social and Political Life-I Chap-6	Urban administration	50-57	Proper waste management to prevent health hazards.	14
The Earth: Our Habitat Chap-4	Maps	23-29	Flood	16
The Earth: Our Habitat Chap-5	Major Domains of The Earth	30-38	Global Warming	18
The Earth: Our Habitat Chap-6	Our Country India	39-47	Tsunami	19
Class-VII				
Social and Political Life-II Chap-7	Markets around us	76-85	*SDG Goal 12-Responsible consumption and production *Pollution (Air, Water, Noise)	20
Geography:Our Environment Chap-1	Environment	1-6	Deforestation & Sustainable environment	21
Geography:Our Environment Chap-3	Our Changing Earth	12-19	Earthquake	22
Geography:Our Environment Chap-4	Air	20-29	Global Warming	24
Geography:Our Environment Chap-5	Water	30-38	*Water pollution & conservation *Tsunami	26
Geography:Our Environment Chap-6	Human environment interactions-The tropical and the sub-tropical regions	39-48	*Forest fires- destruction of biodiversity *UN-SDG-6-Access to safe water, sanitation and hygiene.	28

Social Science book & Chap No.	Topic	Book Pg. No.	Related DRR Topic	Pg. No.
Class-VIII				
Social and political life-III Chap-7	Public Facilities	88-99	*UN-SDG Goal 11-Sustainable cities & Communities *Urban flooding *Water scarcity- Causes and mitigation measures	30
Resources and Development Chap-1	Resources	1-6	Threat to the sustainable development due to exploitation of resources	32
Resources and Development Chap-2	Land, Soil, Water - Natural Vegetation, Wildlife Resources	7-21	*Landslide *Forest fires	33
Resources and Development Chap-4	Industries	32-43	*Industrial Disaster	35
Resources and Development Chap-5	Human Resources	44-53	Impact of overpopulation	37
Class-IX				
NCERT textbook: India and the Contemporary World I Chap-3	Nazism and the rise of Hitler	49-74	Nuclear Disaster	39
NCERT textbook: Economics Chap-3	Poverty as a challenge	29-41	SDG-1-Strategies on alleviating poverty	41
NCERT textbook: Economics Chap-4	Food Security in India	42-54	Famine	43
NCERT text book: Contemporary India I Chap-2	Physical features of India	7-16	Cyclones and floods in coastal regions	45
NCERT text book: Contemporary India I Chap-4	Climate	26-38	SDG-13-Climate Change	46
NCERT text book: Contemporary India I Chap-5	Natural vegetation and wildlife	39-47	Deforestation	48

Social Science book & Chap No.	Topic	Book Pg. No.	Related DRR Topic	Pg. No.
Class-X				
NCERT-Understanding economic development Chap-1	Development	3-17	Sustainable development and circular economy	49
NCERT-Understanding economic development Chap-2	Sectors of Indian Economy	19-31	Associating Pandemic with Economic Crisis	51
NCERT text book: Contemporary India II Chap-1	Resources and Development	1-12	*Agenda 21 *Soil erosion and Land degradation conservation	53
NCERT text book: Contemporary India II Chap-3	Water Resources	19-29	*Urban flooding *Water scarcity -Depletion of underground water-Rain water harvesting	55
NCERT text book: Contemporary India II Chap-4	Agriculture	30-41	*Problem of Intensive farming and commercial farming	57
NCERT text book: Contemporary India II Chap-5	Minerals and Energy Resources	42-56	*Mining hazards *Over exploitation of resources	58

Class: VI, Subject: Social Science, NCERT textbook: Social and Political life-I

Chapter No.: 2, Chapter Name: Diversity and Discrimination, Page no.: 13-22

Related DRR topic: Violence and riots due to discrimination

Discrimination happens when people act on their prejudices or stereotypes. The struggle for freedom from British rule also included within it the struggle of large groups of people who fought to be treated more equally. Dalits, women, tribal and peasants fought against the inequalities they experienced in their lives. Discrimination can lead to violence, therefore through this chapter the teacher will explain the importance of living in harmony and preventing riots and violence.



Women at a rally demanding their rights



Learning Outcome:

1. Compare the living conditions of different people in the society and identify reasons for discrimination.
2. Reason out how discrimination leads to riots and violence in the society and affects law and order.
3. Analyse the steps taken by the Government and educational institutions to bring equality and stop violence

Teaching learning strategies/ Suggestive Classroom activities:

1. Group discussion: The teacher can initiate a group discussion for analyzing the types of discrimination in the society: 10 minutes.
2. Make charts or collage: The teacher can ask students to make charts or collage which can depict the violent reactions of discrimination and also make students reflect on right and wrong actions from the chart displayed: 30 minutes.
3. Role play/ Skit: Students can have a role play/ skit in the class to bring realization about how discrimination can affect others: 20 minutes preparation, 10 minutes performance.
4. Conduct a survey: The students can conduct a survey in the local region to identify any issues related to discrimination and submit a report to authorities/ discuss in class.
5. Students can also watch videos and reflect on their understanding.

Students may write down their reflections of learning this DRR topic in their journal

Class: VI, Subject: Social Science, NCERT textbook: Social and Political life-I

Chapter No. : 6, Chapter Name: Urban administration, Page no.:50-57

Related DRR topic- Proper waste management to prevent health hazards

The teacher discusses the role of urban administration in keeping city clean and tidy. The teacher also discusses the role of The Municipal Corporation in being responsible for ensuring that diseases do not break out in the city. Schools, hospitals and dispensaries must be careful in waste disposal.

It goes without saying that environmental pollution caused by poor and improper waste disposal can reap serious havoc/disaster on habitats, ecosystems, air, water, soil and bio diversity.

Fig 1 depicts how the waste is being segregated and managed for the benefit of the society and Fig 2 shows the waste which is not managed properly.



Fig 1



Fig 2

Learning outcome:

- 1.The students will analyse how the unclean environment can lead to dangerous diseases and epidemics that can cause havoc to the life of people.
- 2.Students will list out the type of diseases that spread in the society due to carelessness in waste disposal of industries, laboratories and hospitals.
- 3.They will assess the work of the municipalities and suggest measures for improving their work and ensuring safety for society.

4. Students will realize that many future man-made disasters like accidents and pollution due to landfills can be prevented if each one of us takes care of our surroundings.

Teaching learning strategies/Suggestive Classroom activities:

1. Classify the types of waste: The teacher can classify the types of waste by giving a few examples. She/he can explain the process of disposing of waste and the names of diseases like Tuberculosis, pneumonia, diarrhea, tetanus, whooping cough, etc. which spread due to improper waste management.
2. **Video:** Proper waste management <https://youtu.be/Qyu-fZ8BOnI>
3. **Case study:**
 - > Spread of Plague in Surat in 1994.
 - > Indore, the cleanest city of India- <https://youtu.be/plAspkXMTgg>
4. The recent Break out of COVID can be discussed which led to mass death in the world.

Students may write down their reflections of learning this DRR topic in their journal



Class: VI, Subject: Social Science, NCERT textbook: The Earth Our habitat

Chapter No. :4, Chapter Name:Maps, Page no.:23-29

Related DRR topic: Floods

We find that maps are useful to us for various purposes, they provide more information about the physical, political and thematic areas. The flood Maps are tools to visualize flood information for decision makers and the public. These maps form the basis for developing flood risk scenarios in flood prone areas based on - land use, environmental conditions, climatic conditions, social and economic conditions. The teacher can explain what are floods, causes and mitigation measures for floods. Using the given map the teacher can explain the flood prone regions in our country.

Fig 1 shows the flood affected areas of India and Fig 2 is the picture of Brahmaputra River during flood. The teacher classifies maps and talks about the usage of different colours for different physio-graphic division of India.



Fig 1



Fig 2

Learning outcome:

- The students will locate the flood prone areas on the physical map of India.
- The students will have a group discussion on the causes of flood and its impact on human life.
- The students will list measures of reducing risk and protect themselves during a flood.

Teaching learning strategies/Suggestive Classroom activities:

1. Map work: Identify and locate the flood prone areas of our country: 10 minutes
2. Flow chart: The teacher can pair the students to make a flow chart of the causes of flood and its impact on society: 20 minutes
3. **Video:** 'How to Survive Floods? Preparing for A Flood' : 5:46 minutes. Reference link: https://youtu.be/pi_nUPcQz_A

Students may write down their reflections of learning this DRR topic in their journal

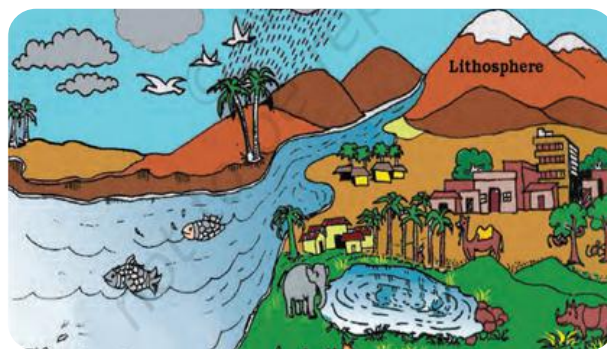


Class: VI, Subject: Social Science, NCERT textbook: The Earth Our habitat

Chapter No. :5, Chapter Name:Major domains of the earth, Page no.:30-38

Related DRR topic: Global warming

Teacher explains the domains of the earth and further explains about the Biosphere which is a narrow zone where we find land, water and air together, which contains all forms of life however due to the emission from industries, thermal power plants and vehicles, air gets polluted. Increase in the amount of CO₂ leads to increase in global temperatures. Due to the burning of large forest areas globally every year, the amount of greenhouse gases emissions into the atmosphere by forest fires increases significantly. This is termed as global warming.



Learning outcome:

- The students will infer the features of the domains of the earth and devise a plan to protect earth.
- They will analyse and propose steps to limit the use of resources of the earth to maintain the balance of nature between the domains of the lithosphere, the atmosphere, and the hydrosphere.
- They can celebrate Earth Day and create awareness among members of the society.

Teaching learning strategies/Suggestive Classroom activities:

- 1.Explain and elaborate: Teacher can show pictures related to forest fire and melting of ice and elaborate the causes and consequences of the misuse of resources: 10 minutes.
- 2.Video clip to explain 'Global warming'.
Reference link: <https://youtu.be/PqxMzKLYrZ4>
- 3.Venn diagram: Can use a Venn diagram to discuss the uses and abuses of resources and list procedures to be followed to reduce further damage of the atmosphere

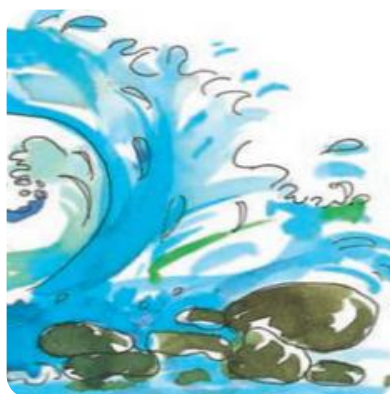
Students may write down their reflections of learning this DRR topic in their journal

Class: VI, Subject: Social Science, NCERT textbook: The Earth Our habitat

Chapter No. :6, Chapter Name:Our Country India, Page no.:39-47

Related DRR topic:Tsunami

The Teacher describes the beauty of our country which has rich resources and has a vast geographical expanse. In the north, it is bound by the lofty Himalayas. The Arabian Sea in the west, the Bay of Bengal in the east and the Indian Ocean in the south, wash the shores of the Indian peninsula. Being surrounded on three sides with sea has become a potential danger of tsunami to the coastal regions of India.



Learning outcome:

- 1.The students will be able to analyse the causes of Tsunami and its impact
- 2.The students will prepare a mitigation plan for people residing near the shore.
- 3.They will use the scientific knowledge in making a warning device to protect people before any danger strikes

Teaching learning strategies/Suggestive Classroom activities:

- 1.Discuss: The teacher can highlight the rich resources of our nation and then point out the hidden dangers:15 minutes.
- 2.List out: The students will list out the dangers that we can foresee from the sea and list the same on the black board: 15 minutes.
- 3.Modal demonstration: Can use a model to demonstrate the plate movements that cause Tsunami: 15 minutes.
- 4.Video clips to understand 'The science of Tsunamis-Reference link: <https://youtu.be/Wx9vPv-T51I>

Students may write down their reflections of learning this DRR topic in their journal

**Class: VII, Subject: Social Science, NCERT textbook: Social and Political life-II
Chapter No. :7, Chapter Name: Markets around us, Page no.:76-85**

Related DRR topic: *SDG Goal-12- Responsible consumption and production

***Pollution- Air, water and noise**

The teacher can discuss the amount of pollution that occurs in markets like - air pollution from industrial market, waste lying without recycling, water pollution by dumping garbage into the water bodies and noise pollution. While teaching this lesson the teacher can discuss about the health issues which can affect the humanity due to pollution. Disasters related to pollution are increasing faster in the rapidly growing small and medium sized urban centres and market places, therefore, there is a need to address and find solutions for the same.



Learning outcome:

- 1.The students will identify different types of pollution that occur in the market.
- 2.They will enlist the causes and impacts of the pollution.
- 3.The students will prepare the solutions to safeguard people from the hazards in a market place.

Teaching learning strategies/Classroom activities:

- 1.Explain and elaborate: The teacher can explain the different types of pollution in the market around us by showcasing pictures: 10 minutes.
- 2.Group discussion: Causes of pollution and how different markets are responsible for the same and the possible solutions: 20 minutes.
- 3.Survey: Students can do a survey of a market near them and find out the causes of pollution and check out the waste disposal system over there: One week.
- 4.Report: The teacher may ask students to write a brief report on the role of government to control pollution in markets: 15 minutes (Pre session task - Research work)

Students may write down their reflections of learning this DRR topic in their journal

Class: VII, Subject: Social Science, NCERT textbook: Our Environment

Chapter No. :1, Chapter Name:Environment, Page no.:1-6

Related DRR topic: Deforestation & Sustainable environment

The teacher can emphasis on preserving the natural environment and discuss the steps to conserve it. The teacher can analyse how the human beings are responsible for disturbing the natural environment and causes danger for all living things. The pictures can be used to initiate discussions among the students. Deforestation leads to soil erosion, which in turn makes land highly susceptible to hazards such as landslides, drought, and sandstorms.

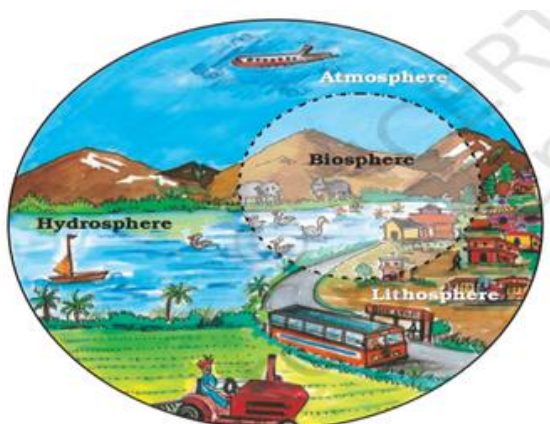


Fig. 1.2: Domains of the Environment

Learning outcome:

- 1.The students will be able to evaluate the damages done to nature by human beings and justify the need for conserving natural environment.
2. They will develop a plan to reduce the human activities which are worsening the environment gradually like deforestation.

Teaching learning strategies/Classroom activities:

- 1.Discuss and list out: The teacher can pose questions to discuss about the importance of the environment. Ask students to list ways by which we can conserve and protect the environment: 20 minutes.
- 2.Explain and elaborate: The teacher can state the various disasters that can happen if the environment is not conserved : 10 minutes.
- 3.Planting drive: The teacher can list out the impact of deforestation and encourage students to plant trees/ saplings in their surroundings: One week
- 4.Video clip: ' (<https://youtu.be/-01T9e6VDWU>) : 3.06 minutes.

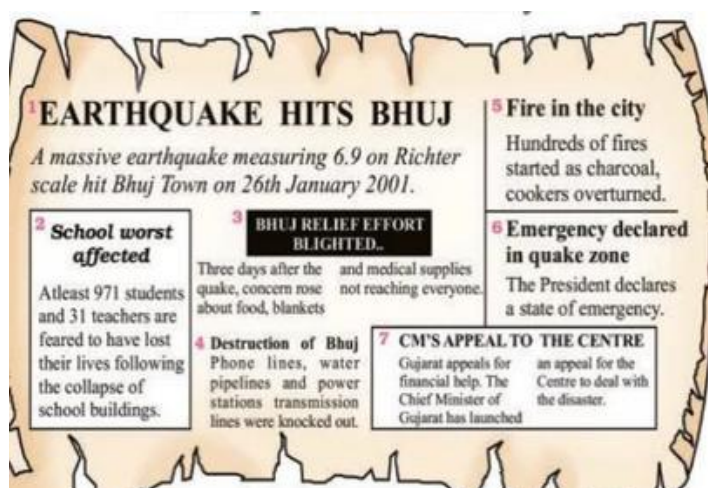
Students may write down their reflections of learning this DRR topic in their journal

Class: VII, Subject: Social Science, NCERT textbook: Our Environment

Chapter No. :3, Chapter Name:Our Changing Earth, Page no.:12-19

Related DRR topic: Earthquake

While teaching about the Earth movements the teacher explains that the lithosphere is broken into a number of plates known as the Lithosphere Plates. The movement of these plates causes changes on the surface of the earth. Movement in the lithosphere plates sometimes produce sudden movements like earthquakes and volcanoes which cause mass destruction over the surface of the earth. The use of pictures helps students to understand the impact of earthquake.



Learning outcome:

1. The students will be able to analyse the reasons and evaluate the impact of an earthquake.
2. They will be able to associate the terms-epicentre, focus and seismograph in their analysis.
3. The students will draft a plan for mitigation measures before and after an earthquake.

Teaching learning strategies/Classroom activities:

Teacher will discuss about the seismic activity in India, particularly in regions such as the Himalayas and the northeastern states. Teach about the causes of earthquakes, the importance of seismic zone mapping, and preparedness measures such as building codes and early warning systems.

1. Model demonstration: The teacher can use a model to demonstrate the movement of plates that cause earthquakes.
2. Discuss: The causes and impact of an earthquake can be discussed by referring to pictures and case studies for a group discussion.

Video clips:

- (3.42 minutes) to explain The Dr. Binocs Show (<https://youtu.be/dJplU1rSOFY>)
- (8.40 minutes) 10 Ways to Survive an Earthquake, according to Experts (<https://youtu.be/hWSu4l1RxLg>)

Students may write down their reflections of learning this DRR topic in their journal



Class: VII, Subject: Social Science, NCERT textbook: Our Environment

Chapter No. :4, Chapter Name:Air, Page no.:20-29

Related DRR topic: Global warming

The teacher explains that the amount of carbon dioxide released by humans or animals seems to be equal to the amount used by the plants which make a perfect balance. However, there is an imbalance created due to the burning of fuels, such as coal and oil. They add billions of tons of carbon dioxide into the atmosphere each year. As a result, the increased volume of carbon dioxide is affecting the earth's weather and climate leading to global warming. The picture below shows the global warming and its adverse impact on the environment. The teacher can discuss about air pollution and the rising temperature related to it.



Learning outcome:

1. The students will interpret the causes of air pollution and its impact on global warming.
2. They will analyse the causes, consequences and suggest solutions.

Teaching learning strategies/Classroom activities:

1. Case study: Delhi air pollution- Causes, damage caused and prevention. How is the government of Delhi planning to reduce its air pollution?: 20 minutes.
2. Collect information and create a flow chart, on any one startup or government initiative working towards reducing air pollution in India: 15 minutes.
3. Video- <https://youtu.be/fobTFFqb1yY>
4. Encourage cycling short distances- also to school if the house is close by.
5. Speak on the topic: How can we make India a carbon neutral country? (Refer- Bhutan)

6. Collage: Design a collage showing the consequences of Global warming by using newspaper clips, magazines: 20 minutes.

7. Design a poster: Methods to reduce the effects of Global warming: 20 minutes.

8. Video clips (3.04 minutes) to explain 'Global warming' <https://youtu.be/oJAbATJCugs>.

Students may write down their reflections of learning this DRR topic in their journal



Class: VII, Subject: Social Science, NCERT textbook: Our Environment

Chapter No. :5, Chapter Name:Water, Page no.:30-38

Related DRR topic: *Water pollution and conservation

***Tsunami**

The teacher can introduce the lesson explaining different types of water bodies in the world and the disasters that can be caused by such large water bodies. One such danger is a tsunami. An earthquake, a volcanic eruption, or underwater landslides can shift large amounts of ocean water. As a result, a huge tidal wave called tsunami, which may be as high as 15m is formed and has the capacity to destroy life and property on the shores for many kilometers. The largest tsunami ever measured was 150m. high. The teacher can explain how during a storm, the winds blowing at very high speed form huge waves. These may also cause tremendous destruction.

Large water bodies may cause a threat to life and property due to the natural hazards like floods and tsunami, however, water is a precious resource which is needed by all living beings for their survival. Even though 71 percent of our Earth is covered with water only 2.5 percent of this water is fresh. The remaining 97.5 percent resides in oceans and is saline. It is therefore essential to conserve water and prevent it from getting polluted. The teacher discusses the importance of using water judiciously in our day to day life.



Destruction caused by tsunami on Tamil Nadu Coast

Learning outcome:

1. The students will be able to evaluate the extent of damage caused by tsunami
- 2.They will be cautious about the tsunami warnings if they are in a coastal region and follow the instructions to safeguard their life.
- 3.Students will implement ways to prevent water pollution and use it wisely.

Teaching learning strategies/ suggestive Classroom activities:

1. Discuss: The teacher asks questions on do's and don't near water bodies.
2. PPT: Students can be asked to prepare PPT on the dangers of a tsunami and the mitigation measures to be taken during a tsunami situation.
3. Video- 'How to survive a Tsunami?' - <https://youtu.be/7EDflnGzjTY>
4. Research work and report: Find out about the lakes that have been revived by any one of the NGOs, Government authorities or individuals in any part of India and write a report on the same.

Students may write down their reflections of learning this DRR topic in their journal



Class: VII, Subject: Social Science, NCERT textbook: Our Environment

Chapter No. :6, Chapter Name:Human environment interactions-The tropical and the sub-tropical regions,Page no.:39-48

Related DRR topic: *Forest fires and destruction of biodiversity

***UN-SDG-6- Access to safe water,sanitation and hygiene**

Through this chapter students learn about the life in the tropical and sub-tropical regions of the world like -The Amazon and The Ganga Brahmaputra plains. Life of the people of the Amazon basin has slowly changed. The developmental activities have lead to the gradual destruction of the biologically diverse rainforest. It is estimated that a large area of the rainforest has been disappearing annually in the Amazon basin. The destruction of forests have major implications on the ecosystems and create an imbalance in the environment.



The Ganga- Brahmaputra plain has several big towns and cities. The cities of Allahabad, Kanpur, Varanasi, Lucknow, Patna and Kolkata all with the population of more than ten lakh are located along the River Ganga. The wastewater from these towns and industries is discharged into the rivers. This leads to pollution of rivers and destruction of our resources.To conserve the river Ganga, 'Namami Gange' Programme has been initiated by the Central government.



Learning objectives: Students will be able to

1. Identify the harmful effects of urbanization and find ways to reduce the harm.
2. Understand the role they can play in reducing the harmful effects of man made disasters like - overcrowded cities, road indiscipline, increasing garbage landfills.
3. Implement the practices that can reduce disasters caused by human actions.

Teaching learning strategies/ suggestive Classroom activities:

1. Discuss the harmful effects of urbanization.
2. List out -Suggest ways to reduce such harmful effects of urbanization like- Indiscipline on roads, waste mismanaged, etc
3. Indore, the cleanest city of India- <https://youtu.be/plAspkXMtgg>
4. Comparative study-Compare some of the cities of the world like Finland and Indore with your own city. Give 5 practical solutions to solve some of the problems in your city.

Students may write down their reflections of learning this DRR topic in their journal



Class: VIII, Subject: Social Science NCERT textbook: Social and Political life-III

Chapter No. :7, Chapter Name:Public facilities, Page no.:88-99

Related DRR topic: *SDG Goal-11- Sustainable cities and communities

***Urban flooding**

***Water scarcity-causes and mitigation measures**

The teacher describes the causes of water scarcity in urban regions. Through the pictures, students understand that the people face difficulties and wait in a queue to get safe drinking water. Most of them depend on water tankers as they don't get sufficient water through bore wells. The urban areas are also facing another major disaster - Urban flooding, caused due to the over population and unplanned infrastructure of the fast growing cities like- Bangalore, Chennai and Mumbai. Therefore, its important to understand that the government authorities and the people take appropriate actions to prevent such situations like- **water scarcity** by adopting practices like rain water harvesting ; **urban flooding** by appropriate drainage and waste management systems in place.



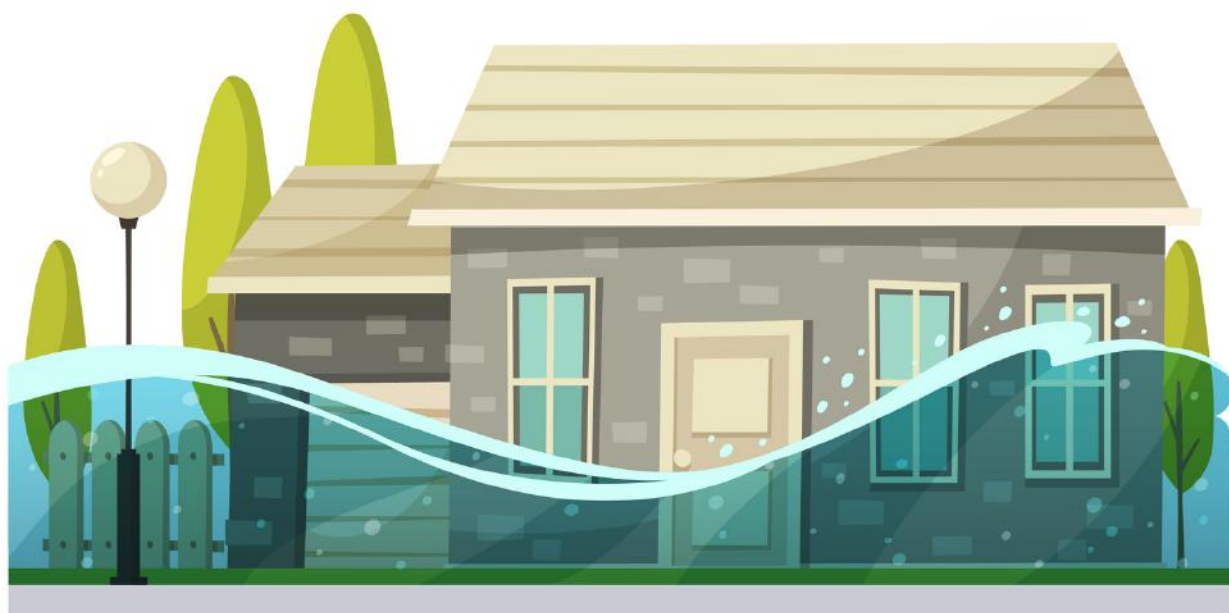
Learning outcome:

- 1.The students will be able to assess the causes of water shortage and list some solutions to the problem. The students will also be able to classify the cities of India which face water scarcity.
2. The students also understand the importance of proper waste management to prevent drainage problems that can lead to disasters like urban flooding.

Teaching learning strategies/ suggestive Classroom activities:

- Classroom Discussion: Uses of water as a resource and the importance of conserving water.
- Case-based sources can be given and questions asked-Natural and man made causes
Why is Assam flooded every year? https://youtu.be/dBYM_wyGglg.
- The students can do a survey on the water usage per family and money spent on buying water and make a water management plan.
- Video- (2.04 minutes) to discuss Water Scarcity-I <https://youtu.be/E6pjj2gVnWA>.
- Learn about the water crisis <https://youtu.be/womlxQgO2tE> (2.11 minutes)

Students may write down their reflections of learning this DRR topic in their journal



**Class: VIII, Subject: Social Science, NCERT textbook: Resources and Development
Chapter No. :1, Chapter Name:Resources, Page no.:1-6**

Related DRR topic: Threat to sustainable development due to exploitation of resources.

The teacher can refer to the pictures that depict the unwise use of resources that can destroy Earth and explains to the students of how resources can be conserved. Further the teacher can discuss about the judicious use of resources and sustainable development.

In short, raw material extraction and processing always impact on the environment, resulting in soil degradation, water shortages, biodiversity loss, damage to ecosystem functions and global warming exacerbation ultimately leading to disasters. Concept of Circular economy can be explained to encourage students to conserve natural resources.



Learning Outcome:

The students will list out the various ways of conserving resources. They will enlist how each person can contribute towards- reducing consumption, recycling, and reusing things.

Teaching learning strategies/Classroom activities:

1. Classroom discussion: Teacher can discuss about the importance of resources and the need of conserving the same. Students participate in the discussion.
2. Best out of waste-craft work : To understand the value of conservation.
3. Poster making and Slogan writing.
4. Video (1.40 minutes) to discuss the need for 'Sustainable Development'.
5. The Date tree- A story of sustainable development - <https://youtu.be/-TKylyVUQy0>
6. Encourage students to cycle short distances.

Students may write down their reflections of learning this DRR topic in their journal

Class: VIII, Subject: Social Science, NCERT textbook: Resources and Development
Chapter No. :2, Chapter Name:Land, Soil, Water - Natural Vegetation, Wildlife
Resources, Page no.:7- 21

Related DRR topic: *Landslides

***Forest fires**

The teacher explains about the landslides which are defined as the mass movement of rock, debris or earth down a slope. They often take place in conjunction with earthquakes, floods, and volcanoes. A prolonged spell of rainfall can cause heavy landslide that can block the flow of river for quite some time. If a landslide occurs near inhabited areas, it can cause a great deal of damage. They can strike quickly and bury entire villages. Buildings are damaged or flattened and roads, bridges and infrastructure can be damaged or destroyed by the debris.

The two pictures given below will be shown to students and a discussion on the causes and consequences will be held in the classroom.



Retention Wall



A Landslide

Learning Outcome: The students will be able to evaluate the impact of the landslide and list the causes of it. They will be able to identify both man made and natural causes of landslides and appraise the mitigation mechanisms of landslides.

Teaching learning strategies/suggestive Classroom activities:

Teacher will explore the hilly and mountainous regions of India and their susceptibility to landslides. Teach about the causes of landslides, early warning systems, slope stabilization techniques, and land use planning to mitigate landslide risks.

Teacher will discuss the risk of forest fires in India, particularly in regions with dense forests. Teach about the causes of forest fires, fire prevention measures, early detection systems, and the role of community participation in fire management.

Teacher explains about the causes of landslide and steps to protect people, by using different methods to make students understand the impact.

- Locate on a map: To identify the landslide prone areas in India.

- PPT: Students can be asked to prepare a PPT to describe the causes of landslides Natural and Man-made. Add suggestions to prevent this disaster due to human intervention.

(Eg- Earthquakes-natural cause, unplanned construction- man-made cause of landslides.)

- Assign a project on the topic 'Land slide Disasters' for self-learning
- Video (3.24 minutes) to discuss 'What is a landslide and what causes it?'

<https://youtu.be/N-gXK72VMWs>

Students may write down their reflections of learning this DRR topic in their journal



Class: VIII, Subject: Social Science, NCERT textbook: Resources and Development

Chapter No. :4, Chapter Name:Industries, Page no.:32-43

Related DRR topic: Industrial disasters

The teacher can refer to the text and discuss about the accidents/disasters that mainly occurred due to technical failure or irresponsible handling of hazardous material in industries. With the help of case studies, teacher can narrate what happened, on 23 December 2005, due to gas well blowout in Gao Qiao, Chongqing, China. An industrial disaster causes widespread destruction or distress and usually occurs suddenly or over a short period of time and can lead to fires or explosions in industrial settings or to chemical or radioactive releases.



Union Carbide Factory



*Rescue operation
in Gao Qiao*

Learning outcome related to DRR:

Students will be able to gain a better understanding of the potential risks involved in manufacturing industries and the strategies employed to mitigate and respond to such risks effectively. They will be able to incorporate disaster risk reduction measures in industries.

Teaching learning strategies/Suggestive Classroom activities:

Teacher will cover general safety measures in manufacturing industries, such as the proper use of personal protective equipment (PPE), equipment safety protocols, and employee training. Teach about the importance of emergency preparedness plans, including evacuation procedures, emergency contacts, and the roles and responsibilities of employees during crises.

Teacher can discuss about the disasters in industries through various activities. Such as--

1. Narrative: The incident can be narrated as a story helping students to visualize the incident.
2. Group discussion: Through group discussion, the probable risk reduction measures can be chalked out.
3. Video clip <https://youtu.be/smXF577SvC4>- 10 worst Industrial disasters ever in history; a video of 5.27 minutes can be shown.
4. The concept of circular economy and how can it be implemented in the existing industrial system. Video- <https://youtu.be/zCRKvDyyHml>

Students may write down their reflections of learning this DRR topic in their journal



Class: VIII, Subject: Social Science, NCERT textbook: Resources and Development
Chapter No. :5, Chapter Name:Human Resources, Page no.:44-53

Related DRR topic: Impact of overpopulation

Due to overpopulation, India has faced several problems like unemployment, excessive dependency, insufficient income rate, insecurities, loss of jobs, development failures, and social problems. Increasing population puts further burden on the earth's capacity to produce food and water and other natural resources. As a result, the underprivileged people will suffer malnutrition, starvation, and unhealthy living conditions, it leads to grave forms of pollution and deforestation and threat to earth.

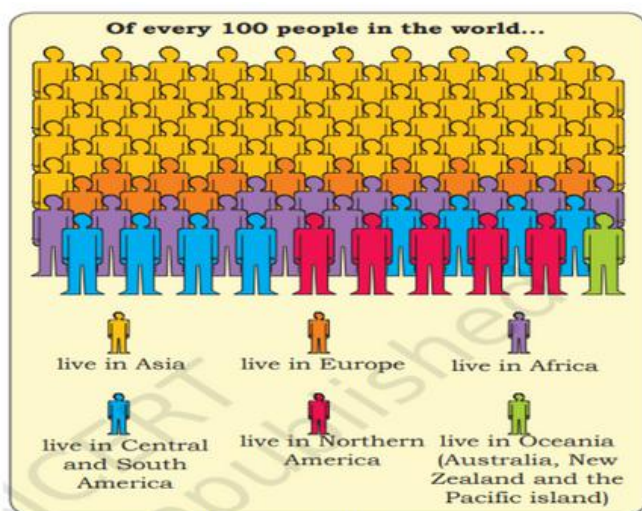
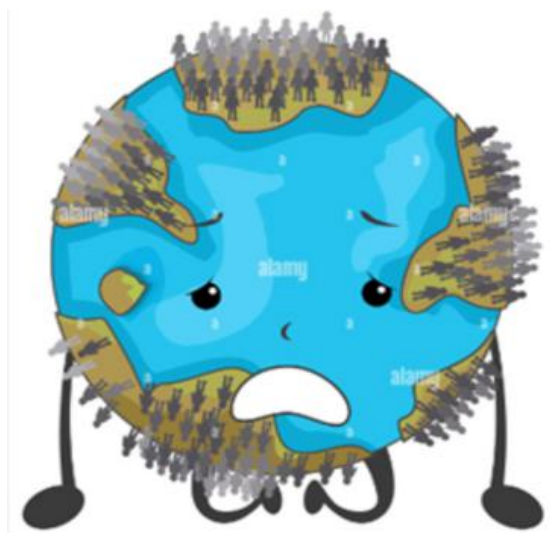


Fig. 5.1: World population by continents



<https://c8.alamy.com/comp/2ACB5MK/illustration-of-a-sad-earth-mascot-full-of-people-over-population-2ACB5MK.jpg%20>(The picture has been taken from this site)

Learning outcome:

- 1.The students will enlist the reasons for the population and present a statistical report state wise.
- 2.The students will elaborate the impact of heavy population on the life of people and the growth of economy and justify the dangerous consequences of over population.
- 3.They will be able to suggest measures to meet the crisis in different areas of economic growth.

Teaching learning strategies/Suggestive Classroom activities:

1. Classroom discussion: The teacher will explain the reasons for the unequal distribution of population on the earth with the help of a map/ pie chart. Duration: 20 mins.
2. Group discussion: The teacher can pose driving questions and conduct a group discussion on different problems that arise due to overpopulation.
3. Brain storm: Students can have a brain storming session to list out how problem of over population can be turned into an advantage for a country like India. 20 mins.

Students may write down their reflections of learning this DRR topic in their journal



Class: IX, Subject: Social Science NCERT textbook: India and the Contemporary

World I, Chapter No. :3, Chapter Name:Nazism and the rise of Hitler, Page no.:49-74

Related DRR topic: Nuclear disaster

The common feeling of oneness did not exist from time immemorial; it was forged through struggles, through the actions of leaders and the common people. There were diverse processes through which nation-states and nationalism came into being in nineteenth-century Europe. Teacher can elaborate the various causes contributing to the tensions among countries, reasons for mistrust between countries and factors which lead to wars. A war situation causes high risk of political, social and economic crisis.

In this lesson the students will understand the division of the world into two power groups and their fight for more power and resources that led to World war II where the nuclear weapons were used. The nuclear bombs created a devastating affect on people of Japan for many generations. As human beings we must learn to live in harmony with one another.



Learning outcome:

- Students will be able to interpret the feelings of nationalism and devise a peace plan to save people from the dangerous impact of wars , which can be averted.
- They can create a slogan to stop war and bring awareness

Teaching Learning Strategies/ Suggestive Classroom Activities:

The teacher can explain about the war and revolutions and list out their negative impact on the society.

Activity 1: Teacher can initiate an oratory - The students form two teams and debate on the war as a potential threat that will lead to international conflicts and push the world into a nuclear war. Duration: (30 min)

Activity 2: Students will be encouraged to write a report imagining themselves as European correspondent for TIME magazine and write an article focusing on the ongoing tension between Kosovo and Serbia. They will highlight why other European powers are asking these two regions to quickly resolve their differences and also debate the historical reasons for the present rise in tensions.

Reference links:

https://www.youtube.com/watch?v=Q8_cINyDKHg

<https://www.youtube.com/watch?v=DSyoJYchO4Y>

<https://www.youtube.com/watch?v=oBL48QRjR0o>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX, Subject: Social Science, NCERT textbook: Economics

Chapter No. :3, Chapter Name:Poverty as a challenge, Page no.:29-41

Related DRR topic: SDG-1 -Strategies on alleviating poverty

The topic can be introduced by bringing to the notice of the students the challenges faced by a country and its citizens when there is poverty. They are made to realize that it is a global concern. The chapter explains the various concepts in poverty, the global scenario, causes of poverty and Anti-poverty measures. People experiencing poverty are more **vulnerable to disasters** because of the significant impacts of poverty on their daily lives.



Poverty is therefore both a cause and consequence of disaster risk.

Learning outcome:

1. Students research on the issues related to the global poverty, including its causes and consequences.
- 2.They evaluate the effectiveness of the national and international organizations working to combat global poverty, such as NGOs, intergovernmental organizations, and bilateral partnerships.
- 3.They list various steps of poverty alleviation programs and interventions implemented in rural areas and create awareness.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- 1.Teacher can initiate a panel discussion on 'International cooperation to combat global poverty'.
2. Questionnaire can be given to students to assess their understanding of Poverty.
- 3.Students can be asked to present a flow chart on the poverty, its impact and the programs to combat poverty.

Reference links:

<https://youtu.be/D9N7QaIOkG8>

<https://youtu.be/HEB4tvIRTXo>

https://youtu.be/GfE_BrnP5fg

<https://youtu.be/ygCQEAZRJg0>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX, Subject: Social Science, NCERT textbook: Economics

Chapter No. :4, Chapter Name:Food Security in India, Page no.:42-54

Related DRR topic: Famine

When the country faces a natural disaster/calamity like earthquake, drought, flood, tsunami it leads to widespread failure of crops causing famine. A Famine is characterized by widespread deaths due to starvation. The most devastating famine that occurred in India was the FAMINE OF BENGAL in 1943. This famine killed thirty lakh people in the province of Bengal.

The students will be made to understand that many people find it difficult to get two square meal a day. The chapter elaborates the reasons for food shortage and the impact of famine on people.



Learning outcome:

- Students will analyse the reasons for food scarcity and its impact on the society.
- They will prepare a chart with newspaper cuttings and pictures related to famine and enlist solutions for the problem
- They will discuss and devise a plan about the role of common people and governments to tackle this problem

Teaching Learning Strategies/ Suggestive Classroom Activities:

The teacher will list the famine which struck the various nations and the causes which brought the disaster. The teacher will create awareness among students about the need of conserving food and avoid wastage.

Activity 1: Students will be encouraged to conduct a mock assembly and discuss on the topic of food scarcity. Duration: (30 min)

Activity 2: They will be motivated to design a poster on the danger of impending food scarcity issues which may lead to famines. They will be initiated to discuss the precautions which need to be taken to avert it.

Reference links:

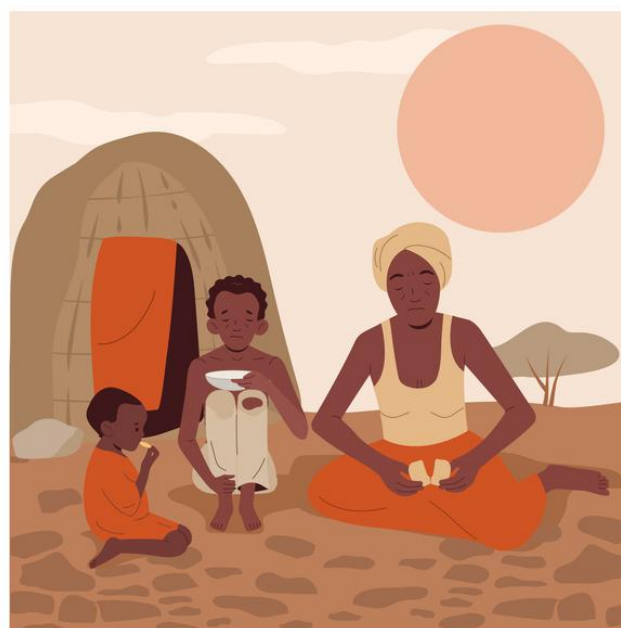
<https://www.youtube.com/watch?v=qZ3czvNbX9g>

<https://www.youtube.com/watch?v=PPWRrq9VBPw>

<https://www.youtube.com/watch?v=Ql6qg1ERmGE>

<https://www.youtube.com/watch?v=thbN-8OVvM4>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX, Subject: Social Science, NCERT textbook: Contemporary India-I

Chapter No. :2, Chapter Name:Physical features of India, Page no.:7-16

Related DRR topic: Cyclones and floods in coastal regions.

Through this chapter, teacher will explain what is a cyclone, the effects of cyclone and how to reduce the damage caused by cyclones and floods in the coastal regions. Students will also be getting an understanding about the effects of deforestation leading to major floods.



Learning outcome: Students will be able to

- understand the implications of human interference in natural environment
- analyse the effects of deforestation especially in coastal regions.
- demonstrate practical solutions and laws that can prevent further disasters.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Teacher will address the flood-prone areas in India, including river basins and coastal regions. Teach about the causes of floods, the impact on human settlements and agriculture, flood forecasting, and the importance of early warning systems, floodplain management, and disaster response planning.

1. Case study- Kerala floods- 'Floods in Kerala- 2018'- Causes, affects and solutions.
2. Discuss- "Though rainfall is triggering this, the man-made activities in Western Ghats are aggravating the disaster potential." Dr S Abhilash, atmospheric scientist at the Cochin University of Science and Technology.
3. Seminar-Disaster management strategies - India Vs Japan

Students may write down their reflections of learning this DRR topic in their journal

Class: IX, Subject: Social Science, NCERT textbook: Contemporary India-I

Chapter No. :4, Chapter Name:Climate, Page no.:26-38

Related DRR topic: SDG-13- Climate change

The topic can be introduced by bringing it to the notice of the students that these instances of erratic weather have increased over the years. They are made to realize that it is a global concern. The chapter tries to elaborate the various causes contributing to this big problem called climate change. Reasons for climate change and man's indiscriminate and reckless activities which are resulting in this.



Learning outcome: Students will be able to

1. Understand that the future of the whole planet is at stake
2. Will try to think if there are any solutions for the problem
3. Will ponder about the responsibility and role of common people and governments to tackle this problem
4. They will be inspired to play their part in tackling this huge concern which has already started affecting people, economies and governments all over the world.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Teacher can explain that the - Climate change can increase disaster risk in a variety of ways - by altering the frequency and intensity of hazard events.

Activity 1: (MUN) Mock environment Summit-Global warming and its effects.

Duration: (30 min)

Activity 2: Prepare a research report on IOT (Internet of Things) for water management. Duration:(20 mins)

Reference links:

<https://www.youtube.com/watch?v=D4vjGSiRGKY>

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

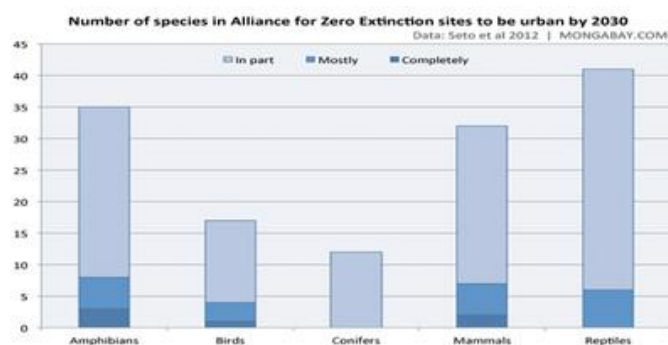
<https://www.youtube.com/watch?v=xeY9miTqzEA>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX, Subject: Social Science, NCERT textbook: Contemporary India I
Chapter No. :5, Chapter Name:Natural vegetation and wildlife, Page no.:39-47
Related DRR topic: Deforestation

The teacher can show the pictures and graphical representation to recall the causes and effects of deforestation about which the students learnt in the previous class. Elicit from students the causes and results of deforestation. This chapter emphasizes on distribution of natural vegetation and wildlife. And how they are under threat due to various human activities and also because of natural calamities.



Learning outcome:

1. List out the causes and effects of deforestation
2. Identify the importance of trees for multiple ecosystem
3. Develop an awareness towards – Protection and conservation of flora, fauna, forest and wildlife.
4. Protection of the environment in order to promote sustainable development.

Teaching Learning Strategies / Suggestive Classroom Activities:

1. Doodle drawing to show ill effects of deforestation and importance of conserving forests. On the same page list out the various methods of forest conservation.
Duration: 15 min
2. Dramatization to show: 'Earth wouldn't be a planet to live for the future generations' / There is NO PLANET B : Duration: 15 min.

Reference link: https://youtu.be/ZRUcE-7CNfQ__

Students may write down their reflections of learning this DRR topic in their journal

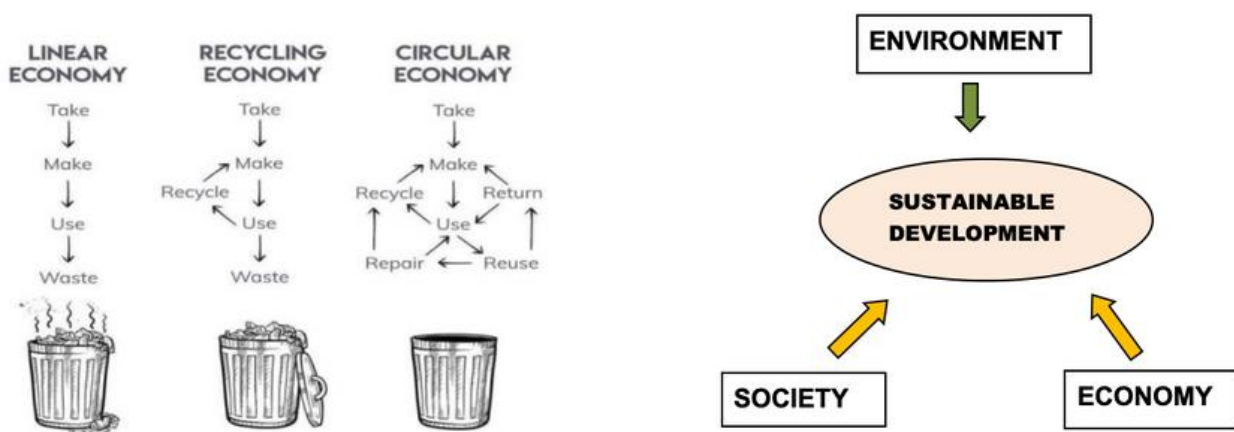
Class:X, Subject: Social Science

NCERT textbook: Understanding economic development

Chapter No. :1, Chapter Name:Development, Page no.:3-17

Related DRR topic: Sustainable development and circular economy

Through this chapter the students understand the meaning of development and how it can mean different for different people. Understanding development also needs a new perspective as the human civilization has now entered the anthropocentric age. Anthropocene is the geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment. There is a need for a gradual shift towards inclusive environment where every ecosystem remains protected. Given these global developments, students have an increasing demand for education that goes beyond teaching knowledge and skills just to find a job. Thus, Sustainable development is an important aspect in development. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.



Learning outcome:

Students will be able to

1. Understand the importance of sustainable development and circular economy.
2. Identify ways of development that go hand in hand with sustainability.
3. Adapt sustainable ways of living like-
 - > Zero waste lifestyle
 - > Proper garbage segregation
 - > Growing your own kitchen garden
 - > Using non-conventional energy resources, etc

Teaching Learning Strategies/ Suggestive Classroom Activities:

1. Case study: Research and discuss: NITI Aayog has released its latest SDG India Index 2019, which assesses each state and Union Territory's achievement on sustainable development goals. Kerala is in the top slot with a score of 70, while Bihar is at the bottom with 50- The Indian Express- December 31, 2019 23:16 IST
2. Encourage cycling short distances.
3. Create an impact: Talk about sustainable ways of living, through word of mouth or social media.

Students may write down their reflections of learning this DRR topic in their journal



Class:X, Subject: Social Science

NCERT textbook: Understanding economic development

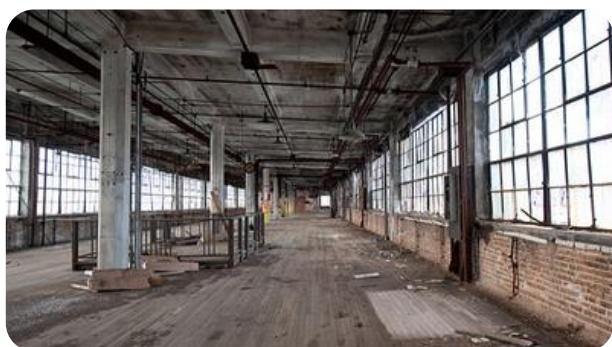
Chapter No. :2, Chapter Name:Sectors of Indian Economy, Page no.:19-31

Related DRR topic: Associating Pandemic with Economic Crisis

Sector classification is done based on several criteria. There are three types of classifications they are: primary/secondary/tertiary; organized/ unorganized; and public/private. A discussion about these types by taking examples familiar to the students and relate them to their daily life. It is important to emphasize the changing roles of sectors. This can be highlighted further to the rapid growth of service sector the students may need to be familiarized with a few fundamental concepts such as Gross Domestic Product.

How are the functioning of these sectors affected? What will be the consequences?

One major factor for discussion is the recent outbreak of COVID resulting in lockdown.



Learning outcome:

1. Students will explore specific technological solutions used in these sectors during a pandemic when people could not go in person to work.
2. Students will assess the benefits and challenges of implementing technology in agricultural practices.
3. They will analyse the impact on well-being during a pandemic.
4. They will be able to identify strategies and resources to promote literacy and improve information dissemination in crisis situations.

Teaching Learning Strategies/ Suggestive Classroom Activities: Teacher explains about the interdependence of all the sectors and their contribution to the national income. The impact on these factors due to lockdown

- Students can make a presentation on 'Role of technology in mitigating disruptions in functioning of the sectors during pandemic.' Duration: (10 min)

- Students can do a project on 'Literacy as a tool for resilience, adaption and information dissemination during a pandemic/health crisis.' Duration: (20 mins)

Reference links:

<https://youtu.be/XB-X2NH0rec>

<https://youtu.be/p0tCPwyJ6Jl->

<https://youtu.be/RK2lfGPSqO0>

Students may write down their reflections of learning this DRR topic in their journal



Class:X, Subject: Social Science, NCERT textbook: Contemporary India II
Chapter No. :1, Chapter Name:Resources and Development, Page no.:1-12
Related DRR topic:*Agenda 21

***Soil erosion and Land degradation**

***Soil and land conservation**

The teacher can show pictures of soil erosion and land degradation to introduce the chapter, depicting the devastation created by over usage of land and soil. The chapter emphasizes on the causes and effects of land degradation which lead to problems like soil infertility and soil erosion, which ultimately affect the productivity of soil.



Learning outcome:

1. Understand the impact of human activities on the environment.
2. Understand the importance of resource management.
3. Develop an awareness of the role of organic and nutritious food in human health
4. Analyze the role of human activities on soil degradation.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- Teacher can give a briefing on the processes of soil formation and erosion and question them on their awareness of soil degradation, followed by a guest Lecture on Soil management and hydro-seeding by experts in the field. (30 min)
- Students will watch a video on causes for land degradation and do a group discussion followed by a report.

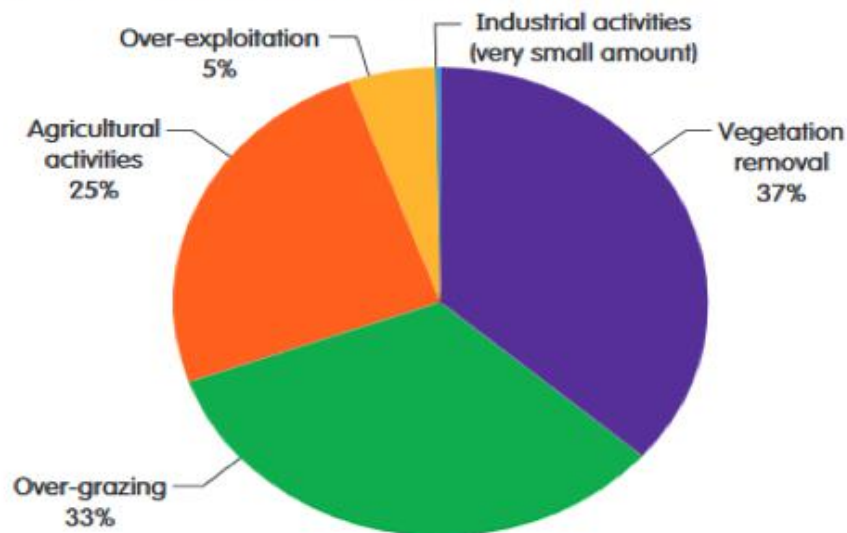
References/ Links:

Link 1: https://youtu.be/Nwr_IAZHf1k

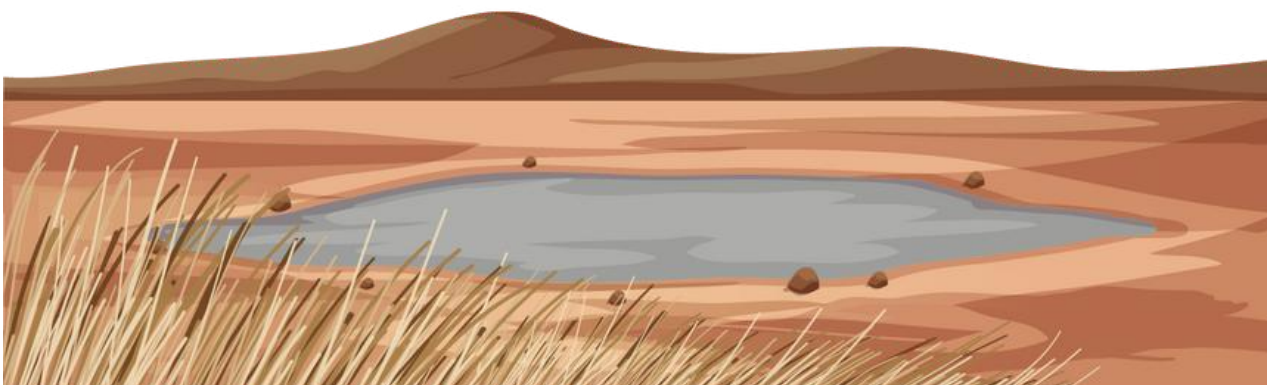
Link 2: <https://youtu.be/415an1V0FxQ>

- Students can use library resources to do research on highly productive crops which use fewer water resources and increase soil fertility. They can also make a comparative study between India and other nations.
- Article writing: Restrictions on natural flow of water leads to land degradation.
Duration: 30 min

Figure 3 Causes of land degradation in the Asia-Pacific region. Australia is ranked fifth in clearing of native vegetation.



Students may write down their reflections of learning this DRR topic in their journal



Class:X, Subject: Social Science, NCERT textbook: Contemporary India II

Chapter No. :3, Chapter Name:Water Resources, Page no.:19-29

Related DRR topic:*Urban flooding

***Water scarcity- Depletion of underground water-Rain water harvesting**

The need of the hour is to conserve and manage our water resources, to safeguard ourselves from health hazards, to ensure food security, continuation of our livelihoods and productive activities and to prevent degradation of our natural ecosystems. Over exploitation and mismanagement of water resources will impoverish this resource and cause ecological crisis that may have profound impact on our lives. Depletion of underground water is a serious concern in the world. Survey report says that many of the metropolitan cities will soon face acute portable water shortage within a decade time.

The urban areas are also facing another major disaster - Urban flooding, caused due to the over population and unplanned infrastructure of the fast growing cities like-Bangalore, Chennai and Mumbai. Therefore, its important to understand that the government authorities and the people take appropriate actions to prevent such situations like- **water scarcity** by adopting practices like rain water harvesting ; **urban flooding** by using appropriate methods to clean drainage regularly and through efficient waste management system.



Learning outcome:

- 1.Students will propose an alternative to reduce water wastage.
- 2.They will form groups and discuss the causes of decrease in underground water level and its effects and devise plan to conserve the water.
- 3.They will analyze the role of community and Government to conserve water resources.

Teaching Learning Strategies/ Suggestive Classroom Activities: The teacher will use the board to bring out the uses and abuses of water. She/he can create a mind map and explain the issues of water misuse and reasons for its depletion.

- The teacher will ask the students to prepare a bulletin board depicting the water conservation methods to be followed in schools. Duration: 15 min
- Organize a street play/ skit / Case study on Urban flooding- Comprising of the causes, effects, and solutions to urban flooding.
- A seminar will be initiated on Amrit Sarovar Abhiyan Duration: 15 min
- Students will be asked to suggest smart farming methods to conserve water resources.
15 min

References/ Links:

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

<https://www.youtube.com/watch?v=JrDxPWZSE2U>

Students may write down their reflections of learning this DRR topic in their journal



Class:X, Subject: Social Science, NCERT textbook: Contemporary India II

Chapter No. :4, Chapter Name:Agriculture, Page no.:30-41

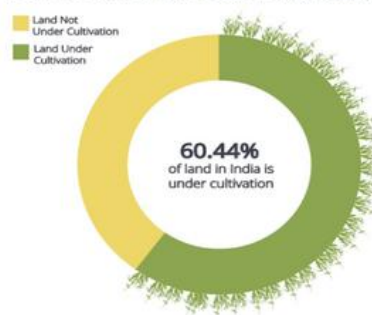
Related DRR topic:*Intensive farming and its impacts

***Problem of burning agricultural waste and air pollution**

Through this chapter students learn that , India is an agriculturally important country. Two-thirds of its population is engaged in agricultural activities. Agriculture is a primary activity, which produces most of the food that we consume. Besides food grains, it also produces raw material for various industries. However, the practices like intensive agriculture and commercial farming are characterized by the use of higher doses of modern inputs, e.g. high yielding variety (HYV) seeds, chemical fertilizers, insecticides and pesticides in order to obtain higher productivity. This not only leads to land degradation but also to the problems like- burning agricultural waste leading to air pollution mainly in North India during winter.



Excessive Cultivation, Soil Erosion And Deforestation Are Degrading India's Land



Learning outcome: Students will be able to

- 1.State the problems associated with commercial farming
- 2.Identify the causes and harmful effects of air pollution because of burning agricultural waste in parts of North India.
- 3.Appreciate the work done by many government bodies to bring control on pollution levels in our cities
4. Implement practices that can reduce disasters caused by human actions.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- 1.Case based study-Stubble burning in UP, Haryana and Punjab during winter-reasons and effects.
- 2.Find out about any one innovation that can help agriculture and prevention of air pollution and create a report of 2 pages.
- 3.Video-How the burning of stubble can be prevented- <https://youtu.be/YsRhn6K-XDs>
- 4.Textbook Activity- Pg-44,45

Students may write down their reflections of learning this DRR topic in their journal

Class:X, Subject: Social Science, NCERT textbook: Contemporary India II

Chapter No. :5, Chapter Name:Minerals and Energy Resources, Page no.:42-56

Related DRR topic:*Mining hazards

***Over exploitation of resources**

The teacher can show the picture of a mining to introduce the chapter depicting the devastation created by over mining and its other associated activities. The chapter emphasizes on the causes and effects of over mining which leads to land degradation, air pollution, noise pollution, health risks and its long term effects on environment.



Learning outcome:

1. appreciate the use of renewable resources.
2. understand the importance of using natural products and saving environment.
3. discuss the causes of air pollution and its effects.
4. learn what are Oil spills and the harmful affects of oil spill.
5. analyse the role of community and Government to reduce over mining.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- Class room Discussion: Sustainable mining is the need of the hour
Duration: 15 min
- Demonstration through role play: Focus on mineral conservation and sustained use
Duration: 15 min
- Seminar: Mining and health safety Acts.
Duration: 7 min
- Discuss: Disasters that can be caused by 'Technological failures '

References/ Links:

<https://www.youtube.com/watch?v=B3aKELWjh4s>

<https://youtu.be/XkTCD4mQtAo>

HACCP Plan Template

Use this plan template to document your HACCP plan, including all relevant Critical Control Points (CCP), hazards, and critical limits associated with your process.

Process Step / CCP	Possible Hazards	Critical Limits	Monitoring: What/How	Monitoring: Frequency	Monitoring: Who	Corrective Action	Verification	Record-keeping
1.								
2.								
3.								
4.								
5.								
6.								

Students may write down their reflections of learning this DRR topic in their journal



Science

Disaster Risk Reduction

Class VI-X

Science

Table of Content

S. No.	Science Topic	Book P. No.	Related DRR Topic	P. No.
Class-VI				
1	Chapter: 3, Separation of Substances	20-30	Role of Separation techniques in managing the aftermath of a disaster	60
2	Chapter: 6, The living organisms - Characteristics and habitat	58-73	Extinction of Animals and Birds	61
3	Chapter: 07, Motion and Measurement of Distances	74-85	Road accidents	62
4	Chapter: 09, Electricity and Circuits	95-103	Short circuits leading to fire accidents	63
5	Chapter: 11, Air around us	115-122	Environmental pollution Air pollution	64
Class-VII				
6	Chapter: 3, HEAT	24-37	Global Warming	65
7	Chapter: 4, Acids, Bases and Salts	38-46	Acid Rain	66
8	Chapter: 10, Electric current and its effect	109-122	Electric short Circuits	68
9	Chapter: 12, Forests: Our lifeline	142-155	Deforestation leading to flood	69
10	Chapter: 9, Motion and Time	92-108	Accidents due to high-speed vehicle	71
11	Chapter: 13, Wastewater Story	156-166	Waste Management	72



S. No.	Science Topic	Book P. No.	Related DRR Topic	P. No.
Class-VIII				
12	Chapter: 9, Friction	112-122	Fire Accidents	73
13	Chapter: 8, Force and Pressure	93-111	Cyclone	75
14	Chapter: 12, Some Natural Phenomena	151-164	Earthquake	77
15	Chapter: 1, Crop Production and Management	1-16	Impact of disasters on crop production and food security	78
16	Chapter: 3, Coal and Petroleum	32-37	Oil Spills	79
17	Chapter: 2, Microorganisms; Friends and Foe	151-164	Pandemic (Covid-19)	80
Class-IX				
18	Chapter: 9, GRAVITATION	100-112	Structural Integrity and Failure	81
19	Chapter: 2, Is matter around us pure	14-25	Elements and compounds used as war weapons.	82
20	Chapter: 8, Force & Laws of Motion	87-99	Road Accidents/ Railways Accidents	83
21	Chapter: 11, Sound	127-139	Role of sound in emergency situations	84
22	Chapter: 12, Improvement in Food Resources	140-151	Sustainable agriculture and Environment Conservation	85
Class-X				
23	Chapter: Metals and Non-metals	38-57	Alloys- used as rescue equipment during natural disasters	86
24	Chapter: 4, Carbon and its Compounds	58-78	Carbon compounds and Environmental Disasters	87
25	Chapter: 12, Magnetism Effects of Electric Current	195-207	Geomagnetic Storms- Effect on Earth.	89
26	Chapter: 2, Acids bases and salts	17-37	Soil degradation (pH degradation)	90
27	Chapter: 13, Our Environment	256-265	Waste management	91
28	Chapter: 11, Electricity	171-194	ARC Flash Accidents	92

Class: VI – SCIENCE (NCERT Textbook Science-6)

Chapter No.: 3 & Name: Separation of Substances (Page No.:20-30)

Related DRR topic: Role of Separation techniques in managing the aftermath of a disaster

Teacher can begin the class by discussing the “Separation of Substances” chapter briefly, highlighting the different methods of separation introduced. Emphasize that these separation techniques can be applied in disaster management to address specific challenges.



Turning dirty water
clean to aid disaster
relief efforts

Learning Outcome: Students will be able to

1. Identify potential scenarios in disaster management where separation techniques could be useful.
2. List out separation techniques and their role in managing contaminated water after a disaster.
3. List out the role of separation techniques in mitigating the impact of a disaster and recover valuable resources.

Teaching learning strategies/ Suggestive classroom activities:

1. Brainstorming: Students will be engaged in a brainstorming session and asked to identify potential scenarios in disaster management where separation techniques could be useful. Teacher will list their responses on green board/ flipchart. (10 minutes)
2. Discussion on Environmental Disasters: Teacher will review the list of scenarios generated by the students and facilitate a discussion about each item. Students will discuss how specific separation techniques, such as filtration and magnetic separation can be applied in those scenarios. (15 minutes)
3. Group Activity: Students can do research on application of separation techniques in managing contaminated water after a disaster and explore how separation techniques can be used to mitigate the impact and recover valuable resources. They can present their findings in class through a PPT.

Students may write down their reflections of learning this DRR topic in their journal

Class: VI – Science (NCERT Text book Science 6)

Chapter No. & Name: 6, The living organisms -Characteristics and habitat (58-73)

Related DRR topic: Extinction of Animals and Birds

The teacher can start the session by discussing about the wide range of habitats found on Earth, such as forests, grasslands, deserts, freshwater ecosystems, and marine environments. She can show images or videos of different habitats and describe their distinct characteristics, including climate, vegetation, and the types of animals that inhabit them. The teacher can highlight that habitats are unique and irreplaceable, and their preservation is crucial for protecting endangered species and maintaining healthy ecosystems. And discuss the potential consequences of habitat destruction, including species extinction, ecological imbalances, and impacts on human well-being.



Learning Outcome: Students will be able to

1. Identify the different types of habitats found on Earth, including their unique characteristics and the organisms that inhabit them.
2. Analyze and evaluate the impact of human activities on habitats and biodiversity and propose evidence-based conservation strategies to mitigate negative effects.

Teaching learning strategies/ Suggestive classroom activities:

- The teacher will show a video based on the reasons behind the extinction of animals.
Link: <https://www.youtube.com/watch?v=ogLFEq1X0RM> (Duration: 5m 52s)
- Students can choose an endangered species and create an informational poster to raise awareness about its difficulty. The poster should include facts about the species, its habitat, reasons for its endangered status, and actions that can be taken to help protect it. Students can present their posters to the class and discuss the importance of conserving endangered species. (Duration: 30 minutes)
- Arrange a virtual field trip to a wildlife reserve, nature reserve, or a zoo that focuses on the conservation of endangered species.

Students may write down their reflections of learning this DRR topic in their journal

Class: VI - SCIENCE (NCERT Textbook Science 6) Chapter No. & Name: 07, MOTION AND MEASUREMENT OF DISTANCES (Page No.:74- 85)

Related DRR Topic: Road accidents

The teacher starts the session by conducting a simple experiment where students can relate motion and measure the speed of different objects. They can use stopwatches and measure the time it takes for objects like toy cars or paper airplanes to travel a certain distance. By calculating the speed (distance/time), students can compare and discuss the differences in speed between the objects. Then the teacher can share stories or news articles that highlight the consequences of road accidents.



Learning Outcome: Students will be able to

1. Enlist the precautionary measures to avoid/prevent road accidents.
2. Implement road safety practices like wearing seat belts, using helmets while cycling/riding a bike, etc. in daily life.
3. Calculate speed of any object in motion.

Teaching learning strategies/ Suggestive classroom activities:

Teacher will show a video about road safety measures.

Link: https://www.youtube.com/watch?v=_NeEF1fwT4k (Duration-3m 28s)

Students will organize a campaign within the school or community to raise awareness about road safety. Students can create posters, banners, and pamphlets with important road safety messages and distribute them in the neighborhood. (Duration- 1 hour)

Students may write down their reflections of learning this DRR topic in their journal

Class: VI - Science (NCERT Textbook Science 6)

Chapter No. & Name: 09, Electricity and Circuits (Page Nos: 95-103)

Related DRR topic: Short circuits leading to fire accidents

The teacher can start the class by showing pictures and newspaper cuttings about electric short circuits depicting the severe damage caused by them. The chapter emphasizes the materials used to make an electric circuit and the flow of electric current in different materials i.e. in conductors and insulators. It also emphasizes the safety measures to be followed while working with live electric wires.



Learning Outcome: Students will be able to

- 1.State the safety measures that should be taken while working with live electric wires and electrical appliances.
- 2.Enlist the causes and effects of electrical short circuits they have.
- 3.Demonstrate the safety measures to be taken while handling electrical appliances to avoid electrocution.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video based on safety measures to avoid electrocution.

Link: <https://www.youtube.com/watch?v=iNpizBLXao8> (Duration – 5m 29s)

NOTE: Relevant parts of the video may be shown in class VI.

- Students will do a role play about the safety measures has to follow while handling electrical appliances. (Duration- 15 minutes)

Students may write down their reflections of learning this DRR topic in their journal

Class: VI – Science (NCERT text book Science-6)

Chapter-11: Air around us (Page: 115-122)

Related DRR topic: Environmental pollution (Air pollution)

The teacher can show a picture depicting several causes of air pollution to introduce the chapter. The chapter emphasizes avoiding burning of dry leaves and discarded remains of crops as they lead to pollution. They increase the accumulation of carbon dioxide in the air and makes it polluted. Air pollution ultimately leads to serious health hazards not only in humans but also in other living organisms.



Learning Outcome: Students will be able to

1. Enumerate the causes and consequences of air pollution. Outline the primary sources of air pollution in New Delhi.
2. Detail the impacts of air pollution on the health of humans, as well as on birds and animals in New Delhi.
3. Provide a comprehensive list of various measures that can be adopted to mitigate and reduce air pollution.

Teaching Learning Strategies/ Classroom Activities:

- Teacher will show a video based on air pollution in New Delhi to explain about the causes and effects of air pollution.

Link: <https://youtu.be/IPAV9kumNq8> (3m 26s)

Duration: 20 minutes

- Case Study and Making a collage: Students will do a case study on New Delhi being one of the most polluted cities in the world. They will collect cut outs related to New Delhi Air pollution from newspapers/ magazines and make a collage of it and paste it in their scarp book. They will also mention a few ways in which air pollution can be reduced.

Duration: 20 minutes

Students may write down their reflections of learning this DRR topic in their journal

Class: VII - SCIENCE (NCERT Textbook Science-7)

Chapter No. & Name: 3, HEAT (Page Numbers: 24-37)

Related DRR topic: GLOBAL WARMING

The teacher can introduce the topic by explaining that Global warming refers to climate change that causes an increase in the Earth's temperature. Natural events and human influences are believed to be top contributions towards the increase in average temperatures. Global warming is a rise in the surface and atmospheric temperature of the earth that has changed various life forms on the earth. Human activities include industrial production, burning fossil fuel, and mining of minerals, cattle rearing and deforestation.



Learning Outcome: Students will be able to

- 1.State that the natural cause of global warming is increase in the greenhouse gases. [Greenhouse gases](#) are carbon monoxide and [sulphur dioxide](#).
- 2.State that volcanic eruptions are another reason for global warming.
- 3.Enlist various problems caused due to global warming.
- 4.Enlist various measures to reduce the effect of global warming.
- 5.List out precautionary measure to protect the future generations from more harm caused due to global warming.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video based on the different solutions to stop global warming.
- Link: <https://youtu.be/mNf2bvdTqV4> (Duration – 6m 46s)
- Students will do a role play on different causes of global warming and measures to reduce it. (Duration- 20 minutes)

Students may write down their reflections of learning this DRR topic in their journal

Class: VII – Science (NCERT text book Science-7)

Chapter- 4 Acids, Bases and Salts (Page 38-46)

Related DRR topic: Acid Rain

The teacher can introduce the topic by showing the picture of Taj Mahal and asking if they are aware that it is becoming yellow day by day. She can also ask if they know the of the reason behind it. Then she can explain that rain containing excess of acids is called acid rain. It occurs due to the emission of pollutants, primarily sulfur dioxide (SO_2) and nitrogen oxides (NO_x), into the atmosphere. When these pollutants react with water, oxygen, and other chemicals in the air, they form sulfuric acid and nitric acid, which then fall to the Earth's surface as acid rain. Acid rain can have detrimental effects on forests, lakes, and infrastructure, as well as human health.



Learning Outcome: Students will be able to

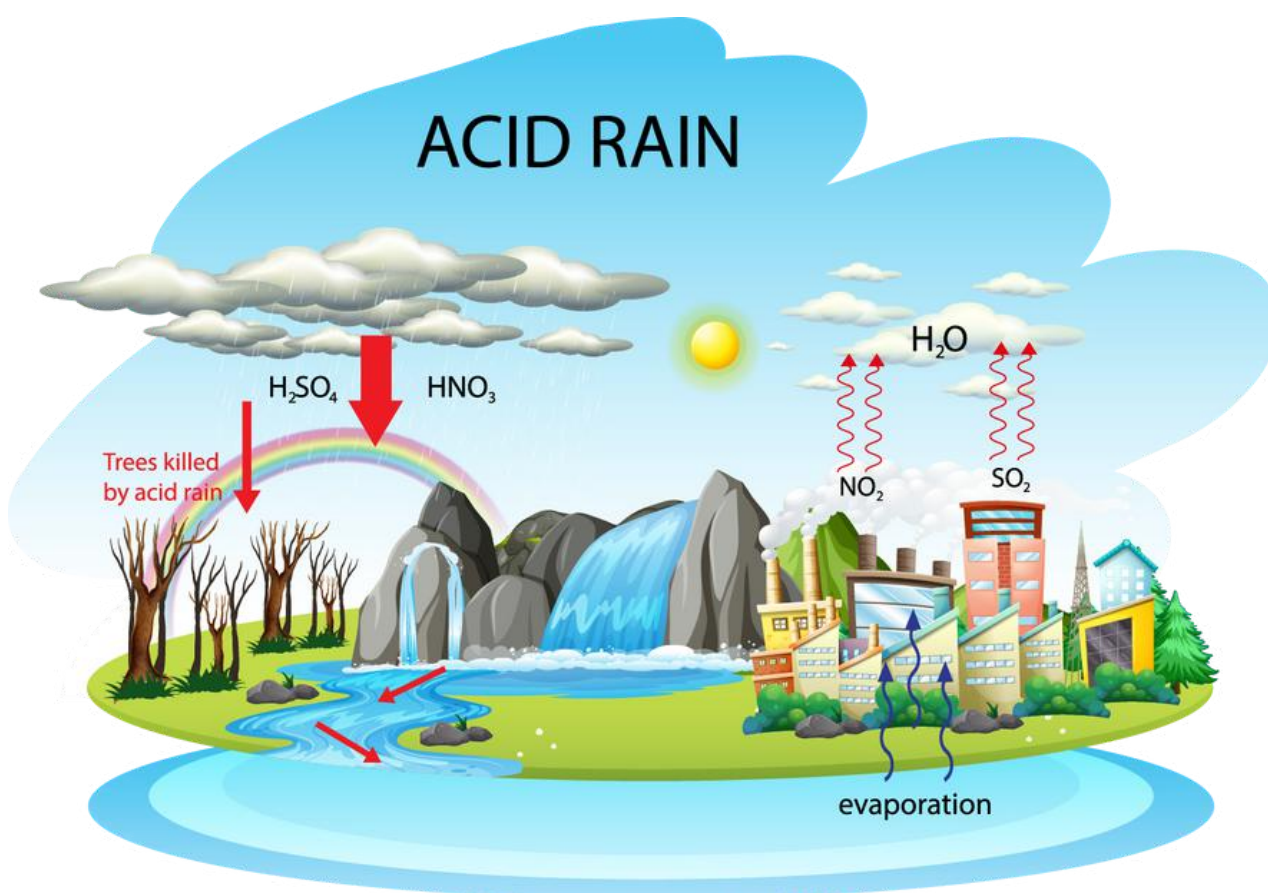
1. List the causes and effects of acid rain on monuments, forests, lakes, soil, aquatic organisms, and human health.
2. Describe how acid rain indirectly affects human health through water contamination and air quality degradation.
3. Explain how acid rain affects natural ecosystems, including its role in nutrient leaching, forest damage, and aquatic life disruption.
4. Conclude by suggesting various methods to control acid rain, such as emission reduction, reforestation, utilization of renewable energy sources, public awareness and education, and international cooperation on environmental policies

Teaching Learning Strategies/ Suggestive Classroom Activities:

Group Discussion: Class will be divided into groups of four/five and each group will be given 5-7 min to discuss the causes and effects of acid rain on monuments, forests, lakes, soil, aquatic organisms and human health. They will also discuss ways to control acid rain and mitigate its effects. They will share their views with the other students of the class.

Reference Link: <https://youtu.be/cRKQT7DeN-E>

Students may write down their reflections of learning this DRR topic in their journal



Class: VII Science (NCERT Textbook Science 7)

Chapter No. & Name: 10, Electric current and its effect (Page No. 109-122)

Related DRR topic: Electric short Circuits

The teacher can introduce the topic by narrating the story of some accident which mainly happened due to short circuits.

She can show fuse and Miniature Circuit Breaker along with different components of electric circuits. This topic emphasizes on the causes and after effects of an electric short circuit.



Learning Outcome: Students will be able to

1. State the importance and function of fuse and Miniature Circuit Breaker (MCB)
2. State the cause of excessive current due to touching of wires and connection of many devices to a single circuit in electric circuits.
3. List out the safety measures to be followed during electric short circuits.
4. Enlist the safety measures to be followed when electric poles are uprooted due to strong winds, storm and cyclones.

Teaching learning strategies/ Suggestive classroom activities:

1. Teacher will show a video based on causes of electrical fires. Students will discuss electrical fire safety tips and more about short circuits, electrical faults, and the right electrical protection in their home

Link: <https://youtu.be/kuDfDWUrEus> (2m 29s)

Note for the teacher-The relevant parts of the video may only be shown in std VII.
Electrical Safety

<https://www.youtube.com/watch?v=Ybp8sEK0mm0> (2min 05 sec)

2. Group discussion: Students will discuss about the safety measures to be followed when electric poles are uprooted due to strong winds, storm and cyclones.

Students may write down their reflections of learning this DRR topic in their journal

Class: VII – Science (NCERT text book Science-7)

Chapter-12 Forests: Our lifeline (Page 142-155)

Related DRR topic: Deforestation leading to flood

The teacher can show the picture of a flood affected area of a forest to introduce the chapter depicting the havoc created by a severe deforestation which leads to flood in forests. Deforestation causes the topsoil to become loose and leads to reduction in water holding capacity of the soil. This results in accumulation of water on the surface which leads to flood during heavy rainfall. Flood leads to loss of natural vegetation and animal life.



Learning Outcome: Students will be able to

1. Enlist the effects of deforestation in forests. They will conclude that deforestation ultimately leads to flood.
2. Enlist the steps to reduce deforestation.
3. State the importance of afforestation to reduce natural disasters like flood in forests.
4. Enlist a few steps to minimize the after effects of such calamities.
5. Identify the role of National Disaster Response Force (NDRF), whose main objective is to build a safer and disaster resilient India by developing a holistic, proactive, multi-disaster and technology driven strategy for disaster management.
6. Enlist devastating effects of flood in Kaziranga National Park, Assam (2022).
7. Analyze and state the measures which can be taken to protect and rescue animals during a forest flood.

Teaching Learning Strategies/ Suggestive Classroom Activities:

1. The teacher may use the following video clips to show the devastating effects of flood in Kaziranga National Park, Assam (2022). Students will discuss about measures which can be taken to protect and rescue animals during floods in forests. They will prepare a presentation on the topic “Forest flood and its effects” and present it in class.

(Duration: 30 minutes)

Link:

https://youtu.be/tP9P_7hsTAo (1m 53s)

<https://youtu.be/wNf8o0ORBPM> (1m 59 s)

Students may write down their reflections of learning this DRR topic in their journal



Class: VII – Science (NCERT Text book Science 7)

Chapter 9- Motion and Time (page no. 92-108)

Related DRR topic: Accidents due to high-speed vehicle

The teacher can start the session by discussing the different part of speedometer, so that students will be able to read speedometer. She can discuss various accidents that have happened in and around their locality and discuss about the severity of these activities due to high speed of the vehicle. The chapter focuses on the concept of speed and speed limit of different vehicles. Teacher will also explain different safety measure and traffic rule to be followed during travelling which help them to move safely during travelling. Teacher will explain the role of Transport Research Wing (TRW) of the ministry of road transport and highway.



Learning Outcome: Students will be able to

1. Enlist the causes and effects of road accidents.
2. Enlist the precautionary measures to be followed to avoid road accidents.
3. Implement road safety practices in daily life.

Teaching learning strategies/ Suggestive classroom activities:

Role Play: Students will perform a skit to emphasize on road safety practices and show different symbols of traffic symbols which are mainly installed beside roads. Teacher will show a video to emphasize on the consequences of rash driving/ over speeding and road safety practices.

Link:

<https://youtu.be/UuwMhA3pPLo> (1m 26s)

https://youtu.be/shBw2_fFRiw (2m 23s)

Students may write down their reflections of learning this DRR topic in their journal

Class: VII – Science (NCERT text book Science-7)

Chapter-13 Wastewater Story (Page 156-166)

Related DRR topic: Waste Management

The teacher can show a picture showing waste disposal practices and discuss about harmful effects of improper waste disposal practices on the environment. She will show a chart with several items and ask students to identify which of them are biodegradable and non-biodegradable. The chapter emphasizes on our role in keeping our environment clean and healthy. It also focuses on our responsibility in maintaining the water sources in a healthy state.



(Text picture)



(Text picture)

Learning Outcome: Students will be able to

1. Identify and differentiate between biodegradable and non-biodegradable waste.
2. State the importance of better waste management practices to keep our environment clean and healthy.
3. List a few waste segregation practices to be followed at home, school, public places and tourist places.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Group discussion: Students will be divided in groups and each group will be given a chance to discuss about good waste management practices to be followed in home, school, public places and tourist places. Then each group will be asked to tabulate some DOs and DON'Ts to be followed while doing waste management.

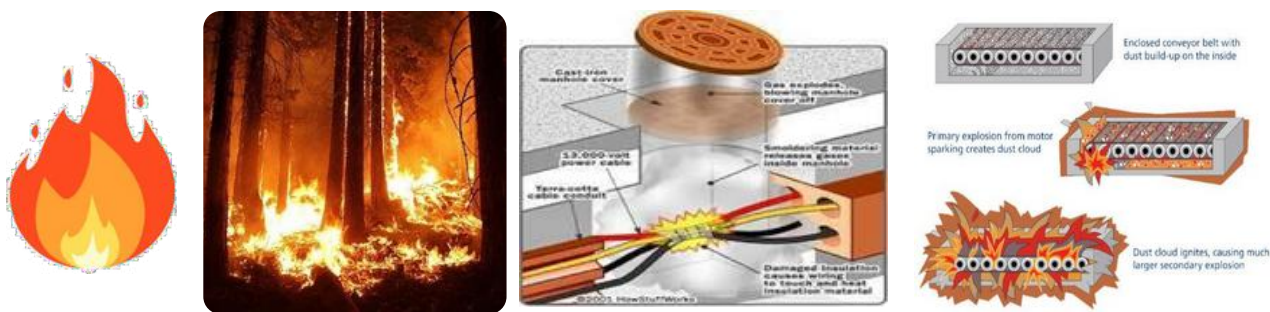
Students may write down their reflections of learning this DRR topic in their journal

Class: VIII – SCIENCE (NCERT Text book SCIENCE 8)

Chapter-09 FRICTION (Page 112 - 122)

Related DRR topic: FIRE ACCIDENTS

The chapter FRICTION depicts primary insights on frictional force. Friction is a fundamental component of fire behavior. It influences how fires spread, the rate at which they advance, and the intensity of the flames. Understanding the role of friction helps predict how fires will behave under different conditions. Within this framework, knowledge of how friction impacts fire accident is crucial for the students to develop effective fire management strategies and mitigate the risks associated with these destructive events.

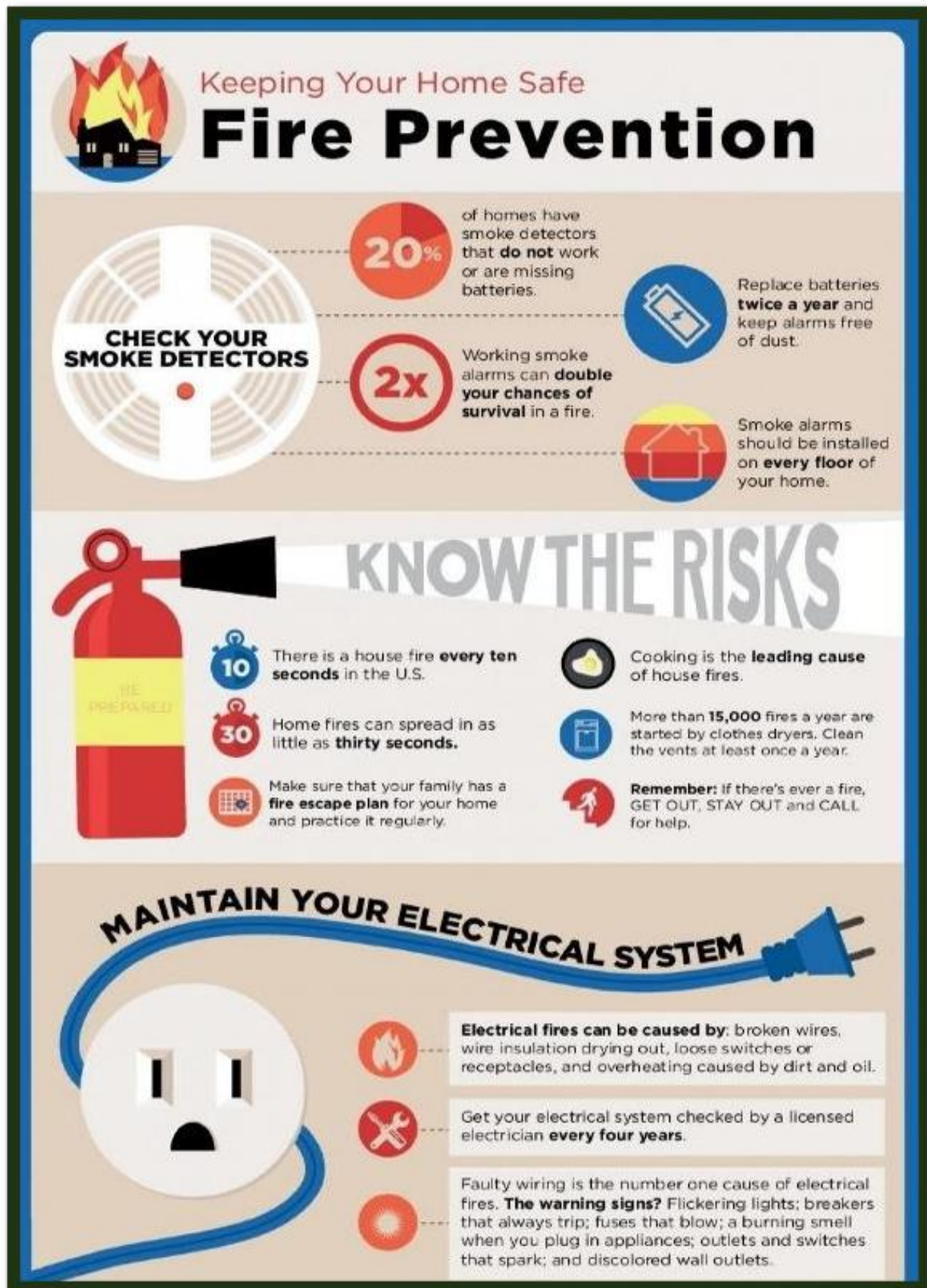


Learning Outcome: Participating in this lesson will help students to:

1. Identify the role of friction in fire accidents and the factors that contribute to their occurrence.
2. Demonstrate strategies for preventing fire accidents related to friction.
3. Enlist prevention, mitigation, and preparedness strategies for fire accidents.

Teaching learning strategies/ Suggestive classroom activities:

1. **Perform experiments** to illustrate the conditions necessary for friction-induced fires, such as using materials of different textures and measuring the temperature increase due to friction.
2. **Show videos or documentaries** that highlight fire accidents caused by friction and discuss the factors involved in the spread and intensity of fires.
<https://youtu.be/YzaQxBILp3A> (Duration: 02:20)
3. **Invite guest speakers** who have expertise in fire safety, friction-related fire risks, or related fields to share their knowledge and experiences with the students.
4. **Provide hands-on experience** with fire safety equipment, such as fire extinguishers, fire blankets, or fire-resistant materials.
5. **Create safety posters or infographics** highlighting fire safety tips, emergency numbers, and preventive measures, and display the posters around the school or in common areas to raise awareness among students, teachers, and staff.



Students may write down their reflections of learning this DRR topic in their journal

Class: VIII – SCIENCE (NCERT Text book SCIENCE 8)

Chapter-08 FORCE AND PRESSURE (Page 93 - 111)

Related DRR topic: CYCLONE

The chapter FORCE AND PRESSURE offers a foundation on the concept of pressure and its effects on liquids and gases, with special highlights on the magnitude of atmospheric pressure. In this context, the students can be provided with an opportunity to investigate "cyclones" through individual and/or classroom activities. The importance of the study could be illustrated through videos and pictures based on the recurrence of cyclones and their vulnerability to society.



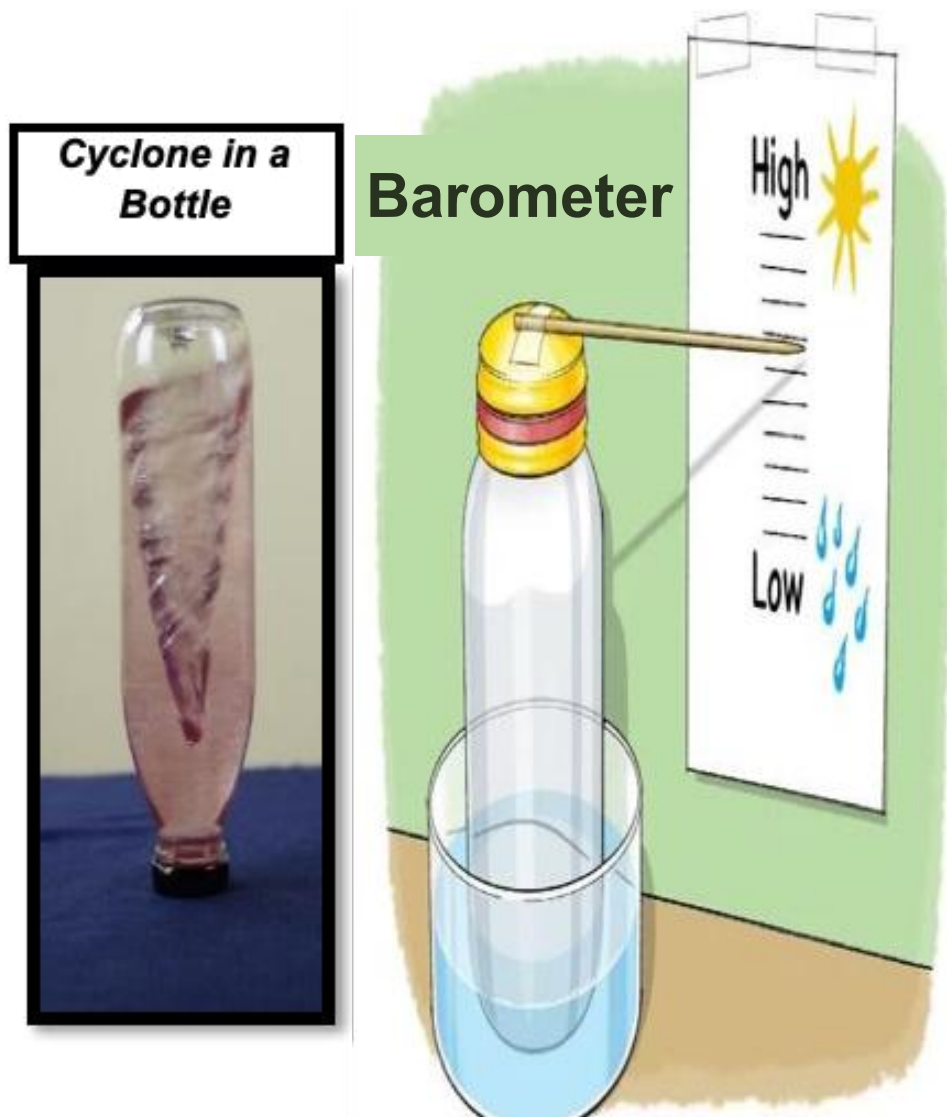
Learning Outcome: Participating in this lesson will help students to:

1. Enlist the effective measures to be taken during a cyclone.
2. Classify the effects of a cyclone.
3. Evaluate how a cyclone is formed and how it is predicted and measured.

Teaching learning strategies/ Suggestive classroom activities:

- The students will be given an activity named “Cyclone in a Bottle” relating the air pressure and water flow. **(Duration: 10 min)**
- Teacher will demonstrate “Barometer Science Project” to brief how atmospheric pressure is measured. **(Duration: 20 min)**
- Teacher will show a video on tropical cyclone severity categories, and the students will be given an assignment to collect news articles related to the effects of past cyclones in India.
<https://youtu.be/qTV8Qft6Nco> (03:06 min)
- The students will be asked to read the “Cyclone: Do's & Dont's” provided by the **National Disaster Management Authority – Government of India**, and prepare a chart based on the same. (<https://ndma.gov.in/Natural-Hazards/Cyclone/Dos-Donts>).

Students may write down their reflections of learning this DRR topic in their journal



Students may write down their reflections of learning this DRR topic in their journal

Class: VIII – Science (NCERT Text book Science 8)

Chapter No. & Name-12 Some Natural Phenomena (Page 151-164)

Related DRR topic: Earthquake

The teacher can show the picture of an earthquake affected area depicting the severe damage caused by it to introduce the chapter. The chapter emphasizes on the causes and after effects of an earthquake. It also emphasizes on the safety measures to be followed during an earthquake.



Learning Outcome: Students will be able to

1. Enlist the causes and effects of an earthquake.
2. List out the safety measures to be followed during an earthquake.
3. Demonstrate safety measures that can be followed during an earthquake.
4. State the role of National Disaster Management Authority (NDMA) during an Earthquake.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- Teacher will show a video based on safety measures to be followed during an earthquake. Link: <https://youtu.be/r5EbbrVXoQw> (4m 54s) Students will also discuss about the role of National Disaster Management Authority (NDMA) during an Earthquake.
(Duration: 15 minutes)
- Awareness Rally: Students will go on a rally in their neighboring areas to create awareness about the safety measures to be followed during and after an earthquake.
(Duration: 1 hour approximately)

Students may write down their reflections of learning this DRR topic in their journal

Class: VIII – Science (NCERT Text book Science 8)

Chapter-1 Crop Production and Management (Page 1-16))

Related DRR topic: Impact of disasters on crop production and food security

The teacher can show the picture of barren land and ask students if they are able to identify the disaster which had led to this condition of that land. Then she explains the various in which crop production gets affected severely. She can explain how drought turns a green field to a barren land and the ways in which flood and cyclones destroy all the crops. She will also discuss the importance of Early warning systems.



Learning Outcome: Students will be able to

1. Identify vulnerable zones.
2. State measures to protect crops during a disaster.
3. Enlist the various types of disasters which affect crop production.
4. Enlist the ways in which the impact of disaster can be reduced. e.g., Early warning systems.
5. Justify that disasters affect the crop production adversely.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- Teacher will show a video based on impact of disasters on food production and then she can explain how different kind of disasters affect various sectors of food production viz., crops affected by flood, storm and drought. Student will be asked to discuss the ways in which the impact can be reduced.
Link: <https://youtu.be/stl1NrLXqgg> (2m 40s)
(Duration: 25minutes)
- Making a collage: Students will collect newspaper/magazine cut-outs and show the places where crop production was affected adversely due to disasters.
Duration (15 min)

Students may write down their reflections of learning this DRR topic in their journal

Class: VIII Science (NCERT Textbook Science 8)

Chapter No. & Name: 3, Coal and Petroleum Page Nos. (32 to 37)

Related DRR topic: Oil Spills

The teacher will show some articles based on oil spills articles and explain how oil spills occur during petroleum extraction process.

This topic emphasizes on the causes and after effects of oil spills. Teacher will narrate some accidents that had happened due to oil spills.



Learning Outcome: Students will be able to-

1. List the precautions to be taken during petroleum extraction process.
2. List out the adverse effects of oil spill accidents on marine life.
3. Analyse the causes of oil spills over the seas and oceans.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video based on causes and effects of oil spill accidents that has occurred so far.
Link: <https://youtu.be/nshSoLw0tdI> (3m 51s)
- Teacher will ask students to explore more about worst oil spill accidents that has occurred across the world and also conduct a group discussion on the preventive measures that can be taken to avoid these types of accidents.

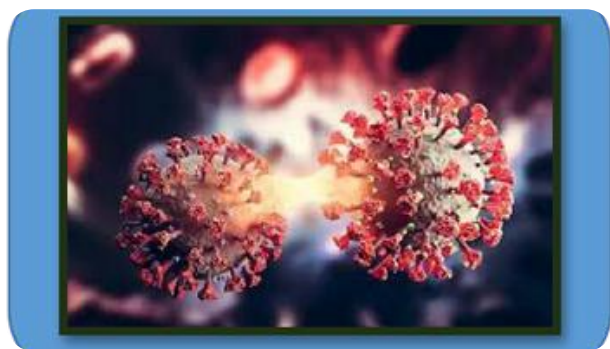
Students may write down their reflections of learning this DRR topic in their journal

Class: VIII – Science (NCERT Text book Science 8)

Chapter-2 Microorganisms; Friends and Foe (Page 151-164)

Related DRR topic: Pandemic (Covid-19)

The teacher can introduce the chapter by asking students about their experience during the pandemic. She can also share her experience with the students. Then she can explain the causes of COVID-19. She can also discuss the role of government, and the frontline warriors like the health care professionals & the police in helping our citizens face the challenging situation. She will also explain the safety measure one can follow during a pandemic.



Learning Outcome: Students will be able to-

1. Enlist the causes and effects of COVID-19.
2. Tabulate the number of active cases, discharged and deaths due to COVID-19 in India.
3. Enlist the number of Indians who got vaccinated against COVID-19
4. Enlist a few ways in which the impact of COVID-19 can be reduced.
5. State the safety measures one can follow during a pandemic

Teaching Learning Strategies/ Suggestive Classroom Activities:

Case study and discussion: Students will visit Government of India's Ministry of health and family welfare website and find out the number of active cases in India currently, number of people discharged, number of death and the total number of people who have got vaccinated till date. They will also explore the state data available on this website and discuss about the effects of COVID-19 on Indian citizens. They will also discuss the ways in which the effect of the pandemic could be reduced and the safety measures one can follow during a pandemic/ pandemic-like situation.

Link: <https://www.mohfw.gov.in/> (Duration: 30 minutes)

Students may write down their reflections of learning this DRR topic in their journal

Class: IX – SCIENCE (NCERT Textbook for class IX)

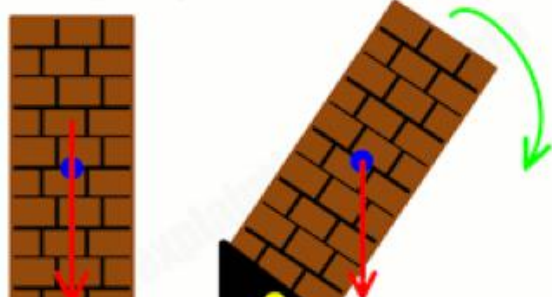
Chapter No. & Name – 09, GRAVITATION (Page No.: 100 - 112)

Related DRR topic: STRUCTURAL INTEGRITY AND FAILURE.

Gravity plays a significant role in the stability of structures. Disasters can occur when buildings or infrastructure fail due to the force of gravity, leading to collapses and potential loss of life. Effective disaster management in this context involves robust engineering practices, regular inspections, maintenance protocols, and adherence to construction codes and standards to ensure structural integrity.

The chapter explains the concept of Gravity and how this force holds objects together on the surface of the earth. The chapter also shows

How gravity makes a wall collapse



Learning Outcome: Students will be able to-

1. Enlist the effect of gravity and gravitational force.
2. Demonstrate the significance of stability of structures (and materials needed to stabilise the structures) in the safety of the structures (buildings).

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video about structural stability and centre of gravity.

Link: <https://www.youtube.com/watch?v=sOtHtD3NEz0> (6 m 38 s)

- **Structural Designing:** Students can be asked to design and build structures with different materials and test their stability in the classroom environment. (40 min)

Students may write down their reflections of learning this DRR topic in their journal

Class IX Science (NCERT Textbook Science-9)**Chapter No. & Name: 2, Is matter around us pure? (Page Nos. 14-25)****Related DRR Topic: Elements and compounds used as war weapons.**

Teacher will explain the classification of pure substance into elements and compounds. Same atoms combine to form element whereas different atoms combine to form compounds. Elements can be classified into metals, metalloids and non-metals, students will recall the properties and uses of metals and non-metals (such as chlorine which is a disinfectant). Teacher will explain how chemicals are used as war weapons. Students will be shown the images of World War 1 where chemical weapons such as chlorine are used.



Learning Outcome: Students will be able to-

- 1.State the safety measures taken during the release of toxic chemicals. (e.g. if the toxic gas released is heavier than air then people should move to the higher elevation, usage of mask and PPE kits)
- 2.Enlist various chemical weapons used.
- 3.Enlist the causes and effects of Chernobyl disaster and Bhopal gas tragedy.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video of safety measures taken during the release of toxic chemicals. (2m 20s)

<https://www.opcw.org/resources/assistance-and-protection/what-do-chemical-emergency>

- Students will discuss about chemical disasters such as Chernobyl disaster and Bhopal gas disaster (20 minutes)

Students may write down their reflections of learning this DRR topic in their journal

Class: IX – SCIENCE (NCERT Textbook Science- IX)

Chapter No.08: FORCE & LAWS OF MOTION (Page No.: 87 - 99)

Related DRR topic: ROAD ACCIDENTS/ RAILWAY ACCIDENTS

The teacher can start the session by discussing about the Physics involved in road safety. They can show images of accidents that have happened in and around their locality and discuss about the severity of these activities based on the speed of the vehicles and the force with which they collide.

The chapter focuses on the concept of force and how different forces can affect the motion of objects. Through Newton's three laws one can understand how they can effectively apply force in various practical situations and help move safely.



Learning Outcome: Students will be able to-

1. List out different road safety measures to be followed and implement them in daily life situations to avoid major mishap on the street.
2. Calculate the stopping distance to avoid collision of vehicles on the road, by applying the concept of force

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video about road safety and the physics involved in it

Link: <https://www.youtube.com/watch?v=007TEpebaXI> (Duration – 9 minutes 38 seconds)

- Students can demonstrate the crash of various sized objects and the impact they have on each other. (Duration – 15 minutes)
- Students can be given a case study based on the recent train accident in Odisha and discuss on the possibilities of what could have gone wrong and how it could have been avoided. (Duration – 30 minutes)

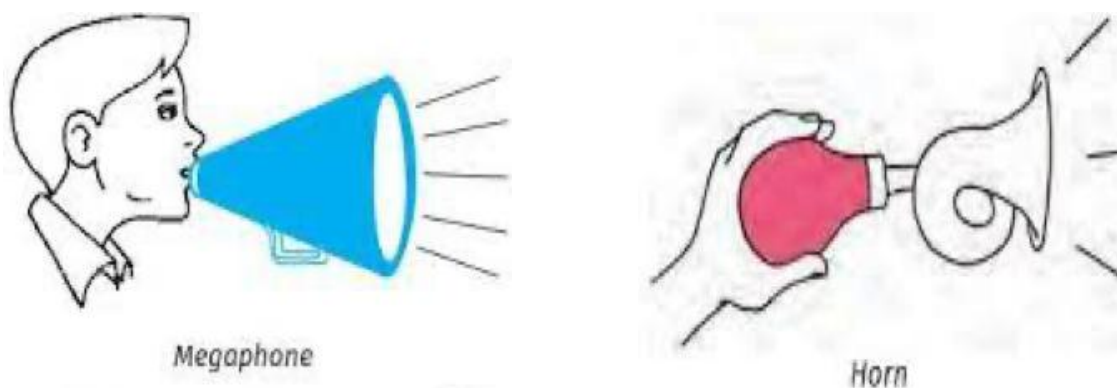
Students may write down their reflections of learning this DRR topic in their journal

Class: IX – Science (NCERT Textbook Science- IX)

Chapter No.12: Sound (Page No.: 127-139)

Related DRR topic: Role of sound in emergency situations

The emphasizes on the various characteristics of sound as a wave. Teacher can integrate this chapter with DRR by explaining the role of sound during an emergency situation and the importance of effective communication including warning systems, emergency communication and information dissemination.



Learning Outcome: Students will be able to-

1. Enlist the various means communication that can be utilized during an emergency situation.
2. State the importance of warning sirens and radio broadcasting during/after a disaster.
3. Enlist the significance of effective communication in reducing the impact of disasters and saving lives.

Teaching learning strategies/ Suggestive classroom activities:

1. **Research and Presentation:** Students will be divided into groups and each group will be assigned a specific aspect of sound in disaster management. Examples including warning sirens, radio broadcasting, or communication devices. Students will be instructed to research their assigned topics focusing on how sound is utilized, its effectiveness and any case studies or examples of its use in real-world disasters. They will present their findings in the class through a PPT. (30 min)
2. **Reflection and Discussion:** Students will be engaged in a reflection and discussion session. They will be asked questions such as:
 - a. How did the research and presentation deepen your understanding of sound in disaster management?
 - b. What are the key takeaways regarding role of sound in disaster management?
 - c. Effective communication contributes to saving lives and minimizing the impact of disasters. Justify.

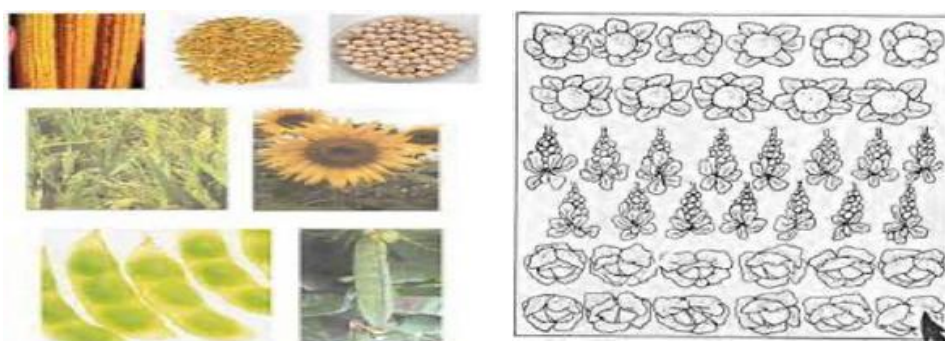
Students may write down their reflections of learning this DRR topic in their journal

Class: IX – Science (NCERT Textbook Science- IX)

Chapter No.12: Improvement in Food Resources (Page No.: 140 - 151)

Related DRR topic: Sustainable agriculture and Environment Conservation

The chapter on improving food resources emphasizes sustainable agriculture practices, such as organic farming, integrated pest management and crop rotation. Sustainable agriculture practices contribute to environmental conservation, minimize soil erosion, preserve water resources and reduce the use of harmful pesticides and fertilizers, ultimately promoting long-term food security and mitigating the risk of disasters associated with environmental degradation.



Learning Outcome: Students will be able to-

1. Enlist the various ways in which sustainable agricultural practices can be implemented.
2. Compare different irrigation systems and their advantages in terms of conserving water and soil.
3. Analyse the benefits of crop rotation, impact of pesticides on environment and list out the effectiveness of integrated pest management practices.

Teaching learning strategies/ Suggestive classroom activities:

1. Field Trip: Students will be taken to a local farm/ community garden. This hands-on experience allows them to see sustainable agricultural practices. (40-50 min approximately)
2. Research Project: Students will explore various aspects of sustainable agriculture and conservation. They can investigate the benefits of crop rotation, impact of pesticides on the environment or effectiveness of different irrigation methods. They will present their findings in the class. (30 min)
3. Students will be shown videos based on sustainable agriculture and environment conservation.

Link: <https://youtu.be/iloAQmroRK0> (3m20s)

https://youtu.be/PrQ_wu67ItM (2m27s)

Students may write down their reflections of learning this DRR topic in their journal

Class: X – Science (NCERT Text book Science 10)

Chapter no. & name: Metals and Non-metals Page No. 38-57

Related DRR topic: Alloys- used as rescue equipment during natural disasters

Teacher will ask the example and uses of alloys. Students will discuss about the alloys which are used as rescue equipment. Alloying will change the properties of metals /non-metals used. Teacher will show the picture of titanium alloys and steel used as rescue tool.



Learning Outcome: Students will be able to-

1. Identify different alloys and its constituents
2. State the advantages of alloying.
3. Analyze the importance of alloys used for structural stability and as a rescue equipment.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video of Kerala flood rescue mission. (2min)
<https://youtu.be/NDGuWQ6fvz8>
- Students will discuss about various alloys used as rescue equipment such as climbing ropes, harness, hydraulic cutters and make a note of the same. (20min)

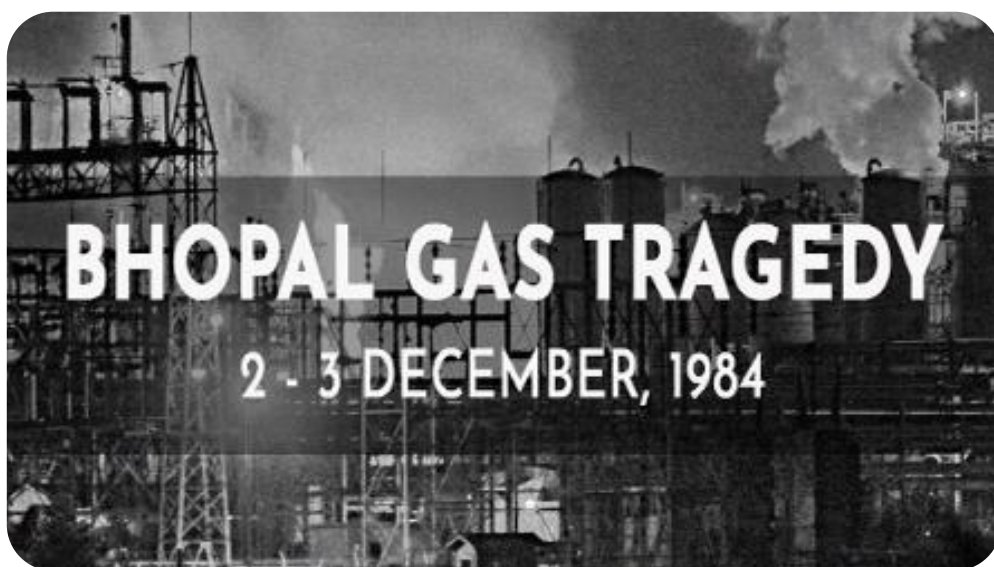
Students may write down their reflections of learning this DRR topic in their journal

Class: X – SCIENCE (NCERT Textbook Science- X)

Chapter No. & Name: 4, Carbon and its Compounds (Page No.:58 -78)

Related DRR topic: Carbon compounds and Environmental Disasters

The chapter carbon and its compounds emphasizes on the various compounds of carbon. Teacher can briefly review the chapter “Carbon and its Compounds” and highlight the nature of carbon compounds and their significance in our daily lives and then explain that certain carbon compounds can contribute to environmental disasters under specific circumstances.



Learning Outcome: Students will be able to-

1. Identify the potential risks associated with certain carbon compounds.
2. Analyse the causes and effects of environmental disasters caused due by carbon compounds.
3. Discuss and list out various mitigation strategies to prevent or minimize similar disasters from occurring in the future
4. Apply their understanding of risks, causes, and mitigation strategies of air pollution to real-world scenarios, thereby encouraging practical problem-solving skills.
5. Investigate alternative sources of energy and sustainable practices that reduce reliance on carbon-based compounds, fostering an understanding of green technologies and renewable energy sources.

Teaching learning strategies/ Suggestive classroom activities:

- **Brainstorming:** Students will be engaged in a brainstorming session and asked to identify carbon-based substances or compounds that have the potential to cause environmental disasters. Teacher will list their responses on the green board/ flipchart. (10 minutes)

- **Discussion on Environmental Disasters:** Teacher will review the list of carbon compounds generated by the students and facilitate a discussion about each item. Students will discuss the environmental disasters associated with these compounds, such as oil spills, chemical leaks, or air pollution caused by carbon emissions. (15 minutes)
- **Mitigation Strategies:** Students will be divided into groups and will be assigned with a specific environmental disaster caused by a carbon compound e.g., Deep Horizon Oil Spill, The Bhopal Gas Tragedy, etc. Each group will be instructed to research and identify mitigation strategies to prevent or minimize similar disasters from occurring in the future. (30 minutes)

Students may write down their reflections of learning this DRR topic in their journal



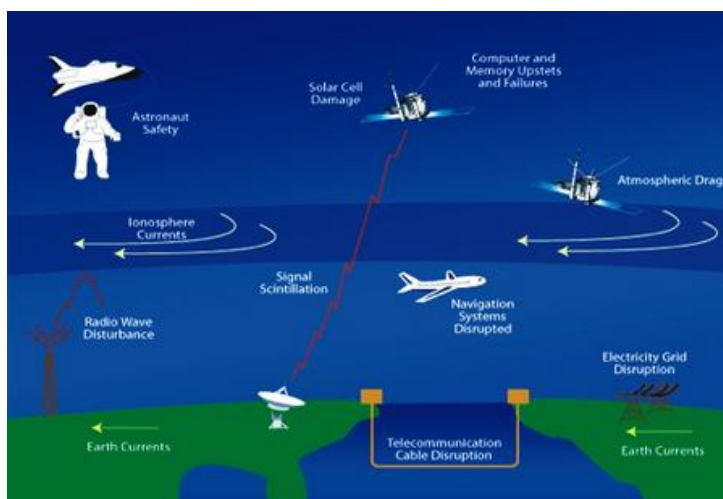
Class: X – SCIENCE (NCERT Textbook Science- X), Chapter No. & Name: 12, MAGNETIC EFFECTS OF ELECTRIC CURRENT (Page No.: 195-207)

Related DRR topic: GEOMAGNETIC STORMS – Effect on Earth.

Geomagnetic storms are a solar induced electromagnetic phenomenon that results in beautiful coloured effect called aurorae, which are effectively electric currents. These induced currents can disrupt navigation systems such as the Global Navigation Satellite System (GNSS) and create harmful geomagnetic induced currents (GICs) in the power grid and pipelines.

These geomagnetic storms could also trigger other global disasters such as floods, earthquakes or massive fire outage.

The chapter focuses on the concept of magnetic effects produced by electric current and how this effect can be controlled and regulated.



Learning Outcome: Students will be able to-

1. Enlist the magnetic impact electrical current produces.
2. List out different safety measures to be taken during a Geostorm.

Teaching learning strategies/ Suggestive classroom activities:

- Teacher will show a video about geomagnetic storm and its impact on earth.

Link: <https://youtu.be/jnzJaqJdyi4> (2 m 57 s)

- Students can be shown the 2017 movie 'Geostorm' and asked to reflect on the natural disasters depicted in the movie.

Students may write down their reflections of learning this DRR topic in their journal

Class: X – SCIENCE (NCERT Textbook Science- IX)

Chapter No. & name 2: Acids bases and salts (Page Nos. 17-37)

Related DRR topic: Soil degradation (pH degradation)

Teacher will begin the class by discussing the concept of soil degradation and its various forms, including pH degradation and explain that soil pH plays an important role in health and productivity of ecosystems. They will be asked to discuss various reasons of soil degradation and how pH is related to plant growth. The chapter focuses on the chemical properties of acids and bases such as neutralisation reaction, metal carbonate and acid reaction etc. Teacher will explain the importance of liming the soil (treating soil with CaCO_3) to balance the pH.



Learning Outcome: Students will be able to-

1. Identify the required Ph. for the healthy growth of a plant.
2. Perform an activity to find out the pH of soil.
3. Enlist the causes of soil pH degradation.

Teaching learning strategies/ Suggestive classroom activities:

1. Teacher will show a video on soil degradation (3Min).
<https://youtu.be/DM4AhycQzv0>
2. Students will collect soil sample from their area and mix 2g of It into 5ml of water. Collect the filtrate and check the pH with universal indicator. (20 MIN)
3. Students will discuss about the bases used to reduce the pH of soil. (5min)

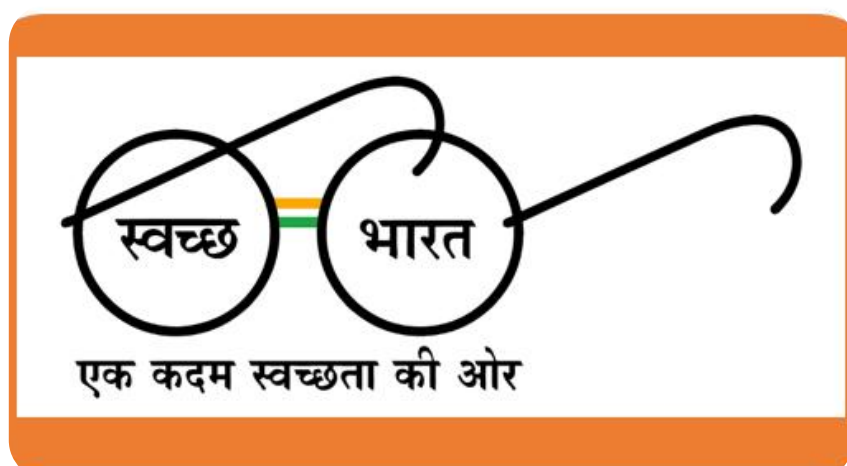
Students may write down their reflections of learning this DRR topic in their journal

Class: X – Science (NCERT text book Science-10)

Chapter No. & Name:13, Our Environment (Page 256-265)

Related DRR topic: Waste management

The teacher can introduce the chapter by narrating the story of Karaikal a small town in south-coast of India and explain its journey towards better waste management approach. She can also show a video of Karaikal and its citizens adopting better waste management practices. The chapter emphasizes on adopting better waste management practices to keep our environment clean and healthy.



Learning Outcome: Students will be able to-

1. Enlist better waste management practices to be followed at home, school and public places.
2. Identify and differentiate between biodegradable and non-biodegradable waste.
3. State the importance of better waste management practices to keep our environment clean and healthy.
4. Enlist a few ways in which the waste generation can be reduced.

Teaching Learning Strategies/ Suggestive Classroom Activities:

- Swachhata Abhiyaan: Students will participate in Swachhata Abhiyaan at school and segregate the waste as biodegradable/non-biodegradable. They will discuss various ways in which the waste generation can be reduced.
(Duration: 1 hour approximately)

Link for video related to Karaikal waste management: https://youtu.be/_YINmkbsL74

Students may write down their reflections of learning this DRR topic in their journal

Class: X – SCIENCE (NCERT Text book SCIENCE 10)

Chapter No. & Name: 11 ELECTRICITY (Page 171 - 194)

Related DRR topic: ARC FLASH ACCIDENTS

The chapter "Electricity" offers knowledge about the resistors that regulate the current through an electric circuit, with additional discussions on the heating effect of electric current. It is to be noted that in some electrical systems, if resistors are not properly sized or ventilated, excessive heat can accumulate and contribute to the severity of arc flash incidents that involve the rapid release of electrical energy in the form of an electric arc. This causes severe burns, injuries from the blast effect, and potential hearing and vision damage. Though arc flash accidents in homes are relatively rare compared to industrial or commercial settings, it is still important for the students to be aware of the potential risks associated with faulty wiring, overloaded circuits, damaged electrical appliances, improper electrical repairs, and inadequate electrical maintenance.



Learning Outcome: Participating in this lesson will help students to:

1. Identity the concept of arc flash accidents, their causes, and potential risks.
2. Enlist preventive measures and safety practices to mitigate the risk of arc flash accidents.
3. List out the importance of personal protective equipment (PPE) used for arc flash protection.

Teaching learning strategies/ Suggestive classroom activities:

- Provide information on arc flash accidents, including their definition, causes, and consequences through real-life case studies and videos of arc flash accidents.

<https://youtu.be/NsqUyalrbc0> (Duration: 06:56)

Note for the teacher - This video may be played till 5.37 minutes

<https://youtu.be/6hpE5LYj-CY> (Duration: 01:17)

- Explain various preventive measures to reduce the risk of arc flash accidents.

<https://youtu.be/h3c-gCQ5ya4> (Duration: 03:43)

- Introduce students to different types of PPE used for arc flash protection, such as flame-resistant clothing, face shields, and insulated gloves.
- Assign research projects to students where they investigate different aspects of arc flash accidents including the latest safety regulations, advancements in electrical system design, case studies of significant arc flash incidents, or emerging technologies for arc flash prevention. Have students present their findings to the class, fostering knowledge- sharing and collaborative learning.

Arc Flash PPE Chart



Students may write down their reflections of learning this DRR topic in their journal



Mathematics

Disaster Risk Reduction

Class VI-X

Mathematics

Table of Content

Chapter No.	Math NCERT Topic	Book P. No.	Related DRR Topic	P. No.
Class-VI				
1	Knowing our Numbers	1-18	Crop Failure	100
8	Decimals	133-141	Earthquake	101
9	Data Handling	142-152	Boat capsize	102
11	Algebra	169-176	Lightning	103
12	Ratio and Proportion	177-193	Building Collapse	104
Class-VII				
2	Fractions and Decimals	20 - 43	Floods	105
3	Data Handling	44 - 58	Cyclones	107
5	Lines and Angles	74 - 87	Bridge Failure	108
7	Comparing Quantities	108 - 123	Emergency Water Release	109
9	Perimeter and Area	144 - 159	Crowd Crush	111
Class-VIII				
4	Data Handling	37 - 50	Tsunami	112
7	Comparing Quantities	79 - 92	Global Warming	113
9	Mensuration	103 - 120	Earthquake	114
11	Direct and Inverse Proportion	129 - 144	Hurricane	115
13	Introduction to Graphs	157 - 169	Loss of Biodiversity	116

Chapter No.	Math NCERT Topic	Book P. No.	Related DRR Topic	P. No.
Class-IX				
1	Number Systems	01 - 24	Pandemic	117
3	Coordinate Geometry	43 - 54	Forest Fire	119
6	Lines and Angles	69- 82	Train accidents	120
9	Circles	116 - 130	Tsunami	121
12	Statistics	151 - 166	Landslide	122
Class-X				
4	Quadratic Equations	38 - 48	Road Accidents	123
5	Arithmetic Progressions	49 - 72	Heat Waves	124
7	Coordinate Geometry	99 - 112	Fire	125
12	Surface Areas and Volumes	161 - 170	Boat Capsize	126
13	Statistics	171 - 201	Earthquake	127

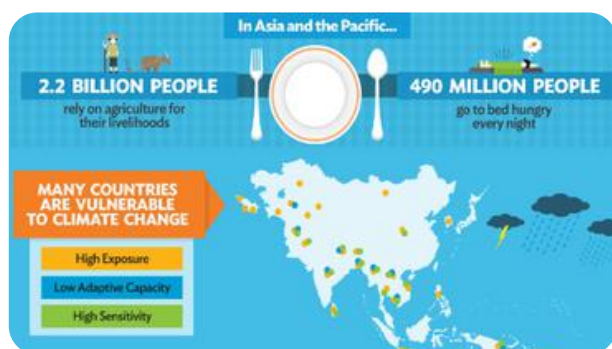
Class: VI, Subject: Mathematics

Chapter: 1 - KNOWING OUR NUMBERS, NCERT Textbook (Page No. 1 – 18)

NCERT Related DRR Topic: Crop Failure

According to CSE report, the climate change-induced natural disasters killed almost 3,000 people and 70,000 livestock, and destroyed around 4.1 lakh houses in 2022 alone. They also affected 18 lakh hectares of crop area.

The following pictures depict the data of reduction in crop yield because of climate change. This change in climate leads to higher temperatures and unanticipated rainfall, resulting in reduced crop yields and overall food production.



Learning Outcome: Students will be able to

1. Read and express large numbers in Indian and International number systems.
2. Understand the ways to reduce the emission of greenhouse gases.

Teaching learning strategies/ Suggestive classroom activities:

1. Students watch https://www.youtube.com/watch?v=G4H1N_yXBiA and discuss how Climate change causes Crop failure. [10 min]
2. Students list the ways a common man can contribute to check global warming. [15 min]
3. Students design a petition to be signed by the family members committing to practice measures that reduce global warming. [15 min]

References / Links:

[Climate Change - We are the PROBLEM & the SOLUTION \(Animated Infographic\) - YouTube](#)

[Friendly Guide to Climate Change - and what you can do to help #everytoncounts - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

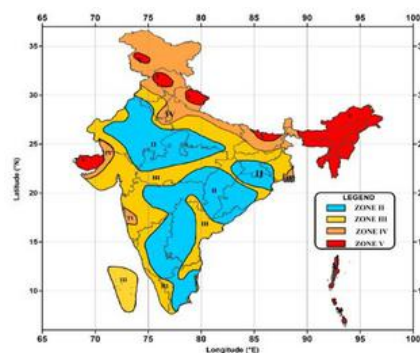
Class: VI, Subject: Mathematics

Chapter: 8 – DECIMALS, NCERT Textbook (Page No. 133 – 141)

NCERT Related DRR Topic: Earthquake

Earthquakes can be felt over large areas, though they usually last less than one minute. Earthquakes cannot be predicted. But scientists are working on it! So, staying prepared to face and survive earthquakes become important.

The map below shows earthquake prone zones. On 26th January 2001, Gujarat was hit by an earthquake of magnitude 7.7 Mw. Find below a picture showing the aftermath.



Learning Outcome: Students will be able to

1. Observe how decimals are used to express the magnitude of earthquakes.
2. Take precautionary measures to survive earthquakes.

Teaching learning strategies/ Suggestive classroom activities:

1. Students observe the earthquake affected regions in [Official Website of National Center of Seismology](#) and note down locations of 5 places in terms of latitude and longitude with the magnitude of the earthquake. [Andaman Sea – 15°30' N, 95°73' E – M : 4.7 - 19.06.23] [10 min]
2. Students watch a video <https://youtu.be/Q-v-G1iL67w> and discuss [10 min]
3. Students create a checklist to be planned and prepared using [NDMA](#). [20 min]

References / Links:

[Do's and Dont's | Official website of National Center for Seismology, Ministry of Earth Sciences, Government of India](#)

[NDMA](#)

[Earthquake | NDMA, GoI](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VI, Subject: Mathematics

Chapter: 9 – DATA HANDLING, NCERT Textbook (Page No. 142 - 152)

NCERT Related DRR Topic: Boat Capsize

The Thekkady boat disaster occurred on 30 September 2009, when the double-decker passenger boat 'Jalakanyaka' sank in Lake Thekkady. When the boat capsized, 45 tourists died. Structural problem, excess passengers on unsecured plastic chairs, overcrowding in one part of the boat, not wearing life jackets and lack of lifeguards and many such were the stated reasons.



Learning Outcome: Students will be able to

1. Learn the precautionary measures to be taken to avoid Boat capsizing accidents.
2. Represent the data using pictograph.

Teaching learning strategies/ Suggestive classroom activities:

1. Students may be divided into groups to collect information on Thekkady(2009), Mallapuram(2023), Thattekad(2007), Kumarakoam(2002), Bengal (2010), Dhubri (1912),. Hirakud (1914) boat accidents [10 min]
2. As a group, they investigate the reasons [10 min] and present the steps to be taken to avoid such incidents [10 min]
3. Students depict the number of casualties using a pictograph. [10 min]

References / Links:

[Boat Safety: 10 Measures to Prevent Boating Accidents - Lawkk](#)
[How to prevent boating accidents: With 14 helpful tips – Boating Valley](#)
[11 Tips for Avoiding Boat Accidents | Boating Mag](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VI, Subject: Mathematics

Chapter: 11 – ALGEBRA, NCERT Textbook (Page No. 169 – 176)

NCERT Related DRR Topic: Lightning

Lightning is a gigantic electrical spark. A single lightning flash has enough energy to light a 100-watt bulb for three months! Light travels faster than sound. That's why we usually see lightning before we hear the thunder. To determine how far away the lightning storm is from you, count the seconds between the flash and the crack and use the storm distance formula, $d = 343 \times t$, Where, 'd' is the lightning distance, and 't' is the time interval between lightning flash and thunder.



Learning Outcome: Students will be able to

1. understand the nature and function of variables and how to use them in equations.
2. understand and spread awareness on staying safe during lightning.

Teaching learning strategies/ Suggestive classroom activities:

1. Student watch the video [WCLN - Physics - Lightning Storm Distance \(in km\) - YouTube](#) or [How to calculate the distance from a lightning strike. - YouTube](#) to understand how to find the lightning distance algebraically. [10 min]
2. Teacher may use the video: [Lightning | NDMA, GoI](#) and discuss the precautionary measures to be taken to avoid being exposed to lightning. [15 min]
3. Students write slogans - "When thunder roars, go indoors!" - to spread awareness on how to stay safe during lightning and thunder. [15 min]

References / Links:

[Lightning \(nationalgeographic.com\)](#)
[Lightning Formula - GeeksforGeeks](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VI, Subject: Mathematics

Chapter: 12– RATIO AND PROPORTION, NCERT Textbook (Page No. 177 - 193)

Related DRR topic- Building Collapse

Negligence, use of poor-quality material led to Greater Noida buildings collapse. Flouting of structural engineering norms, including the use of poor-quality construction material, seems to be the reason behind the collapse of two buildings in Greater Noida on June 09, 2023.

“Generally, the ratio of cement with sand while preparing construction material is either 1:4, or at the most, 1:5. However, based on the rubble that we are digging, it seems that the ratio may have been as skewed as 1: 20,” said BR Meena, deputy commandant, NDRF.

The reinforced iron bars used in the construction of columns and beams of buildings are usually 22 / 25 mm thick. However, the ones that were used here seem to be only 10 / 12 mm. Going against regulations would have definitely weakened the structural strength of the building.



Learning Outcome: Students will be able to

1. Understand the importance of ratios and proportion in constructions
2. Understand the significance of thickness of the concrete beams
3. Know the safety and precautionary measures to survive a building collapse.

Teaching learning strategies/ Suggestive classroom activities:

1. Students may watch [How to Survive a Collapsing Building - YouTube](#) followed by discussion on how to avoid being caught / survive in a building collapse [15 min]
2. Students study one such case, prepare a report on reason for the disaster (15 mins) and present their findings [10 min]

References / Links:

[Structural Collapse Guide | Occupational Safety and Health Administration \(osha.gov\)](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VII, Subject: Mathematics

Chapter: 2 - FRACTIONS AND DECIMALS, NCERT Textbook (Page No. 20 - 43)

Related DRR topic- FLOODS

Floods are there every year in Assam because of the combination of natural and man-made factors. Assam has a vast network of rivers, including the Brahmaputra and Barak River, and more than 50 tributaries feeding them. The glacial melt in summer coincides with the monsoon, intensifying the downstream flow causing floods.

The flood prone area of Assam as assessed by the Rastriya Barh Ayog (RBA) is 31.05 Lakh Hectares against the total area of state - 78.523 Lakh Hectares.



Learning Outcome: Students will be able to

1. Express cropped area in total flooded area as a fraction and decimal.
2. Take precautionary measures to stay safe during floods

Teaching learning strategies/ Suggestive classroom activities:

Period	Area Flooded (in Mha)	
	Total	Cropped
1953 – 59	1.13	0.1
1960 – 69	0.75	0.16
1970 – 79	0.87	0.18
1980 – 88	1.43	0.4
1999 – 05	1.07	0.38

1. Students divide the decimals involved to find out the portion of cropped area flooded compared to the total flooded area. They compare the result obtained to understand the impact of flood across the periods given. [10 min]
2. Students watch [Flood | NDMA, GoI](#) to learn preparedness [15 min]
3. Students in groups present what they have learnt in a carousel activity [15 min]

References / Links:

[Nature based solutions for flood management - Atkins | Adapting for Tomorrow's Environment - YouTube](#)

[5 Methods of Flood Protection - Flood Control Asia - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal



Class: VII, Subject: Mathematics

Chapter No 3: DATA HANDLING, NCERT Textbook (Page No. 44- 58)

Related DRR Topic: Cyclones

India Meteorological Department (IMD) has launched a dynamic, impact-based cyclone warning system to minimize economic losses and damage to property from cyclones that hit the country's coasts every year.

All the disaster management agencies may make the extensive use of geological, cartographic and hydrological data available for the concerned district. If a district is to be hit by a wind up to 160 kmph, the system will warn about the kind of infrastructure that will likely to get damaged and these can be mapped.

The Odisha cyclone caused widespread devastation, destroying homes, infrastructure, and agricultural fields. Communication and power lines were severed, making it challenging for authorities to assess the damage and coordinate relief efforts.

SIGNAL NO.	WINDS (KPH)	LEAD TIME (HRS)	IMPACTS
1	30 - 60	36	No damage to very light damage.
2	61 - 120	24	Light to moderate damage.
3	121 - 170	18	Moderate to heavy damage.
4	171 - 220	12	Heavy to very heavy damage.
5	Above 220	12	Very heavy to widespread damage.



Learning Outcome: Students will be able to understand

1. The IMD's warning signs associated with severity of cyclones and the precautions.
2. Analysis and interpretation of data that aids in resource allocation and rebuilding activities.

Teaching learning strategies/ Suggestive classroom activities:

1. Students calculate average rainfall, due to cyclones. [5 min]
2. Students refer to [NDMA](#) to understand 'dos and don'ts' and 'recover and build' with respect to cyclones. [15 min]
3. Teacher uses interactive [earth :: a global map of wind, weather, and ocean conditions \(nullschool.net\)](#) to examine its features and learn the weather of the day. [20 min]

References / Links: [Cyclone](#), [NDMA](#), [GoI](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VII, Subject: Mathematics

Chapter No 5: LINES AND ANGLES, NCERT Textbook (Page 74- 87)

Related DRR Topic: Bridge Failures

Bridge failures are extremely devastating occurrences that could lead to loss of life, property damage and above all, loss of transport communication link. These failures can occur due to various factors like floods, construction and design flaws and manufacturing errors, fires, earthquakes etc.

In order to contain the damage as best as practicable, it is essential to conduct bridge health assessment regularly and to provide health evaluation reports so that prompt remedial measures can be taken, failures could be avoided and the damages and losses are minimised.



Learning Outcome: Students will be able to understand

- 1.Importance of lines and angles in holding the structures strong.
- 2.Prevention is better than cure and that Age is not a constraint to be proactive.

Teaching learning strategies/ Suggestive classroom activities:

- 1.Students build a straw bridge once to check the wind force it can withstand. They rebuild it again to improve the stability and analyse the reasons for the improved stability. [15 min]
- 2.Students watch [Class 5 The Boy Who Saved Holland - YouTube](#) to understand - irrespective of the age, even they can contribute to the society by doing whatever little they can. [10 min]
- 3.Students examine their furniture to check how intact the nuts & bolts are firmly holding the furniture and do a mini audit of their block to check if there are any creaking doors / wobbling fans / shaky windows / open power sockets etc., [15 min]

References / Links: [Another Bridge Collapse In Bihar, Bridge Crashes Down In Bihar's Vaishali - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

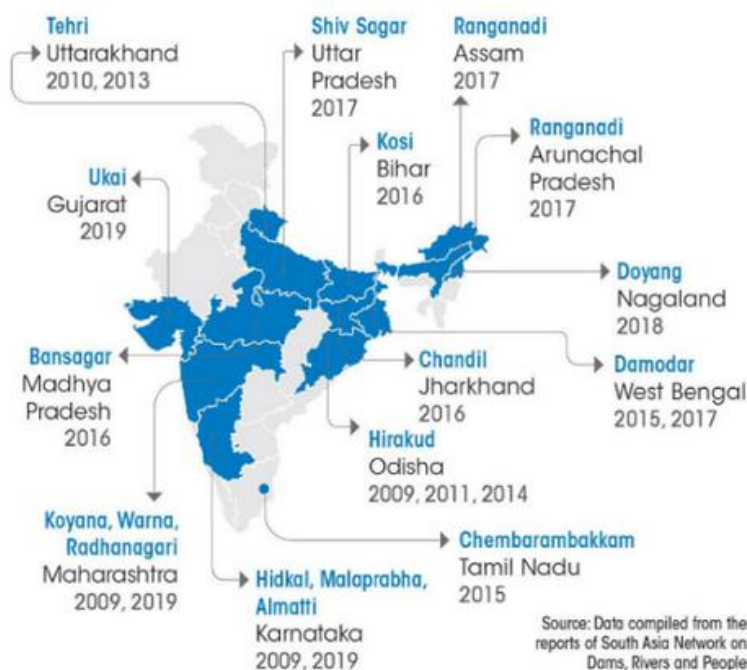
Class: VII, Subject: Mathematics

Chapter: 7 - COMPARING QUANTITIES, NCERT Textbook (Page No. 108 – 123)

NCERT Related DRR Topic: Emergency Water Release

Belagavi, geographically a dry district, received 652 per cent above normal rainfall, in 2019. As a result, all the dams in the district were brimming. As rains intensified, suddenly release became 833.3 cumecs and increased to a whopping 2,858 cumecs, the next day.

The Rule Curve, practised internationally, is a dam operating schedule. It regulates when and how a dam should be filled and emptied, and provides the dam a cushion during times of excessive rainfall, thus curbing the chances of floods in downstream areas.



Learning Outcome: Students will be able to

1. Compare capacities of dams and express the difference as percentage
2. Take precautionary measures during emergency release of water.

Teaching learning strategies/ Suggestive classroom activities:

1. Students read the below table and calculate increase % of the water level [20 min]

Reservoirs	Full Depth	Full Capacity	Current Year Level	Current Year Storage	Current Year Inflow	Current Year Outflow	Last Year Level	Last Year Storage
	(Feet)	(M.Cft.)	(Feet)	(M.Cft.)	(CuSecs)	(CuSecs)	(Feet)	(M.Cft.)
Mettur	120	93470	92.4	55437	226	12587	106	72835
Harangi	129	8500	89.88	2660	221	50	123.19	6628

2. Students may watch [Visualizing Dams: Operational Flood Risk - YouTube](#) and [How the Flood Risk Management System Works \(Animation\) - YouTube](#) . They discuss possible areas that could be affected and how to stay safe. [20 min]

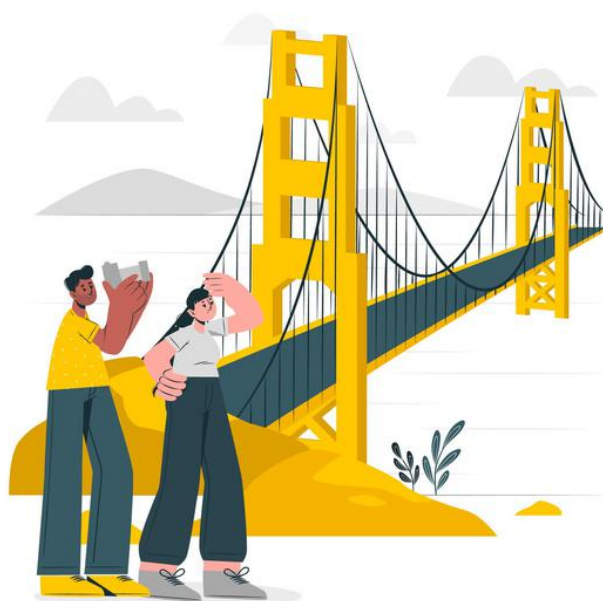
References / Links:

[10 gates of Hidkal Dam opened in Karnataka - YouTube](#)

[Kerala rains: Plans to release water from dams cause flood concerns, alerts issued at Idukki - YouTube](#)

[65,000 Cusecs Of Water Released From Tungabhadra Dam After Heavy Inflow - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal



Class: VII, Subject: Mathematics

Chapter: 9 –PERIMETER AND AREA, NCERT Textbook (Page No. 144 – 159)

NCERT Related DRR Topic: Crowd Crush

Crowd collapses and crowd crushes are catastrophic incidents that can occur when a body of people becomes dangerously overcrowded - when it reaches or exceeds the density of 4–5 people per sq.m. At this density, a crowd can start to act like fluid, sweeping individuals around without their volition. Such incidents can occur at large gatherings such as sporting, commercial, social, and religious events.

The average individual occupies an oval floor space approximately 30 by 60 cm or 0.18 sq.m. However, at higher densities of 6 - 7 per sq.m., individuals become pressed against each other, and can be unable to move on their own volition. This can turn dangerous.



Learning Outcome: Students will be able to

1. Calculate area and perimeter of quadrilaterals and use the concept to express crowd density.
2. Take precautionary measures to avoid and survive crowd related disasters.

Teaching learning strategies/ Suggestive classroom activities:

1. Students watch [How to increase chances of survival in crowd crush - YouTube](#) and share their experiences when they watched or are caught in a crowd. [10 min]
2. Students to be taken to the ground and made to experience the crowd density by making them stand inside squares of side 1m [10 min]
3. Students to learn and practise the strategies to survive crowd collapses [20 min]

References / Links:

[4 Potentially Life Saving Tips to Survive a Crowd Surge - YouTube](#)

[After DC Pride scare, how to protect yourself in a crowd - YouTube](#)

[Explained | How is a crowd crush different from a stampede? | WION Originals - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

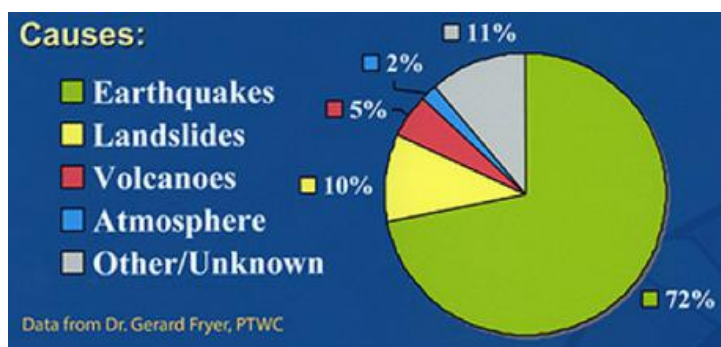
Class: VIII, Subject: Mathematics

Chapter: 2 – DATA HANDLING, NCERT textbook (page no:37 - 50)

Related DRR topic- Tsunami

A tsunami is a large ocean wave that is caused by sudden motion on the ocean floor. This sudden motion could be an earthquake, a powerful volcanic eruption, or an underwater landslide. The impact of a large meteorite could also cause a tsunami. Tsunamis travel across the open ocean at great speeds and build into large deadly waves in the shallow water of a shoreline.

The causes of Tsunami can be presented using circle graph or pie chart. A circle graph shows the relationship between a whole and its part.



Learning Outcome: Students will be able to

1. express the data related to Tsunami in the form of Circle graph.
2. understand the 'Dos and Don'ts' of Tsunami

Teaching learning strategies/ Suggestive classroom activities:

1. Students watch [Tsunamis 101 | National Geographic - YouTube](#) [5 min]
2. Students to be given the list of Tsunamis from [List of tsunamis - Wikipedia](#). Students to create a frequency table that shows the primary cause of Tsunami in the chosen period. They express the causes as a Circle Graph. [15 min]
3. Students will learn the 'Dos and Don'ts' of Tsunami from [Tsunami | NDMA, GoI](#) [20 min]

Reference link:

[Tsunami \(tulane.edu\)](http://Tsunami.tulane.edu)

[What causes Tsunamis \(ioc-unesco.org\)](http://What.causes.Tsunamis.ioc-unesco.org)

Students may write down their reflections of learning this DRR topic in their journal

Related DRR topic- GLOBAL WARMING

A large crowd of people gathered on a city street, many holding blue umbrellas, suggesting a protest or demonstration. The crowd is dense and fills the street, with people of various ages and genders visible. In the background, there are buildings and a yellow banner. A white car is partially visible in the lower right corner.

1. Express population as a function $P = P_0(1 + r)^t$, where P = population, P_0 = initial population, r = percent growth rate [ratio of the birth rate to the death rate], and t = time, usually in years.
2. Students will use the above function to predict the future global population, provided the current growth rate.

1. Students to be presented with a table of global population values and rate of growth to calculate the expected growth in different years. [15 min]
2. Students compare the population growth of different countries with their CO₂ emission [10 min] and plan for a campaign to create awareness. [15 min]

[8 billion humans: How population growth and climate change are connected as the 'Anthropocene engine' transforms the planet \(theconversation.com\).](#)
[The Connections Between Population and Climate Change \(populationconnection.org\)](#)

Page 113

Class: VIII, Subject: Mathematics

Chapter: 9 - MENSURATION, NCERT Textbook (Page 103- 120)

Related DRR Topic: EARTHQUAKE

Higher the magnitude of the earthquake, the greater the damage as it will lead to collapse of buildings and structures which will cause more people to be trapped, suffering from injuries or even loss of lives. Earthquake-resistant or aseismic structures are designed to protect buildings to some or greater extent from earthquakes. While no structure can be entirely impervious to earthquake damage, the goal of earthquake engineering is to erect structures that fare better during seismic activity than the conventional designs.



Learning Outcome: Students will be able to

1. understand the effects of earthquakes and the need to combat it with aseismic construction designs.
2. take precautionary measures to stay safe during an earthquake.

Teaching learning strategies/ Suggestive classroom activities:

1. Students make cylindrical, cuboidal and hexagonal columns. Students in groups perform a STEM experiment to examine which solid supports the load better. [20 mins]
2. Teacher takes the students through 5 Ways to Survive an Earthquake - wikiHow [20 mins]

References / Links:

[How to Show the STRONGEST SHAPE for COLUMNS? | dArtofScience - YouTube](#)
[GIANT PAPER BOOK TOWER STACKING CHALLENGE! Cool Science Experiment - YouTube](#)

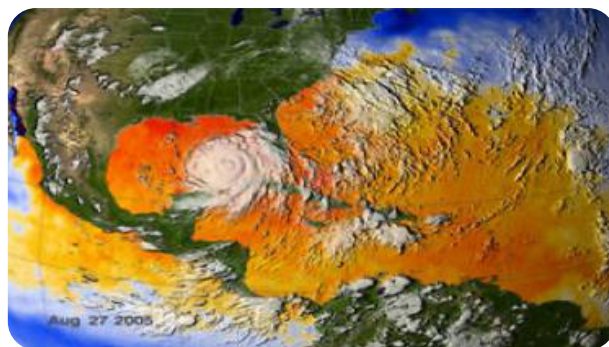
Students may write down their reflections of learning this DRR topic in their journal

Class: VIII, Subject: Mathematics

Chapter:11 DIRECT AND INVERSE PROPORTION, NCERT textbook (Pg no:129-144)

Related DRR topic- HURRICANE

Hurricanes are among nature's most powerful and destructive phenomena. Hurricanes are large, swirling storms. Winds from a hurricane can damage buildings and trees. Sometimes they strike land. When a hurricane reaches land, it pushes a wall of ocean water ashore. This wall of water is called a storm surge. Heavy rain and storm surge from a hurricane can cause flooding. Hurricanes can be related to both direct and inverse variation in different aspects of disaster management.



Learning Outcome: Students will be able to understand

- 1.The direct variation between the intensity of a hurricane and its impact. The wind speed of a hurricane directly influences the extent of damage it can cause.
- 2.Inverse variation between the central pressure of a hurricane and its wind speed. Inverse variation in the relationship between the distance from the eye of a hurricane and the wind speed experienced.

Teaching learning strategies/ Suggestive classroom activities:

- 1.Students can work in groups to create a hurricane preparedness plan for their school; develop evacuation routes and find measures to minimize damage. [15 min]
- 2.Students can analyze past hurricane data to identify patterns and trends. [10 min]
- 3.Students learn about the interactive track of cyclones from [CYCLONE \(imd.gov.in\)](http://cyclone.imd.gov.in) and explore the features of [AWS ARG NETWORKS \(imd.gov.in\)](http://awsargnetworks.imd.gov.in) [15 min]

Reference link: [Cyclone | NDMA, GoI How to Survive a Hurricane, According to Science - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: VIII, Subject: Mathematics

Chapter: 13 - INTRODUCTION TO GRAPHS, NCERT textbook (Page no:157-169)

Related DRR topic- LOSS OF BIO DIVERSITY

Deforestation is the process of clearing the earth's forests on a massive scale. Forests are essential to the Earth's [biological diversity](#). With each forest gone, another vital carbon sink disappears and the fight against climate change gets harder. That's not to mention the loss of rich plant and animal life that lived in the forest and formed part of its biodiversity. The ecosystem they make plays an essential role in supporting life on earth. Mathematicians can use graph-based algorithms to measure the proximity of deforestation activities to factors like roads, human settlements, or protected areas. This analysis can help identify areas at higher risk of deforestation and aid in designing conservation strategies.



Learning Outcome: Students will be able to understand that

Graphs can be used to model the network of deforestation activities and their impact on the environment. Graphs can assist in analyzing the spatial distribution of deforestation and its associated factors.

Teaching learning strategies/ Suggestive classroom activities:

1. Students may watch the short film [Why is biodiversity important - with Sir David Attenborough | The Royal Society - YouTube](#) to understand the need for afforestation activities [10 min]
2. Students can create graphical representations that show deforestation over time or compare deforestation rates across different regions. [15 min]
3. Students may create presentations to spread the awareness [15 min]

Reference link:

[What do you want to know about biodiversity loss? | Royal Society](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: IX, Subject: Mathematics

Chapter: 1 - NUMBER SYSTEMS, NCERT Textbook (Pages 01 - 24)

Related DRR Topic: Pandemic

Understanding the concept of 'exponents' became important with the unimaginable fast spread of covid -19. Exponential growth is a classic pattern in which numbers stay small initially, but then end up with very large numbers very quickly. If you start with a certain number, and then multiply that number by a growth factor every day, depending on what that growth rate is, you'll see the cumulative number doubling over a certain time period.

The number of infected people doubles every 3 days as the infection spreads. Take the number of infected people on a particular day say 'x', and multiply by 2. Then do it again, again and again. Do this multiplication exercise 10 times in total.

The result $[x \times 2^{10} = 1024x]$ is the estimate for the actual cases in 30 days.



Learning Outcome: Students will be able to

1. Use the concept of 'exponents' in understanding the spread of a pandemic.
2. Implement the precautions to be taken to break the chain and help contribute to flatten the curve.

Teaching learning strategies/Suggestive classroom activities:

- Students explore the posters in [Covid 19 | NDMA, GoI](#) to understand the precautionary measures to be taken to stay safe from any contagious disease. [15 min]

- Students read from [Biological Emergencies | NDMA, GoI](#) and discuss how to act during a pandemic. [15 min]
- Students in groups, may write lyrics to create awareness and set to tune. - [Breaking the Chain of Infection \(Music Video\) - YouTube](#)

References / Links:

[It's in Your Hands - the official song for the World Hand Hygiene Day \(5th of May\) - YouTube](#)
[NDMA](#)

Students may write down their reflections of learning this DRR topic in their journal



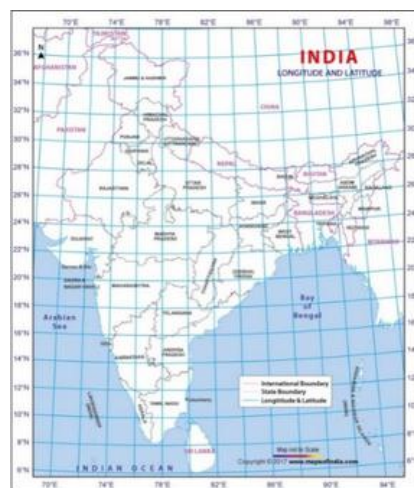
Class: IX, Subject: Mathematics

Chapter : 3 – COORDINATE GEOMETRY, NCERT Textbook (Pages 43 - 54)

Related DRR topic – FOREST FIRE

Forest fires have several impacts, causing the loss of human life, biodiversity, habitat, production and productivity; degradation of landscapes; and disruption of livelihoods.

FSI carried out a study based on spatial analysis of forest fire points to identify fire prone forest areas in the country. Maps showing forest areas in different classes of fire proneness can be an effective management tool for controlling forest fires. Such maps can be used for optimally utilizing available resources for controlling forest fires. Increased vigil in highly fire prone forest areas may help prevent forest fires.



Learning Outcome: Students will be able to

1. plot the points in two-dimensional coordinate system.
2. locate fire prone forest areas of India and find the measures to avoid wildfire.

Teaching learning strategies/ Suggestive Classroom activities:

1. Teacher shares data from [XPS3112212139_ISFR PART 3.cdr \(fsi.nic.in\)](https://xps3112212139.isfrpart3.cdr(fsi.nic.in)) and students use coordinate plane to locate 5 areas affected by forest fire. They use Tropic of cancer and Indian standard meridian as X and Y axes. [10 min]
2. Students watch [Eco India: To fight forest fires in Himachal Pradesh, locals use flammable pine needles to make fuel - YouTube](https://www.youtube.com/watch?v=...) and learn how problems can be converted into opportunities. [20 min]
3. Teacher gives handouts from [VCB AR2014 \(ndma.gov.in\)](https://ndma.gov.in/vcb-ar2014) for students to work in group to learn about how different nations face wildfire [10 min]

Reference / links: [VCB AR2014 \(ndma.gov.in\)](https://ndma.gov.in/vcb-ar2014).

Students may write down their reflections of learning this DRR topic in their journal

Class: IX, Subject: Mathematics

Chapter : 6 - LINES AND ANGLES, NCERT Textbook (Pages 69- 82)

Related DRR topic- Train Accidents

The crash involved the Bengaluru-Howrah Superfast Express, the Shalimar-Chennai Central Coromandel Express, and a goods train. one train ran so hard into another, that carriages were lifted high into the air, twisting and then smashing off the tracks. Another carriage had been tossed entirely onto its roof, crushing the passenger section. One unfortunate event, that must not have happened.

In general safety audits are undertaken at regular intervals on all railway infrastructures with a view to identify weak areas in asset maintenance, safety procedure and systemic defects and to provide ways and means to prevent accidents. Besides, safety drives are launched to indicate safety consciousness amongst staff. As a result of safety measures, number of train accidents are continuously decreasing.



Learning Outcome: Students will be able to

1. Observe importance of Parallel and Transversal lines in railway tracks.
2. Be aware of measures to take during such disaster.

Teaching learning strategies/Suggestive Classroom activities:

1. Students watch [Odisha Train Accident Details: Odisha train crash explained: How the tragedy unfolded in Balasore, killing 275 people - The Economic Times Video | ET Now \(indiatimes.com\)](https://www.indiatimes.com/video/odisha-train-crash-explained-how-the-tragedy-unfolded-in-balasore-killing-275-people-the-economic-times-video-et-now-indiatimes-com). [10 min]
2. Teacher divides students into groups to find details about the new initiatives of railways – TPWS, RSRC, SPAD, ETC, TMS, ACD and TAWD to ensure safety [20 min]
3. Students ideate a process/product to prevent train accidents [10 min]

References / links:

[Microsoft Word - Safety Review 2005-2006.doc \(indianrailways.gov.in\)](#)
[Future Railway Signaling: A Scenario for 2033 - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: IX, Subject: Mathematics

Chapter : 9, CIRCLES, NCERT Textbook (Pages 116 - 130)

Related DRR Topic: Tsunami

Tsunamis can be modelled as circular waves propagating outward from the epicentre, similar to ripples in a pond. The radius of a circle is the distance from the centre to any point on its circumference. In the context of tsunami management, understanding the radius is crucial for determining the affected areas and establishing evacuation zones. Mathematical calculations involving distances and radii can help estimate the potential reach of a tsunami wave.



Learning Outcome: Students will be able to

1. Identify various parts of a circle and understand the radius for determining the affected areas and establishing evacuation zones.
2. Do the calculations involving distances and radii that can be associated with tsunami waves.

Teaching learning strategies/Suggestive Classroom activities:

1. Students watch [How to Survive a Tsunami, According to Science - YouTube](#) [10 min]
2. Teacher conducts a group activity to draw concentric circles around the central circle to represent different tsunami hazard zones, such as high-risk, medium-risk, and low-risk zones and label each zone, add relevant information, such as evacuation routes, emergency shelters, or coastal protection measures. Each group to present their circle mapping to the class. [30 min]

Reference link: [Tsunami](#) | [NDMA](#), [GoI](#)

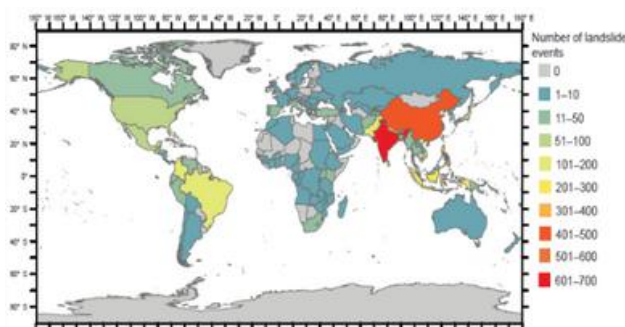
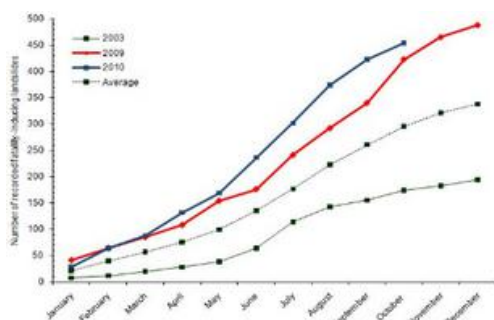
Students may write down their reflections of learning this DRR topic in their journal

Class: IX, Subject: Mathematics

Chapter : 12 - STATISTICS, NCERT Textbook (Page no.151-166)

Related DRR topic- Landslide

Landslides are among the main natural catastrophes, which cause major problems in mountainous terrain by killing people, besides damaging property, disrupting transportation and blocking communication links. Landslide is “a movement of mass of rock, earth or debris down a slope”. Different types of landslides such as Debris slide, debris flows, Rock slide, rock fall etc. can be triggered by rainfall, undercutting of slopes due to flooding or excavation, earthquakes, snowmelt and other natural causes, as well as anthropogenic causes such as over grazing by cattle, terrain cutting and filling, excessive development, etc.



Learning Outcome: Students will be able to

1. represent the data graphically to analyse landslide risks.
2. understand how to stay safe during landslides

Teaching learning strategies/Suggestive Classroom activities:

1. Students watch [How YOU Can Prevent Landslides - YouTube](#) to understand measures to be taken to prevent landslides. [10 min]
2. Students create frequency distribution table, represent the data as a bar graph/histogram/frequency polygon and interpret the data to find average damage /intensity / [10 min]
3. Watch [Do-it-yourself experiments-Landslide - YouTube](#) and perform an experiment to understand how to prevent landslides. [10 min]
4. Visit NDMA site [Landslide | NDMA, Go!](#) to learn 'Dos and Don'ts' before, during and after landslides. [10 min]

Reference link:

[Landslide Risk Reduction NDMA A5 BOOK.cdr](#)

[LandslideAtlas_2023.pdf \(isro.gov.in\)](#)

Students may write down their reflections of learning this DRR topic in their journal

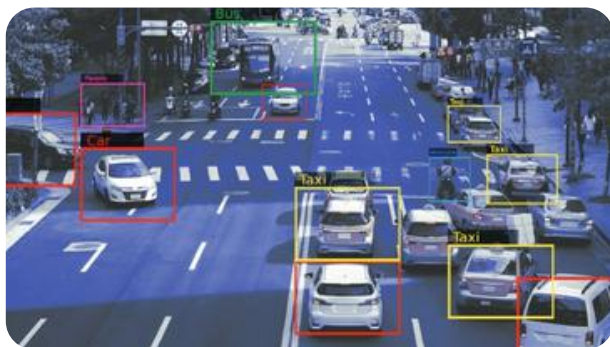
Class: X, Subject: Mathematics

Chapter: 4 – QUADRATIC EQUATIONS, NCERT Textbook (Pages 38 - 48)

Related DRR Topic: Road Accidents

Artificial Intelligence (AI) powered solutions may soon make roads in India a safer place to drive. A unique AI approach is being implemented in Nagpur City with an objective of resulting in a significant reduction of accidents. It uses the predictive power of AI to identify risks on the road, and a collision alert system to communicate timely alerts to drivers. Quadratic Equations are mainly used in AI algorithms.

Also, when a driver slams the brakes on a car, skid marks are created on the road. Accident investigators measure the length of the skid marks to estimate the speed of the car. This involves using a quadratic function.



Learning Outcome: Students will be able to

1. understand the uses of Quadratic Equations in our daily life
2. list out the precautions to avoid road accident

Teaching learning strategies/ Suggestive classroom activities:

1. Discussion on the daily life applications of quadratic equations with reference to problems involving distance, time and speed. [5 min]
2. Discussion on Road Safety measures. [7Ds of Road Safety: Tips to Prevent Road Accidents While Driving_\(zhl.org.in\)](https://www.zhl.org.in/7Ds-of-Road-Safety-Tips-to-Prevent-Road-Accidents-While-Driving). [20 min]

References / Links:

<https://youtu.be/txqYO9H0Obs>

[Preventing Accidents On The Road - BBC Click - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: X, Subject: Mathematics

Chapter : 5 - ARITHMETIC PROGRESSIONS, NCERT Textbook (Pages 49 - 72)

Related DRR topic- Heat Waves

The India Meteorological Department (IMD) declares a heatwave for a region when the maximum temperature reaches, at least 40°C in the plains, 37°C along the coast, and 30°C in hilly regions.

Alternatively, a heatwave is declared when the maximum temperature rises by between 4.5°C and 6.4°C above normal. A severe heatwave is declared when the maximum temperature departs from normal is more than 6.4°C .

A third condition for a heatwave arises when an area records a maximum temperature of more than 45°C and up to 47°C on any given day.



Learning Outcome: Students will be able to

1. use the concept - common difference to check how sequences progress.
2. understand increase in temperature - 'Heat waves' and the measures to be taken.

Teaching learning strategies/Suggestive Classroom activities:

1. Students record the Monday temperature of 4 chosen cities for a period of 2 months and check if there is a common difference and finds if the temperatures are in arithmetic progression. [10 min]
2. Students watch [Heatwave | NDMA, GoI](#) and discuss the visuals on precautions to be taken during heat waves. [20 min]
3. Students participate in 'Heat waves' Quiz in their classrooms. [10 min]

Reference link:

[How to Survive a Heat Wave, According to Science - YouTube](#)

[Heatwaves explained: the why, what and how - YouTube](#)

Students may write down their reflections of learning this DRR topic in their journal

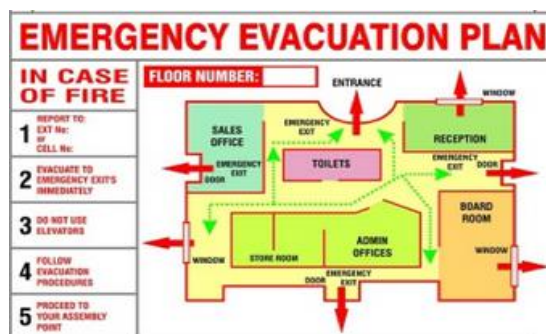
Class: X, Subject: Mathematics

Chapter : 7 – COORDINATE GEOMETRY, NCERT Textbook (Pages 99 - 112)

Related DRR topic- FIRE

A major fire broke out in a 12-storey building of Kurla. Precautions are to be taken to save lives by evacuating people in such instances. Application of coordinate geometry aids in evacuation planning. The shortest and safest evacuation routes to reach the assembly points are designed using coordinate geometry.

Students learn the need to identify key landmarks, entry/exit points, and potential hazards and assign coordinates to key locations such as emergency exits, assembly points, medical facilities, or other relevant points of interest. They learn to assign coordinates using the appropriate format (e.g., decimal degrees or degrees, minutes, seconds) for latitude and longitude-based systems and based on the rows and columns of the grid for grid-based systems.



Learning Outcome: Students will be able to

1. plot the points in two dimensional Cartesian coordinate system.
2. draft evacuation plan for the school.

Teaching learning strategies/Suggestive Classroom activities:

1. Keeping the number of individuals in the campus, students decide the number of assembly points with their location. They use Coordinate Geometry to represent the location of various rooms and design the optimal route to safety using distance and section formulae. [20 min]
2. In groups they create an evacuation plan for a city/building/campus/any relevant location by obtaining a map. [20 min]

Reference link:

<https://www.youtube.com/watch?v=5-YqX7jw7MU>

[How to Write an Emergency Evacuation Plan | SafetyCulture](#)

Students may write down their reflections of learning this DRR topic in their journal

Class: X, Subject: Mathematics

Chapter : 12 SURFACE AREAS AND VOLUMES, NCERT Textbook (Pgs. 161 - 170)

Related DRR Topic: Boat Capsize

India has an estimated navigable length of 14,500 km of inland waterways. They are cheaper mode of transport, more environmentally friendly and causes least CO₂ emission. Furthermore, diversion of movement from road to water will decongest roads, reduce road accidents and substantially reduce the line cost, transportation and fuel cost.

Realising the potential of IWT, India enacted the National Waterways Act, 2016, creating 106 new waterways. The rules require boats to be checked for safety equipment ahead of every journey. However, the boat accidents resulted in deaths are found not to have carried any lifebuoys and life jackets.



Learning Outcome: Students will be able to

1. Apply the concepts learnt to calculate the surface area and volume of life jackets
2. Understand the importance of life jackets in saving lives

Teaching learning strategies/Suggestive Classroom activities:

1. Students listen to experts talk about the components of life jackets and their functions [10 min]
2. In groups they create posters to promote life vests [30 min]

Reference link:

[Boating Equipment - Personal Flotation Devices \(PFDs\) 2.1 - YouTube](#)

[HOW LIFE JACKETS SAVE LIVES - YouTube](#)

[Everything You Wanted to Know About Life Jackets on Ships \(marineinsight.com\)](#)

Students may write down their reflections of learning this DRR topic in their journal

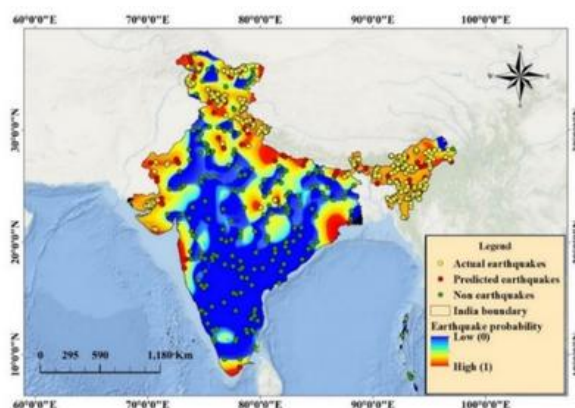
Class: X, Subject: Mathematics

Chapter : 13 - STATISTICS, NCERT Textbook (Page no.171-201)

Related DRR topic- Earthquake (Risk Analysis)

India saw many earthquakes in the last century. The main cause of earthquakes is due to the movement of the Indian plate towards the Eurasian plate at the rate of about 50 mm per year.

Richter instrumental scale is used for categorising earthquakes into large, medium and small shocks. Statistical analysis when applied in earthquake engineering consists of estimating the future frequency or probability of seismic events based on information contained in previous seismic records.



Learning Outcome: Students will be able to

1. apply measures of central tendency to analyse and understand earthquake risks.
2. understand how analysis of previous data enable predicting the occurrence, magnitude and intensity of earthquakes.

Teaching learning strategies/Suggestive Classroom activities:

1. Students read from [Microsoft Word - paper4.doc \(iitk.ac.in\)](#) to understand the risk involved in the earthquakes that affected India [15 min]
2. Students create frequency distribution table, calculate mean, median, mode and range and interpret the data to find average damage/intensity pattern/ [10 min]
3. Visit NDMA site [Earthquake | NDMA, GoI](#) to learn 'Dos and Don'ts' before, during and after earthquakes. [15 min]

Reference link:

<https://youtu.be/UEi8cwrX2Vw>

<https://youtu.be/uTKoVa8krRs>

Students may write down their reflections of learning this DRR topic in their journal



English

Disaster Risk Reduction

Class VI-X

English

Table of Content

S. No.	Content	Book P. No.	DRR Related Topics	P. No.
Class-VI				
1	Supplementary Book- A Pact with the Sun Chapter No.: 1, The Tale of Two Birds	1-3	Cyclones(storm)	131
2	Supplementary Book-Honey Suckle Chapter No.: 5, A Different Kind of School	54-62	Physical Disabilities due to Accidents	133
3	Text Book: Honey Suckle Poem No.: 1, A House, A Home	15	Home Safety Norms to Prevent Natural and Man-made Disaster	135
4	Text Book - A Pact with the Sun Chapter No.: 8, A Pact with the Sun	28-32	Heatwave	137
Class-VII				
5	Text Book - Honey Comb Poem: TREES	84	Natural Disaster: Landslides	139
6	Text Book - Honey Comb Chapter No.: 6, Expert Detectives	86-93	Natural Disaster: Flood, Earthquake	140
7	Text Book – Honey Comb Chapter No: 7 The Invention of Vita-Wonk	100-103	Invention of Nuclear Bomb- 2nd World War [Man-made Hazard]	141
8	NCERT Text Book- Honey Comb Poem No.: 7, Dad and the Cat and the Tree	108-110	Man-made Disaster- Deforestation	143
9	Text Book - Honey Comb Chapter No.: 8, A Homage to our Brave Soldiers	114-126	Man-made Disaster: War	145

S. No.	Content	Book P. No.	DRR Related Topics	P. No.
Class-VIII				
10	Text Book - Honey Dew Chapter No.: 2, Tsunami	24-30	Tsunami	146
11	Text Book: Honeydew Poem: 2, The Geography Lesson	34	Extreme urbanization	148
12	Text Book: Honeydew Chapter: 1, The Best Christmas Present in the World	9-16	Man-made Disaster: War	150
Class-IX				
13	Text Book: Beehive Chapter: 2, Wind	30	Destructive Winds	152
14	Text Book: BEEHIVE Poem: 6, No Men Are Foreign	80	Man-made Disaster: War	154
15	Text Book: Moment Chapter No.: 8, The House is not a Home	49-54	Fire safety and emergency preparedness	155
16	Text book: Beehive Poem: 8, On Killing a Tree	110	Deforestation: an Environmental Damage	157
17	Text Book: Beehive Chapter No.: 4, A Truly Beautiful Mind	46	Resilience and Peace Building	159
Class-X				
18	Text Book: First Flight Chapter No.: 1, A Letter to God	1-7	Cultivation Damage due to Natural Disasters (storms)	161
19	Text book: First Flight Chapter No.: 2, Nelson Mandela-A long walk to Freedom Page No: 16-28	16-28	Manmade disaster: Racial Discrimination	163
20	Text Book: First Flight Chapter No.: 3, Black Aeroplane	37-39	Emergency preparedness	165
21	Text Book: The First Flight Poem No.: 7, The Trees	77-88	Environmental conservation	167
22	Textbook: First Flight Poem No.: 8, Fog	115	Hazard Awareness	169

Class: VI Subject: English NCERT Supplementary Book - A Pact with the Sun

Chapter No. and Name: 1, The Tale of Two Birds Page No.: 1 - 3

Related DRR topic: Cyclones(storm)

The teacher shows the picture of a cyclone affected area to introduce the chapter depicting the havoc created by a severe storm(cyclone). The chapter narrates the separation of two bird chicks whose mother bird is killed in the deadly storm. Eventually, two different people with different mind-set rescue each and rear them in two contrasting atmospheres thus making them different natured creatures, thereby emphasising on the value point of the lesson - “One is known by the company one keeps.”



(Textbook Picture)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Analyse the impacts of cyclonic storms and compile a catalogue of precautionary protocols.
2. Design a set of measures to mitigate the consequences following such catastrophes.
3. Illustrate the technological methods employed to forecast impending cyclones effectively and lessen destruction.
4. Evaluate the role of the National Disaster Response Force (NDRF) in formulating a comprehensive, proactive, technologically-driven strategy to cultivate disaster resilience in India.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1 - Students are asked to make a list of five major storms after watching the video in Ref. link and make cut-outs showing five safety steps to follow during storms. (15m-20m)

Reference Links: The teacher may use the following video to show few destructive storms which had hit the planet Earth to understand the severity of the natural calamities.

<https://youtu.be/SfmhrRrEk0A> (10m 8 s)

Devastating storm Fani which has hit the Odisha Coast

https://youtu.be/WXQYrsi_jns (1m 18s)

The video suggests safety steps.

<https://youtu.be/kzFPJV9ZJKI> (3m 6s)

Students may write down their reflections of learning this DRR topic in their journal



Class: VI-Subject: English NCERT Supplementary Book - Honey Suckle

Chapter No. and Name: 5, A Different Kind of School Page No: 54-62

Related DRR topic: Physical Disabilities due to Accidents

The teacher mentions about accidents which are a cause of damage to human resources. The story tells about a different school that teaches and develops ethics in students apart from the teaching syllabus. It is about experiencing a day as a differently-abled person. The emphasis of education imparted is on 'developing responsible citizens.'



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Examine the importance of rehabilitation following bodily injury in an accident.
2. Formulate safety protocols for managing daily tasks to ensure personal well-being.
3. Devise safety precautions for safeguarding oneself from physical harm when confronting opposing forces in adverse circumstances.
4. Compile a list of contacts for various NGOs and organizations that provide assistance during emergencies and contribute to the rehabilitation process to alleviate damage.
5. Appraise the significance of societal moral support for individuals experiencing such challenges.

Teaching Learning Strategies/Suggestive Classroom Activities

Activity1 - Narrate the story of Motivation from Arunima Sinha's life (world's first female amputee to scale Mount Everest)

Or any person of repute who achieved fame after becoming physically challenged in any type of accident

Reference Links: The teacher may use the following video to show an accident survivor's story

Reference Links:

https://youtu.be/tUtD_jjUf34

Inspirational story of Sudha Chandran, an accident survivor

<https://youtu.be/dva1oiWL9To>

Students may write down their reflections of learning this DRR topic in their journal



Class: VI-Subject: English NCERT Text Book: Honey Suckle

Poem No. and Name: 1, A House, A Home Page No: 15

Related DRR topic: Home Safety Norms to Prevent Natural and Man-made Disaster

The teacher explains about the essence of a home and how it is slightly different from just a house. The teacher further states about certain safety measures which all family members should follow to make the house a safe home to live & cherish.



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Emphasize the necessity of conducting safety measure briefings as a mandatory practice in every household.
2. Compile a list of essential contacts to be dialled and reached out to during emergencies.
3. Detail the proper steps to take when detecting any potential danger within the home to prevent it from escalating into a hazard.
4. Highlight the value of having a readily accessible first-aid kit.
5. Assess the importance of cultivating healthy habits in daily life.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1 - Keep your home safe by making a Home Safety/Hazard Checklist. Write the checklist of minimum of 10 pointers and then involve your parents later at home to ascertain its availability

Activity 2 – To make a handy first aid box with a checklist of necessary tips at emergency times.

Reference Links: The teacher may use the following videos to show how to keep a home safe by following safety tips.

<https://youtu.be/CqH2QYt6oOc>

The video suggests safety steps.

<https://youtu.be/398hDLKjNZE>

Students may write down their reflections of learning this DRR topic in their journal



Class: VI-Subject: English NCERT Text Book - A Pact with the Sun

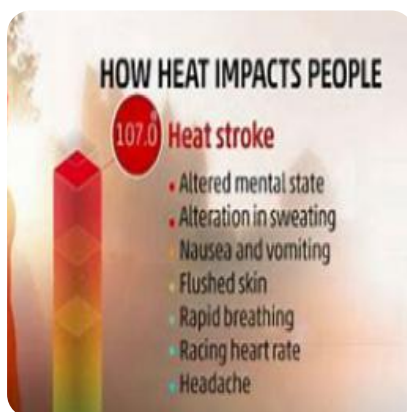
Chapter No. and Name: 8, A Pact with the Sun Page No.: 28-32

Related DRR topic: Heatwave

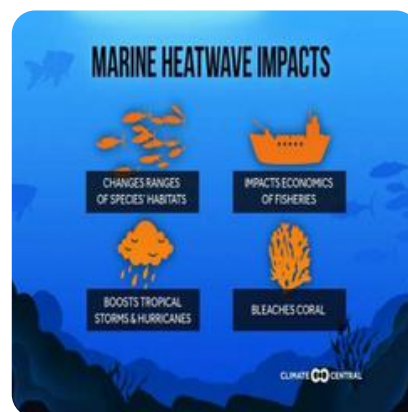
The Sun is the star at the center of the Solar System. It is a nearly perfect ball of hot plasma, which radiates energy mainly as light, ultraviolet, and infrared radiation, and is the most important source of energy for life on Earth. The story talks about the necessity of sunrays and presence of its heat in an optimum level for the survival of living beings on Earth. But when these sun rays, also called heatwave, remain for a prolonged period as an abnormally high surface temperatures relative to those normally expected causes significant impact on the society including a rise in heat-related deaths



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Identify and explain the primary causes of heatwaves.
2. List at least two specific dangers associated with heatwaves, such as their impact on air quality and exacerbation of drought conditions.
3. Demonstrate an understanding of the potential lethality of heatwaves by discussing their capacity to cause a significant number of casualties in a short time frame.
4. Analyze the direct link between heatwaves and the increased risk of wildfires.
5. Describe the immediate and long-term consequences of heatwaves on infrastructure, including the effects on metal structures, power transformers, water lines, and transportation systems.
6. Develop and present a heat preparedness plan with actionable steps to reduce the impact of heatwaves on vulnerable areas and populations within a specific timeframe.

Teaching Learning Strategies/ Suggestive Classroom Activities

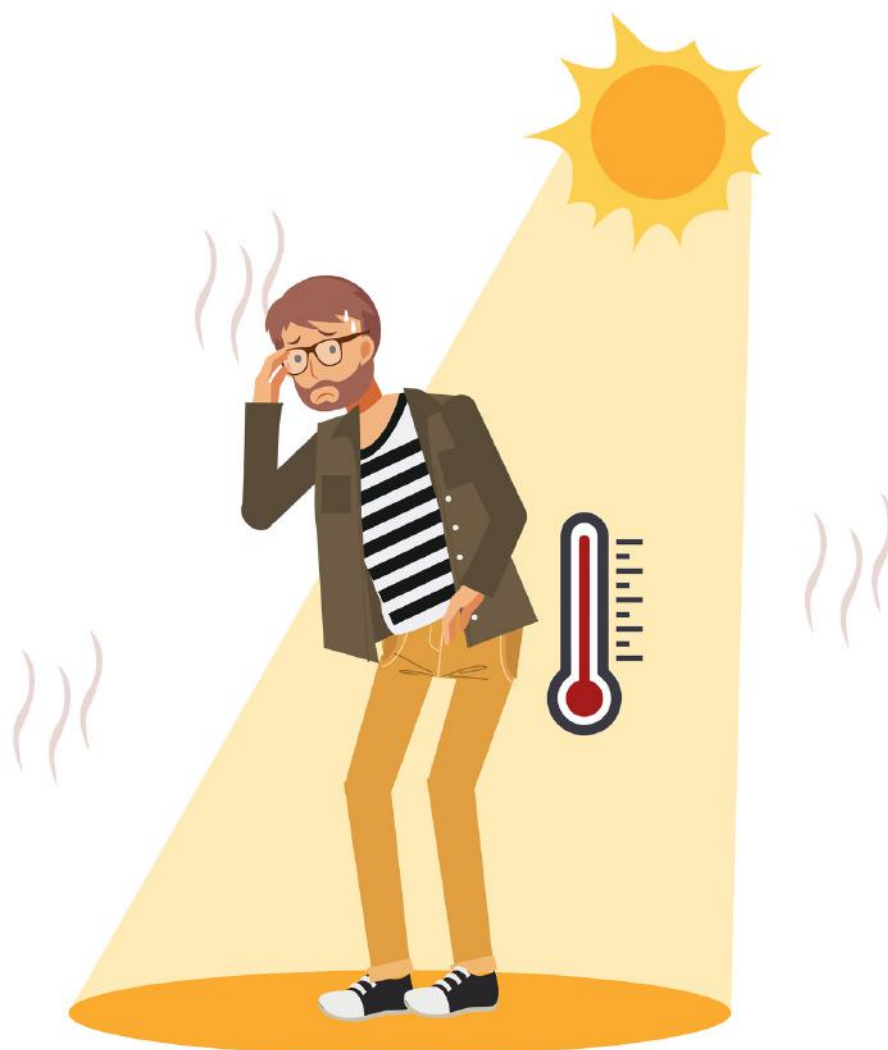
Activity1 - Make a checklist of 5 Do's & don'ts to minimise the impact of a heatwave in your locality

Activity 2 – Have each group present their research findings and educational materials to the class on the topic “Heat Wave Preparedness Campaign.” Encourage discussions and questions after each presentation.

Reference Links: The teacher may use the following video to show the ill effects of heat waves on long run.

<https://youtu.be/O8fuW97sG3w>

Students may write down their reflections of learning this DRR topic in their journal

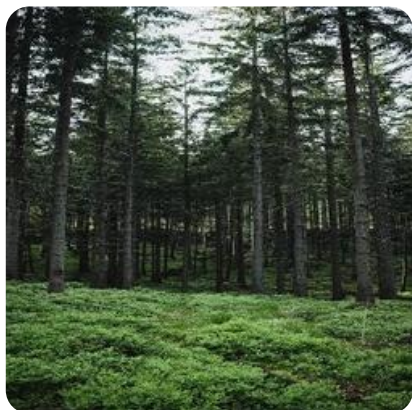


Class: VII-Subject: English NCERT Text Book - Honey Comb

Poem: TREES Page No.:84

Related DRR topic: Natural Disaster: Landslides

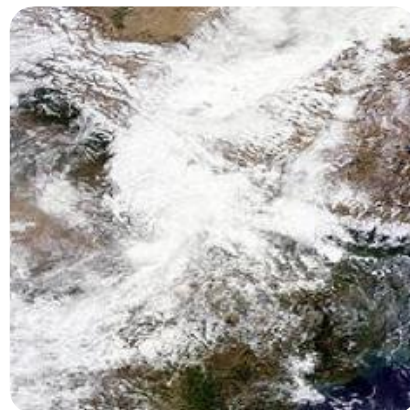
The teacher initiates the lesson by displaying a variety of images depicting trees and forests, highlighting the crucial functions trees perform in mitigating landslide hazards through diverse mechanisms. Tree roots play a pivotal role in strengthening soil layers, securing the soil firmly to bedrock, and creating natural barriers against soil displacement. Furthermore, trees contribute to diminishing landslide susceptibility by effectively reducing soil moisture levels, creating a more stable environment. In addition, they serve as vital components of the ecosystem, fostering biodiversity and providing invaluable environmental benefits.



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Analyze the characteristics and impacts of landslides as a natural disaster.
2. Evaluate the significance of trees in averting and preventing landslides.
3. Examine the multifaceted roles of trees in climate regulation, soil erosion control, and flood prevention.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1 - Poster making with slogans on saving trees.

Activity 2- What are the ways you think you should always practice to avoid any landslide, flood, or soil erosion from happening? Make a flow chart with your opinion.

Reference Links:

The teacher may use the following video links to enhance the topic clarity

Uttarakhand cloud burst https://youtu.be/kAgzXUaBi_c

Bengaluru Floods and its effects to learn from <https://youtu.be/Ch1JP4O-jP0>

Students may write down their reflections of learning this DRR topic in their journal

Class: VII-Subject: English NCERT Text Book - Honey Comb

Chapter No.6: Expert Detectives Page No.:86 to 93

Related DRR topic: Natural Disaster: Flood, Earthquake

The lesson commences with the presentation of inspiring images showcasing the courage of Indian soldiers, emphasizing their dedication and sacrifices in the face of natural disasters. These valiant individuals not only act as a formidable rescue force during various calamities but also symbolize the embodiment of resilience and national unity, making them a source of pride for the entire nation. Furthermore, their multifaceted roles extend beyond, encompassing safeguarding national borders, upholding the values of honor and duty and disaster response.



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Examine the pivotal role of soldiers in disaster response and management during natural disasters.
2. Reflect on the sacrifices made by brave individuals in the face of various types of disasters.
3. Assess the qualities of daring and readiness exhibited by those involved in disaster response efforts.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity - What would be your contribution to people affected by flood, depict through a mind map.

Reference Links:

The teacher may use the following video links to enhance the topic clarity.

<https://youtu.be/XOIyEMUOAmU>

The video of Gen. Bipin Rawat during the air crash.

<https://youtu.be/2WF5uqBbvDo>

Students may write down their reflections of learning this DRR topic in their journal

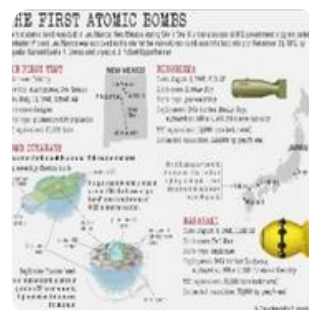
Class VII-Subject English NCERT Text Book – Honey Comb

Chapter No. and Name: 7 The Invention of Vita-Wonk Page No.:100 -103

Related DRR topic: Invention of Nuclear Bomb – 2nd World War [Man-made Hazard]

Introduction (10 minutes)

The facilitator will kickstart the session with a brief discussion on World War II and the series of events that led to the use of atomic bombs. The primary aim of this activity is to gain insights into the historical context and ethical considerations surrounding atomic bombs. Additionally, we will examine disaster management responses within the broader framework of this historical context, exploring how nations and organizations reacted to the aftermath of these catastrophic events.



Learning Outcome: The student will be able to

1. Summarize the key historical events with at least 90% accuracy.
2. Analyze disaster management responses in the context of atomic bomb incidents, identifying key strategies and their effectiveness.
3. Develop a hypothetical disaster management plan for a city faced with a similar catastrophe to an atomic bomb attack, incorporating historical insights and ethical principles.

Teaching Learning Strategies / Suggestive Classroom Activities:

Activity 1- "Atomic Bombs: Exploring History and Ethics"

Research (20 minutes): Students will be divided into small groups and each group will be assigned with a specific aspect of the topic to research. Possible topics could include:

- Development of atomic bombs (Manhattan Project)
- Hiroshima and Nagasaki bombings
- Immediate and long-term consequences

Each group will present their findings to the rest of the class by way of posters, PowerPoint slides, or any other visual aids.

Activity 2: To do worksheet

1. How did learning about the consequences of atomic bombs make you feel?
2. What are some ethical considerations when it comes to using atomic bombs?
3. Can you think of alternative solutions that could have been pursued instead of dropping atomic bombs?
4. How can we learn from history to ensure that such events are not repeated?
5. How can empathy and understanding help in preventing future conflicts?

Students will individually reflect on the activity by writing a short paragraph or drawing a picture that captures their thoughts and feelings about atomic bombs.

Reference Links:

Video Rare Nuclear Bomb Footage video <https://youtu.be/c6W2suGacjQ>

How the Atomic Bomb ended the World video https://youtu.be/96yhS_IEXg

The Evolution of Nuclear weapons video <https://youtu.be/xLRSmzGRLUk>

Students may write down their reflections of learning this DRR topic in their journal



Class: VII Subject: English NCERT Text Book- Honey Comb

Poem No. and Name:7, Dad and the Cat and the Tree Page No.: -108-110

Related DRR topic: Man-made Disaster–Deforestation

The teacher introduces the lesson by displaying captivating images of lush forests and engages students in a discussion about the vital role that trees play in our environment. They highlight how trees provide oxygen, support biodiversity, regulate climate, and offer numerous resources essential for human survival. However, the lesson will gradually shift focus towards the alarming issue of deforestation, emphasizing that this act involves the large-scale removal of trees and has far-reaching consequences.

Students will then explore how countries and organizations are taking action to combat deforestation. This may include policies promoting sustainable forestry practices, reforestation initiatives, and international agreements aimed at protecting forests. The importance of raising awareness and citizen involvement in forest conservation efforts will also be discussed.



(Textbook Picture)



(Teaching Aids)

Learning Outcome: Students will be able to

1. explain the concept of deforestation and its implications for biodiversity and climate stability.
2. examine and evaluate the primary drivers of deforestation in specific regions and propose strategies to address these challenges sustainably.
3. construct presentations or reports detailing the diverse approaches taken by countries and organizations to combat deforestation, and they will synthesize this information to identify effective strategies for forest preservation.

Teaching Learning Strategies/Suggestive Classroom Activities:

Activity 1- Poster making with slogans on Save Trees.

Activity 2- Draw a table and write the causes and effects of deforestation.

Reference Links:

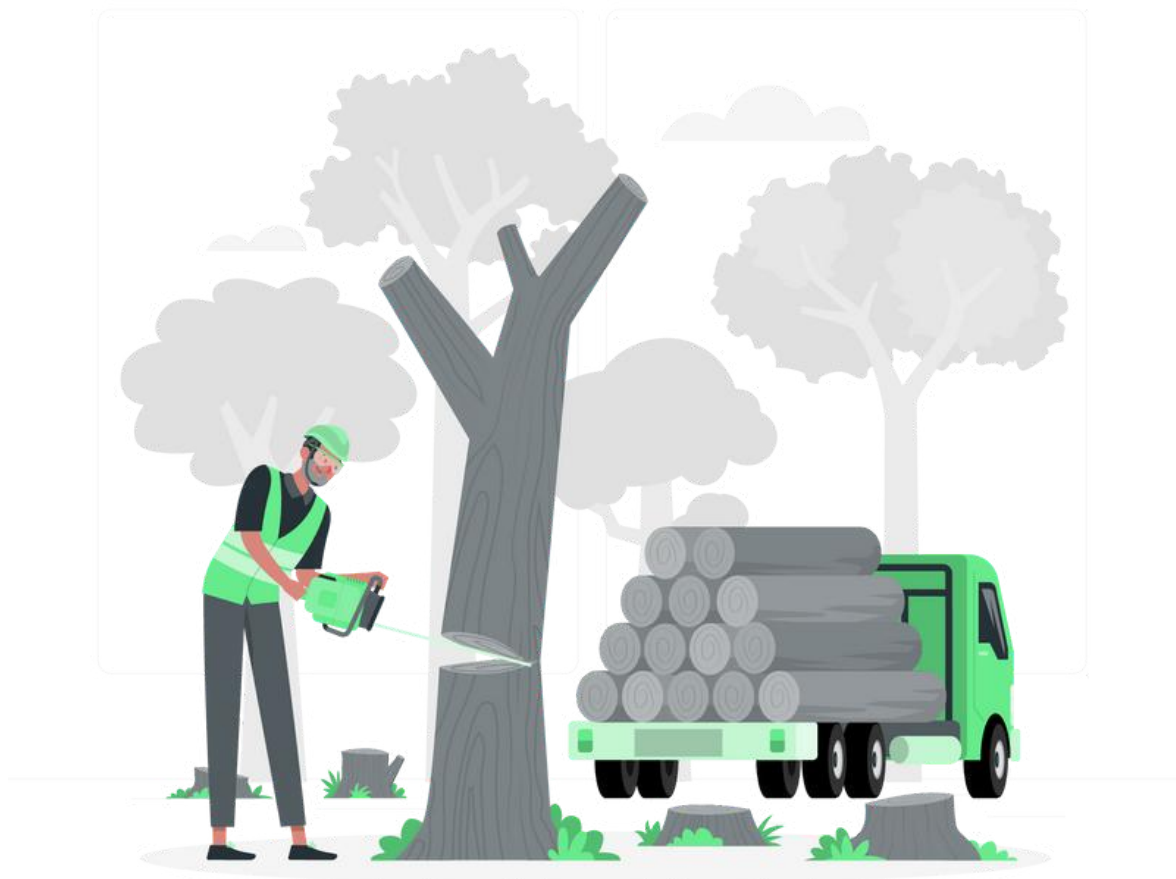
The teacher shows the video on Deforestation.

<https://youtu.be/-01T9e6VDWU> (3m05s)

What if all trees were cut down? Earth without trees.

<https://youtu.be/6x8luJlcXTk> (6m19s)

Students may write down their reflections of learning this DRR topic in their journal

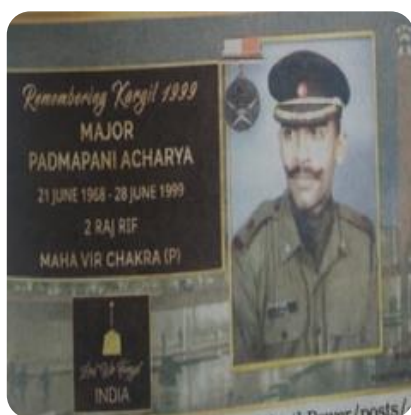


Class: VII-Subject: English NCERT Text Book - Honey Comb

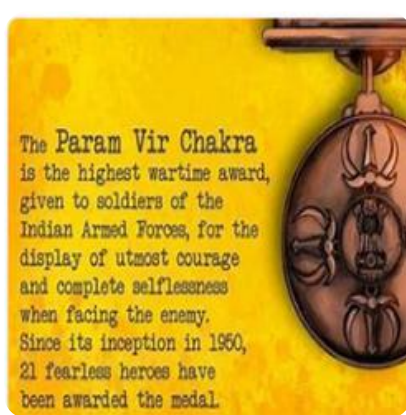
Chapter No. and Name: 8, A Homage to our Brave Soldiers Page No.: 114 - 126

Related DRR topic: Man-made Disaster: War

The teacher introduces the lesson with pictures of brave Indian soldiers and talk about their sacrifices while fighting for the country's safety. War of any kind is a human-induced disaster which not only dilapidates the country's economy but shatters the lives of people mainly those who are victims of such wars. We pay homage to the martyrs who lay down their lives but at the same time we should look for ways to avoid such events from happening.



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to know that

1. War is a social disaster.
2. Necessity of the adoption of advanced response mechanism
3. Acute need of a Prevention stage involving mitigation, negotiation, and reconciliation.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1 - Poster making with slogans on war's aftermath effects. (30m)

Activity 2- What are the ways you think you should always practice to avoid any type of fight or argument from happening? Make 4-5 danglers with your opinion(25-30m)

Reference Links: The teacher shows the video on Kargil War, commemorated as Kargil Vijay Diwas.

<https://youtu.be/M-F1WfweFB8> (9m 34s)

The present Ukraine-Russian War & its effects to learn from

<https://youtu.be/M-F1WfweFB8>

Students may write down their reflections of learning this DRR topic in their journal

Class: VIII-Subject: English NCERT Text Book - Honey Dew

Chapter No. and Name: 2, Tsunami Page No.: 24 - 30

Related DRR topic: Tsunami

The chapter is based on real incidents that happened when devastating Tsunami had hit some parts of India in 2004. The stories are from Andaman and Nicobar Islands and the Tamil Nadu coast which narrates some stories of courage and survival. The teacher talks about the causes & effects of Tsunami which makes it one of the perilous natural disasters of greater magnitude. Necessity of measures and plans to be kept in place to reduce the impact in tsunami prone areas. Magnitude of impact differs in humans from animals and reasons behind for that.



(Textbook Picture)



(Teaching Aid)

Learning Outcome: Students will be able

- 1.Explain the causes of Tsunamis, including the geological processes and factors leading to their occurrence, with accuracy.
- 2.Identify and discuss the regions that are most susceptible to Tsunamis and comprehend the potential catastrophic consequences that may arise if natural warnings and alerts are not heeded.
- 3.Analyze the evolution of technological advancements in tsunami forecasting over the decades, highlighting how these advancements have improved the ability to predict tsunamis well in advance. They will also outline the precautionary measures recommended in response to tsunami alerts.
- 4.Respond to natural disasters, specifically Tsunamis. They will be able to demonstrate their knowledge of evacuation procedures and other safety protocols.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1: Vocabulary Quiz on Tsunami to have a better understanding of the topic.

Activity 2: Rescue Response Awareness Game

You are vacationing on an island when you learn that a major earthquake is expected to strike in the ocean very close to your location. Answer the following question based on this situation in a chart in colorful clouds.

- What immediate safety measures will you take?
- Which necessary utility items should you carry with you?
- Which SOS contacts/agency should you contact for further instructions?
- Whom will you try to keep in contact with steadily if you had a method of communication?

Activity 3

Instruct the students to choose one cause of the Tsunami. Use poster board, writing, and drawing supplies. Students should divide the poster into three sections:

- Top-write the causes of a tsunami
- Middle-explain how tsunamis are formed by that cause
- Bottom- draw a picture to illustrate the cause

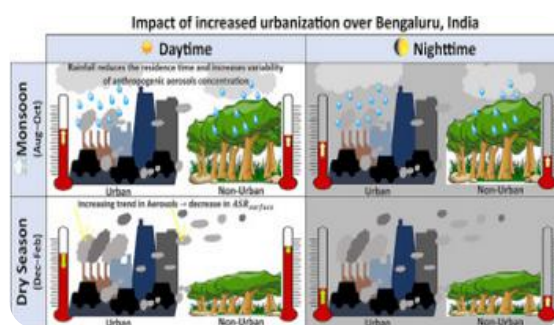
Reference Links: Video of the fateful day of 26th December 2004 when Tsunami hit Indian Ocean <https://youtu.be/EomuVQjh9nc> (approx. 10m)
How to survive Tsunami with the safety tips? <https://youtu.be/7EDfInGzjTY>

Students may write down their reflections of learning this DRR topic in their journal



Class VIII-Subject: English NCERT Text Book: Honeydew
Poem No. and Name: 2, The Geography Lesson Page No.:34
Related DRR topic: Extreme urbanization

In "The Geography Lesson," the poet discusses how humans have altered and reshaped the natural world to suit their needs. This theme can be related to extreme urbanization, which involves rapid and uncontrolled expansion of cities, often at the expense of the environment. The poem's exploration of the changing landscape and loss of natural beauty can be seen as a metaphor for the transformation of rural areas into concrete jungles due to urbanization. Extreme urbanization often results in the destruction of ecosystems, deforestation, and loss of biodiversity. It highlights the need for a balanced approach to urban development that considers environmental sustainability and the preservation of green spaces.



(Teaching Aid)

Learning Outcome: Students will be able to

1. Explain the causes, patterns, and consequences of extreme urbanization, demonstrating a comprehensive understanding of this phenomenon.
2. Evaluate the complex challenges arising from extreme urbanization, particularly the consequences of deforestation, and demonstrate an awareness of the importance of minimizing tree cutting and promoting sustainable practices.
3. Comprehend the multifaceted aspects of urban development.
4. Identify and describe the environmental impacts of extreme urbanization, including habitat destruction, deforestation, air and water pollution, and loss of biodiversity, fostering a heightened sense of environmental consciousness.
5. Recognize the interconnections between urban development, resource consumption, and climate change, enabling them to appreciate the importance of sustainable urban planning in mitigating environmental challenges.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity1: Solution Brainstorming

Facilitate a whole-class discussion on potential solutions to address the impacts of extreme urbanization and encourage the students to think critically and propose innovative ideas to mitigate negative effects and promote sustainable urban development.

Activity 2: Impact Analysis Stations

Divide students into small groups and assign each group a specific impact of extreme urbanization to analyze (e.g., environmental, social, economic, infrastructure). Provide each group with resources (online, books, articles) to research and gather information about their assigned impact and instruct them to discuss and analyze the causes, effects, and potential solutions related to their assigned impact.

Reference Links:

Urbanization:

<https://www.youtube.com/watch?v=ZGriw-jzPI>

Urbanization and the future of cities:

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

Students may write down their reflections of learning this DRR topic in their journal



Class: VIII-Subject: English NCERT Text Book - Honeydew

Chapter No. and Name: 1, The Best Christmas Present in the World Page No.: 9-16

Related DRR topic: Man-made Disaster: War

The teacher introduces the lesson by showing the guess cards and makes the students guess the event. After few minutes of discussion, the teacher tells the students about the ramification of Wars. More than 6 million people died in World War 1 because of deliberate genocide, massacres, mass-bombings, diseases, and starvations. Though World War I is called the “War to end all wars”, unfortunately, World War II “the deadliest war in world history” came after a few short years after the end of World War 1. The teacher further explains how the story “Best Christmas Present in the World” states that war brings only destruction and sadness in the world. Only the path of peace will lead us to the happiness and welfare of mankind.



(Teaching Aid)

Learning Outcome:

1. After studying the statement "War always brings calamity and strife," students will gain a deep understanding of the consequences and impact of war on societies, highlighting how it often leads to calamity and strife.
2. Students will examine and evaluate the ramifications of war, recognizing that they can be perilous and extend beyond the immediate conflict, affecting various aspects of a nation's well-being and global stability.
3. Students will develop critical thinking skills as they evaluate the statement "War is not the solution to all problems," delving into the complexities of conflict resolution and exploring alternative approaches to addressing disputes and issues.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1 – Create a spider diagram with any words or terms you associate with war.

Activity 2- Create a storyboard that depicts the aftermath of war.

Reference Links:

The teacher shows the video on World War 1

<https://www.youtube.com/watch?v=OGfAf45ddCo>

The teacher shows the video on the causes and effects of World War 1

<https://www.thoughtco.com/causes-that-led-to-world-war-i-105515>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX-Subject: English NCERT Text Book - BeeHive

Poem No. and Name: 2, - Wind Page No: 30

Related DRR topic: Destructive Winds

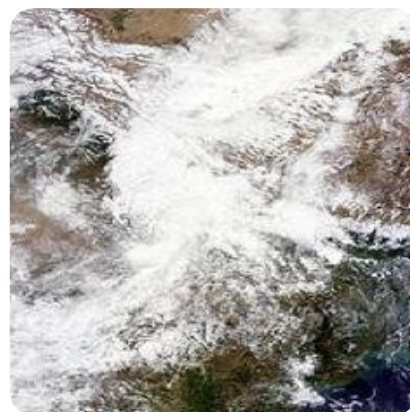
Strong winds can indeed be highly destructive, causing a range of problems such as damage to infrastructure, uprooting of trees, power outages, and even endangering lives. Wind gusts exceeding 90 km/h are classified as damaging winds and can result in significant property damage. When wind gusts reach 125 km/h or higher, they are considered destructive winds, capable of causing widespread destruction. In extreme cases, violent and destructive winds can lead to catastrophic consequences, including the destruction of homes, severe disruption of transportation systems, and even loss of life



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to know that

1. Identify the wind speed thresholds that classify winds as damaging and destructive.
2. Analyze the potential consequences and hazards associated with destructive winds, including their impact on infrastructure and safety.
3. Evaluate the poet's message in the poem regarding people's perception of wind from a sweet breeze to a destructive force, and its relevance to understanding the power of nature.
4. Develop a safety preparedness plan for individuals and communities to lessen the impact of damaging and destructive winds, including measures for securing property and ensuring personal safety.

Teaching Learning Strategies/ Suggestive Classroom Activities:**Activity 1: Make a to Do List**

After learning about the precautionary advisory from Meteorological Dept., how will you be prepared for an emergency during strong winds?

Activity 2: Know about safety Rules when high wind threat is there:

1. Which is the safest place during strong winds?
2. If you are caught outside during high winds?
3. If one is driving?
4. In the event of a downed power line?

Reference Links: Havoc created by strong winds <https://youtu.be/D-YnXrit2Uo>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX-Subject: English NCERT Text Book - BEEHIVE

Poem No: 6, Poem Name: No Men Are Foreign Page No.: 80

Related DRR topic: Man-made Disaster: War

The teacher introduces the lesson by showing the picture of before and after images of war which reveals the massive destruction. When we decide to go into a war, we kill one another. Whenever we choose to despise someone, we choose to despise ourselves. Through this poem, the poet states that before going into the war, we should take a moment and think of our actions, as in war, there are no winners. Teacher further explains how the poet urges people to drop their weapons and welcome one another as part of their own to bring peace and love in this world without any hatred or discrimination.



(Teaching Aid)

Learning Outcome: Students will be able to

1. Demonstrate their understanding of the significance of promoting peace as a means to counter thoughts of war and conflict.
2. Analyze and evaluate the role of universal brotherhood in reducing the likelihood of wars and fostering equality and harmony among diverse groups.
3. After studying the concept of a policy of peaceful co-existence, students will develop critical thinking skills to assess its effectiveness in reducing hostility and conflicts on a global scale.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1: Create a “peace pledge” for your school or organization or community, expressing your values and your commitment to take action to build peace going forward.

Activity 2- Write a quote about peace that inspires you to act, or create an image that represents your vision for peace, and share it as an inspiration for others using #Peace Day Challenge.

Reference Links: The teacher may show the following videos on war and its impact

https://youtu.be/6FsZWBPI_Gg

<https://youtu.be/LeYqB23vNpY>

Students may write down their reflections of learning this DRR topic in their journal

Class IX Subject: English NCERT Text Book: Moment

Chapter No.: 8, Chapter Name: The House is not a Home Page:49-54

Related DRR topic: Fire safety and emergency preparedness

A house becomes a home when its occupants feel safe and prepared. Developing an emergency plan that includes protocols for various scenarios, such as natural disasters or medical emergencies, is crucial. It can provide shelter, but it is essential to have fire safety measures installed like fire extinguishers, smoke detectors, fire escape paths, etc. Transforming a house into a home also involves having essential supplies readily available. In the context of fire safety and emergency preparedness, we can relate this phrase to emphasize the importance of taking proactive measures to ensure that a house becomes a safe and secure home.



(Teaching Aid)

Learning Outcome: Students will be able to

1. Analyze the potential impact of disasters on homes and communities to increase knowledge and awareness.
2. Differentiate the misconception that a house automatically guarantees safety and security during disasters.
3. Evaluate the significance of preparedness and resilience measures in safeguarding homes and the well-being of individuals and families.
4. Develop a practical plan for disaster preparedness and resilience to apply in their own homes and communities.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1: Fire Safety Action Plan:

Individually or in groups, students create a fire safety action plan for their homes. They can identify potential hazards, suggest preventive measures, and design evacuation routes. Encourage them to involve their families and discuss the importance of fire safety at home.

Activity 2: Emergency Preparedness Stations:

First Aid Station and Emergency Kit Assembly: Demonstrate basic first aid techniques

and have students practice bandaging wounds and also provide a list of essential emergency supplies and work in groups to assemble mini emergency kits using provided materials like anti-septic cream, cotton, bandages etc.

Reference Links:

Fire safety: <https://www.youtube.com/watch?v=AWHGdWOI4kw>

Emergency preparedness: <https://www.youtube.com/watch?v=kE3XAwR412I>

Students may write down their reflections of learning this DRR topic in their journal



Class: IX Subject: English NCERT Textbook: Beehive

Poem No. and Name: 8, On Killing a Tree Page No.:110

Related DRR topic: Deforestation – an Environmental Damage

The loss of trees and other vegetation will affect the water cycle, it will destroy the flora and fauna, it will lead to increase in carbon-di-oxide thereby increasing global warming. The poet through the poem makes us understand that killing a tree is akin to murdering a fellow human being. It also refers to the destructive nature of humans and how nature can replenish by itself if it's not interfered.



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Develop a comprehensive understanding of the effects of cutting down trees, including their role in contributing to climate change, causing soil erosion, reducing crop yields, triggering flooding, and increasing greenhouse gases in the atmosphere.
2. Identify and discuss various strategies such as afforestation, spreading awareness about forest importance, promoting the reuse and recycling of forest-derived products, advocating sustainable forest management practices, and considering shifting cultivation as an alternative.
3. Evaluate the role of Government and Environmentalists in forest conservation, examining the effectiveness of implementing strict laws to prevent illegal logging and the careful planning of infrastructure construction to minimize forest loss.
4. Demonstrate problem-solving skills as they explore the concept of introducing new reforestation campaigns to restore deforested lands, identifying potential challenges and solutions in the reforestation process.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1: Make a to Do List:

After learning about the measures taken by the government and environmentalists in preventing deforestation, how as an individual you will support them in reducing deforestation?

Activity 2: Know about effects of deforestation:

- To what extent does deforestation affect the environment where you live today?
- How have the environmental problems such as deforestation affected the lives of the people or community around you?
- Like deforestation talk about another human activity that causes a loss in biodiversity?

Reference Links: The teacher may show the following videos

Deforestation effects: <https://www.youtube.com/watch?v=WQVBNMG3HrM>

Chipko movement: https://www.youtube.com/watch?v=r_N4gJLmJt4

Students may write down their reflections of learning this DRR topic in their journal



Class: IX Subject: English NCERT Text Book – Beehive

Chapter No: 4 Lesson Name – A Truly Beautiful Mind Page No: 46

Related DRR topic: Resilience and Peace Building

The teacher shows the picture of the Japanese cities Hiroshima and Nagasaki on which The United States detonated two atomic bombs which killed lakhs of people most of whom were civilians. The lesson - A Truly Beautiful Mind is about Albert Einstein. It is a short biography of him. In this lesson we get to know about another aspect of his life – his belief in humanity. He advocates world peace, non-violence in his entire life.



(Teaching Aid)

Learning Outcome: Students will be able to

1. Gain a deep understanding of the dual nature of science as both a blessing, when used for the betterment of humanity, and a potential curse, when misused by destructive individuals or groups.
2. Apply their knowledge to evaluate the environmental impacts of scientific advancements and the importance of responsible application.
3. Develop critical thinking skills as they analyze the statement "Science cannot be held responsible for the destruction. To destroy is not the fault of science but it is definitely the fault of the human selfish mind," exploring the ethical and moral dimensions of science and human responsibility in its application.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity-1-Case Studies:

Present case studies of other disasters (natural or man-made) and their impacts. Analyze the strategies and measures implemented before, during, and after these events to reduce risks, save lives, and aid recovery efforts. You can explore examples like the Great East Japan Earthquake and Tsunami in 2011 or the Chernobyl nuclear disaster.

Activity-2-Preparedness Activity based on the Bomb Blast:

Develop a specific preparedness activity centered around the Hiroshima bomb blast.

For example:

Ask students to research and prepare emergency kits or "go bags" that would contain essential items for survival in the aftermath of a disaster.

Conduct a mock evacuation drill, focusing on communication, organization, and safety procedures.

Reference Links: The teacher may show the following videos

Benefits of Science & Technology <https://www.youtube.com/watchv=7wxYwpmCQVU>

Hiroshima Day 2022: https://www.youtube.com/watch?v=96yhS_IEXg

Students may write down their reflections of learning this DRR topic in their journal



Class: X Subject: English NCERT Text Book – First Flight

Chapter No.: 1 Chapter Name – A Letter to God Page Nos: 1- 7

Related DRR topic: Cultivation Damage due to Natural Disasters (storms)

Agriculture is one of the backbones of economy and a necessity of human survival. The teacher through this chapter highlights the devastating effects of few natural disasters which destroy harvesting crops and the agricultural fields in no time with its impact through the pictures like hailstorms, flood, attack of locusts etc, making the farmer helpless. In the story, a farmer, the protagonist has an immense & unfathomable faith in God but alas his harvesting crop of corn was destroyed suddenly by heavy hailstorm while he was just expecting a shower.



(Textbook Picture)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Identify various types of very dangerous storms, such as tornadoes and hurricanes, occurring in different regions of the world.
2. Analyze the reasons why technological and planning strategies should shift from reactive disaster response approaches to proactive prevention and preparedness.
3. Evaluate the necessity of risk-informed anticipatory actions and investments to mitigate the economic impacts of climate-induced disasters, particularly in the agricultural sectors.
4. Assess the potential benefits of incorporating more technological advancements in the field of agriculture, specifically in introducing dominant seeds designed to withstand weather-specific crises.
5. Examine the importance of crop insurance as a means to minimize financial losses for farmers and its potential role in enhancing agricultural sustainability.

Teaching Learning Strategies/ Suggestive Classroom Activities:**Activity 1: Collage Making**

Collage making on different natural and man-made causes of agricultural loss.

Activity 2: Discuss and Debate

Resilience approach to disaster risk reduction in agriculture is the need of the hour.

Reference Links:

The teacher may use the following video to show the assistance given by FAO.

<https://youtu.be/pbIS-PALRsU>

NGOs are helping farmers in Bangladesh, a flood prone country to mitigate the impact. <https://www.facebook.com/watch/?v=891245302330681>

Students may write down their reflections of learning this DRR topic in their journal



Class: X Subject: English NCERT Textbook–First Flight

Chapter No. and Name: 2, Nelson Mandela-A long walk to Freedom Page No: 16-28

Related DRR topic: Manmade disaster- Racial Discrimination

Respect for human rights and the principles of equality and non-discrimination are interdependent and to underpin the Universal Declaration of Human Rights and the main international human rights treaties. The teacher introduces the lesson by showing them the pictures of the activist who dedicated their life to dismantle racism. Long Walk to Freedom is Nelson Mandela's moving and exhilarating autobiography which says about his struggle against apartheid. Teacher further explains why Nelson Mandela calls Racial discrimination as the greatest human disaster. Discrimination at an earlier stage may affect later outcomes. For instance, discrimination in elementary school may negatively affect outcomes in secondary school and diminish opportunities to attend college. Discrimination in one domain may diminish opportunities in other domains. For example, families that live in segregated neighborhoods may have limited access to adequate employment and health care.



(Teaching Aids)



(Teaching Aids)

Learning Outcome: Students will be able to

1. Analyze the historical context of the apartheid era in South Africa, examining its significance and impact on the nation's social, political, and economic landscape.
2. Evaluate the pivotal role played by Nelson Mandela in the struggle to transform South Africa into a multiracial democracy, considering his leadership, sacrifices, and enduring legacy.
3. Examine apartheid as a significant human disaster, exploring its underlying principles, policies, and consequences on the lives of South Africans, especially those in marginalized communities.
4. Discuss the principles of equality, emphasizing their importance in dismantling apartheid and fostering a more just and inclusive society.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity1: Compose a poem about injustice and Racial Discrimination.

Activity2: Create a piece of art honoring Nelson Mandela that should include a quote.

Activity3: Group Discussion topic.

Nelson Mandela defended himself in court wearing the traditional dress of an African chief...ask the group to discuss what messages Mandela was trying to send out with this action.

Reference Links:

The teacher may use the following video on Elimination of Social Discrimination
<https://www.un.org/en/observances/end-racism-day>

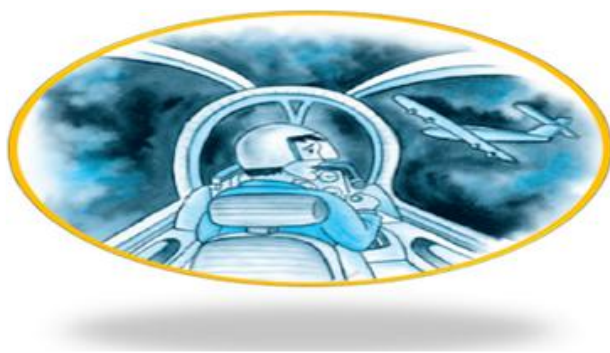
The teacher may use the following video on Discrimination
<https://www.amnesty.org/en/what-we-do/discrimination>

Students may write down their reflections of learning this DRR topic in their journal



Class X Subject: English NCERT Text Book –First Flight**Chapter No. and Name: 3, Black Aeroplane Page No: 37-39****Related DRR Topic-Emergency preparedness**

Sometimes, it gets tough for us to take decisions and doubt creates a lot of fear. We consider some helpful incidents to be miracles and mysteries. These incidents take us out of trouble and are nothing else but our mind's courage and strength which takes the form of an external factor and takes us out of the doubtful situation. Such incident happens with the narrator, the pilot of the old Dakota plane who is flown out of the storm by a mysterious "Black Aeroplane". Everything gets dark and all the instruments stop working. He lost control of the plane and the hope of their survival becomes bleak. The very less amount of fuel is left and the pilot starts panicking in the situation.



(Teaching Aids)



(Teaching Aids)

Learning outcome: Students will be able to

1. Identify the location of emergency exits on airplanes and demonstrate the proper procedure to operate them in the event of an emergency.
2. Recall and summarize the safety instructions provided by cabin crew members or pilots, emphasizing the importance of promptly following these instructions during an aviation incident.
3. Analyze the significance of staying calm and composed during emergencies, recognizing how panic can impede one's ability to make rational decisions and adhere to safety protocols.
4. Apply knowledge of safety equipment such as oxygen masks, life vests, and seat belts by demonstrating their proper usage and understanding the importance of following provided guidelines for maximum safety.

Teaching Learning Strategies/ Suggestive Classroom Activities:**Activity1:** Preparing Emergency Kit (30m)

Discuss the importance of emergency kit preparedness and create a classroom activity where students prepare their own emergency kits. They can include essential items like water bottles, Non-Perishable food, first aid supplies, flashlight, etc. This activity helps students understand the significance of being prepared for potential disasters.

Activity 2: Evacuation plans (30m)

Conduct a classroom simulation where students practice evacuating the classroom or school building in an orderly manner. Discuss the importance of following evacuation procedures and staying calm during such situations.

Reference link:

Teacher may show a building evacuation training <https://youtu.be/UuTowptYlrM>

Students may write down their reflections of learning this DRR topic in their journal



Class: X Subject: English NCERT Text Book: The First Flight

Poem No. and Name: 7, The Trees Page:77-88

Related DRR topic: Environmental conservation

"The Trees" touches on the theme of human intervention and the potential consequences it can have on the environment. By drawing attention to the power dynamics between humans and the natural world, the poem implicitly highlights the need for responsible stewardship and environmental conservation. It suggests that we should respect and protect nature's inherent qualities, rather than attempting to control or exploit it for our own short-term gains.

Humans have made trees confined to the 4 walls of their houses to fulfill their needs. We must follow the rules of nature and should not try to overrule it.



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Analyze the importance of forest ecosystems, specifically focusing on the disruptive effects of cutting trees on habitat loss, reduced biodiversity, and imbalances in ecological processes.
2. Examine the various drivers of deforestation, including logging, agriculture expansion, and urbanization, and evaluate their social, economic, and environmental impacts on local and global scales.
3. Evaluate the consequences of deforestation, such as soil erosion, climate change, and loss of livelihoods, and demonstrate an understanding of the urgent need to reduce tree cutting and promote sustainable practices.
4. Empower individuals to advocate for environmental protection by encouraging them to engage in activities like supporting reforestation initiatives, participating in conservation campaigns, or making sustainable choices in their own lives.

Teaching Learning Strategies/ Suggestive Classroom Activities:**Activity 1: Poster Making**

Create posters, brochures, or infographics highlighting the benefits of forests, threats they face, and ways individuals can contribute to their preservation.

Activity 2: Forest Conservation Documentary or collage video

Work in groups to produce a documentary film/video on forest conservation by including challenges faced, success stories, and the importance of preserving forests.

Reference link: The teacher may show the following videos

Deforestation: <https://www.youtube.com/watch?v=lc-J6hcSKa8>

What if: <https://www.youtube.com/watch?v=3hxE7Af98AI>

Students may write down their reflections of learning this DRR topic in their journal



Class: X Subject: English NCERT Textbook–First Flight

Poem No. and Name: 8, Fog Page No: 115

Related DRR topic: Hazard Awareness

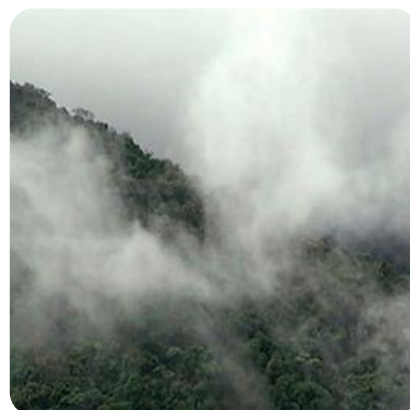
The biggest hazard of fog is physical safety as low visibility potentially causes more accidents. Due to visibility reduction, it can have a hindering and sometimes even lethal impact on air, sea and road traffic. Fog has a substantial influence on various ecosystems and it impacts economy, traffic system and human life in many ways. In this poem, the poet describes fog which is happening in the cities and harbour. The poet says that the fog is very silent and the onset is slow to. But when the fog is around especially in the city, many accidents may occur due to low visibility. Hence sometimes fog may be very harmful to human life too.



(Teaching Aid)



(Teaching Aid)



(Teaching Aid)

Learning Outcome: Students will be able to

1. Explain the cause and effects of fog, emphasizing how water vapor condenses to form fog and the significant impacts of fog on transportation, including airport operations, highway travel, marine travel, and rail travel.
2. List and describe the precautions individuals should take during extreme fog conditions, including driving slowly, using fog lights, utilizing warm A/C to clear mist on windshields, staying alert, and other safety measures.
3. Analyze the role of weather officials in issuing precautionary advisories regarding extreme fog conditions and the responsibility of local officials in strictly implementing these advisories until conditions improve, emphasizing the importance of such actions in mitigating potential damage and ensuring public safety.

Teaching Learning Strategies/ Suggestive Classroom Activities:

Activity 1: Vocabulary Quiz on fog to have a better understanding of the topic

Activity 2: What you need: Glass jar, small strainer, water, ice cubes

What to do: Fill the jar completely with hot water for about a minute. Pour out almost all the water, leaving about 1 inch in the jar. Place the strainer over the top of the jar. Drop three or four ice cubes into the strainer. As the cold air from the ice cubes collides with the warm, moist air in the bottle, the water will condense and fog will form. This is one of those weather activities that will inspire plenty of oohs and aahs!



(Teaching Aids)

Reference Links:

The great smog of London <https://www.youtube.com/watch?v=hmrjwAkMveE>

Students may write down their reflections of learning this DRR topic in their journal





Hindi

विषयसूची

क्र. संख्या	विषय सामग्री	पाठ्यपुस्तक पृष्ठसंख्या	डी आर आर विषय से संबंधित	पृष्ठ संख्या
कक्षा-VI				
1	पाठ्यपुस्तक: वसंत भाग 1 पाठ: 5, साथी हाथ बढ़ाना	28-29	प्राकृतिक आपदा	173
2	पाठ्यपुस्तक: वसंत भाग-1 पाठ: 9, जो देखकर भी नहीं देखते	65-67	प्राकृतिक आपदा	175
कक्षा-VII				
3	पाठ्यपुस्तक: वसंत भाग 2 पाठ: 1 हम पंछी उन्मुक्त गगन	1-2	दैवीय आपदा	177
4	पाठ्यपुस्तक: वसंत भाग 2 पाठ: 2 हिमालय की बेटियाँ	4-6	साफ पानी और स्वच्छता और भूमि पर जीवन	178
5	पाठ्यपुस्तक: वसंत भाग 2 पाठ: 5 पापा खो गए	26-44	सड़क, रेल, दुर्घटनाएं	179
6	पाठ्यपुस्तक: वसंत भाग 2 पाठ: 6, शाम एक किसान	47-48	जलवायु	180
7	पाठ्यपुस्तक: वसंत भाग 2 पाठ: 10, खानपान की बदलती तस्वीर	65-68	जिम्मेदारी के साथ उपभोग और उत्पादन	182
कक्षा-VIII				
8	पाठ्यपुस्तक: वसंत भाग 3 पाठ: 5, क्या निराश हुआ जाए	25-30	अच्छा स्वास्थ्य और जीवनस्तर	184
9	पाठ्यपुस्तक: वसंत भाग 3 पाठ: 10, लाख की चूड़ियां	1-6	सांस्कृतिक विरासत का संरक्षण	185
10	पाठ्यपुस्तक: वसंत भाग 3 पाठ: 12, पानी की कहानी	70-78	जलवायु परिवर्तन	187
11	पाठ्यपुस्तक : दूर्वा पाठ: 17, वह सुबह कभी तो आएगी	110-112	औद्योगिक विपदा	189
कक्षा-IX				
12	पाठ्यपुस्तक :क्षितिज 1 पाठ: 1, दो बैलों की कथा	1-11	भूमि पर जीवन	191
13	पाठ्यपुस्तक :क्षितिज 1 पाठ: 13, बच्चे काम पर जा रहे हैं	104-105	गुणवत्तापूर्ण शिक्षा और अच्छा काम और आर्थिक विकास	192
14	पाठ्यपुस्तक : स्पर्श 1 पाठ: 1, दुख का अधिकार	1-11	असमानता में कमी और शांति और न्याय के लिए संस्थान	193

कक्षा: 6, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 1

पृष्ठ संख्या: 28-29, पाठ: 5, पाठ का नाम: साथी हाथ बढ़ाना

डी आर आर विषय से संबंधित: प्राकृतिक आपदा

इस कविता में कवि कहते हैं कि जिस प्रकार पानी की बूँदों से सागर बनता है, मनुष्य किसी भी स्थिति पर जीत हासिल कर सकता है अगर वह साथ हो। छात्र यह समझने में सक्षम होंगे कि आपदा जैसी स्थिति में लोगों को एक समाज के रूप में एक दूसरे की मदद की आवश्यकता होती है और इस विकट त्रासदी के परिमाण को कम करने में एक दूसरे की मदद करनी चाहिए।

एक दूसरे की सहायता करना, विशेष रूप से आपदा का सामना करते समय
RESPONSE आपदा प्रबंधन का



सीखने के प्रतिफल : छात्र सक्षम होंगे

- बचाव कर्मी एवं डॉक्टर द्वारा किए गए कार्यों की सराहना करने में
- आपदा जैसी स्थिति में स्वयं को तैयार करने की एवं दूसरों की सहायता करने की जिम्मेदारी निभाए।

शिक्षण अधिगम रणनीतियाँ/ कक्षा गतिविधियाँ :

1. सामूहिक गतिविधि : (10 मिनट की चर्चा + 15 मिनट की प्रस्तुति= 25 मिनट)

- कक्षा को समूहों में विभाजित किया जा सकता है।
- प्रत्येक समूह किसी एक आपदा के बारे में जानकारी लाएंगे।
- ऐसी स्थिति में किस प्रकार वह स्वयं और अपने आसपास के लोगों की सहायता कर सकते हैं। इस संबंध में चर्चा करेंगे।
- प्रत्येक समूह चार्ट, पीपीटी आदि के माध्यम से कक्षा में अपना कार्य प्रस्तुत करेंगे।

नुक्कड़ नाटक: विषय पर आधारित (20 मिनट की तैयारी + 5 मिनट की प्रस्तुति = 25 मिनट)

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

**“WE CANNOT STOP NATURAL DISASTERS BUT
WE CAN ARM OURSELVES WITH KNOWLEDGE:
SO MANY LIVES WOULDN'T HAVE TO BE LOST IF
THERE WAS ENOUGH DISASTER
PREPAREDNESS.”**

PETRA NEMCOVA



कक्षा: 6, विषय: हिंदी, एनसीईआरटी पाठ्यपुस्तक: वसंत भाग-1

पृष्ठ संख्या: 65-67, पाठ: 9, पाठ का नाम: जो देखकर भी नहीं देखते

डी आर आर विषय से संबंधित: प्राकृतिक आपदा

लेखक के अनुसार हमसे अधिकतर लोग जिनकी आंखें हैं वे अपने आसपास की छोटी- छोटी चीजों को नहीं देख पाते हैं। हम अपने स्वास्थ्य को हल्के में लेते हैं और प्रकृति के प्रति असंवेदनशील हो गए हैं। हालांकि जो भाग्यशाली नहीं है, कि उनके पास कुछ ज्ञानेंद्रियां नहीं हैं, वे प्रकृति की सराहना करते हैं और उन छोटी चीजों की सराहना करते हैं जो वे अपनी स्थिति के कारण खो चुके हैं। छात्र किसी भी आपदा के दौरान अपनी ज्ञानेंद्रियों का बुद्धिमानी से उपयोग करने के महत्व को समझेंगे। वे उन विभिन्न स्थितियों को सूचीबद्ध करने का प्रयास करेंगे जब समाज में लोगों को एक दूसरे की सहायता की आवश्यकता होती है। वे आपदा की स्थिति में विकलांग लोगों की मदद करने के तरीके को प्राप्त कर पाएंगे।

*हमारी इंद्रियों का उपयोग करना और अपने परिवेश के बारे में जागरूक होना विशेष रूप से आपदा के समय।

*आपदा के दौरान हम किस तरह स्थिति पर प्रतिक्रिया करते हैं और कैसे कीमती जीवन और संपत्ति को बचाया जा सकता है।

*आपदा के दौरान कमजोर लोगों की मदद करना हर किसी का कर्तव्य बन जाता है।

*अंगदान के प्रति जागरूकता फैलाना।



On average, **198.8 million** people are affected by natural disasters each year.¹



People with disabilities are **2-4 times** more likely to be killed in disasters.²

सीखने के प्रतिफल : छात्र सक्षम होंगे

- बचाव कर्मी एवं डॉक्टर द्वारा किए गए कार्यों की सराहना करने में।
- आपदा जैसी स्थिति में खुद को तैयार करने और दूसरों की मदद करने विशेष रूप से विकलांगों की मदद करने की जिम्मेदारी निभाएंगे।

शिक्षण अधिगम रणनीतियाँ / कक्षा गतिविधियाँ :

1. **सामूहिक गतिविधि : नवीन विचारों को प्रोत्साहित करना**
(अवधि : (15 मिनट की चर्चा + 15 मिनट की प्रस्तुति= 30 मिनट)

- कक्षा को समूह में विभाजित किया जा सकता है ।
- प्रत्येक समूह नवीन विचारों के बारे में चर्चा करेगा जिससे आपदा के दौरान विकलांग लोगों की मदद की जा सके।
- प्रत्येक समूह चार्ट ,पीपीटी ,रोलप्ले आदि के माध्यम से कक्षा में अपना कार्य प्रस्तुत करेंगे ।
- एक केस स्टडी भी शामिल करेंगे ।

2. वीडियो: निम्नलिखित वीडियो देखे और विकलांग लोगों के लिए एक डी. आर. आर योजना तैयार करें ।

<https://youtu.be/7ZjSfVa3jKs>

<https://youtu.be/1iwTn91W9zQ>

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं



कक्षा: 7, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 2

पृष्ठ संख्या :1-2, पाठ: 1, पाठ का नाम: हम पंछी उन्मुक्त गगन

डीआरआर विषय से संबंधित: दैवीय आपदा

‘हम पंछी उन्मुक्त गगन’ प्राकृतिक आपदाओं के सामरिक संघर्ष के महत्व को दर्शाता है। यह गीत बताता है कि हम पंछी हैं जो उन्मुक्त गगन में उड़ते हैं और प्रकृति के लिए अपना जीवन अर्पित करते हैं। गीत में डिसास्टर रिस्क और प्रकृति के प्रति जागरूकता के महत्व का प्रचार किया जाता है। यह छात्रों को डिसास्टर रिस्क मिटिगेशन के बारे में शिक्षा देता है और प्रकृति के साथ संवाद करने, साझा जिम्मेदारी उठाने, और संयुक्त राष्ट्रीय लक्ष्यों के प्रति समर्पित होने की प्रेरणा देता है। इस गीत के माध्यम से छात्रों को डिसास्टर रिस्क रिडक्शन के महत्वपूर्ण सिद्धांतों को समझाया जाता है और उन्हें संबंधित मुद्दों के प्रति जागरूक किया जाता है।



**समझाया जाता है और उन्हें संबंधित मुद्दों के प्रति जागरूक किया जाता है।
सीखने के परिणाम:**

- डिसास्टर रिस्क और प्रकृति के प्रति जागरूकता
- विभिन्न प्राकृतिक आपदाओं से बचना
- संरक्षित भूमि और स्थायी विकास (SDGs), के प्रति समर्पित होना, साझा जिम्मेदारी के महत्व और सहयोग करना

शिक्षण अधिगम रणनीतियाँ/कक्षा गतिविधियाँ:

- प्रकृति संवेदनशीलता दौरा
- प्रकृति संरक्षण अभियान (वृक्षारोपण, प्लास्टिक मुक्त अभियान)
- वाद-विवाद : डिसास्टर रिस्क रिडक्शन और प्राकृतिक आपदाओं के सम्बन्ध में



छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 7, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 2

पृष्ठ संख्या : 4-6, पाठ: 2, पाठ का नाम: हिमालय की बेटियाँ

डीआरआर विषय से संबंधित: साफ पानी और स्वच्छता और भूमि पर जीवन

लेखक के अनुसार, आजकल हिमालय क्षेत्र की नदियों को अपनी माँ की गोद में बहने वाली बेटियों के रूप में माना जा सकता है। डीआरआर के एक भाग के रूप में छात्रों को प्रदूषण के रूप में दुरुपयोग के बारे में जागरूक किया जा सकता है जिसका ये नदियाँ सामना कर रही हैं। पर्यटकों के असंवेदनशील व्यवहार ने इन नदियों में मिलने वाले शुद्ध जल को प्रदूषित कर दिया।

STOP POLLUTING



मानव रचित आपदा

सीखने के परिणाम:

- छात्र हमारे जल संसाधनों की सराहना करने में सक्षम होंगे
- आलोचना करें कि पर्यटक इन संसाधनों को कैसे प्रदूषित कर रहे हैं
- जिम्मेदार व्यक्ति/पर्यटक बनें और जल निकायों को प्रदूषित न करने का ध्यान



शिक्षण अधिगम रणनीतियाँ/ कक्षा गतिविधियाँ:

1. अनुभवात्मक अधिगम (अवधि-15 मिनट की चर्चा + 15 प्रस्तुति - 30 मिनट)

कक्षा को समूहों में विभाजित किया गया है। प्रत्येक समूह को करने के लिए कहा गया है।

- हिमालय की यात्रा करने वालों के अनुभवों पर चर्चा करें
- नदियों के प्रदूषण के कारणों का पता लगाएं
- हिमालय में प्रदूषण को कम करने के लिए क्या किया जा सकता है इसके बारे में अपने विचार साझा करें
- नमामि गंगे परियोजना के बारे में जानकारी साझा करें।
- जल निकायों की रक्षा के लिए पर्यटन मंत्रालय और भारत में प्रदूषण बोर्ड को एक पत्र लिखें
- संबंधित विभागों को ईमेल के माध्यम से पत्र पोस्ट करें।

2. हमारी नदियों को बचाओ- (अवधि 25 मिनट) पर एक पोस्टर डिज़ाइन करें

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 7, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 2

पृष्ठ संख्या :26-44, पाठ: 5, पाठ का नाम: पापा खो गए

डीआरआर विषय से संबंधित: सड़क, रेल, दुर्घटनाएं

पापा खो जाना एक अपादकता की स्थिति हो सकती है, जिसे एक डिसास्टर से जोड़ा जा सकता है। इस तरह की स्थिति में, बच्चों को डिसास्टर प्रबंधन के महत्व को समझाने का मौका मिल सकता है। वे अपादकता से संबंधित जोखिमों को पहचानने और इसके सामरिक उपायों को सीख सकते हैं। पापा की वहांगमय गायबी संदिग्धता के संबंध में, सड़क सुरक्षा के महत्वपूर्ण तत्वों पर ध्यान केंद्रित करने का अवसर हो सकता है। छात्रों को सड़क सुरक्षा नीतियों, बाइक या गाड़ी चलाने के सुरक्षित तरीकों, और ट्रैफिक नियमों के बारे में जागरूकता प्राप्त कराई जा सकती है। पापा की गायबी का कारण प्राकृतिक आपदा हो सकती है जैसे कि बाढ़, अवसाद, या ज्वालामुखी।



सीखने के परिणाम:

- डिसास्टर के दौरान और बाद में व्यक्तियों और समुदायों के सामरिक चुनौतियों की संवेदनशीलता और समझ को बढ़ाना
- पापा खो गए" की कहानी से जुड़े व्यक्तिगत अनुभवों और विस्तृत DRR और SDG प्रयासों के बीच के संबंध को पहचानना
- घटना, समर्पण, और समाधान की क्षमता विकसित करने का मौका मिलना

शिक्षण अधिगम रणनीतियाँ/कक्षा गतिविधियाँ:

- समूह चर्चा: आपदा की तैयारी, प्रतिक्रिया, और सतत विकास के महत्व
- मामला अध्ययन विश्लेषण: वास्तविक जीवन में हुए आपदा और उनके प्रभाव पर वास्तविक मामलों की पेशकश

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 7, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 2

पृष्ठ संख्या :47-48, पाठ: 6, पाठ का नाम: शाम एक किसान

डीआरआर विषय से संबंधित: जलवायु

एक किसान को बाढ़, सूखा, या तूफान जैसी विभिन्न प्राकृतिक आपदाओं का सामना करना पड़ता है। कहानी उस किसान के सामने आने वाली मुश्किलें और चुनौतियों को बता सकती है, जिसमें फसल का नुकसान, पशुधन के क्षति और आर्थिक संकट शामिल हो सकते हैं। किसान, DRR उपाय की मदद से, आपदाओं के जोखिम को कम करने और भविष्य की आपदाओं के प्रति प्रतिरोधशीलता को बढ़ाने के लिए सीखता है। इसमें क्लाउड-स्मार्ट कृषि प्रथाओं को अपनाना, समय पर चेतावनी प्रणाली को लागू करना, मिट्टी और जल संरक्षण तकनीकों का प्रयास करना, फसलों की विविधता को बढ़ाना और खेत में अवसंरचना को सुधारना शामिल हो सकता है।



सीखने के परिणाम:

- अपने प्राकृतिक पर्यावरण के बारे में जागरूकता का विकास
- किसान के जीवन और उद्यमिता की गहरी समझ
- कृषि और सांख्यिकी ज्ञान का विकास।
- कृषि सेक्टर में गरीबी निवारण, खाद्य सुरक्षा, और संतुलित विकास के प्रति जागरूकता का विकास।

शिक्षण अधिगम रणनीतियाँ/कक्षा गतिविधियाँ:

- किसान के साथ इंटरव्यू
- कृषि क्षेत्र का दौरा
- सम्प्रेषण मॉड्यूल: एक सम्प्रेषण मॉड्यूल के माध्यम से छात्रों को किसान के अनुभवों, समस्याओं और उपायों के बारे में सूचना प्रदान करें।



छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा : 7, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 2

पृष्ठ संख्या.: 65-68, पाठ: 10, पाठ का नाम: खानपान की बदलती तस्वीर

डी आर आर विषय से संबंधित: जिम्मेदारी के साथ उपभोग और उत्पादन

लेखक के अनुसार, आजकल दुनिया भर में विभिन्न प्रकार के भोजन हमारे लिए उपलब्ध है। हम उपभोक्ता के रूप में अपने दैनिक जीवन में विभिन्न प्रकार के भोजन की इच्छा रखते हैं और कोशिश करते हैं कि वह हमें प्राप्त हो। यह एक आशीर्वाद का रूप ही है कि हम विभिन्न प्रकार के भोजन का उपयोग कर सकते हैं, पर ऐसे कई अवसर हैं जहाँ बहुत सारा भोजन बर्बाद हो रहा है। उपभोक्तावाद ने हमारे समाज पर जो प्रभाव डाला है उसके बारे में छात्रों को जागरूक किया जाना चाहिए। उन्हें एक जिम्मेदार उपभोक्ता होने के बारे में ज्ञान प्राप्त करना चाहिए और उन तरीकों को सूचीबद्ध करना चाहिए जिनके द्वारा हम अपने दैनिक जीवन में भोजन की बर्बादी को कम कर सकते हैं, खासकर सामाजिक समारोहों की मेजबानी करते समय।



सीखने के प्रतिफल : छात्र सक्षम होंगे

- भोजन की बर्बादी को कम करने के विचार की सराहना करने में सक्षम होना।
- जिम्मेदार उपभोक्ता बनना

शिक्षण अधिगम रणनीतियाँ/ कक्षा गतिविधियाँ :

1. **अनुभावात्मक अधिगम-** (अवधि- 15 मिनट चर्चा + 15 मिनट की प्रस्तुति= 30 मिनट)
 - कक्षा को समूहों में विभाजित किया जाएगा। प्रत्येक समूह को निम्नलिखित करने के लिए कहा जाएगा।
 - उन खाद्य पदार्थों को याद कर, सूचीबद्ध करें जिसे उन्हें पिछली बार किसी समारोह में दिया गया था।
 - उसी स्थिति में खाद्य पदार्थों का बेहतर प्रबंधन कैसे किया जा सकता था ?
 - चर्चा करें- क्या वे उन कार्यक्रमों में भाग लेना पसंद करेंगे जहां भोजन बर्बाद नहीं होता है?
 - यदि आप अपने दोस्तों/परिवार के लिए एक सभा में की मेजबानी कर रहे हैं तो एक मेनू सेट करें।
 - प्रत्येक समूह को अपनी कहानी प्रस्तुत करने का अवसर दिया जाएगा।
2. **पोस्टर डिजाइन-** "एक जिम्मेदार उपभोक्ता" विषय पर एक पोस्टर डिजाइन करे (अवधि-25 minutes)
3. **रोलप्ले/ नुक्कड़ नाटक-** खाने की बर्बादी (अवधि:- 20 मिनट चर्चा + 5 मिनट की प्रस्तुति = 25 मिनट)
4. **चर्चा:** (अवधि- 15 मिनट चर्चा + 15 मिनट की प्रस्तुति= 30 मिनट)



खाना बर्बाद करने से पहले सोचे

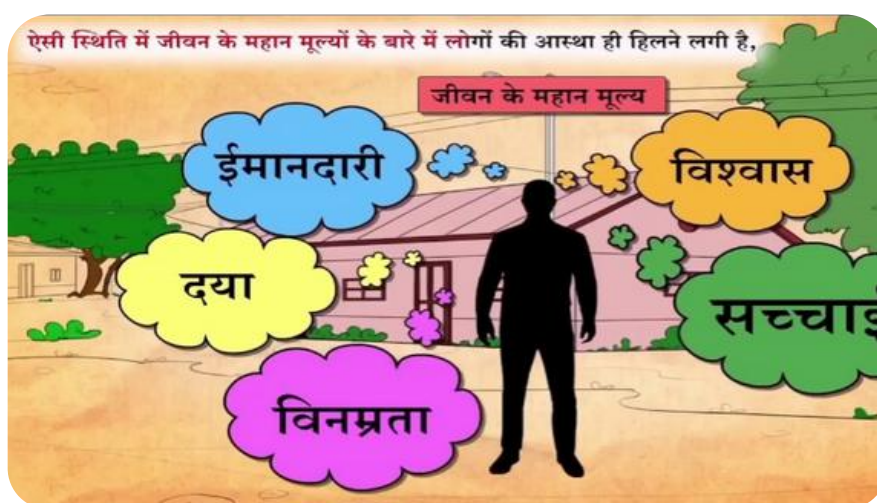
छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 8, विषय: हिंदी, NCERT पाठ्यपुस्तक: वसंत भाग 3

पृष्ठ संख्या: 25-30, पाठ: 5, पाठ का नाम: क्या निराश हुआ जाए?

डीआरआर विषय से संबंधित: अच्छा स्वास्थ्य और जीवनस्तर

लेखक के अनुसार, आज बहुत से लोग सामाजिक मुद्दों को इस तरह उजागर करते हैं कि हम यह मानने लगे हैं कि समाज में अच्छाई से ज्यादा बुराई है। डीआरआर के एक भाग के रूप में, छात्रों को जागरूक किया जा सकता है कि उन्हें जिम्मेदार नागरिक होना चाहिए और एक स्थिति में दोनों कोणों का अध्ययन करके एक सूचित राय बनानी चाहिए। विभिन्न केस स्टडीज के माध्यम से वे विभिन्न मानव निर्मित आपदाओं के बारे में विचार साझा कर सकते हैं जो जीवन की विभिन्न स्थितियों में जानकारी साझा करने में जिम्मेदारी से कार्य नहीं करने पर हो सकती हैं।



सीखने के परिणाम : छात्र यह बताने में सक्षम होंगे

- कैसे स्थितियों को अलग तरह से संभाला जा सकता है यदि हम एक सूचित राय बनाते हैं
- केवल उनके आसपास की समस्याओं की पहचान करके बल्कि समाधान ढूंढकर जिम्मेदार व्यक्ति बनते हैं
- रचनात्मक और महत्वपूर्ण जानकारी को जिम्मेदारी से साझा करें

शिक्षण सीखने की रणनीतियाँ / कक्षा गतिविधियाँ: अनुभवात्मक शिक्षण-रोल प्ले (अवधि -15 मिनट की चर्चा + 15 प्रस्तुति 30 मिनट)

- कक्षा को समूहों में विभाजित किया गया है। प्रत्येक समूह को करने के लिए कहा गया है।
- चर्चा करें कि कैसे एक गलत खबर आपदा का कारण बन सकती है
- एक रोल प्ले के लिए एक स्क्रिप्ट बनाएं
- प्रत्येक समूह को प्रदर्शन करने का मौका दिया जाएगा

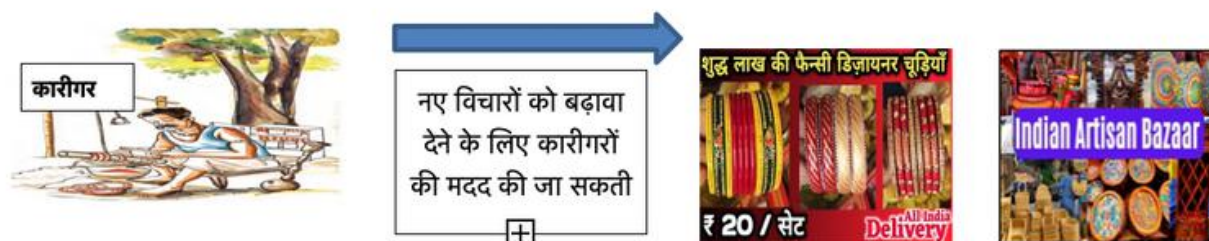
छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा : 8, विषय: हिंदी, NCERT पाठ्यपुस्तक : वसंत भाग 3

पृष्ठ संख्या : 1-6, पाठ: 10, पाठ का नाम: लाख की चूड़ियां

डी आर आर विषय से संबंधित: सांस्कृतिक विरासत का संरक्षण

यह अध्याय औद्योगीकरण के कारण पुरानी कला रूपों के नुकसान पर प्रकाश डालता है। इस कहानी के माध्यम से छात्रों को संवेदनशील बनाने का एक प्रयास किया गया है जो शहरीकरण और औद्योगिक विकास के कारण ग्रामीण उद्योग के अंत को दर्शाता है। कहानी का मनोबल हमारी सांस्कृतिक विरासत को बनाए रखना है और जीवन में कभी हार नहीं मानना है। डी आर आर के लिए मूल बिंदु भारत में पुरानी कला रूपों और कौशल को पुनर्जीवित करने पर हो सकता है जो उत्पादन के स्थायी तरीकों का प्रदर्शन करते हैं और हमारी अर्थव्यवस्था को बढ़ने में मदद करते हैं और UN SDG-12 सतत खपत और उत्पादन को भी पूरा करते हैं। छात्रों को वोकल फॉर लोकल पर जाने और भारत में बनी चीजों की सराहना करने के लिए प्रोत्साहित किया जा सकता है। उन्हें प्लास्टिक जैसी गैर- बायोडिग्रेडेबल सामग्री का उपयोग करने के बजाय चीजों का उत्पादन करने के लिए टिकाऊ/ पर्यावरण में अनुकूल सामग्री का उपयोग करने के लिए भी प्रोत्साहित किया जाएगा।



सीखने के प्रतिफल : छात्र सक्षम होंगे

- छात्र हमारे गांव में विघटन और सांस्कृतिक नुकसान के आर्थिक कारणों की व्याख्या करने में सक्षम होंगे।
- अपने दैनिक जीवन में बायोडिग्रेडेबल सामग्रियों के उपयोग को प्रोत्साहित करेंगे।
- छात्र पुरानी कौशल कला को जीवित रखने के लिए प्रदर्शनी का आयोजन/ दौरा करके कारीगरों के मनोबल को बढ़ाएंगे।
- स्थानीय रूप से बनी चीजें खरीदेंगे।
- ऐसे कई लोगों से बातचीत कर ग्रामीणों को कला रूप /कौशल को पुनर्जीवित करने और उनकी आय को बढ़ाने में मदद करेंगे।

शिक्षण अधिगम रणनीतियाँ / कक्षा गतिविधियाँ :

1. चर्चा - (20 मिनट)

- वोकल फॉर लोकल / मेक इन इंडिया
- स्वदेशी आंदोलन के कारण भारतीय अर्थव्यवस्था का विकास
- कई भारतीय कला रूपों को पुनर्जीवित करने का समय समाप्त हो रहा है और हम कैसे मदद कर सकते हैं?

केस स्टडी - उदाहरण कांचीपुरम के बुनकर - <https://youtu.be/mGw0FHpwEys>

2. सूची बनाएं और लिखें - (सत्र पूर्व कार्य- अनुसंधान+ कक्षा में 15 मिनट का लेखन)
पांच भारतीय कला के बारे में एक रिपोर्ट लिखिए जिन्हें सरकार या अन्य संगठनों की पहल द्वारा पुनर्जीवित किया गया है।
3. समूह गतिविधि - अपने राज्य में किसी एक कला को पहचानने और उस कला रूप को प्रदर्शित करने के लिए एक विज्ञापन बनाएं और एक समूह के रूप में अपने दोस्तों और परिवारों के बीच प्रचार करें (कला एकीकरण) (30मिनट)



छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 8, विषय: हिंदी, NCERT पाठ्यपुस्तक :वसंत भाग 3

पृष्ठ संख्या: 70-78, पाठ: 12, पाठ का नाम: पानी की कहानी

डी आरआर विषय से संबंधित: जलवायु परिवर्तन

पानी के जीवन का एक चक्र होता है। समुद्र का पानी सूर्य की किरणों से गर्म होकर भाप बनता है। और भाप बादल बन जाता है। यही सब क्रिया के बारे में छात्र विज्ञान के अध्यायों में पढ़ते हैं कि पानी के जीवन का एक चक्र होता है। इस कहानी के माध्यम से, छात्र जल और पानी के संबंधित मुद्दों, जैसे कि जल संरक्षण, जल संपदा, और जल संबंधी आपदा प्रबंधन के बारे में ज्ञान बढ़ाएंगे। वे इन मुद्दों पर गहराई से सोचेंगे और उन्हें अपनी अपनी जीवन और समुदाय के साथ कैसे जोड़ सकते हैं, उसके बारे में विचार करेंगे।



सीखने के परिणाम : छात्र सक्षम होंगे

- सामुदायिक रूप से जल संरक्षण, पानी के महत्व, केवल उनके आसपास की समस्याओं की पहचान करके बल्कि समाधान ढूंढकर जिम्मेदार व्यक्ति बनते हैं।
- आपदा प्रबंधन की महत्वपूर्णता की जागरूकता बढ़ाई जाएगी। इससे छात्रों का जागरूकता स्तर बढ़ेगा।
- वे जल संबंधी मुद्दों के बारे में अपने सामुदायिक माध्यमों के साथ बातचीत करने और कार्य करने के लिए प्रेरित होंगे।

शिक्षण सीखने की रणनीतियाँ / कक्षा गतिविधियाँ :

अनुभवात्मक शिक्षण- (अवधि -15 मिनट की चर्चा + 15 प्रस्तुति 30 मिनट)

- कक्षा को समूहों में विभाजित किया गया है। प्रत्येक समूह को करने के लिए कहा गया है।
- चर्चा - "जल संरक्षण का महत्व" या "प्रभावी आपदा प्रबंधन उपाय"
- पोस्टर निर्माण: छात्रों को जल संरक्षण और आपदा प्रबंधन के महत्व को प्रदर्शित करने वाले पोस्टर बनाने का कार्य असाइन करें।
- सामुदायिक जागरूकता अभियान -एक सामुदायिक जागरूकता अभियान आयोजित करें। वे प्रस्तुतियों, पैम्फलेट या छोटे स्किट्स बना सकते हैं ताकि दूसरों को जल प्रबंधन और DRR के महत्व के बारे में शिक्षित कर सकें।
- रिवर लिंकिंग प्रोजेक्ट – पीपीटी प्रस्तुति



छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

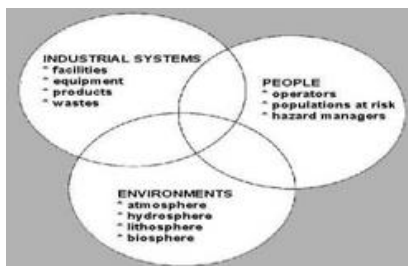
कक्षा : 8, विषय: हिंदी, NCERT पाठ्यपुस्तक : दूर्वा

पृष्ठ संख्या :110-112, पाठ: 17, पाठ का नाम: वह सुबह कभी तो आएगी

डी आर आर विषय से संबंधित: औद्योगिक विपदा

यह एक लड़की की कहानी है जिसने अपने गृह नगर में एक औद्योगिक गैस रिसाव के कारण अपने पिता को खो दिया है और गैस रिसाव के परिणाम स्वरूप उसे कई स्वास्थ्य समस्याओं का सामना करना पड़ा। एक औद्योगिक दुर्घटना एक गंभीर घटना है जिसमें खतरनाक संबंधी हानिकारक तत्व होते हैं और जिससे आसपास की आबादी और पर्यावरण पर गंभीर परिणाम हो सकते हैं। शामिल उत्पादों की प्रकृति के आधार पर, दुर्घटना आग, विस्फोट या जहरीले रेडियोधर्मी पदार्थ के उत्सर्जन का रूप ले सकती है। इस अध्याय के माध्यम से छात्र विभिन्न प्रकार की चोटों की पहचान करने में सक्षम होंगे जो औद्योगिक दुर्घटनाओं के कारण हो सकती हैं। वह विभिन्न प्रकार की चोटों के लिए उपयुक्त प्राथमिक चिकित्सा उपायों की रूपरेखा तैयार करेंगे।

कारण:



निवारण:

- <https://youtu.be/3Ph8jKOOaSO>
- <https://youtu.be/ClwelmnCFws>

सीखने के प्रतिफल : छात्र सक्षम होंगे

- विभिन्न उद्योगों में दुर्घटनाएं कैसे हो सकती हैं ?
- अपने आसपास के उद्योगों की पहचान करें और ऐसे खतरों के बारे में सतर्क रहें जो इस तरह के कारण से हो सकती हैं।
- आपदा के समय लोगों को उनके इलाके में सुरक्षित रहने की योजना बनाएं।

शिक्षण अधिगम रणनीतियाँ / कक्षा गतिविधियाँ :

समूह गतिविधि: निर्देश:

चर्चा - "औद्योगिक आपदा क्या है?"

- विभिन्न प्रकार की चोटों की पहचान करें जो औद्योगिक दुर्घटना के कारण हो सकती हैं।
- छात्रों को चार या पांच समूहों में विभाजित किया जाएगा।
- प्रत्येक समूह निम्नलिखित पर काम करता है और पूरी कक्षा/ सम्मेलन के लिए एक प्रस्तुति तैयार करता है॥

अपने आसपास के किसी उद्योग की पहचान करें	उद्योग से होने वाले नुकसान	आपदा को रोकने के लिए त्वरित योजना	आपदा के दौरान दी गई प्राथमिक चिकित्सा

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं



कक्षा: 9, विषय: हिंदी, NCERT पाठ्यपुस्तक :क्षितिज1

पृष्ठ संख्या: 1-11, पाठ: 1, पाठ का नाम : दो बैलों की कथा

डी आर आर विषय से संबंधित: भूमि पर जीवन

यह पाठ पशुओं की स्वतंत्रता संघर्ष के बारे में है। मनुष्य अपने स्वार्थ के लिए जानवरों को पालता है परंतु चाहे वह जानवर हो या मनुष्य स्वतंत्र रहना सभी को अच्छा लगता है। इस अध्याय के माध्यम से छात्र समझ पाएंगे कि स्वतंत्रता का क्या महत्व है? वह मनुष्यों को अपने व्यवहार परिवर्तन पर विवेचन करने के बारे में प्रेरित करेंगे। वह प्राणी पर होने वाले अत्याचारों के बारे में पता करेंगे और लोगों को पशुओं की देखभाल करने के लिए प्रोत्साहित करेंगे। प्रजाति लुप्त न हो जाए इसके बारे में महत्वपूर्ण नियमों की सूची तैयार करे।



सीखने के प्रतिफल: छात्र सक्षम होंगे

- सभी प्राणियों के प्रति आत्मीयता का भाव रखेंगे।
- विभिन्न तरीकों से पशुओं पर होने वाले उत्पीड़न को रोकेंगे।
- पृथ्वी पर जीवन की सुरक्षा के लिए अपनी जिम्मेदारी का निर्वहन करेंगे।

शिक्षण अधिगम रणनीतियाँ/ कार्य गतिविधियाँ

समूह गतिविधि : (30 मिनट)

1. कक्षा को समूहों में विभाजित किया जाएगा।
2. प्रत्येक समूह जानवरों पर होने वाले अत्याचारों पर जानकारी लाता है-कारण, रोकथाम, शमन के तरीके।
3. समूह कक्षा में अपना काम प्रस्तुत करते हैं।
4. प्रत्येक प्रकार के लिए एक केस स्टडी प्रस्तुति में शामिल करेंगे।

वीडियो : <https://youtu.be/PiIFN3ys4SI> (3 मिनट)

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 9, विषय: हिंदी, NCERT पाठ्यपुस्तक :क्षितिज1

पृष्ठ संख्या: 104-105, पाठ: 13, पाठ का नाम : बच्चे काम पर जा रहे हैं

डी आर आर विषय से संबंधित: गुणवत्तापूर्ण शिक्षा और अच्छा काम और आर्थिक विकास

बच्चे काम पर जा रहे हैं यह समस्या संबंधित है (SDGs) से, विशेष रूप से SDG 8: अच्छा काम और आर्थिक विकास और SDG 4: गुणवत्ता वाली शिक्षा के साथ संबंधित हैं। बच्चे काम करने में अक्सर शोषणात्मक और खतरनाक स्थितियों का सामना करते हैं, जो अच्छे काम के सिद्धांतों के खिलाफ होते हैं। काम करने वाले बच्चों को आमतौर पर शिक्षा के अधिकार से वंचित कर दिया जाता है, जो एक मौलिक अधिकार है। बाल श्रम में से छुटकारा पाने और बच्चों को स्कूल जाने की संभावना प्रदान करके, हम SDG 4 के प्रति योगदान करते हैं, जो उनके संपूर्ण विकास और भविष्य की संभावनाओं के लिए महत्वपूर्ण है।



सीखने के प्रतिफल: छात्र सक्षम होंगे

- बाल श्रम के दुष्प्रभाव के बारे में जागरूकता बढ़ाएं और शिक्षा के महत्व को संकल्पित करें।
- बच्चों के अधिकारों की सुरक्षा के लिए कानूनी ढांचाओं और नीतियों को मजबूत करें, बाल श्रम को निषेधित करने और निश्चित आयु तक अनिवार्य शिक्षा सुनिश्चित करने वाले कानूनों को लागू करें।
- वयस्कों के लिए व्यावसायिक प्रशिक्षण और कौशल विकास के अवसर प्रदान करें, ताकि उनकी रोजगार क्षमता और आय कमाने की क्षमता में सुधार हो।

शिक्षण अधिगम रणनीतियाँ/ कार्य गतिविधियाँ
समूह गतिविधि

1. कक्षा को समूहों में विभाजित किया जाएगा ।
 2. प्रत्येक समूह सामुदायिक आदान-प्रदान/शिक्षा कार्यक्रमों को संचालित करें ।
- जागरूकता अभियान:

- एक जागरूकता अभियान आयोजित करें जहां बच्चों, उनके परिवारों और समुदाय के सदस्यों को श्रमिक बाल मजदूरी के खिलाफ जागरूक किया जा सके।, रैली, सड़क नाटक आदि शामिल हो सकते हैं।

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं

कक्षा: 9, विषय: हिंदी, NCERT पाठ्यपुस्तक : स्पर्श 1

पृष्ठ संख्या: 1-11, पाठ: 1, पाठ का नाम : दुख का अधिकार

डी आर आर विषय से संबंधित: असमानता में कमी और शांति और न्याय के लिए संस्थान

यह पाठ आपदाओं या दर्दनाक घटनाओं के बाद व्यक्तियों और समुदायों द्वारा अनुभव किए गए भावनात्मक दर्द, पीड़ा और दुःख की मान्यता और स्वीकृति को संदर्भित करता है। डिजास्टर रिस्क रिडक्शन (DRR) के संदर्भ में, "दुख का अधिकार" आपदा प्रभावित आबादी की मनोवैज्ञानिक और भावनात्मक जरूरतों को पूरा करने के महत्व पर जोर देता है। डीआरआर में आपदाओं से जुड़े जोखिमों को कम करने और व्यक्तियों, समुदायों और समाजों पर उनके प्रभावों को कम करने के उद्देश्य से किए गए प्रयासों और उपायों को शामिल किया गया है।



सीखने के प्रतिफल: छात्र सक्षम होंगे

- आपदा प्रभावित व्यक्तियों और समुदायों की भावनात्मक जरूरतों को पहचानना।
- भौतिक तैयारियों, बुनियादी ढांचे और प्रतिक्रिया तंत्र रखना।
- आपदा से बचे लोगों के दर्द को स्वीकार करना और उन्हें उनकी भावनाओं से निपटने और उनके जीवन के पुनर्निर्माण के लिए आवश्यक सहायता प्रदान करना।

शिक्षण अधिगम रणनीतियाँ/ कार्य गतिविधियाँ

समूह गतिविधि : (30 मिनट)

1. समूह चर्चा: आपदाओं के भावनात्मक और मनोवैज्ञानिक प्रभावों पर समूह चर्चा करें।
2. केस स्टडीज: छात्रों उन समुदायों में व्यक्तियों द्वारा सामना की जाने वाली भावनात्मक चुनौतियों का विश्लेषण करेंगे। छात्र इन समुदायों द्वारा उपयोग किए जाने वाले मुकाबला तंत्र का पता लगा सकते हैं और उन तरीकों की पहचान कर सकते हैं जिनमें शोक और मनोवैज्ञानिक सहायता का अधिकार आपदा प्रतिक्रिया और पुनर्प्राप्ति प्रयासों में एकीकृत किया जा सकता है।
3. कम्युनिटी एंगेजमेंट प्रोजेक्ट: छात्रों को एक कम्युनिटी एंगेजमेंट प्रोजेक्ट असाइन करें जहां उन्हें स्थानीय संगठनों या उन पहलों के साथ सहयोग करना है जो आपदा प्रतिक्रिया और रिकवरी पर ध्यान केंद्रित करते हैं। उनके कार्य में आपदा प्रभावित व्यक्तियों और समुदायों की भावनात्मक जरूरतों का आकलन करने के लिए साक्षात्कार या सर्वेक्षण करना शामिल हो सकता है।

छात्र इस डीआरआर विषय को सीखने के अपने विचारों को अपनी पत्रिका में लिख सकते हैं



DRR Journal Format



DISASTER RISK REDUCTION JOURNAL

Activities Of Disaster Risk Reduction With Evidence And Reflection

Submitted

By
Name Of Student

Grade & Section

Signature Of The

Student

Class Teacher

Principal



Index

S No	Date of submission	Subject	Chapter	Topic	Remarks	Teacher's sign



Date:

ACTIVITY DESCRIPTION:

EVIDENCE: (Pictures/ Survey inferences or any other relevant details).

REFLECTION (How this learning will help him/her in real-life situation) :



SCHOOL SAFETY POLICY GUIDELINES



Annexure – 8**School DM Plan Model Template-
National School Safety Programme (NSSP)**

(Prepared by National Disaster Management Authority, Govt of India)

Section 1 : Introduction:

1. School profile (attached format in Annexure 8 (i))
2. Aim and Objective of the plan
3. Geographical location of the school.

Guidance Note:

- This section of the plan will provide information relating to the school as per details given in Annexure-I It should also mention the objective of the plan, the stakeholders who will be using the plan and members who would be responsible for implementing, reviewing and updating the plan.
- This section can also include a map of the school.

Section 2 : Hazard Risk and Vulnerability Assessment

1. Non-structural assessment (*can be done practically by all teachers and select students in a group exercise*)
2. Structural assessment (to be done by a Civil Engineer, Licensed Building Surveyor)
3. Identification of hazards outside the school campus (Road Safety, Industrial Hazard, Chemical hazard, open drain flooding etc.)
4. Database of past disasters/accidents which have affected the schools.
5. Identification of vulnerable locations within the school campus
6. Summary of the key findings and identifications of action for mitigation.

Guidance Note:

This section of the plan will focus on identifying the various vulnerable areas within the school building as well as the probable risks arising out of structural and non structural elements.

For identifying non-structural and structural weakness in the school building a committee may be constituted comprising members of School Administration (Including Physical Education Teacher), officer from nearest fire station/Civil defence post warden, Health Service Provider (doctor/nurse/ health worker) from nearest health centre/hospital/nursing home, officer from the nearest police station, engineers from PWD, SSA, Municipal Corporation. Zilla Parishad who may help in identifying the structural and non-structural weaknesses in the building. Likewise this committee can also identify hazard outside the school campus particularly the hazard related to road/traffic outside the school building, industrial (Chemical Hazard) which may be due to location of such an industry in vicinity of the school.



This *Hazard hunt* activity will help in identifying some of the obvious risks like improper location of electricity panel in the school, open electricity panels, live wire if any, improper placing of cupboards and furniture, obstruction in the escape route or object that can fall during the Earthquake such as glass panel, flowerpot etc.

This section of the plan can also document or provide details of any past disaster that had affected the school or in the vicinity of the school.

Section 3 : Preparedness

This section of the plan should include the following:

- **Constitution of school DM Committee Composition of the Core Team and its roles and responsibilities during different phases.**
- **Constitution of sub team and** identification of roles and responsibilities of each of the sub teams/task force, before, during and after disaster. The school may comprise the following teams/task forces.
 - a. Awareness Generation, Warning and information dissemination team.
 - b. Evacuation team.
 - c. Search and rescue team (only teachers to be member of this team)
 - d. Fire safety team
 - e. First aid team.
 - f. Bus safety team (for each bus) - wherever applicable.
 - g. Site security team.

Guidance Note:

This section of the plan will focus on Preparedness. A higher prevent injuries Level of preparedness for disaster helps to minimise the loss of life and prevention of injuries caused particularly during earthquakes for which there is no warning. However certain other hazards like floods, cyclones etc. do have early warning systems thereby giving some time for taking response. Children being the future of tomorrow should be ensured a safe learning environment and prepared well to respond effectively during disasters. To put this into practice it is recommended that every school constitutes a School Level Disaster Risk Reduction Committee along with a sub-committee to ensure better preparedness and response in disasters. The various committees constituted in a school will comprise of members from among teachers, non-teaching members, staff as well students. However for certain committee like search and rescue students are not recommended. The recommended structure for a School Disaster Risk Reduction Committee is as follows:

1. Chairperson: Principal
2. Vice Principal, Heads of primary and middle sections
3. Education Officer/Deputy Education Officer for the zone
4. Parent Teacher Association President



5. 4 Students (NCC, NSS, Scouts and Guides, Head Boy and Head Girl)
6. Representative of Relief/ Revenue/ Disaster Management Department/ District Administration/ Municipal Corporation
7. Representative of the Fire Services (from Closest Fire Station) or Civil defence personnel.
8. Representative of Police (from Closest Police Station)
9. Representative of Health Department (Local Doctor)
10. A Warden from Civil Defence

The sub committees mentioned below will work under overall supervision of school DM Committee (SDMC). Following sub committees can be constituted

- Awareness generation and warning and information dissemination team.
- Evacuation team.
- Search and rescue team (only teachers to be member of this team)
- Fire safety team
- First aid team
- Bus safety team (for each bus)
- Site security team

For First Aid and Site Security team the representative of nearest Police Station, Hospital/ health services and fire station may be identified. The roles and responsibilities of these committees during disaster as well as peace time need to be defined clearly.

c. Resouce inventory

i. Listing of resources available inside the school campus: which could be used during any disaster situation for effective response.

ii. Identification and listing of resources outside the school within vicinity of one-five kilometres

- Nearest hospitals Health Centre for emergency treatment.
- Police Station
- Fire Station

iii. Updation of important telephone numbers in Principal's room

iv. **Critical health problem record** of each child to be maintained by school and also displayed on his I-Card with blood group along with **Updated contact details** of parents/ Guardian and alternate contact persons.

v. **Disaster preparedness check-list.** (Attached in Annexure 8 (ii))

d. **Mechanism for alerting students and teachers during school time including installation of alarm.**

e. **School Map with evacuation plan in place** (Attached in Annexure 8 (iii)).

f. **Annual calendar for conducting various preparedness activities** along with plan to

implement it. This will include the list of various awareness generation programmes to be conducted by the school annually.

g. Action plan for conducting Mock drills and development of a checklist to identify the gaps

h. Steps for Updation of DM plan - indicating the time line and the process of doing it along with the roles of teachers and other non teaching staff.

Guiding notes for Resource inventory:

As part of preparedness exercise, each school must develop a School DM kit. It is suggested that a network is established by the school management with the nearest hospital/ health centre/ health worker for help in case of emergency. The suggestive list of items which could be procured for school DM kit have been listed below. However, it is suggested that each school must have provision for other external resources (grants given by the State Government like MPLADs/ MLALADs etc.) to strengthen this resource list further.

- | | | |
|--|---|-----------------------------|
| <ul style="list-style-type: none"> i. Stretcher ii. Ladders iii. Thick rope iv. Torch v. First-aid box vi. Temporary shelter (tents and tarpaulins) vii. Sand buckets viii. Fire Extinguishers | } | Provision of School DM kit. |
|--|---|-----------------------------|

School map with evacuation plan:

It is recommended to prepare a floor wise evacuation plan and display it prominently at the notice board on each of the floors. The evacuation plan may be discussed by the evacuation team with the teachers and students to generate awareness to help conduct mock drill. (A sample Evacuation Map is attached for reference as Annexure 8

Guiding note for Mock drill

Mock drills are the ways of rehearsing the preparedness plan. It is one of the last steps in preparedness. The mock drill on earthquake, fire etc. may conducted at periodic interval preferably once in every six months and the deficiencies may be assessed for updation of the plan. This section of the plan should clearly indicate the steps to be followed to conduct the mockdrills and the responsibilities of the teachers, non teaching staff and students. If required school should invite the Fire Service Officers and trained Civil Defence volunteers for support. The steps to be followed for earthquake drill are mentioned below.

**Earthquake drill:**

1. Practice drop, cover and hold.
2. Evacuate classroom in less than 1 minute without pushing and falling.
3. Evacuate school in less than 4 minutes.
4. Lookout for friends.
5. Stay away from weak areas/ structures.
6. Help those who need assistance (identification of task force in advance for rescue of special children).

Fire/ Chemical Accident/ Drill:

1. Evacuation from classroom
2. Ensure safe storage of inflammable liquids/ chemicals
3. Put off electricity and remove or close down gas connections.

i. Capacity building and training:

1. Capacity Building and training of students and teachers is an important step to ensure safety of school going community in a disaster situation. Every year appropriate number of teachers and students may be trained in various skills of disaster management.
2. Action plan for training of teachers, non teaching staff and students on DM including all the task forces constituted and also organising refresher courses. This can also include documentation of details of trained teachers and students.

j. Awareness generation and sensitization:

Awareness generation/ sensitization is a part of preparedness measures aiming at sensitising and educating all the stakeholders including students, teachers and officials/ parents on issues relating to school safety. It is suggested that an annual calendar of events may be prepared including various activities involving students/ teachers, etc. where experts from outside may also be invited for giving their opinion on school safety issues.

Some of the measures which could be undertaken by the school management for creating awareness are as follows:

- a. Through poster, audio-visual clips, organizing debate, quiz, sports activities, drawing competition, rally in schools.
- b. Display of important information on school notice board including school evacuation plan and weather news information.
- c. Conducting seminars and lectures on making the learning environment safer and involvement of Parents in such seminars.
- d. Observing a month of safety in the year calendar of school as *Preparedness month*.

**Section 4 : Response:**

- a. Hazards specific response plan including Crowd Management to avoid stampede on special days like annual functions, sports day etc.
- b. Alternate arrangement for continuation of school education. (Delivery of education during and post disaster situation particularly in cases where the school will be used as relief shelters).
- c. Reporting of Emergencies/ Disasters to the Government
- d. Special provision for specially abled children.

Guidance Note:

This section of the plan should be very precise, crisp indicating the various roles and responsibilities of teachers, non teaching staff and students during disaster situation. The plan should clearly mention the steps to be followed in case of an earthquake, fire, flooding, cyclone or such emergent situation like stampede or health problems faced by any student. The plan should include all the steps to be taken up by the school management to ensure safety of the child including their safe evacuation from the affected site till the child is handed over to the parents. It will also include all other steps to be taken up by the management to ensure supply of essential services in the school like power, water and food and basic first aid during a disaster and immediately after it.

Section 5 : Mitigation measures**1. Listing of various Non-structural measures to be undertaken in the school along with timeline.**

- a. Ensuring clear passages, stairways which are to be used as evacuation routes.
- b. Chemistry labs-the bottles used for storing the chemicals are secured and protected against shattering.
- c. Fixating of Almirahs to the walls of staff rooms.
- d. Securing fans and light from ceiling.
- e. Fire safety measures

2. Safety audit

- a. Electric safety audit-checking of the electrical system by an electrician.
- b. Fire safety audit-checking for possible sources of fire and identifying inflammable items within the school
- c. Inspection of quality of food getting served during mid-day meal.
- d. Audit of purity of water supply in school.
- e. Inspection of the hygienic conditions in kitchen and washrooms.

**Guidance Note:**

This section of the plan will focus on various mitigation measures to be undertaken by the school. Mitigation Planning is a long term exercise and hence it is essential to divide the strategy prioritizing the actions along with definite timeline. It is also necessary to prioritise the actions based on the nature of the threat and its potential to cause injuries and loss of life. Some of the non structural mitigation measure like anchorage of almirahs, clearance of the exit routes, relocation of the storage of laboratory items, installation of warning alarms could be done immediately by incurring minimal costs, some other mitigation measures like major structural repair work will require more time and fund commitments.

As a part of mitigation action, school should also undertake periodic fire and electrical safety checks by involving officials from Electricity Department/ board, Fire Services, PWD etc. Other measures like testing of purity of drinking water and hygienic conditions in the school should also be undertaken.

Annexure – 8 I

Emergency Mangement Plan Checklist

1. Name of School and code number provided by Department of Education :
2. Postal address with pin code :
3. Contact number :
4. Number of teachers : Male _____ Female _____
5. Number of Students : Male _____ Female _____
6. Number of differently-abled students : Male _____ Female _____
7. Specify the type of disability :
8. Date of Construction of School building :
9. Number of Buildings in the school compound :
10. Number of classrooms :
 - Number of Chemistry laboratories
 - Number of Physics laboratories
 - Number of Biology laboratories
11. Number of floors :
12. Number of staircases :
13. Do you have a kitchen ? Yes/No -----
- if yes do you have Gas stove or open fire kitchen or use cooking gas connection:
14. Do you have toilets separate for : Boys- Yes/No Girls- Yes/No
15. Number of drinking water points :
16. Playground size and open area :
17. Fire extinguisher installed :
 - If yes number of fire extinguishers :
 - Date when last checked :
18. Number of Sand Buckets installed :
19. Evacuation drill organized - Yes/No :
If yes last date when drill was conducted and number of students who participated :

(Signature of Principal)



Annexure – 8 II

Emergency Mangement Plan Checklist

Name of School & Location _____

Date _____

YES

1. Have the emergency numbers been confirmed with the concerned departments ? ☐

2. Are the emergency contact numbers prominently displayed in the principal room ? ☐

3. Does the plan clearly specify procedures for reporting emergencies to the government services and the relevant education authority ? ☐

4. Are the potential risks within and up to a kilometre from the workplace identified ? ☐

5. Does the plan clearly mention about the evacuation plan ? ☐

6. Are the roles and responsibilities of key personnel's clearly defined - task force team leaders, class teachers, office staff and students ? ☐

7. Are the staff responsibilities to account for and supervise students during and following the emergency clearly described ? ☐

8. Does the plan give emphasis on the more vulnerable children below class v ? ☐

9. Does the plan address the students with special physical, mental and medical needs ? ☐

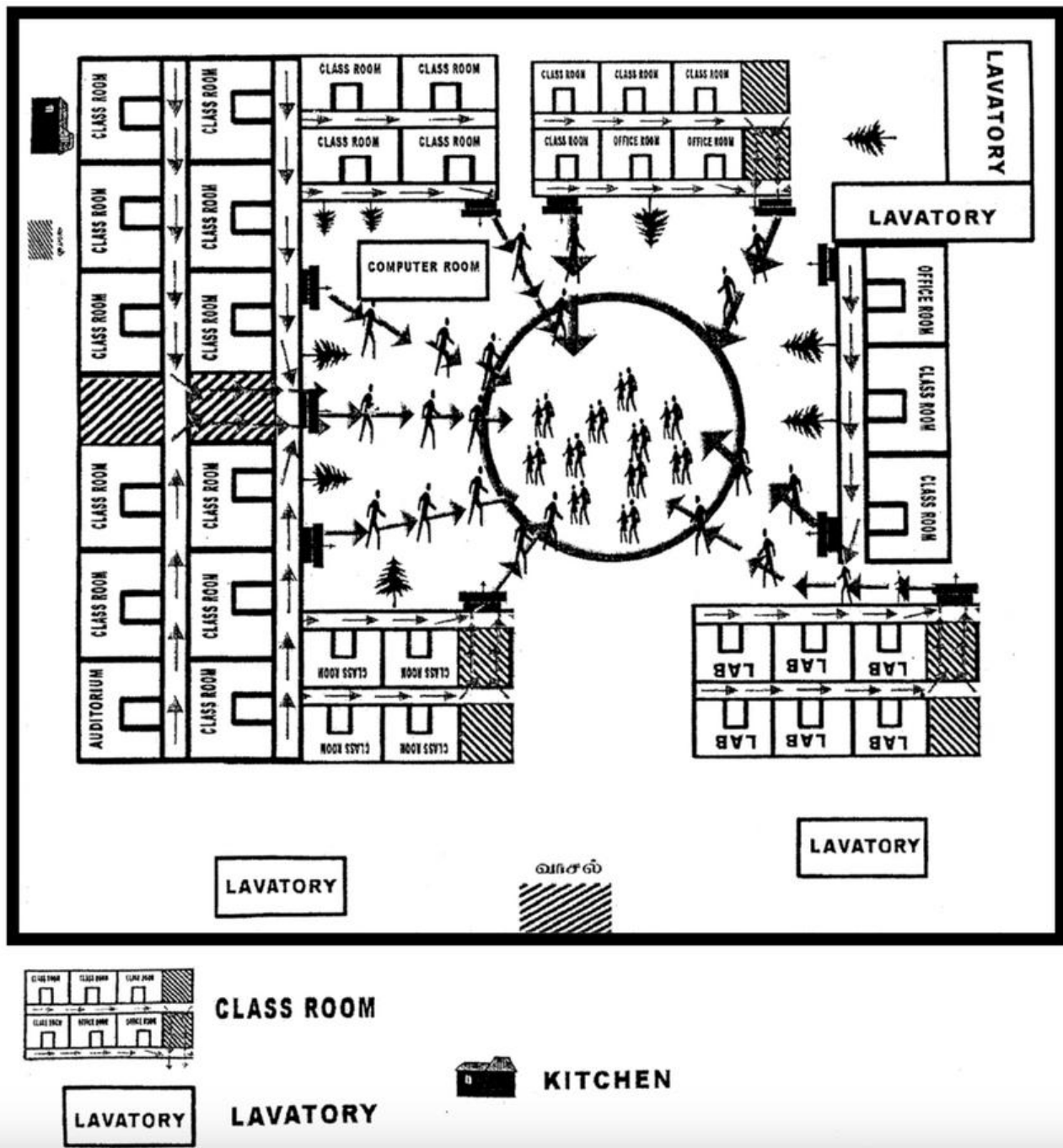
10. Does the plan describe about how the DM team will be trained ? ☐

11. Does plan provide the calendar for mock drill to be conducted ? ☐

12. Has the plan been endorsed by local police and fire brigade ? ☐

Annexure – 8 iii

Sample School Evacuation Plan





DRR Mapping

DISASTER RISK REDUCTION



Name of the Disaster		Class 6					Class 7					Class 8					Class 9					Class 10				
		Englis h	Hindi	Math	Scienc e	Social Scienc e	Englis h	Hindi	Math	Scienc e	Social Scienc e	Englis h	Hindi	Math	Scienc e	Social Scienc e	Englis h	Hindi	Math	Scienc e	Social Scienc e	Englis h	Hindi	Math	Scienc e	Social Scienc e
Natural Hazards	Climate change							✓					✓									✓				✓
	Cyclone/ Hurricane	✓							✓					✓	✓						✓					✓
	Desertification / Crop Failure			✓				✓													✓					✓
	Drought / Famine																				✓					
	Acid rain									✓																
	Earthquakes and Volcanoes			✓			✓				✓			✓	✓									✓		
	Flood		✓		✓	✓	✓		✓				✓								✓	✓				
	Forest Fire										✓					✓				✓						
	Global Warming					✓				✓	✓			✓												
	Heat wave/Cold Wave																									
	Landslides/ Avalanches						✓									✓				✓						
	Lightning			✓											✓											
	Soil erosion/Land degradation									✓					✓						✓				✓	✓
	Storms/ Thunderstorms	✓													✓										✓	
	Tsunami					✓						✓					✓									
Man made Hazards	Boat Capsize			✓																						
	Bridge / Building Collapse			✓					✓												✓					
	Epidemic/ Pandemic														✓			✓	✓							✓
	Fire Accidents				✓										✓							✓		✓	✓	
	Electric short circuits									✓														✓		
	Pollution/ Over exploitation of resources	✓			✓	✓		✓		✓	✓			✓				✓			✓				✓	✓
	Oil spills													✓	✓											
	Road Accidents		✓		✓			✓		✓					✓						✓			✓	✓	
	Stampede / Crowd Crush/ Overpopulation								✓							✓										
	Train accidents	✓																		✓	✓					
	Urban floods								✓							✓										✓
	Wars/Riots				✓	✓						✓					✓			✓	✓	✓				
	Deforestation					✓				✓	✓									✓	✓	✓			✓	
	Industrial accidents												✓			✓				✓						



Acknowledgment

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Advisory and support:

We express our sincere appreciation to Smt. Nidhi Chhibber IAS, Chairperson of CBSE, for her invaluable support in the development of this resource material.

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- Certain reviewers have made significant contributions to the development of content, and we extend our gratitude for their valuable efforts in both realms.
- We wish to acknowledge the invaluable contributions of individuals, both directly and indirectly involved, who have played a role in the creation of this resource material.

Disaster Risk Reduction In Schools

CBSE, New Delhi