English

Learning Outcomes

Sources and Resources

Week-wise Suggestive Activities (to be guided by parents/ teachers)

The learner

- listens for information, gist and details and responds accordingly.
- listens to and discusses literary / non-literary inputs in varied contexts to infer, interpret and appreciate.
 - ✓ reads with comprehension the given text / materials employing strategies like skimming, scanning, predicting, previewing, reviewing, inferring.
 - reads silently with comprehension, interprets layers of meaning.

Lesson 3: Two Stories about Flying

His First Flight by Liam O' Flaherty

Black Aeroplane by Frederick Forsyth

https://ciet.nic.in/pages.php?id=firstflight&ln=en

(Audio version of the Lesson)



Use QR code reader from mobile.

http://ncert.nic.in/textbook/textbook.htm?jeff1=3-11

(PDF version of energised book available at www.ncert.nic.in)

Reading

Having listened to the story / text / poem, learners read the text on their own. (In case there are other sibling at home, they can do it with their brother / sister or even parents)

Learners read the text in chunks (the text may be divided into four or five sections). NCERT textbooks are divided into sections followed by oral comprehension check.

While reading activity: As they read the text / stories on their own, learners will have to attempt to answer the question given in the middle of the text or learners are using text from state or other textbooks, they should attempt to answer the questions for comprehension given at the end of the text.

WEEK 5

Competency/Skill—Listening and Reading

- Teachers inform learners about the website and the particular lesson to be learnt.
- Teacher may be given special instruction - what is expected of them. Say for example, 'listen to the audio text and then read the same text on your own.'

Competency/Skill—Reading

Teachers may ask learners to do the following activities as per the needs of learner/the curriculum—

- Attempt and answer the reading comprehension questions given at the end of text.
- Create a sub-text by summarising the text
- Write or tell the whole story / text in your language to parents or sibling.
- Make a visual description of the story.

Post Reading Aactivity Reading comprehension

Revisit / reread the text and answer the comprehension question given at the end of the text.

Rearranging the sentences to create sub-text

https://nroer.gov.in/55ab34ff8

This interactive activity can be accessed using QR code mentioned above.



- uses words, phrases, idioms and words chunks for meaning making in contexts.
- ✓ understands and elicits meanings of the words in different contexts, and by using dictionary, thesaurus and digital facilities.
- speaks fluently with proper pronunciation, intonation and pause, using appropriate grammar.

The learner

- ✓ writes short answers / paragraphs, reports using appropriate vocabulary and grammar on a given theme;
- ✓ writes a description of one's experiences

The learner

- listens for information, gist and details and responds accordingly.
- listens to and discusses literary / non-literary inputs in varied contexts to infer, interpret and appreciate.

Process Approach to Writing

It emphasises the steps a writer goes through when creating a well-written text. The stages include:

Brainstorming: writing down many ideas that may come to an individual's mind or through discussions, pair work, group work

Outlining: organising the ideas into a logical sequence

Drafting: writer concentrates on the content of the message (rather than the form).

Revisions: in response to the writer's second thoughts or feedback provided by peers or teacher, the draft is revised.

Proof-reading: with an emphasis on form. Correct the language and appropriateness of its use.

Final draft: Write the final draft now

Watch the video on process approach to writing.

Other resources can be found on https://www.youtube.com/user/ kankoduthavanithan

Black Aeroplane by Frederick Forsyth

https://ciet.nic.in/pages.php?id=firstflight&ln=en

(Audio version of the Lesson. Listen to the Part II of the lesson)



Competency/Skill— Vocabulary

Thematic vocabulary (used / read in the lesson)

Teachers may ask learners to -

- Find the new words and categorise into groups and make a word web or mind map of the words.
- Create a dictionary of words you come across in the text.
- Find the meaning of words and write them down in their notebook.
- Try to make sentences using the words.

Skills/Competency Speaking

Learners describe the movement of aeroplanes, motorcars, Bird flying and about how bird move from one place to another.

(Describing movement with suitable words, sentence constructions)

Learners write a description of their experience, like noticing the young bird flying.

WEEK 6

Competency/Skill—Listening and Reading

- Teachers inform the learners about the website and the lesson to be learnt.
- Teacher may be given special instruction what is expected of them. Say for example 'listen to the audio text and then read the same text on your own.'



- ✓ reads with comprehension the given text / materials employing strategies like skimming, scanning, predicting, previewing, reviewing, inferring.
- ✓ reads silently with comprehension, interprets layers of meaning.

Use QR code reader from mobile.

http://ncert.nic.in/textbook/
textbook.htm?jeff1=3-11

(PDF version of energised book available at www.ncert.nic.in Read Part II of the lesson)

QR codes of the Workbook, Words and Expressions II have some additional activities. These could be

http://ncert.nic.in/textbook/textbook.htm?jewe2=3-11

used by all learners.

Grammar

Notices the grammar items in the text from the given exercises under grammar part of the textbook.

http://ncert.nic.in/textbook/textbook.htm?jewe2=3-11

Competency/Skill—Reading

Teachers may ask learners to do the following activities as per the needs of learner / the curriculum—

- Attempt and answer the reading comprehension questions given at the end of text.
- Create a sub-text by summarising the text
- Write or tell the whole story / text in your language to parents or sibling.
- Make a visual description of the story.

Post Reading Activity

i. Reading comprehension

Revisit / reread the text and answer the comprehension question given at the end of the text.

ii. Rearranging the sentences to create sub-text

https://nroer.gov.in/55ab34ff8

This interactive activity can be accessed using QR code mentioned above.

Vocabulary and use of words figuratively

Finding many words / synonyms for one word. Word from the text is 'fly'

Teacher may give some more words, like, drive, move

The learner

- ✓ uses words, phrases, idioms and words chunks for meaning making in contexts.
- ✓ understands and elicits meanings of the words in different contexts, and by using dictionary, thesaurus and digital facilities.
- ✓ uses grammar items in context, such as, reporting verbs, passive and tense, time and tense etc.



The learner

- writes short answers
 / paragraphs, reports
 using appropriate
 vocabulary and
 grammar on a given
 theme;
- writes letters
 both formal and
 informal, invitations,
 advertisements,
 notices, slogans,
 messages and emails.
- writes short dialogues and participates in role plays, skits, street plays (*nukkadnatak*) for the promotion of social causes like BetiBachao -BetiPadhao, Swachh Bharat Abhiyaan, conservation and protection of environment, drug abuse, gender issues, child labour and promotion of literacy etc.

Project Work

- uses language for purposes – collecting information from various sources and developing a report / write up and work with other on theme / work
- asppreciate literary language / poetry

https://www.youtube.com/user/kankoduthavanithan

Lot of resources available on this NROER, QR codes of the lesson

Process Approach to Writing (Please refer to the writing activity given above)

https://www.youtube.com/watch?v=W_gARDa4zgA

Access using QR code.

https://ciet.nic.in/pages.php?id=firstflight&ln=en

Listen to the poem from the audio book (NCERT)

WEEK 7

Writing

Based on the reading of the text / story, the learner may now do the short answer comprehension questions. Learners undertake at least three or four writing tasks undergoing the process (approach).

Week 7 (last two days) Doing a Project work

Learners to the project work given in the textbook and in the

WEEK 8

Workbook.

How to Tell Wild Animals by Carolyn Wells

Read the poem, listen to it from the audio and do 'Thinking about the Poem'

The Ball Poem by John Berryman

Learners write (some lines) poem on their own.



The learner

- ✓ listens for information, gist and details and responds accordingly.
- ✓ listens to and discusses literary / non-literary inputs in varied contexts to infer, interpret and appreciate.
- ✓ reads with comprehension the given text / materials employing strategies like skimming, scanning, predicting, previewing, reviewing, inferring.
- ✓ reads silently with comprehension, interprets layers of meaning.

Thinking about Language (Vocabulary and Grammar— Phrasal verbs, Idioms, Contracted forms)

✓ uses words, phrases, idioms and words chunks for meaning making in contexts.

Lesson 4

From the Diary of Anne Frank by Anne Frank

https://ciet.nic.in/pages.php?id=firstflight&ln=en

Listen to the audio of the text.

QR Code



http://ncert.nic.in/textbook/textbook.htm?jeff1=4-11

Read from the energised text.

http://epathshala.nic.in/ OR/?=1059CHO4

Post reading activity task. Creating a sub text by rearranging the sentences which summarises the story / text.

https://nroer.gov.in/55ab34ff8/

https://nroer.gov.in/55ab34ff8/

Interactive tasks based on the text and vocabulary- phrasal verbs

WEEK 9

Competency/Skill—Listening and Reading

- Teachers inform the learners about the website and the particular lesson to be learnt.
- Teachers may be given special instruction - what is expected of them. Say for example 'listen to the audio text and then read the same text on your own.'

Competency/Skill—Reading

Teachers may ask learners to do the following activities as per the needs of learner / the curriculum:

- Attempt and answer the reading comprehension questions given at the end of text.
- Create a sub-text by summarizing the text
- Write or tell the whole story /text in your language to parents or sibling.
- Make a visual description of the story.

Post Reading activity

i. Reading comprehension

Revisit / reread the text and answer the comprehension question given at the end of the text

ii. Rearranging the sentences to create sub-text

Teacher guides learners through activities / tasks from the textbook and also additional activities to notice phrasal verbs and how they are formed and uses.

Learners understand and use Idioms in contexts,



- ✓ understands and elicits meanings of the words in different contexts, and by using dictionary, thesaurus and digital facilities.
- ✓ uses grammatical items appropriate to the context in speech and writing.
- ✓ uses grammatical items as cues for reading comprehension such as tense, reported speech, conjunctions, and punctuation

Speaking

The learner

- speaks with coherence and cohesion while participating in interactive tasks.
- uses language appropriate to purposes and perspectives.
- talks on key contemporary issues like social justice, environment, gender, etc., in speech and writing.

Writing

 writes diary expressing one's experiences and emotions.

Listening

The learner

 listens to announcements, instructions, read-aloud texts, audio, videos for information, gist and Teacher may use any resource from internet or any other source to showcase dialogues

Here is one from NROER Come on Let us Dialogue

https://nroer.gov. in/55ab34ff81fccb4f1d806025/ file/5dc39f3516b51c73271bc03c

https://nroer.gov. in/55ab34ff81fccb4f1d806025/ file/5dc39f1016b51c73271bc039

Two videos on writing.

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

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

https://www.youtube.com/watch?v=9MPIUAHV84o&t=61s

https://www.youtube.com/watch?v=uW zybiWlik&t=102s

Use resources QR code of NCERT textbook and from NROER

WEEKS 10 AND 11

Teacher asks learners to read out the dialogue from the textbook or learners may read the dialogue with their sibling or parents.

Teacher may create some more dialogues. Some with gaps so that learners can fill them up.

Teacher gives an illustration of a diary citing from *Anne Frank's Diary*.

Provides an engaging experience of writing through the process approach to writing – jotting down the point, making an outline, writing the first draft, editing and proof reading and writing the final draft. (Refer to Process Approach to writing given above)

Teacher should engage learners to write at least three or four diary writing tasks.

Teacher directs the learners to do the listening activity from the textbooks (p. 59)



details; responds by answering questions accordingly.

 listens to and discusses literary / non-literary inputs in varied contexts to infer, interpret, and appreciate.

The learner

- interprets ideas and theme of the poem and uses the literary devices.
- Appreciate literary language / poetry

Revision of lessons / Competencies learnt

Poem

Amanda!

Learners listen from the audio book (NCERT).

https://ciet.nic.in/pages.php?id=firstflight&ln=en

Use the resources mentioned above and teacher's own.

One of the learners / siblings read out the text and the other learner completes the task.

Week 12 (First Four days)

Teacher makes the learners read the poem at least three times and the do the tasks.

Week 12 (Last two days)

Teacher revises the lesson / competencies learnt so far. May use this time also for formative / period assessment.

Points to be kept in view for language teaching-learning

- This guidelines enables learners to learn languages based on the textbook or any other materials available to them. Since this is self-initiated and directed, learners, teachers and parent have to be highly flexible in enabling the learners to use them effectively.
- This can be used for any lesson / unit in language learning based on textbook or based on any other materials available to learners in print or as soft copy.
- Not all the activities can be undertaken by all learners. So let's be flexible and let learners do on their own depending on the facilities available to them. (For example, some may not have audio enabled gadgets with them, in that case they should do reading well or ask another person to listen to the text at home.)
- All the activities mentioned here are for learners to do as they are not with teachers or in any formal teaching-learning situation.



SOCIAL SCIENCE

Social Science as a subject at the Secondary Stage comprises the components of History, Geography, Political Science and Economics. Therefore, while preparing the eight-week calendar in Social Science, these components have been divided into 4 + 4 (total 8 weeks for Social Science - 2 weeks for each component). Accordingly, a two-week calendar for History has been planned for Class IX and two-week calendar for Class X.

(a) History

Sources and Subject-wise Weekly Academic Calendar **Learning Outcomes** (to be guided by parents/teachers) Resources The learner Textbook in History WEEK 5 for Class X • describes the Salt Focus will be on March and explains *India* and the its significance in Contemporary World- II The Salt March and the Civil Disobedience Indian history Movement; Why Different Social Groups Theme: Rise of demonstrates Participated in the Civil Disobedience Nationalism in India understanding Movement; the Idea of Swaraj; The Limits of of principles of **OR** Code the Movement. non-violence and its impact on the In the chapter 'Rise of Activity 1 national movement Nationalism in India' p.29 analyses the Warming Up Session Through Discussion effectiveness of Mahatma Gandhi in Students have already been familiarised Gandhiji's non-South Africa with the Salt march in the previous week. violent means to achieve freedom Teacher may ask students to reflect on the **NCERT** from British following questions and write down their Official.Youtube colonialism. views: Mahatma Gandhi locates places ✓ Identify some issues/reasons in current Visuals/ Audio/Videos identified with the times when people have gathered to in NROER Repository Salt March on a protest. map. https://nroer.gov. ✓ Would you protest if a commodity that in/582ead6916b5 is dear to people is taken away or made assesses the unavailable? Why? spread of the Civil 1c01da6b8887/file/ Disobedience ✓ Identify some other famous marches/ Mahatma Gandhi in Movement with help protests that have taken place and the South Africa of a map. reasons thereof? analyses the http://gandhi. ✓ Can you list some of the other sociocontribution of political issues for which peaceful southafrica.net/ different sections of protests may work? The Jallianwalla Bagh society in Gandhiji's After students have written down their call for Civil as Struggle

Video 483, NCERT

official, YouTube



Disobedience.

views, teacher may initiate a discussion on

the answers.

 identifies different icons and symbols that created sense of collective belonging. Champaran Mein Gandhiji ka Aagman

NCERT Oficial, youtube

Live Discussion on Civil Disobedience Movement

NCERT, You Tube

Gandhi Ashram at Sabarmati

https://gandhia shramsabarma ti.org/en/

How Mahatma Gandhi Changed Political Protest

https://www. nationalgeographic. com/culture/people/ reference/mahatmagandhi-changedpolitical-protest/

The Great Salt March Part I and Part II

From the Archives of Doordarshan

https://www.y outube.com/ watch?v=He_eIhlAw_8

Salt March Mar 12, 1930 - Apr 6, 1930

https://artsa ndculture.google. com/entity/saltmarch/m0324lm? categoryId= event&hl=en

Dandi March: Salt Satyagraha Mapping of Dandi March on School Bhuvan NCERT Geo portal

Activity 2

Retracing Gandhiji's Dandi March through a Map

Teacher may ask students to refer to the following resources:

Dandi March: Salt Satyagraha Mapping of Dandi March on School Bhuvan NCERT Geo portal

https://bhuvan-app1.nrsc.gov.in/mhrd_ncert/help/Dandi_march.pdf

The Salt March to Dandi

earth.google.com/web/@22.00435195

Students may thereafter be asked to locate the route of the Dandi March and identify significant places associated with the march on a map.

Activity 3

Poster on Participation of Women in Civil Disobedience Movement in Different Parts of India

An important feature of the Civil Disobedience Movement was the large-scale participation of thousands of women who came out of their homes in large numbers. They participated in protest marches, manufactured salt, and picketed foreign cloth and liquor shops and many went to jail.

Students may prepare a poster highlighting the participation of women in different parts of India. The poster may highlight protest marches, manufacture of salt, picketing of foreign cloth and liquor shops by women, and many of whom also went to jail. Visuals/illustrations/ oral sources/ maps / etc. may be used.

Students may seek help from parents and grandparents in this activity.

Activity 4

Locating the spread of the Civil Disobedience Movement on a map

Different social groups that participated in the Civil Disobedience Movement, such as rich peasant communities, poor peasants, business houses, industrial working class, women, etc.



https://bhuv an-appl.nrs c.gov.in/mh rd_ncert/help/ Dandi_ march.pdf

The Salt March to Dandi

earth.google.com/ web/@22.00435195 Students may identify on a map significant places associated with the Civil Disobedience Movement. This activity will enable students to assess the spread of the movement.

WEEK 6

Activity 1

Questions and Answers

Students may be given some time to read 3.2 and 3.3 on p. 41-45. Teacher may then ask students to write down answers to the following questions:

- ✓ Why did some of the rich peasant communities become enthusiastic supporters of the Civil Disobedience Movement?
- ✓ How did Swaraj appeal to different social groups?
- ✓ How did the business class relate to the Movement?
- ✓ Why did the concept of *swaraj* not appeal to the oppressed classes?
- ✓ Did the Civil Disobedience Movement succeed at a pan- India level? Explain with reasons.

Activity 2

Preparing a Comparative Chart on the Non-cooperation Movement and the Civil Disobedience Movement

This activity will help students to highlight significant events and help them to draw parallels between the two Movements.

Students may be asked to create two columns (vertical) on a chart paper. One column for the *Non-cooperation Movement* and the other for the Civil Disobedience Movement. Each column may highlight significant developments and pattern of protest, participation of different sections of society including women, methods adopted,



CLASS IX

Science

Learning Outcomes

Sources and Resources

Week-wise Suggestive Activities (to be guided by parents with the help of teachers)

The learner

- classifies materials based on their states, such as, solids, liquids and gases.
- plans and conducts investigations or experiments to arrive at and verify the facts or phenomena or to seek answers to queries on their own, such as- Is matter continuous or particulate in nature? What is the effect of compression on different states of matter? etc.
- relates processes and phenomena with causes/ effects, such as, process of evaporation with cooling effect, etc.
- explains processes and phenomena, such as, some substances change state directly from solid to gaseous state and vice versa without changing into the liquid state: gases are highly compressible as compared to solids and liquids etc.

Chapter 1

Matter in our Surroundings

Content

Discussed in the textbook

Physical nature of matter

Matter is made up of particles

Characteristics of particles of matter

- Particles of matter have space between them
- Particles of matter attract each other

States of matter

- · The solid state
- · The liquid state
- · The gaseous state

Can matter change its state?

- Effect of change of temperature
- Effect of change of pressure

Evaporation

- Factors affecting evaporation
- How does evaporation cause cooling?
- E-Resources developed by NCERT, which are available on NROER and also attached as QR Code in textbooks of NCERT.
- Live telecast of various science concepts at Swayam Prabha Channel

Theme— Material

WEEK 5

- Read the chapter, Matter in Our Surroundings from your textbook carefully. If you do not have hard copy of the textbook, open the link and read from e-book
 - http://epathshala.nic.in/process.php?id=students&type=eTextbooks&ln =en/
- Perform an activity and have fun.

Make your own cloud in a bottle and recap the concept you have studied in your earlier classes.

- Take a 500 ml plastic bottle and pour 5ml water in it.
- Request any elderly person to light a matchstick and then blow it out so that it gives out smoke and immediately drop it into the bottle.

Caution: Do this step in the presence of an elderly person

- Put the cap back on the mouth of the bottle but do not screw it.
- Place the bottle between your hands and squeeze it as much as possible.
- Now close the mouth of the bottle by screwing the cap.
- Shake the bottle, squeeze it and then release it.
- Repeat the above step several times and observe.

This activity will help you to understand the concept of condensation of water vapour and the formation of clouds.

• Open the given link. This is an interactive quiz and try to self-assess your learning https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/5b3e062816b51c01d90bcc38



- draws labelled diagrams/ tables/ flow charts about the setup of the activities / experiments.
- calculates
 using the data
 given, such as,
 conversion of
 Celsius scale to
 Kelvin scale and
 vice versa by
 solving problems
- uses scientific conventions or symbols to represent various quantities and units, such as, SI units.
- measures physical quantities using appropriate apparatus such as, measuring the volume of liquids using various measuring devices.
- applies scientific concepts in daily life by solving problems, such as, particles of matter are very small; particles of matter are continuously moving; cooling is caused by evaporation etc.
- draws conclusion, such as, matter is made up of particles; particles of matter are continuously moving.

https://www.youtube. com/channel/UCT0s92 hGjqLX6p7qY9BBrSA

Laboratory Manual in Science for Class IX Links for various experiments are given below

- http://epathshala.nic. in/QR/books/desm/ NCERT_Science_Lab_ Manual_IX%20_Expt_05. pdf
- http://epathshala.nic. in/QR/books/desm/ NCERT_Science_Lab_ Manual_IX%20_Expt_06. pdf
- http://epathshala.nic. in/QR/books/desm/ NCERT_Science_Lab_ Manual_IX%20_Expt_07. pdf
- http://epathshala.nic. in/QR/books/desm/ NCERT_Science_Lab_ Manual_IX%20_Expt_08. pdf

- Perform this activity and find out Is matter continuous or particulate in nature?
- Take a clean glass tumbler and fill half the tumbler with water.
- Taste this water

Caution: you will take water which you use only for drinking purpose at home.

- Now add one tea spoon full of salt/sugar in it and stir it with spoon
- What do you think has happened to the salt/ sugar?
- Taste this water from anywhere in the glass
- Why it is evenly distributed throughout the solution?
- · Think and reflect on it.
- Perform this activity and share your findings with your classmates on WhatsApp Group, through email, etc.
- Learn by doing this activity
- Take an incense stick and place it in a corner of your room.
- How close do you have to go near it to get its smell?
- Now light the incense stick and place it at the same place

Caution: Do this step in the presence of some elderly person

• Do you get the smell sitting at a distance?

Record your observations and share your findings with your friends on WhatsApp Group. etc.

(Remember we are not moving out of home due to COVID19. So, you are requested whatever material is available at home,try to do these activities / experiments accordingly).

• Open the given link. This is an interactive quiz based on the concept of sublimation. Solve this quiz and have fun.

https://nroer.gov.in/55ab34ff81fccb4f 1d806025/page/5b3ef32c16b51c01 da83d1cc



- takes initiative to know about scientific discoveries such as, discovery of five states of matter.
- exhibits values
 of honesty,
 objectivity, and
 rational thinking
 while taking
 decisions, such
 as, records
 and reports
 experimental data
 honestly etc.
- communicates the findings and conclusions effectively, such as, those of experiment/ activity/ project orally and in written form using appropriate figures/ tables/ graphs/ digital form, etc.
- makes efforts to conserve environment by keeping surroundings clean, making judicious use of materials.

• Time to relax!

After doing a couple of activities, do some work out at home. For example, breathing exercises, stretching exercises, skipping, dance, yoga, indoor games, etc. Parents must motivate their children. Have a balanced diet. This you should follow even when your schools reopen.

Remember health is wealth.

Exemplar Problems in Science for Class IX

Matter in our surroundings

http://ncert.nic.in/ ncerts/l/ieep101.pdf

Link to find out the answers to the questions

http://ncert.nic.in/ ncerts/l/ieeplan.pdf

Week 6

- Let us try this activity. Note your observations at the end of each activity in your notebooks.
- Collect some solid materials within your home, such as, pen, book, steel spoon, plate, sponge, rubber band, etc., and observe their shape.
- Try compressing them by applying force. Are you able to compress them?
- Are these objects capable of diffusing into each other?



- Now collect water, cooking oil, milk, juice, butter milk, containers of different shapes, such as, cup, bowl, tumbler, plate, etc.
- Transfer these liquids one by one into different containers. Does the shape of the liquid remain the same? Does it flow easily from one container to another?
- What will happen if these liquid are spilt on the floor?
- You can also take a syringe (if it is available at your home). Try to press its piston by closing its nozzle with your thumb.
- Remove its piston and fill it with water and insert the piston back. Try to press its piston.
- Take out water from this syringe and dry it. Now fill it with some common salt and insert the piston back. Try to press its piston again.
- In which case was the piston easily pushed in?
- What do you conclude from this activity?

Compile the results in the form of table/ flow chart and share your findings with your classmates and teacher on the group created by her/him. Clear your doubts, if you have any.

- Open the given link. This is an interactive quiz based on the concept of states of matter. Solve this quiz and have fun.
 - https://nroer.gov.in/55ab3 4ff81fccb4f 1d806025/file/5c98b63316b51c01e5c 5772b
- Perform this activity and explore the young scientist in you. With this activity you can recall the concepts which you have studied in your earlier classes too.
- Take containers of same size such as, patila, plate, bowl, thali, etc., and pour equal amount of water in each one of them.
- Place these containers at different places such as in balcony under sun, in balcony under shade, inside a wardrobe, under the fan inside room, etc.
- Record the time or days taken for the evaporation process in all the above situations. What was your inference?



 differentiates between uniform and nonuniform motion; distance and displacement/ speed and velocity **Chapter 8- Motion**

You can repeat this activity by taking containers of different sizes with equal amount of water and place them at different places under different conditions.

- Observe them carefully and share your findings in the form of a project report. You can click or draw photographs or shoot videos. Project report you can also share with your classmates when your school will reopen.
- Collect information and pictures about scientists who are talking about the five states of matter by surfing net. Compile it in the form of report. Share it with your teacher and classmates on Google Group / WhatsApp Group / e-mail. With the help of your teacher you can also disseminate this report by publishing it in your school magazine.
- Open the given link. This is an interactive quiz based on the concept of evaporation Learn more and have fun.

https://nroer.gov.in/55ab34 ff81fccb4f1 d806025/ file/5c9af65416b51c01e5c592bf

 Open the given link and solve problems in your note book. If you have any doubts, discuss with your teacher or classmates

http://ncert.nic.in/ncerts/l/ieep101.pdf

You can self-evaluate answers by clicking on the given link

http://ncert.nic.in/ncerts/l/ieep1an.pdf

• Time to relax!

After doing a couple of activities, do some work out at home. For example, breathing exercises, stretching exercises, skipping, dance, yoga, indoor games, etc. Parents must motivate their children. Have a balanced diet. This you should follow even when your schools reopen.

Remember health is wealth.

WEEK 7

Theme: Moving Things, People and Ideas

Some of the activities given in the textbook can be done at home. Observation and conclusion can be discussed with peers and Teacher.



- classifies different types of motion as uniform-non uniform; linearcircular that s/he sees in everyday life
- plans and conducts investigations/ experiments to arrive at and verify the facts/ principles/ phenomena to seek answers to queries on their own, such as-How does speed of an object change?; How can we find difference between distance and displacement?
- explains processes and phenomena such as effect of force on the state of motion of objects
- calculates using the given data, such as distance, velocity, speed.
- draws graphs, such as distancetime and velocitytime graph
- analyses and interprets graphs/ figures etc., such as distancetime; velocitytime graphs, to compute distance/ speed/ acceleration of objects in motion
- uses scientific conventions/ symbols/ equations to represent various quantities/units

https://youtu.be/ z8Q2YYY0QtU

http://ncert.nic.in/ textbook/textbook. htm?iesc1=8-15

http://ncert.nic.in/ ncerts/l/ieep108.pdf

Chapter 9: Force and Laws of Motion

Activity 8.1

 Discuss whether the walls of your room are at rest or in motion.

Activity 8.2

- Have you ever experienced that the train in which you are sitting appears to move while it is at rest?
- Discuss and share your experience.

Activity 8.3

- Take a metre scale and a long rope.
- Walk from one corner of your room to the opposite corner along its sides.
- Measure the distance covered by you and magnitude of the displacement.
- What difference would you notice between the two in this case?
- Plot graphs using the data given in Tables 8.2, 8.3, 8.4, and 8.5 of Chapter 8.

WEEKS 8 AND WEEK 9

Some of the activities given in the textbook can be done at home. Observation and conclusion can be discussed with peers and Teacher. Do the Activity shown in Fig 9.4. Try to push a heavy object with small force. Does it move? What force is acting in a direction opposite to your push? Discuss.

Activity 9.1

- Make a pile of similar to Fig. 9.6 with carom coins on a table.
- Attempt a sharp horizontal hit at the bottom of the pile using another carom coin or the striker. If the hit is strong enough, the bottom coin moves out quickly. Once the lowest coin is removed, the inertia of the other coins makes them 'fall' vertically on the table.



- derives formula such as equation of motion
- applies scientific concepts in daily life and records & reports experimental data objectively and honestly
- exhibits values of honesty/ objectivity/ rational thinking
- communicates the findings and conclusions effectively, such as, those of experiment/ activity/ project orally and in written form using appropriate figures/ tables/ graphs/ digital form, etc.
- differentiates between balanced and unbalanced force
- plans and conducts investigations/ experiments to arrive at and verify the facts/ principles/ phenomena to seek answers to queries on their own, such as force can be used to change the magnitude of velocity of an object, or to change its direction of motion.

https://youtu.be/ IQUkUFBK61w

https://youtu.be/YZx_x72s08s

https://youtu.be/ hUVmCA_eiyA

https://youtu.be/JAmw8zlWmY

http://ncert.nic.in/ textbook/textbook. htm?iesc1=9-15

http://ncert.nic.in/ ncerts/l/ieep109.pdf

https://youtu.be/ VCsetKxKEfo

Activity 9.2

- Set a five-rupee coin on a stiff card covering an empty glass tumbler standing on a table (see Fig. 9.7).
- Give the card a sharp horizontal flick with a finger. If we do it fast then the card shoots away, allowing the coin to fall vertically into the glass tumbler due to its inertia.
- The inertia of the coin tries to maintain its state of rest even when the card flies off.
- Some of the activities, given in the textbook can be done at home. Observation and conclusion can be discussed with peers and Teacher.

Activity 10.1

- Take a piece of thread. Tie a small stone at one end. Hold the other end of the thread and whirl it round, (see Fig.10.10.
- Note the motion of the stone.
- · Release the thread.
- Again, note the direction of motion of the stone.

Caution: Be careful of the surroundings while performing this activity.

Activity 10.6

- Take a transparent vessel filled with water.
- Take a piece of cork (or some lighter material) and an iron nail of approximately equal mass.
- Place them on the surface of water.
- Observe what happens. The cork floats while the nail sinks. This happens because of the difference in their densities. The upthrust of water on the cork is greater than the weight of the cork, so it floats (See Fig. 10.5).
- Solve the numerical problems given in Chapter 10.



- explains processes / laws such as Newton's laws of motion
- calculates using the data given, such as force, momentum, acceleration
- draws figures/ diagram to illustrate Newton's laws of motion; conservation of linear momentum
- analyses and interprets graphs/ figures etc., such as, velocitytime graphs to compute acceleration
- uses/ measures physical quantities using appropriate apparatus/ instruments/such as spring balance
- uses scientific conventions/ symbols/ equations to represent various quantities/units
- derives formula/ equation, such as, law of conservation of linear momentum
- applies scientific concepts such as laws of motion in daily life
- records & reports experimental data objectively and honestly
- exhibits values of honesty/ objectivity/ rational thinking

http://ncert.nic.in/ textbook/textbook. htm?iesc1=10-15

http://ncert.nic.in/ ncerts/l/ieep110.pdf

https://youtu.be/ sMYCMPSKCeg

https://youtu.be/_glcaj83GtI



Mathematics

Learnina **Outcomes** The learner develops a Class X relationship between algebraic and graphical methods of finding the zeroes of a polynomial. **Equations** finds solutions of E-resources pairs of linear equations in two variables using graphical and different algebraic methods. demonstrates strategies of finding

roots and determining the nature of roots of a quadratic

equation.

Sources and Resources

NCERT Mathematics Textbook for

Chapter 2 Polynomials

Chapter 3 Pair of Linear Equations in two Variables

Chapter 4 Quadratic

Chapter 2 Polynomials

http://ncert.nic.in/ textbook/textbook. htm?jemh1=2-15

https://nroer.gov. in/5645d28d81fcc b60f166681d/ file/58dd37ba472 d4a03227bf8e0

Chapter 3

Pair of Linear Equations in two Variables

http://ncert.nic.in/ textbook/textbook. htm?jemh1=3-15

Chapter 4 Quadratic **Equations**

http://ncert.nic.in/ textbook/textbook. htm?jemh1=4-15

Books published by The Association of **Mathematics Teachers** of India (AMTI)

Week-wise Suggested Activities (to be guided by teachers/parents)

WEEK 5

- · A brief review of polynomials can be done by asking students to pick polynomials from a collection of algebraic expressions. This may be followed by asking students to classify given polynomials as linear, quadratic or cubic. They may be encouraged to form more such polynomials.
- A discussion about notation for representing a polynomial using different letters as variables, say p(x), q(y), r(m) may follow.
- Students may be given different polynomials and asked to find values of those polynomials for different values of the variable. For e.g. if p(t) = (2/3)t + 1 the then p(t) may be found for t=1,-2,0 etc. Students may choose their values, calculate and send to the teacher.
- Tasks of the following nature may be encouraged to be done by the students: Given a number say, Ö2, they should construct polynomials of different degrees and terms that will have Ö2 as a zero. For example $x^2 - 2$ or $x^2 - (\ddot{O}^2 + \ddot{O}^8) x$ + 4 etc. Different such numbers may be taken.

Week 6

- Discussion about zero of polynomials may then follow. Students may be encouraged to form as many examples as possible using rational and irrational numbers as coefficients of terms in polynomials.
- Students may be sent different polynomials for sketching their graphs. They may be asked to observe which graphs cross the x-axis and which do not. For e.g., graph of $x^2 - 1$ will cross at x=1 and x=-1, whereas that of x^2+1 will never cross the x-axis.
- Students may be motivated to explore a relation between the zeros of a polynomial and crossing of x-axis of its graph followed by relation between the number of zeros, degree of the polynomial and the number of times crossing of the x-axis by its graph may be discussed. Many examples of polynomials of different degrees may be created by the students for this purpose.



- The discussion may be supported by attempting exercises from the Class X NCERT textbook and Exemplar problem book, both available on the NCERT website.
- Students may be asked to observe the coefficients of polynomials whose zeros they have found earlier. They may be motivated to explore some relation between the zeros of the polynomial and the coefficients of the terms. The discussion may finally culminate in establishing relation between sum of zeros, product of zeros and the coefficients.
- The relation so established may be verified by creating new polynomials and solving them.
- The analogy of dividing two positive integers may be extended to division of two polynomials. The terms quotient, divisor, dividend, remainder may be discussed in the context of polynomials. For e.g. when $2x^2 + 3x + 5$ is divided by x + 1, the quotient is x + 1, remainder is 4 divisor is x + 1 and dividend is $2x^2 + 3x + 5$.

- This discussion can lead to the concept of division algorithm for polynomials and its verification through lots of examples generated by students.
- Polynomials of different degrees and terms may be encouraged to be formed for verifying different related concepts. For e.g. x^2-2x+1 , x^3-5 etc.
- A recall of linear equations can be done. There are infinite solutions of these equations, many of them can be found.
- Students may be motivated to improvise the situations that generated a single linear equation in two variables to those that will generate two linear equations in two variables. For e.g., in a situation, two friends donated an amount of Rs 9500 to PM's relief fund generates an equation x + y = 9500. A condition can be added further that- one of them donated Rs 1500 more than the other. To find the amounts donated by each, equations x + y = 9500 and x y = 1500 must be formed.
- More such situations be discussed and equations be formed. It may further be thought out whether a pair of such equations will give one or more solutions.



- Students may be asked to plot graphs for the given pair of linear equations in two variables. Initially teachers may send these equations to the students, later students may be encouraged to do that. Students may send their observations about the nature of graph i.e., whether the lines representing the given equations intersect at a point or overlap each other or are parallel. This may lead to the discussion on the nature of solutions of these equations.
- The three algebraic methods of finding solutions may then be discussed one by one. After finding the solution students may be asked to verify it by substituting the values of the variables in the equations.
- Students may be encouraged to refer literature of other subject areas which she is learning and try to frame questions that may lead to formation of linear equations in two variables.

WEEK 10

- Given a pair of such equations, students may try to solve it using all the three methods, verify it graphically as well as by substituting the solutions obtained in the given equations. They may try to think how these three methods are linked to each other and which is more workable etc.
- To deepen their understanding students may continue with the learning activities using exercises given in Class X NCERT textbook, Exemplar Problem Book, Laboratory Manual for Secondary Stage and e-resources on NROER

- Situations may be thought of that generate a quadratic equation. For e.g., suppose a charity trust decides to build a prayer hall having a carpet area of 300 square metres with its length one metre more than twice its breadth. What should be the length and breadth of the hall? Quadratic polynomials may be generated and may be put equal to zero to get a quadratic equation.
- Students may form equations that appear to be quadratic and exchange with their friends to verify whether they are quadratic or not. For e.g., equation x(x + 1) + 8 = (x + 2)(x 2) reduces to the form x + 12 = 0 which is not in the form $ax^2 + bx + c = 0$. Also students may create situations and exchange with their friends who in turn will form a quadratic equation for them.



- Teacher may encourage students to see through examples the analogy between the number of zeros of a quadratic polynomial and the number of solutions i.e. roots of a quadratic equation.
- Finding of roots of a quadratic equation by factoring it into linear factors may now be initiated.

- The method of completing the squares to find the solution of a quadratic equation may now be discussed. Students may be encouraged to apply this method to a general form of a quadratic equation ax²+bx+c =0 and a general formula for finding solution of a quadratic equation may be explored.
- The nature of roots of a quadratic equation may be discussed based on the quadratic formula.
- Teachers may guide students to convert equations convertible to quadratic equations and solve them.
- Use of Class X NCERT mathematics textbook and exemplar problem book be made to attempt innovative and thought provoking exercises. Students may generate more questions based on these and solve them to get a better insight in the concepts.



हिंदी

सीखने के प्रतिफल

लिखने की प्रक्रिया को समझकर अपने अनुभवों को स्वयं लिखते हैं।

- अपने परिवेशगत अनुभवों को समझते हुए भाषा का सृजनात्मक प्रयोग करते हैं।
- पाठ्यपुस्तकों में शामिल रचनाओं के अतिरिक्त कविता, कहानी, निबंध आदि पढते-लिखते हैं।
- विभिन्न सामाजिक, प्राकृतिक मुद्दों/घटनाओं के प्रति अपनी प्रतिक्रिया को बोलकर/लिखकर व्यक्त करते हैं।

स्रोत और संसाधन

ICT का उपयोग करते हुए पाठ्यपुस्तक में दिए गए QR Code की सहायता ले सकते हैं।

- टी.वी. पर प्रसारित कार्यक्रम, इंटरनेट, रेडियो आदि।
- NCERT, CIET, E-Pathshala, QR-Code आदि पर उपलब्ध सामग्री देख सकते है। www.ncert.nic.in, www.ciet.nic.in,, www. swayamprabha.gov.in https://www.youtube.com/ channel/UCT0s92hGjqL X6p7qY9BBrSA

एक उदाहरण–

- 'मैं क्यों लिखता हुँ?'– अज्ञेय
- एनसीईआरटी की कक्षा 10 की पूरक पाठ्यपुस्तक 'कृतिका भाग 2' में संकलित पाठ।

नोट-

संदर्भ-विस्तार के कुछ बिंदु-

- मैं क्यों लिखता हूँ? का उत्तर लिखकर ही जाना जा सकता है।
- लिखने का आंतरिक एवं बाहरी दबाव।
- आंतरिक दबाव-सच्ची बेचैनी है।
- बाहरी दबाव, जैसे– प्रकाशक-आर्थिक आवश्यकताएँ।
- अनुभव से अनुभूति तक जाना
 ''अनुभव तो घटित होता है, पर
 अनुभूति संवेदना और कल्पना के
 सहारे उस सत्य को आत्मसात कर
 लेती है, जो वास्तव में कृतिकार के
 साथ घटित नहीं हुआ है।''

सप्ताहवार सुझावात्मक गतिविधियाँ (अभिभावकों द्वारा अध्यापकों के सहयोग से संचालित)

- यदि आप अपने शिक्षक/शिक्षिका से ICT के माध्यम से संपर्क में है तो इस संदर्भ में उनसे बातचीत करनी चाहिए।
- लिखने की प्रक्रिया, संदर्भ, अनुभवों, भाषा/शैली पर ICT माध्यमों से जुड़े अपने साथियों, अध्यापकों से बातचीत करें।
- परिवार में अपने अभिभावकों/बड़ों से भी पढ़ने-लिखने की प्रक्रिया पर बातचीत कर सकते हैं।
- लिखने की प्रक्रिया के महत्तवपूर्ण बिंदुओं पर चिंतन-मनन करें।
- अपने अनुभवों को आपके द्वारा देखी और अनुभूत की गई दुनिया को अपनी भाषा में शब्दबद्ध करने (लिखने) का प्रयास करें।
- लिखने की प्रक्रिया एक लंबी और लगातार चलने वाली प्रक्रिया है, अत: धैर्य से अपनी अनुभूतियों को लिखने का प्रयास करें।
- पढ़ने-लिखने का ढंग/सामग्री कुछ भी हो सकते हैं, जैसे– कविता, कहानी, निबंध/लेख आदि।
- हम अपनी पसंद/मन के अनुकूल कुछ भी कविता, कहानी, लेख आदि लिख सकते हैं।
- सुझाई गई सहायक सामग्री के माध्यम से पहले हम स्वयं कहानी पढ़ने-स्नने, समझने का प्रयास करें।
- अपने साथियों, अध्यापकों से ICT के माध्यम से बातचीत करने का प्रयास करें िक वे इस कहानी और उसकी विषय-वस्तु के बारे में क्या कहते-सोचते हैं।
- इस कहानी के माध्यम से हम साहित्य की एक प्रमुख विधा-(कहानी) से परिचित होते हुए, 'देशभिक्त' को भी विविध संदर्भों में देख-समझ सकते हैं, जैसे–
- ''चारों ओर से घिरे भू-भाग का नाम ही देश नहीं होता। देश बनता है उसमें रहने वाले सभी नागरिकों, निदयों, पहाड़ों, पेड़-पौधों, वनस्पितयों, पशु-पिक्षयों से और इन सबसे प्रेम करने तथा इनकी समृद्धि के लिए प्रयास करने का नाम देशभिक्त है।''
- देश की भौगोलिक सीमाओं की रक्षा के साथ-साथ उपर्युक्त संदर्भों में भी अपनी 'देशभिक्त' की अवधारणा को समझने का प्रयास करें।
- इसमें दिए गए विभिन्न आयामों/पहलुओं पर धैर्यपूर्वक चिंतन-मनन करें।
- अपने अनुभवों और विचारों को लिखने का प्रयास करें।



- अज्ञेय, स्वयं विज्ञान के विद्यार्थी होने और हिरोशिमा-नागासाकी (जापान) पर परमाणु बम गिराए जाने के अनुभवों और अनुभूति को एक कविता 'हिरोशिमा' में व्यक्त करते हैं।
- बच्चे भी अपने अनुभवों-अनुभूतियों को लिखने की कोशिश करें।
- उदाहरण के लिए हम
 एनसीईआरटी की पाठ्यपुस्तक
 'क्षितिज भाग 2' में संकलित
 कहानी 'नेताजी का चश्मा' लेखक
 स्वयं प्रकाश, को ले सकते हैं।

- 'नेताजी का चश्मा' कहानी में यदि नेताजी की मूर्ति पर नया-नया चश्मा होना, यहाँ तक किसी बच्चे द्वारा सरकंडे का चश्मा चढ़ाया जाना भी सच्ची देशभिक्त का ही परिणाम है।
- कहानी की देशभिक्त की अवधारणा को समझते हुए हम आज-कल 'कोविड-19' (COVID-19) से जूझते देश-समाज के विभिन्न नागरिकों, जैसे— डॉक्टरों, नर्सों, सफ़ाई कर्मचारियों, पुलिसकर्मियों, दैनिक जीवन की अनिवार्य-आवश्यक सेवाओं-वस्तुओं को हम तक पहुँचाते 'देशभक्त नागरिकों' के हौसलों, संघर्षों, चिंताओं, समर्पण आदि के बारे में लिख सकते हैं।
- संघर्षमयी परिस्थितियों में अपने कर्त्तव्यों का पालन करते हुए हम अपनी 'देशभिक्त' की समझ का विस्तार कर सकते है।
- इस कहानी में 'फ़ेरीवालों' की चर्चा है, आज-कल की परिस्थितियों को देखते उनकी आवश्यकताओं पर भी विचार करें।
- इस कहानी के माध्यम से शारीरिक रूप से कमज़ोर व्यक्तियों के बारे में भी चर्चा की जा सकती है। (कहानी में ऐसी टिप्पणी/ संदर्भ हैं।)
- कहानी में 'नगरपालिका' अर्थात् स्थानीय प्रशासन द्वारा काराए जाने वाले कार्यों की भी चर्चा है, आज-कल की परिस्थितियों में देखें कि स्थानीय प्रशासन अपने नागरिकों को कैसी-कैसी सुविधाएँ प्रदान करता है।
- साहित्य के दो अलग-अलग रूपों जैसे— कहानी 'नेताजी की चश्मा' (स्वयं प्रकाश) और निबंध 'देश प्रेम' (आचार्य रामचंद्र शुक्ल) द्वारा देशभिक्त को समझा-कहा गया है। आप भी अपने तरीके से कविता-कहानी आदि के द्वारा इसे लिख सकते हैं।
- किवता (छाया मत छूना) को दो-तीन बार स्वयं पढ़ने-सुनने का प्रयास करें। इससे किसी भी किवता का मुख्य भाव-विचार धीरे-धीरे खुलने लगता है।
- आवश्यकता एवं सुविधानुसार अपने शिक्षकों/शिक्षिकाओं (विशेषत:, जो कक्षा 9–10 में आपको हिंदी पढ़ाते हों) से बातचीत की जा सकती है।
- अपने साथियों (मित्रों) से भी कविता के बारे में मोबाइल फ़ोन पर विचार-विमर्श किया जा सकता है। इससे किसी कविता विशेष के बारे में उनके विचारों को जाना जा सकता है।
- ''छाया मत छूना'' विगत (जो बीत गया) को भूलकर, उससे सीख लेकर आगे बढ़ने को कहती है। 'भूतकाल' की अपेक्षा अपने वर्तमान और भविष्य पर ध्यान केंद्रित करना चाहिए।
- इस कविता को 'कोरोना काल' की विकट परिस्थितियों के संदर्भ में भी समझने की कोशिश करें।
- किवता में आए ध्विन-साम्य वाले शब्दों की सूची बनाकर, स्वयं भी ऐसे नए शब्दों को देखें-परखें, जैसे— छूना-दूना, सुहावनी-मनभावनी, यामिनी-चाँदनी, सरमाया-भरमाया, मृगतृष्णा-कृष्णा आदि।



(b) Geography

Learning Outcomes

Sources and Resources

Week-wise Suggestive Activities (guided by parents/teachers)

The learner

• explains cause and effect relationship between phenomena, events, and their occurrence, for example, analyses the impact of overuse of natural resources, such as, ground water.

- demonstrates inquisitiveness, enquiry, for example, pose questions related to the scarcity of potable water.
- extrapolates and predicts events and phenomena, for example predicts the impact of pollution of water on human health.
- analyses and evaluates information, for example, indigenous or modern methods of conservation of water.
- constructs views, arguments and ideas on the basis of information, for example, natural resources and their impact on cultural diversity of any region.

Textbook-Contemporary India -II

Chapter 3: Water Resources

Web Resources

• Online E-learning portal School Bhuvan NCERT.

QR Code

 Dictionary of Geography for Schools (Trilingual) (Hindi-English-Urdu)

http://www.ncert.nic.in/ publication/Miscellaneous/ pdf_files/tidog101.pdf

Web Resource

 Online E-learning portal School Bhuvan NCERT.

WEEK 7

Themes- Water scarcity and need for water conservation and management

- Teacher may initiate the topic by asking students to prepare a write up on usage of water and issues related to potable water in their own locality during summers. Student may share the write up with the teacher and classmates through email or WhatsApp.
- Teacher may take cue from their write up and discuss about different types of water sources in India and scarcity of water due to overuse and misuse of fresh water.
- Students may consult atlas and School Bhuvan NCERT portal for locating fresh water sources e.g. rivers and lakes in India.
- Students may collect visuals and stories related to water scarcity from different parts of the country, make collage and share with students and teachers.
- Students may be given task to interpret the collage related to Water Scarcity explained in Fig. 3.1 on page 24 showing snow covered areas of Kashmir, dry regions of Gujarat and flood prone areas of West Bengal; learners may be asked to investigate reasons of water scarcity of each region located in different climatic areas and prepare a report or chart.

Topic- Multipurpose River Projects and Integrated Water Resource Management

- Students may be encouraged to read about Hydraulic structures in Ancient India given in the textbook and locate these places on the map of India.
- Student may open layers of thematic maps on School Bhuvan NCERT portal to locate rivers, lakes and dams of India.



 Students can open administrative map of India showing state and district boundary layer on the portal to observe location of water resources and dams in different states and districts.

WEEK 8

Multipurpose river projects and integrated water resource management

- Student may be given task to prepare write up on importance of multipurpose dams by giving some examples from States and share with teacher.
- Student may discuss with their grandparents about the traditional method of building dams and irrigation work during their childhood days and share with classmates and teacher through email.
- Student may also collect information about inter-state water disputes in India and share with the teacher.
- Teacher may use School Bhuvan portal to show flood situation in different parts of the country in recent past and discuss its causes and consequences.
- Student may read carefully the collage related to *Basic Safety Precautions To Be Taken during Floods* given on page 29 and discuss with their parents.
- Students may prepare a chart on water pollution and its impact on human health and share with classmates and teacher

Topic- Rainwater harvesting

- Students may be sensitised towards misuse and overuse of water resources.
- Student may collect information about traditional methods of water harvesting in ancient India from the textbook and prepare a write up and share with teacher and classmates.
- Student may be encouraged to draw a sketch of roof-top water harvesting system to explain modern method of rainwater harvesting.
- Students may prepare chart on depletion of water resources and its causes and consequences.



(c) Political Science

Learning Outcomes	Sources and Resources	Week-wise suggestive activities (to be guided by the parent/ teacher)
The learner	Theme: Political	Weeks 9 and 10
describes different	Parties	Define multipal mantice and their
political parties in India and their role	NCERT/STATE TEXTBOOKS	Define political parties and their role in shaping democracy. Share the write-up with your friends. Write a short note on the Election Commission of India
explains the role of election commission	Sources	
develops materials	YouTube	
showing different parties in India	E-content	Prepare a chart on different Political Parties along with their symbols.
	Other state textbooks	
 materials and prepare write-ups on founders of 	Newspapers and Magazines	Write in five hundred words on:
political parties in India		-Two Party System
	Swayam Prabha channel	-Multi party system
	Radio and T.V. discussion on the theme.	Discuss with your parents on what the challenges to the political
	Question papers of the last five years.	parties in India and how they can be reformed.
		You may prepare a chart on the founders of National Political Parties in India with a brief biography.



(d) Economics

In Economics, there are five topics, viz., (i) Development (ii) Sectors of the Indian economy (iii) Money and credit (iv) Globalisation and the Indian economy and (v) Consumer Rights.

One them was already completed in the first academic calendar for four weeks. Here will be cover the following two themes—

- 1. Sectors of the Indian economy;
- 2. Money and credit

Learning Outcomes

Sources and Resources

Week-wise suggestive activities (to be guided by parents/teachers)

The learner

- explains the income as an indicator of economic development
- uses some simple statistical tools (bar and pie) to analyse developmental indicators
- recognises the need to evolve criteria to classify economic activities, enterprise and people
- appreciates that people are highly interdependent and so are the economic activities
- defines primary, secondary and tertiary sectors, final goods, intermediate goods, Gross Domestic Product, organised and unorganised sector, private and public sector

Chapter 2: Sectors of the Indian economy

NCERT Textbook

Understanding Economic Development, Social Science Textbook for Class X

(https://ncert.nic.in/textbook.php?jess2=0-5)

- 1. Trilingual Dictionary of
 Economics for Schools
 (https://ncert.nic.
 in/pdf/publication/
 otherpublications/Dic_
 Eco.pdf)
- 2. Economic Survey reports for various years (https://www.indiabudget.gov.in/economicsurvey/allpes.php)
- 4. Live Phone-inprogramme interactive session programme videos telecasted from Swayam Praba Channel.

Links

https://www.youtube.com/ watch?v=9qoI1DD_5wQ - GDP and sectors of the Indian economy - 1

- 1. This topic can be taught over a period of five working days of 30-35 minutes.
- 2. During the first session, students can be encouraged to read the chapter. Underline important technical terms used in the chapter and find out their explanation given in the trilingual dictionary whose link is given.
- 3. Students can share the questions and doubts about various parts of the chapter.
- 4. Students can be encouraged to watch the videos whose links are given and participate in the activities suggested in the videos including the assessment questions.



- examines changes in Gross Domestic Product over the last 4-5 decades in India and across three sectors
- differentiates: (a)
 organised and
 unorganised sectors;
 (b) private and public
 sector

The learner

- understands barter system and how money came into being
- defines money, double coincidence of wants, credit, interest rate, collateral and formal and informal sources of credit
- explains the role of banks in an economy
- analyses different sources of credit based on statistical data
- uses bar and pie diagrams to explain the sources of credit

https://www.youtube. com/watch?v=yrmb8lIrNH4 - GDP and sectors of the Indian economy - 2

Chapter 3 Money and Credit

- NCERT Textbook –
 Understanding Economic
 Development, Social
 Science Textbook for
 Class X
 - (Https://ncert.nic.in/textbook.php?jess2=0-5)
- 2. Trilingual Dictionary of Economics for Schools (https://ncert.nic.in/pdf/publication/otherpublications/Dic_Eco.pdf)

Details of Indebtedness – latest source of credit at the national level can be accessed from http://www.mospi.gov.in/sites/default/files/publication_reports/KI_70_18.2_19dec14.pdf

Live Phone-in Programme sessions

Links

https://www.youtube.com/ watch?v= zm-svH4oZc money and credit 1

https://www.youtube.com/ watch?v=PSzi4mLsHO4 – money and credit 2

https://www.youtube. com/watch?v=mJ2uT4V2uY - money and credit 3

- 1. This topic can be taught over a period of five working days of 30-35 mines.
- 2. During the first session, students can be encouraged to read the chapter. Underline important technical terms used in the chapter and find out their explanation given in the trilingual dictionary whose link is given.
- 3. Students can share the questions and doubts about various parts of the chapter.
- 4. Students can be encouraged to watch the videos whose links are given and participate in the activities suggested in the videos including the assessment questions.
- 5. Students may be encouraged to watch websites of museums in which currency and coins are kept.
- 6. The statistical data related to sources of credit can be used to assess the students' data analysis skills



(b) Geography

Learning Outcomes	Sources and Resources	Week-wise Suggested Activities (to be guided by Parents under the guidance of teacher)
The learner	NCERT Textbook Contemporary India,	WEEK 7
recognises and retrieves	Part 1	Major Physiographic Divisions
facts, figures and narrates processes, for example, • locates physical	http://ncert.nic.in/ textbook/textbook. htm?iess1=ps-6	• Learner may read the introduction of the chapter and understand that our vast country has varied landform. They can observe the Fig.2.2 'Relief' to understand where they will find these different landforms.
features on the map of India. • recognises and describes	Chapter 2: Physical Features of India	• Learners may be encouraged to use School Bhuvan to understand the relief features of India.
different physical features		• Compare the political map of India with relief map and identify the main states where these major physiographic divisions are found.
classifies and		
compares, for example,	Use the QR code given for	The Himalayan Mountains
• classifies physical features in the surroundings and compare them with physical features of other places;	the chapter for additional resources	Read about the Himalayan Mountains. Take help of Geography dictionary to understand various terms.
interprets, for example,	Explore School Bhuvan:	• Identify the highest peaks of the Himalayas on the map of India. Identify the Karakoram range and the K2 peak.
• maps of	http://bhuvan.nrsc.gov. in/governance/mhrd_	
physiography	ncert/	Mark Purvanchal on the map of India
• photographs		• Learners may be asked to write in their own words about—
	Trilingual Dictionary of Geography for Schools (Hindi-English-Urdu) http://www.ncert. nic.in/publication/ Miscellaneous/pdf_files/ tidog101.pdf	 ✓ three parallel ranges of Himalayas in its longitudinal extent ✓ Duns and their examples ✓ Division of Himalayas on the basis of regions from west ✓ Purvanchal The Northern Plains Read about the northern plains. Take help of Geography dictionary to understand various terms.



- Identify the three major rivers, namely, the Indus, Ganga and Brahmaputra and with the help of atlas/school bhuvan/ maps in the textbooks. Find out which are the states where these rivers flow in the plains.
- In your own words write about the four divisions of this region.

The Peninsular Plateau

- Learner can read about the peninsular plateau in the textbook and take help of Geography dictionary to understand various terms.
- Identify the river Narmada and the broad divisions of the plateau and Chota Nagpur plateau on the map.
- Identify the extension of the plateau in the northeast and three prominent hill ranges from the west to the east.
- · Compare western and eastern ghats.
- Write the main characteristics of the peninsular plateau in your own words.

The Indian Desert

- Read about the Indian desert. Take help of Geography dictionary to understand various terms.
- Identify the following on the map of India—
 - ✓ Aravali hill
 - ✓ Luni river
 - ✓ Jaisalmer

The Coastal Plains

- Learner can read about the coastal plains in the textbook and take help of Geography dictionary to understand various terms.
- Identify the major rivers in this region and their deltas on the map.
- Identify lake Chilka. Collect more information from various sources and write a note about it.
- Compare both coastal plains.



The Islands

- Learner may read about the islands in the textbook and take help of Geography dictionary to understand various terms.
- · Identify these islands on the map of India.
- Compare these two island groups of India and write their major characteristics in your own words.

Own Region

- Your home falls under which physiographic division? Write the characteristics of your region in your own words.
- Compare your physiographic region with any other region of the country. You can prepare a drawing/write a poem or prepare a write up.

Note: You may collect information/pictures about these physiographic divisions from various other sources like books, magazines, internet, and from elders at home and broaden your understanding. Prepare a scrap book and share with your friends when your school reopens.

Do the activities and exercises given in the textbook.



(c) Political Science

Learning Outcomes	Sources and Resources	Week-wise Suggested Activities (to be guided by Parents under the guidance of teacher)
The learner	NCERT/STATE TEXTBOOKS	Weeks 9 and 10
• explains the importance of Rights in a	Theme: Democratic Rights	Write a short note on the importance of security, dignity and fair play in Democracy.
democratic form of government	Rights	• Prepare a write-up for your Annual Magazine on: Rights comes with obligations to respect others.
 demonstrates different ways of highlighting Democratic Rights 	Sources	You may prepare a script on "The History of Women getting Voting Rights in India."
	Other state books	• Prepare a chart on Fundamental Rights and explain each one of them.
• explains Amnesty International	News paper and Magazines	Prepare a write-up on "How can we secure Rights in Democracy". Share the same with friends.
• describes Bill of Right	Youtube	• Write a short note on Amnesty International.
explains the role of National Human Right Commission		• Prepare an essay on the National Human Right Commission
	Discussion on T.V/Radio	Prepare a collage collecting different write- ups on National Human Right Commission.
	Talk on the Swayam -Prabha Channel	



(d) Economics

Learning Outcomes	Sources and Resources	Week-wise Suggested Activities (to be guided by Parents under the guidance of teacher)
The learner	NCERT Economics	W EEK 11
 may be exposed to the rural realities through the discussion 	Trilingual dictionary in economics is available on www.ncert.nic.in	Write or tell the story of a village economy in your language and share it with your parents or siblings.
on factors of production i.e to land, labour, physical capital		• Learners can visualise and write paragraphs on several activities undertaken in the rural economy.
and human capital • visualises		Discuss through emails/WhatsApp the difference and similarity between farm and non-farm activities
the village economy as a self organizing entity		• Questions can be raised on who are the cultivators, moneylenders, shopkeepers, rich farmers and so on.
• recognises the difference between farm		• Parents can show the picture of wheat, rice, maize and some other seeds of basic commodities.
as well as non- farm activities		• A child with special needs can be asked to identify seeds of wheat, rice, rajma etc and discuss how are these cultivated in
• familiarises about different economic agents and their role in the village economy.		the field Teachers can also encourage students to pose problems from the online textbooks and the e resources available on NROER.
• gets exposure to the different seeds grown in the field		
• demonstrates	QR codes of the textbook	W EEK 12
inquisitiveness, enquiry and raises questions which can help to construct views, ideas and arguments	have some additional activities. These could be used by all learners.	• Land is fixed in nature, but the population is increasing. How do we meet the evergrowing demand for food of the increasing population?
		• Discuss the need for green revolution in your country.
		• Role plays can be modelled to show the difference between the two situations i.e before and after the green revolution.
		• Show on the map of India which states have benefitted (colour with green) or not benefitted from the green revolution (colour with blue).
		• Debates can be organised on advantages and disadvantages of the green revolution.



CLASS X

Science

Learning Outcomes

Sources and Resources

Suggested Activities (to be guided by teachers/parents)

The learner

- classifies metals and non-metals based on their physical and chemical properties
- plans and conducts experiments simple activities/ experiments to verify the conditions necessary for rusting/ corrosion of objects and also metals are good conductor of heat, etc.
- explains about metals as good conductors of heat whereas nonmetals are not with some exceptions, extraction of metals from ores etc.
- draws labelled diagrams for set up of activities / experiments such as metals are good conductors of heat, and also flow charts for extraction of metals from ores.
- uses scientific conventions to represent symbols, formulae, and equations for balanced chemical equation and also physical states of substances
- identifies laboratory apparatus and materials appropriately.
- applies scientific concepts in daily life for preventing corrosion of copper, silver and iron articles.

Theme - Materials

Chapter 3- Metals and Non-metals

Content discussed in the textbook

- Physical properties of metals and non-metals
- Chemical Properties metals and non-metals
 - ✓ What happens when metals are burnt in air?
 - ✓ What happens when metals react with water?
 - ✓ What happens when metals react with acids?
 - ✓ How do metals react with solutions of other metal salts?
- The reactivity series
- How do metals and non-metals react?
- · Occurrence of metals
- Corrosion
 - ✓ E-Resources developed by NCERT, which are available on NROER and also attached as QR Code in textbooks of NCERT.

- ✓ Read the chapter *Metals and Non-metals* from your Textbook carefully. If you do not have hard copy of textbook, open the link and read from e-book
 - http://epathshala. nic.in/process. php?id=students&type=eTextb ooks&ln=en
- ✓ Open the given link
 https://nroer.gov.
 in/55ab34ff81fccb4f1d806025/
 page/588713124
 72d4a1fef810dbc
- ✓ Watch the video carefully; you can see many reactions taking place in the video. Pause the video after each reaction and do the following:
- Write the symbol and formulae for the metals, acids and salt solutions used in the video.
- Write the physical states for the substances used in the reactions.
- Translate each reaction into chemical equations and then balance them.
 - ✓ Find out the locations of the deposits of metals such as, zinc, iron, aluminum, etc., in India and their uses by surfing net. Prepare it in the form of project report. You may also paste or draw pictures of metals and their uses. Share and discuss it with your friends through email or WhatsApp group. You can also share this project report with your classmates once your school will reopen.
 - ✓ Open the given link

 https://nroer.gov.
 in/55ab34ff81fccb4f1d806025/
 page/5b3dc76816b51
 c01da81ec29



- draws conclusion for various investigations, such as, metals are good conductors of heat. Necessary conditions for rusting etc.
- exhibits values of honesty, objectivity, rational thinking by reporting and recording experimental data accurately and honestly
- communicates
 the findings and
 conclusions of
 the activities/
 experiments/projects
 or any task orally
 and in written form
 effectively using
 appropriate figures,
 tables, graphs, and
 digital forms, etc.
- makes efforts to conserve environment by doing activities/ experiments making judicious use of resources.

- ✓ Live telecast of various science concepts at Swayam Prabha Channel
- ✓ https://www.youtube.com/
 channel/
 UCT0s92hGjq
 LX6p7qY9BBrSA
- ✓ ITPD package developed for teachers teaching at Secondary Stage
- ✓ http://www.ncert. nic.in/departments/ nie/dse/activities/ advisory_board/ PDF/teaching_ sc.pdf
- ✓ Laboratory Manual in Science for Class X
- ✓ http://ncert.nic.in/ ncerts/l/jelm102. pdf
- ✓ Exemplar Problems in Science for Class X
- Chapter on Metals and Non- Metals
- http://ncert.nic.in/ncerts/1/jeep103.pdf

Link to find out the Answers to the Questions

http://ncert.nic.in/
ncerts/1/jeep1an.pdf

- ✓ This is an Interactive Quiz based on the properties of metals and non-metals. Learn more and have fun.
- ✓ Develop a crossword puzzle based on Metals and Non-metals. Share it with your friends on WhatsApp Group or email. Each one of you may note down the time to complete this crossword puzzle. Discuss the key and clear your doubts.
- ✓ Time to relax!

After doing couple of activities, do some work out at home. For example, stretching exercises, skipping, dance, yoga, indoor games etc. Parents must motivate their children. Have a balanced diet. This you should follow even when your schools will reopen.

WEEK 6

- ✓ Try to perform this activity at home
- Take three dry bottles and label them as A, D and C
- Place clean iron nails/ or any iron objects and place these in each one of them.
- Pour some water in bottle A and tightly screw its lid.
- Pour boiled water in bottle B and tightly screw its lid
- Pour boiled water in bottle C. Add one tablespoon of oil on it and tightly screw the bottle with its lid. Make sure that a layer of oil should float on water.

Caution: Be careful!

Do not spill hot water on your hand. Perform these steps in the presence of some elderly person.

- Leave these bottles for a few days and record your observations on the following parameters:
 - ✓ In which bottle(s) you found rusted iron nails/ iron objects and why?



- √ What does this tell us about the conditions under which iron articles rust?
- ✓ State the ways by which you can prevent the rusting of iron nails/ iron objects.
- Explore the young scientist in you. You can further investigate by dipping iron articles in various solutions, such as, juices, milk, salt solution etc. Plan and design your experiment/activity accordingly. Prepare the report like a scientist.
- You can also draw diagram of this experimental setup
- You can also click photographs or make video of the activity/ experiment and share it with your teacher and friends on WhatsApp Group.

(Remember we are not moving out of home due to COVID19.

So, you are requested whatever material you have at home, try to do the activity / experiment accordingly).

- ✓ Collect information and pictures about the field of metallurgy in ancient India by surfing the Internet. Compile it in the form of a report. Share it with your teacher and classmates on Google Group / WhatsApp Group / e-mail. With the help of your teacher you can also disseminate this report by publishing in your school magazine.
- ✓ Open this link. Learn and have fun.
- https://nroer.gov.in/ 55ab34ff81fccb 4f1d806025/page/ 5b3dc7f916 b51c01d90b5ff4#;

This is an Interactive Quiz consisting of Multiple Choice Questions with answers on Reactivity and Extraction of Metals. You can do self- evaluation. If you still have any doubts, ask your teacher or friends.



WEEK 7

- ✓ Collect pictures and information related to the historical background of two rust resistant monuments built in India.
- ✓ Compile it in the form of report. Share information with your friends on the Group created by your teacher.
- ✓ Try to perform this activity at home.
- Take metallic spoon, plastic spoon and wooden spoon. If you do not have plastic or wooden spoon, you can take wooden broom stick, plastic stick/rod. Remember all the three objects should be of same length, width and thickness.
- Take a tumbler/container and pour hot water in it.

Caution: Ask some elderly person at home to pour hot water in the tumbler/container. Be careful! Do not touch the hot tumbler/ container with your hands.

- Now touch each one of the spoons / objects one-by- one and note down your observations after every two minutes.
- Which spoon/ object is the best conductor of heat and which one is not so good?

(Remember we are not moving out of home due to COVID19.

So, you are requested whatever material you have at home, try to do the activity / experiment accordingly).

- ✓ Find out the answer to these questions by surfing the Internet. Some answers to these questions you can also find inside your home only.
- Which metals and non-metals are used in your home and for which purpose? Write in detail.
- Which metal is present in chlorophyll?
- Which metal is found in human blood?



• Which non-metals are usually used in day-to-day life?

Share and discuss it with your friends through email or WhatsApp group. Compile it in the form of a report. You can also share this project report with your classmates once your school will reopen.

WEEK 8

✓ Develop a game using cards (you can make them from thick sheets of paper). Write information about some important metals and non-metals such as name the of metals/non-metals, their symbol, their atomic number,physical properties, chemical properties and uses on different cards. Pick up one card having name of the metal. Now look for the card showing its symbol. Similarly pick up the card showing its atomic number, its physical or chemical properies and usse. You can play this game with your parents or siblings.

You can make video of this game and share with your friends. You can also play the developed game with your classmates when your schools reopen.

- ✓ Solve all the questions given at the back of your textbook in your notebook. If you have any doubts, ask your teacher or friends. You can also get them evaluated by your teacher through email or show her/him when your school will reopen.
- ✓ Develop a flow chart of steps involved in the extraction of metals from ore on a chart paper. Share photographs with your friends on WhatsApp group. You can also paste this flow chart in your class when your school will reopen.
- ✓ Open this link and try to solve the questions in your notebook
- √ http://ncert.nic.in/ncerts/l/
 jeep103.pdf



The learner

- relates processes and phenomena with causes and effects, such as, impact of human activities on the environment.
- explains processes and phenomena, such as, food chains, food webs, ozone layer depletion, etc.
- draws labelled diagrams, flow charts, concept maps, graphs, such as, ecosystem, waste management, etc.
- applies learning to hypothetical situations, such as, ecosystem without mosquitoes, ecosystem without human beings.
- analyses and interprets graphs and figures the increase in CFC and ozone layer depletion, etc.
- applies scientific concepts in daily life and solving problems, such as, reducing use of non-biodegradable products.

NCERT/State Textbook

Chapter: Our Environment

Link 1

Chapter 15: Our Environment

 http://ncert.nic.in/ textbook/textbook. htm?jesc1=15-16

Link 2

Interactive resource with questions on components of ecosystem

 https://nroer.gov. in/55ab34ff 81fccb4f1d 806025/page/5c90c e7d16b51c0 1e4209ccb You can self-evaluate the answers by clicking on the given link

http://ncert.nic.in/ncerts/1/jeep1an.pdf

If you have any doubts, discuss with your friends and teacher on the group created by her/him.

Time to relax!

After doing couple of activities, do some work out at home. For example, stretching exercises, skipping, dance, yoga, indoor games etc. Parents must motivate their children. Have balanced diet. This you should follow even when your schools will reopen.

WEEK 9

Activity 1

• Students may read Section 15.1 (Link 1).

Activity 2

• Students may check Link 2 and learn more about ecosystem and check their understanding as well based on multiple choice questions provided at the end of the link.

Activity 3

 Students may write down the chain of events which could take place in the ecosystem if mosquitoes were wiped out from the face of the earth.

Note: Students may take the help of internet to find out the role of mosquitoes in the ecosystem.

Activity 4

 Students may write down the chain of events which could take place in the ecosystem in the absence of human beings.

Activity 5

• Students may prepare a chart of an ecosystem based on the theme "Me in the Ecosystem".



Chapter: Our Environment

Link 3

A slide about ozone hole

 https://nroer.gov.in/ 55ab34ff81f ccb4f1d806025/ page/5a9e56e c16b51cebb 41cc50f

Link 4

An article about ozone hole and CFC

 https://nroer.gov. in/55ab34ff 81fccb4f1d806025/ page/58da8 0b4472d4a 2c0ef2d176

WEEK 10

Activity 6

- Students may read Section 15.2 (Link 1).
- They may also look up Links 3, 4 and 5 related to ozone layer.
- Students may do Activity 15.4 provided in Link 1.

Activity 7

• Students may perform Activity 15.5 provided in Link 1.

Activity 8

- Students may find out the different kinds of waste generated in their homes.
- They may calculate the amount of waste they produce in their homes.
- They may trace the journey of the waste they generate and find out what finally happens with the waste.
- They may come up with some ideas as to how they can reduce waste generation in their homes.
- They may present their findings in appropriate format such as table, charts, diagrams, etc.

Activity 9

- Students may complete Activity 15.6 provided in Link 1.
- They may record their findings in their scrapbook.

Activity 10

 Using internet and other sources, students may find out how long it may take for different kinds of plastics to degrade.



The learner

- differentiates between convex and concave surfaces; between erect and inverted image based on, properties/ characteristics
- plans and conducts investigations/ experiments to arrive at and verify the facts/ phenomena related to reflection and refraction to seek answers to queries on their own
- draws labeled ray diagrams/ tables/ flow charts about the setup of the activities / experiments based on spherical mirrors, spherical lenses and glass slab
- measures physical quantities using appropriate apparatus such as focal length of spherical mirrors and spherical lenses, etc.
- uses scientific conventions/ symbols to represent various quantities /units, related to reflection, refraction, power of lenses, etc.
- relates processes
 and phenomena with
 causes/ effects, such
 as, bending of light
 when light passes from
 one medium to another
 medium, everyday life
 experiences related
 with reflection and
 refraction, etc.
- calculates using the data given, such as, object distance, image distance, focal length, refractive index of a material, magnification of spherical lenses, etc.

Chapter 10- Light

 Content of chapter 10 of Science Textbook (English version)

Link 1

(English version)

- http://ncert.nic.in/ textbook/textbook. htm?jesc1=10-16
- Content of chapter 10of Science Textbook

(Hindi version)

 http://ncert.nic.in/ textbook/textbook. htm?jhsc1=10-16

Link 2

Experiments on reflection light using laser

 https://nroer.gov.in/ 55ab34ff81fcc
 b4f1d806025/page/ 5699f92981fcc
 b15fb2145f7

Link 3

Sign convention for spherical mirrors shown with graphics

 https://nroer.gov.in/ 55ab34ff81fcc
 b4f1d806025/page/ 5a9e57b916b51 cebb41cc9c4

Link 4

Numerical problems based on spherical mirrors

https://nroer.gov.in/
 55ab34ff81fccb
 4f1d806025/file/
 5c795fab16b
 51cbe62be7b77

Link 5

A quiz based on refraction of light

WEEKS 11 AND 12

Activity 1

- Take a large shining spoon. Try to view your face in its curved surface.
- Do you get the image? Is it smaller or larger?
- Move the spoon slowly away from your face. Observe the image.
- How does it change?
- Reverse the spoon and repeat the Activity. How does the image look like now?
- Compare the characteristics of the image on the two surfaces.

Activity 2

- Draw the ray diagram for image formation by a concave mirror and convex mirror for different positions of the object. Compare your diagram with those given in Fig. 10.7 and Fig. 10.8.
- Describe the nature, position and relative size of the image formed in each case.
- Tabulate the results in a convenient format. and check your answers with Table 10.1 and Table 10.2

(Observe Links 2 and 3)

Activity 3

- Observe the image of a distant object, say a distant tree, in a plane mirror.
- Could you see a full-length image?
- Try with plane mirrors of different sizes. Did you see the entire object in the image?
- Can a concave mirror show full length image of the object? Discuss with a ray diagram.



- explains processes and phenomena, such as, reflection and refraction, etc.
- Analyses and interprets data/graph/figure to
- draw conclusion regarding reflection and refraction from spherical mirrors and lenses, glass slabs, etc.
- Communicates
 the findings and
 conclusions effectively,
 such as those of
 experiment/ activity/
 project orally and in
 written form using
 appropriate figures/
 ray diagrams tables/
 graphs/ digital form,
 etc.
- applies scientific concepts in daily life in solving problems, such as, numerical problems; why coin in a bowl disappears from sight at a certain position of observer and appears again on pouring water in the bowl, etc.
- exhibits values of honesty/ objectivity/ rational thinking while taking decisions, such as, records and reports experimental data honestly, etc.

 https://nroer.gov.in/ 55ab34ff81fcc
 b4f1d806025/file/ 5b3dc8be16b5
 1c01d82d9b1c

Link 6

Experiments to demonstrate reflection and refraction of light

 https://nroer.gov.in/ 55ab34ff81fcc b4f1d806025/ page/5699f8b 581fccb15f b214089

Link 7

Simulation to show refraction of light

 https://nroer.gov. in/55ab34ff81f ccb4f1d806025/ page/5b4d7da 316b51c0 1e2fe50f2

Link 8

Observe refraction

 https://nroer.gov. in/55ab34ff8
 1fccb4f1d
 806025/page/569
 9f90281fccb
 15fb214426

Link 9

Refractive disappearance

 https://nroer.gov.in/ 55ab34ff 81fccb4f 1d806025/ page/5699f8eb81f ccb15fb214308

Link 10

Observe refraction-magical coin

 https://nroer.gov. in/55ab34ff81fc cb4f1d806025/ page/5699f 8bd81fccb1 5fb2140e2

Activity 4

- Solve numerical problems and quiz questions given in Links 4 and 5.
- See Link 13. Perform experiments/ activity if feasible.
- Caution: Do not go out of the house. You can search and observe video of experiments.
- Experiments can be performed after opening of school.
- Solve problems given in Link 14.

Activity 5

Observe Links 6 to 12.

Activity 6

- Place a coin at the bottom of a bucket filled with water.
- With your eye to a side above water, try to pick up the coin at once. Did you succeed in picking up the coin?
- Repeat the Activity. Why did you not succeed in doing it in one go?
- Ask your friends to do this. Compare your experience with theirs.

Activity 7

- Place a large shallow bowl on a Table and put a coin in it.
- Move away slowly from the bowl. Stop when the coin just disappears from your sight.
- Ask a friend to pour water gently into the bowl without disturbing
- the coin.
- Keep looking for the coin from your position. Does the coin become visible again from your position? How could this happen? (Links 10 and 11)



Link 11

Observe the coins

 https://nroer.gov. in/55ab34ff81 fccb4f1d806025/ page/5699f83e8 1fccb15fb213b50

Link 12

Observe refraction-hiding fish

 https://nroer.gov. in/55ab34ff81fcc b4f1d806025/ page/5699f892 81fccb15fb213eac

Link 13

(English version)

Experiments based on the concepts of reflection and refraction given in Laboratory Manual

 http://ncert.nic.in/ ncerts/1/jelm104.pdf

(Hindi version)

Experiments based on the concepts of reflection and refraction given in Laboratory Manual

• http://ncert.nic.in/ ncerts/1/jhlm105.pdf

Link 14

Assessment-Exemplar Problems (English version)

 http://ncert.nic.in/ ncerts/l/jeep110.pdf

Link 15

Assessment-Exemplar Problems (Hindi version)

 http://ncert.nic.in/ ncerts/l/jhep110.pdf

Link 16

Enjoy the optical patterns

Activity 8

- Draw a thick straight line in ink, over a sheet of white paper placed on a Table.
- Place a glass slab over the line in such a way that one of its edges makes an angle with the line.
- Look at the portion of the line under the slab from the sides. What do you observe? Does the line under the glass slab appear to be bent at the edges?
- Next, place the glass slab such that it is normal to the line. What
- do you observe now? Does the part of the line under the glass slab appear bent?
- Look at the line from the top of the glass slab. Does the part of the line, beneath the slab, appear to be raised? Why does this happen?

Note- A glass tumbler with flat bottom can be used if glass slab is not available at home.



- relates processes and phenomena with causes and effects, such as, impact of carbon dioxide and other greenhouse gases on climate change.
- explains processes and phenomena, such as, global warming, climate change, ozone layer depletion, etc.
- draws labelled diagrams, flow charts, concept maps, graphs, such as, biogeochemical cycles—carbon cycle, nitrogen cycle, water cycle, etc.
- applies learning to hypothetical situations, such as, life on earth without atmosphere.
- analyses and interprets graphs and figures the increase in greenhouse gases over decades, concentration of air pollutants, etc.
- applies scientific concepts in daily life and solving problems, such as, purification of water.

Chapter: Natural Resources

Link 1

http://ncert.nic.in/textbook/textbook.htm?iesc1=14-15

Link 2

Live interaction on Air pollution https:// www.youtube.com/ watch?v=lhYClwdF5gU

Link 3

Live interaction on Air pollution https:// www.youtube.com/ watch?v=4XknE275G88

Link 4

https://mausam.imd.gov.

WEEK 10

Activity 1

- Students may read the whole of Activity 14.1 (Link 1) and watch videos on air pollution (Links 2 and 3) in order to have an idea about atmosphere and air pollution.
- They may describe the hypothetical situation if there is no atmosphere.

Activity 2

- In order to understand the nature of convection currents, students may perform Activity 14.2 provided in Chapter 14 (Link 1).
- Repeat the activity at least a few times and write down what they observe.

Activity 3

- In order to demonstrate some of the factors influencing climatic changes, students may perform Activity 14.3 provided in Chapter 14 (Link 1).
- Repeat the activity at least a few times and answer the questions as provided in the textbook following the activity.

Activity 4

- Students may be engaged in Activity 14.4 provided in Chapter 14 (Link 1).
- They may compile the information they have gathered in their notebook or scrapbook.
- They may present the data in the form of graph or other presentable form.

Activity 5

- Using internet, students may find out more about monsoons and cyclones from authentic websites (For example, Link 4).
- They may try to find out the rainfall pattern of any other country also.
- They may also find out if the monsoon is responsible for rains the world over.



- draws conclusion, such as, soil has different components and it is not homogenous, deforestation can lead to soil erosion, etc.
- designs models using eco-friendly resources, such as, water purification system.
- exhibits values of honesty, objectivity, rational thinking, freedom from myths, superstitious beliefs while taking decisions, respect for life, etc., such as, records and reports experimental data exactly.
- communicates the findings and conclusions effectively, such as, those derived from experiments, activities, and projects both in oral and written form using appropriate figures, tables, graphs, and digital forms, etc.
- applies the interdependency and interrelationship in the biotic and abiotic factors of environment to promote conservation of environment, such as, water conservation.



Chapter: Natural Resources

Link 5

https://cpcb.nic.in// upload/Downloads/AQI_ Bulletin_20200427.pdf

Link 6

https://nroer.gov. in/55ab34ff81fc cb4f1d806025/ page/5b714d69 16b 51c01ef583a61

Link 7

https://cpcb.nic.in/index.php

WEEK 11

Activity 6

- Based on the Air Quality Index provided for different cities in Link 5, students may find out the air quality of different states in general.
- They may present their findings in the form of an appropriate table, graph, etc.
- They may make a list of the different prominent air pollutants and find out using internet the possible sources of such pollutants.

Activity 7

• Students can find out how much they know about water cycle by watching the interactive video provided in Link 6.

Activity 8

- Using reliable source (e.g., Link
 7) students may find out the laws application in India related to air and water pollution.
- They may write a summary of each of the laws

Activitu 9

Students may compile information about water on the following—

- (i) Trace the route of the source of water that you use at home.
- (ii) What is the quality? Is it safe to drink without purification?
- (iii) What are the sources of water pollution in your area? What should be done to reduce such pollutions?
- (iv) Do you use water judiciously and conserve it? What are the steps that you take for that?
- (v) Prepare a model for water purification.
- (vi) Should water be made available free of cost to everyone? Justify your answer with examples.
- (vii) Suggest ways the government in your district/ state/ country should do to address scarcity of water for domestic, agriculture and industry.



Chapter: Natural Resources

Link 8

NOAA resource on what is carbon cycle https:// oceanservice.noaa.gov/ facts/carbon-cycle.html

Link 9

It's a series of slides about carbon in the atmosphere https:// nroer.gov.in/55ab34ff81fc cb4f1d806025/ page/5a9e56e11 6b51cebb41cc4e1

Link 10

Leonardo DiCaprio's documentary movie on climate change https://www.filmsforaction.org/watch/before-the-flood-2016/

Link 11

Tracking CO2 emission https://vimeo.com/ 23539318

Link 12

Shrinking arctic sea https://vimeo.com/23540634

Link 13

Global climate model https:// www.youtube.com/ watch?v=SuZHnqxltKo

Link 14

Quiz on climate https:// cleanet.org/clean/literacy/ climate/quiz.html

Activity 10

• Students may perform Activity 14.10 provided in Chapter 14 (Link 1). Note: Instead of beaker they can use any transparent glass, etc.

WEEK **12**

Activity 11

 Check Link 8 and Link 9 and prepare a well-labeled chart of carbon cycle

Activity 12

 Watch Link 10 and write down in your own words what are the challenges of climate change in India and what are the possible solutions.

Activity 13

- Watch Links 11, 12 and 13 and explain in your own words how do you know that climate change is real?
- How is climate change related to carbon dioxide?

Activity 14

 Take the quiz in Link 14 to find out your knowledge about climate change



Chapter: Natural Resources

Link 15

NOAA Nitrogen cycle https://www.esrl.noaa. gov/gmd/ education/ info_activities/pdfs/CTA_ nitrogen_cycle.pdf

Link 16

A slide about ozone hole https://nroer. gov.in/55ab34ff81 fccb4f1d806025/ page/5a9e56ec16 b51cebb41cc50f

Link 17

An article about ozone hole and CFC https:// nroer.gov.in/55ab34ff81fc cb4f1d806025/ page/58da80b44 72d4a2c0ef2d176

Link 18

https://www. unenvironment.org/ ozonaction/who-we-are/ about-montreal-protocol

Link 19

It's a quiz on the chapter https://nroer.gov.in/55ab34ff81fccb4f1d806025/page/5b3c556116b51c01d82c36c5

Link 20

Reasons for the quiz answer https://nroer. gov.in/55ab34ff81fcc b4f1d806025/ page/5c79607e16 b51cc05c05007e

Activity 15

• Read the information about nitrogen cycle in Link 15 and complete the task given at the end.

Activity 16

- Read the slide in Link 16 and read the article about ozone hole and CFC in Link 17.
- Do you agree with the statement "ozone hole is linked to climate change." Justify your answer based on the resources you have read.

Activity 17

- Read information provided in Link 18 about Montreal Protocol.
- What is the outcome of the Protocol? Explain.

Activity 18

 Take the quiz given in Links 19 and 20 to check your knowledge relevant to the chapter.



Mathematics

Week-wise suggested activities (to be guided by parents under the guidance of teacher)	
ef recall of algebraic expressions e done by motivating students to as many expressions as possible different variables and operations. g. $2x-7/3$, $3/x^2 + 4$, $2/3(t + 5)$ etc. ents may now be asked to form raic expressions with increasing or	
decreasing powers of a variable. For e.g. $y^3 - 2y + 6$, $1/(m^2 + 1)$ etc. They may be involved in observing the difference in such types of expressions.	
expressions with a particular gement of variables can be seed. Concept of a polynomial can roduced now.	
terms related to polynomials, as, term, coefficient can now be ssed.	
nts may be encouraged to find ions from the concepts learnt in which polynomials can be	
ated. For e.g. if the side of a square units, then its area is $(x+1)(x+1)$ $2x+1$ sq. units or The volume of with dimensions $x+2$, $x+1$, x is $(x+3)(x+2)(x+1) = x^3+6x^2+11x+6$ units.	
discussion about degree of a pmial and their types may then . For example, $3x^2-5x+4$ is a pmial of degree 2 and is a quadratic pmial.	
ng from the process of division or numbers, such as, 236 ÷ e process of division of two omials, such as, (3x²+9x-3) ÷ (x-ay be initiated. Students may accouraged to create and send examples. Students may tell the ent and remainder obtained in case.	



Chapter 4

Linear Equations in Two Variables

http://ncert.nic.in/textbook/textbook.htm?iemh1=4-15

Books published by The Association of Mathematics Teachers of India (AMTI)

WEEK 7

- The analogy between process of division of two numbers and that between two polynomials may be drawn. The remainder theorem and later factor theorem can be discussed. The statements of these theorems may be discussed. The ease of obtaining remainder and quotient can be made to realise through the discussion of different examples. The discussion about importance of theorems and their application may be encouraged among the students.
- Different identities, such as, $(a+b)^2 = a^2 + 2ab + b^2$ may be discussed. Students may be motivated to think how bigger expressions can be simplified using these identities.
- Many of the concepts introduced can be verified through activities given in the NCERT Mathematics textbook for Class IX and Mathematics Laboratory Manual for Secondary Stage.
- Examples can be further supplemented for deeper understanding of concepts by the use of exercises given in NCERT Mathematics Textbook and Exemplar Problem Book, both available on NCERT website.

WEEK 8

- Situations from daily life may be discussed where we are required to locate a certain building in a city or a house in a big colony. The given references need to be focused on. For example, To locate an office in another city, we may give directions as two kilometres from the railway station near X school. Many such situations may be created and discussed by the students.
- This may be followed by sketching the locations on a paper thereby giving an idea about locating a point in a plane and the required parameters.
- Activity: The students may be asked to mark a point on a blank sheet and make an attempt to describe its location so that the other person can locate the point nearly at the same position on a similar sheet. More such activities can be thought of.



• Beginning from locating a point on a number line it may be discussed how the use of a combination of such number lines can be extended to locate a point in a plane. Students may now be introduced to the formal concepts of coordinate axes, and their use in locating a point in a plane using coordinates.

Week 9

- Further concepts of quadrants and plotting points in a plane may then be talked about. As an activity students may be given the coordinates of points, such as, (5,0), (0,-3), (2,-3) etc. They may draw the coordinate axes and show the representation. Students may be encouraged to use a graph paper initially and later shift to a plain sheet of paper.
- Activities mentioned in Mathematics textbook of Class IX and Mathematics Laboratory Manual for Secondary Stage (available on NCERT website) may be referred.
- Exercises attempted by students from the chapter Coordinate Geometry of Class IX Mathematics Textbook and Exemplar Problem Book for Class IX will help in better understanding of the concepts.

WEEK 10

- A brief recall of linear equations in one variable can be done by motivating students to think of situations which can generate linear equations in one variable. For example, Sum of two numbers is 125. If one exceeds the other by 15, find the numbers. The equation would be x+(x+15) = 125.
- Situations may now be thought of where use of merely one variable does not suffice to give a solution. The situations involving two variables may be thought of. In the same example mentioned above: Sum of two numbers is 125. What are the numbers? Here the equation could be x + y = 125.
- Students may be encouraged to think of as many situations as possible and give them to others to make equations.



WEEK **11**

- Solutions of such equations may now be thought of. It may be discussed as to how many solutions can there be? How are these equations similar or different from linear equations in one variable in terms of the number of solutions of these equations? Students may be motivated to find solutions having varying natures, such as ,whole numbers, integers, rational numbers or irrational numbers
- The graphs of these equations may be plotted either on a graph paper or on a plain sheet to get a visual understanding of the nature of linear equations. It may be discussed how the graphs of ax + by +c = 0 and ax+ b = 0 differ.
- The relation between a point say, (x, y) lying on a line ax + by +c = 0 and it being a solution of that equation may be observed through examples created by students. This gives a better understanding about the graphs of equations and their solutions.

WEEK 12

- Students may discuss the application of equations in other subject areas, such as, science. That is, how can certain principles of science be written mathematically in terms of equations and how can they be useful in predicting certain parameters associated with them? For e.g.: You know that the force applied on a body is directly proportional to the acceleration produced in the body. Write an equation to express this situation and plot the graph of the equation.
- Nature of the graphs of linear equations reduced to one variable may be discussed in one and two dimensions. For example, x= 3 represents a line parallel to Y axis and passing through the point (3,0) whereas it is a point on a number line marked at 3.
- To deepen their understanding about all these concepts students may be encouraged to discuss exercises given in NCERT textbook and Exemplar Problem Book for Class IX. E-resources available on NROER will be useful to develop visual understanding.



हिंदी

सीखने के प्रतिफल

भाषा-साहित्य के विविध रूपों/विधाओं को समझते हुए स्वंय भी कुछ पढ़ते-लिखते हैं।

- अपने जीवन के परिवेश के अनुभवों (अनुभूतियों) को लिखकर, बोलकर दूसरों तक संप्रेषित कर (पहुँचा) सकते हैं।
- अपने परिवेश को समझते हुए उसे अपने दैनिक जीवन में जाँच-परख कर लिखते हैं।

स्रोत और संसाधन

P NCERT, CIET, E-Pathshala, QR-Code आदि पर उपलब्ध सामग्री देख सकते है। www.ncert.nic.in, www.ciet.nic.in,

www.swayamprabha.gov.in https://www.youtube.com/ channel/UCT0s92hGjqLX6p 7qY9BBrSA

एनसीईआरटी द्वारा कक्षा 9 के लिए प्रकाशित हिंदी की पाठ्यपुस्तक 'क्षितिज भाग 1' से महादेवी वर्मा की रचना 'मेरे बचपन के दिन' ले सकते हैं।

- बचपन की यादों को लेकर लिखी गई किसी भी रचनाकार या सुप्रसिद्ध हस्ती (व्यक्तित्व) की कोई भी रचना हम पढ़-सुन सकते है।
- ऐसी रचनाएँ हमें सभी पाठ्यपुस्तकों अथवा पत्र-पत्रिकाओं में मिल जाती हैं।
- ICT की सहायता से भी हम ऐसी रचनाओं को ढूँढ़/पढ़ सकते हैं।
- कक्षा 9 की पाठ्यपुस्तक 'क्षितिज भाग 1' में संकलित पाठ 'उपभोक्तावाद की संस्कृति' लेखक श्यामाचरण दुबे को एक उदाहरण के रूप में पढ़ते-सुनते हैं।
- रेडियो, टी.वी. पर आने वाले विज्ञापनों और प्रचार सामग्री का उपयोग अध्य्यन सामग्री की तरह किया जा सकता है।
- एक उदाहरण QR Code की सहायता से एनसीईआरटी की कक्षा 9 की हिंदी की पाठ्यपुस्तक 'क्षितिज भाग 1' में शामिल कबीर के दोहों एवं पदों (सबदों) को पढ़ते-सुनते हैं।

सप्ताहवार सुझावात्मक/गतिविधियाँ (अध्यापकों के सहयोग से अभिभावकों द्वारा संचालित)

- 9वीं और 10वीं कक्षा के विद्यार्थी बेशक अपनी किशोरावस्था में होते हैं, लेकिन 'बचपन' हम सब में हमेशा रहता है और रहना भी चाहिए।
- महादेवी वर्मा ने संस्मरण 'मेरे बचपन के दिन' में ऐसी ही यादों (स्मृतियों) को सबसे साझा किया है।
- उनके बचपन में बालिकाओं की सामाजिक दशा और शिक्षा की स्थिति बहुत अच्छी नहीं थी। इसके बावजूद वे पारिवारिक प्रोत्साहन से भारतीय साहित्य की विख्यात रचनाकार (विदुषी) बनीं। जिस प्रकार सुप्रसिद्ध व्यक्तित्व अपने संस्मरणों से हमें प्रेरित करते हैं, उसी प्रकार हम भी अपने बचपन की यादों (अनुभवों) को लिख सकते हैं।
- बचपन की यादें न केवल बच्चों की हों, अपितु बच्चे अपने माता-पिता से उनके 'संस्मरणों/यादों' को सुनकर, उन्हें सभी लिख सकते हैं।
- महादेवी वर्मा के 'मेरे बचपन के दिन' में ही कई विचारणीय बिंदु हैं, जैसे— घर-परिवार का माहौल, छात्रावास का जीवन एवं सहपाठी, (सुभद्रा कुमारी से मित्रता, महात्मा गांधी से मुलाकात) कविता-लेखन की शुरुआत और कविता पाठ जैसी अनेक घटनाएँ हैं, जिन्हें हम अपने परिवेश से जोड़ते हुए, अपने अनुभवों को लिख सकते है।
- आज से लगभग सौ साल पहले स्त्रियों की दशा और आज के 'बेटी बचाओ, बेटी पढ़ाओ' जैसे नारों के संदर्भ में भी विचार विमर्श करना चाहिए।
- महादेवी वर्मा ने किवता पाठ करने से पहले की अपनी बेचैनी का जिक्र किया है। हम भी अपने विद्यालयों में होने वाले कार्यक्रमों में भाग लेते समय होने वाली अपनी बेचैनी के बारे में लिख सकते हैं।
- अपनी यादों/संस्मरणों को लिखते समय अपनी भाषा शैली का भी ध्यान रखें, ताकि हम अपनी यादों/संस्मरणों को सहज-संदर रूप में लिख सके।
- महादेवी वर्मा द्वारा लिखित रेखाचित्रों एव संस्मरणों की सुप्रसिद्ध पुस्तंकों 'अतीत के चलचित्र', 'स्मृति की रेखाएँ', 'पथ के साथी' आदि से भी ऐसे ही और संस्मरण पढ़ सकते हैं।
- पाठ, 'उपभोक्तावाद की संस्कृति', बाज़ार की गिरफ़्त में आ रहे समाज की वास्तविकता को रेखांकित करता है।



- सूचना संचार प्रौद्यौगिकी (ICT) माध्यमों को अपनी अध्ययन आवश्यकताओं के लिए प्रयोग करते हैं।
- भाषा-साहित्य की मौखिक-लिखित परंपरा को समझते हैं।
- भाषा-साहित्य की बारीकियों पर चर्चा करते हैं।
- दोहा-सबद (पद) की लय/ गायन-शैली और संगीत पर ध्यान देते हैं। (स्वयं भी गाने का प्रयास करते हैं।)
- एनसीईआरटी द्वारा कबीर पर निर्मित फ़िल्म को CIET की साइट पर देख सकते हैं।
- इसके अलावा Youtube पर उपलब्ध कबीर/रहीम/बिहारी के सैकड़ों दोहों को भी सुना-देखा-समझा जा सकता है।
- पाठ का पहला वाक्य है कि ''धीरे-धीरे सब कुछ बदल रहा है'' 'लॉकडाउन' की पिरिस्थितियों को ध्यान में रखते हुए उन कार्यों, व्यवहारों की सूची बनाई जा सकती है, उनका विश्लेषण किया जा सकता है, जिनमें हम बदलावों को देख रहे हैं। यह हमारे घर, स्कूल, खेल-कूद, बाहर आने-जाने या प्रकृति संबंधी बदलाव आदि कुछ भी हो सकते हैं।
- विज्ञापनों का हमारे व्यवहार पर कैसा (अच्छा-बुरा) प्रभाव पड़ता है? इस बारे में पढ़ा-लिखा जाना चाहिए।
- विज्ञापनों में दिखाई जाने वाली वस्तुओं की गुणवत्ता और प्रदर्शन-प्रकृति पर भी सोच-विचार करें।
- लेखक ने उपभोक्तावाद के विस्तार, सामाजिक असमानता और अशांति की भी बात कही है। इस पर भी विचार करें।
- भाषा-अध्ययन की दृष्टि से इस पाठ के साथ क्रिया एवं क्रिया-विशेषण के उदाहरण दिए गए हैं, जैसे— ''धीरे-धीरे सब कुछ बदल रहा है।'' इस लेख में ऐसे कई उदाहरण आपको मिलेंगे, उन्हें ढूँढ़कर अपनी तरफ़ से नए वाक्य बनाएँ/प्रयोग करें।
- कबीर की 'साखियों' (दोहों) को Youtube या इंटरनेट की सहायता से सुने और पढ़ें। साखियों/दोहों को बार-बार सुनने से हमें उनकी लय-तान के साथ-साथ उनका अर्थ समझने में आसानी होगी।
- कबीर, रहीम, बिहारी जैसे सुप्रसिद्ध संतो किवयों के दोहों/पदों को अनेक सुप्रसिद्ध गायक-गायिकाओं ने गाया है।
- कबीर की 'साखियाँ' उनके अनुभव/ज्ञान की 'साक्षी' 'साखी' हैं।
- पाठ में संकलित साखियों में- प्रेम का महत्व, संतों के लक्षण, ज्ञान की महिमा, बाह्याडबंरों के विरोध आदि का भाव है।
- संकलित सबदों (पदों) में बाह्याडंबरों का विरोध किया गया है और अपने भीतर ही ईश्वर की व्याप्ति का संकेत है, तो दूसरे में ज्ञान की आँधी के रूपक के सहारे ज्ञान के महत्व का वर्णन है।
- इन उदाहरणों के अतिरिक्त हम अपनी-अपनी पसंद और समझ से कबीर के अन्य दोहों का भी संकलन कर, भविष्य में अंत्याक्षरी खेलने में इस्तेमाल कर सकते हैं।
- अपने-अपने संकलन को हम 'चार्ट' के रूप में तैयार करके कक्षा की दीवारों पर भी लगा सकते हैं।
- विद्यार्थी स्वयं या अपने अध्यापकों से ICT के माध्यम से 'दोहा' छंद को समझने का प्रयास भी कर सकते हैं। 'मात्राओं' को गिनने के तरीके को समझते हुए 'दोहा छंद' पहले-तीसरे चरण में 13–11, — दूसरे-चौथे चरण में 11–13 मात्राओं की गणना करें। अपने अध्ययन-विस्तार की दृष्टि से 'मात्रिक छंद' को भी जानने-समझने का प्रयास करें।



English

This eight week calendar covers Lessons 3, 4 and 5 and three poems from Class IX.

Learning Outcomes	Sources and Resources	Week-wise Suggested Activities (to be guided by Parents under the guidance of teacher)	
 The learner listens for information, gist and details and responds accordingly. listens to and discusses literary / non-literary inputs in varied contexts to infer, interpret and appreciate. 	Lesson 3: A Little Girl (Short Story) by Katherine Mansfield https://ciet.nic.in/pages.php?id=beehive&In=en Use QR code reader from mobile.	 WEEK 5 Competency/Skill- Listening and reading Teachers inform the learners about the website and the particular lesson to be learnt. Teachers may be given special instruction what is expected of them. Say, for example, 'listen to the audio text and then read the same text on your own 	
reads with comprehension the given text / materials employing strategies like skimming, scanning, predicting, previewing, reviewing, inferring. reads silently with comprehension, interprets layers of meaning.	http://ncert.nic.in/ textbook/textbook.htm?ie be1=3-11 https://epathshala. nic.in//process. php?id=students&type =eTextbooks&ln=en (Energised flipped Books) Reading Having listened to the story / text / poem, learners read the text on their own. (In case there are other sibling at home, they can do it with their brother / sister or even parents) Learners read the text in chunks (the text may be divided into four or five sections). NCERTtextbooks are divided into sections followed by oral comprehension check. While reading activity: As they read the text/stories on their own, learners will have to attempt to answer	Competency/Skill—Reading Teachers may ask learners to do the following activities as per the needs of learner / the curriculum: • Attempt and answer the reading comprehension questions given at the end of text. • Create a sub-text by summarising the text. • Write or tell the whole story / text in your language to parents or sibling. • Make a visual description of the story. Post Reading activity—Reading comprehension Revisit / reread the text and answer the comprehension question given at the end of the text. Do the QR coded tasks from NCERT textbook and the workbook, Words and Expressions 1. http://ncert.nic.in/textbook/textbook.htm?iewe1=3-11	



question the given the middle of the text or learners are using text from state or other textbooks, they should attempt to answer the questions for comprehension given at the end of the text.

Post Reading

Use above sources for doing the post reading tasks from the textbook and also decode the QR coded (additional) tasks



https://epathshala.nic. in// process. php ?id= students & type= eText books &ln=en

The learner

- uses words, phrases, idioms and words chunks for meaning making in contexts.
- understands and elicits meanings of the words in different contexts, and by using dictionary, thesaurus and digital facilities.

QR codes of the textbook $|\mathbf{W_{EEK}}|$ some additional have activities. These could be used by all learners.

https://epathshala. nic .in//process.php?id= students&type=eTextbook s&ln=en

http://ncert.nic.in/ textbook/ textbook.htm?i ewe1=3-11 (Workbook)

Vocabulary

Post Reading Activity Vocabulary learning

Let learners consult the dictionary online or off line to find the meaning of words / phrases that they find it new in the passage they read.

Competency/Skill-Vocabulary

Thematic vocabulary (used/read in the lesson)

Glad, happy, pleased, delighted, thrilled and overjoyed and verbs of reporting.

Teachers may ask learners to

- (i) Find the new words and categorize into groups and make a word web or mind map of the words.
- (ii) Create a dictionary of words you come across in the text.
- (iii) Find the meaning of words and write them down in their note book.
- (iv) Try to make sentences using the words.
- do the activities and task in the work (v) book for class X, Words and Expression 1



The learner

- writes short answers / paragraphs, reports using appropriate vocabulary and grammar on a given theme;
- writes letters both formal and informal, invitations, advertisements, notices, slogans, messages and emails.
- writes short dialogues and participates in role plays, skits, street plays (nukkad natak) for the promotion of social causes like Beti Bachao - Beti Padhao, Swachh Bharat Abhiyaan, conservation and protection of environment, drug abuse, gender issues, child labour and promotion of literacy, etc.

The learner

- speaks fluently with proper pronunciation, intonation and pause, using appropriate grammar.
- listens to and speaks on a variety of verbal inputs, viz. debate, speech,

https://www.you tube. com/user/kankodutha vanithan

Lot of resources available on this

Process Approach to Writing

It emphasises the steps a writer goes through when creating a well-written text. The stages include—

Brainstorming: writing down many ideas that may come to an individual's mind or through discussions, pair work, group work

Outlining: organising the ideas into a logical sequence

Drafting: writer concentrates on the content of the message (rather than the form).

Revisions: in response to the writer's second thoughts or feedback provided by peers or teacher, the draft is revised.

Proof-reading: with an emphasis on form. Correct the language and appropriateness of its use.

Final draft: Write the final draft now

Teachers use audio and audio and video resources from radio, visual medium

Workbook has additional activities.

Writing

Teacher may give additional questions wherever possible and needed.

Based on the reading of the text / story learner may now do the short answer comprehension questions

Long answer questions article writing, essay writing, letter writing and so on.

Speaking

Learners do the activities in the textbook and also from the workbook.



- group discussion, power point presentation, radio programme, interview, mock parliament, etc.
- uses language for purposes

 collecting information from various sources and developing a report / write up and work with other on theme / work
- interprets theme, ideas and events of the poem
- appreciates literary language / poetry
- listens for information, gist and details and responds accordingly.
- listens to and discusses literary/non-literary inputs in varied contexts to infer, interpret and appreciate.
- reads with comprehension the given text / materials employing strategies like skimming,

https://www.youtube.com/watch?v=W_gA RDa4zgA

Poem

Rain in the Roof by Coates Kinney

Use the audio book to enable learners to listen to the poem many times.

https://ciet.nic.in/pages.php?id=beehive&ln=en

Lesson 4

Truly Beautiful Mind (A biographical narrative about Albert Einstein)

Listen to the text from the NCERT audio book

https://ciet.nic.in/pages.php?id=beehive&ln=en

Use QR code reader from mobile.



http://ncert.nic.in/ textbook/textbook. htm?iebe1=4-11 https://epathshala. nic.in//process.php

?id=students&type=

eTextbooks&ln=en

WEEK 6 (LAST/ONE DAY)

Doing a Project work

Learners do the project work given in the textbook and in the Workbook. Or else teacher along with learners may design project work for learners (doing from home)

WEEK 7

Learners learn to appreciate and interpret ideas and language of the poem. (We need not teach other language aspect through a poem. Poetry is for enjoyment.)

Do the tasks from the Workbook

http://ncert.nic.in/textbook/textbook. htm?iewe1=4-11

WEEK 8

Competency/Skill—Listening and reading

- Teachers inform the learners about the website and the lesson to be learnt.
- Teacher may give special instruction what is expected of them. For example, 'listen to the audio text and then read the same text on your own.

Competency/Skill—Reading

Teachers may ask learners to do the following activities as per the needs of learner / the curriculum:

 Attempt and answer the reading comprehension questions given at the end of text.



scanning, predicting, previewing, reviewing, inferring.

- reads silently with comprehension, interprets layers of meaning.
- connects with the ideas and concept of other subjects
 Science and Mathematics – the Einstein's theory and it use to promote Language Across the Curriculum (LAC)

(Energised flipped Books)

Reading

Having listened to the biographical narrative / poem, learners read the text on their own. (In case there are other sibling at home, they can do it with their brother / sister or even parents)

Learners read the text in chunks (the text may be divided into four or five sections).

NCERTtextbooksaredivided into sections followed by oral comprehension check.

While reading activity

As they read the text/stories on their own, learners will have to attempt to answer the question given in the middle of the text or learners are using text from state or other textbooks, they should attempt to answer the questions for comprehension given at the end of the text.

Post Reading

Use above sources for doing the post reading tasks from the textbook and also decode the QR coded (additional) tasks.

http://ncert.nic.in/ text book/textbook. htm? iewe1= 4-11



Competency/Skill-Reading

Teachers may ask learners to do the following activities as per the needs of learner/ the curriculum.

- Create a sub-text by summarizing the text
- Write or tell the whole story / text in your language to parents or sibling.
- Make a visual description of the story.

Post Reading activity reading comprehension

Revisit / reread the text and answer the comprehension question given at the end of the text.

Do the QR coded tasks from NCERT textbook and the workbook, Words and Expressions I.

http://ncert.nic.in/textbook/text book. htm?iewe1=4-11



- Attempt and answer the reading comprehension questions given at the end of text.
- Create a sub-text by summarizing the text
- Write or tell the whole story / text in your language to parents or sibling.
- Make a visual description of the story.

Post Reading Activity Reading comprehension

Revisit/re-read the text and answer the comprehension question given at the end of the text.

Do the QR coded tasks from NCERT textbook and the workbook, Words and Expressions I.

Moving Beyond Text

Connect with subjects like, Science and Mathematics with the support of the subject teachers and design activities for Language Across the Curriculum.

The learner

- uses words, phrases, idioms and words chunks for meaning making in contexts.
- understands and elicits meanings of the words in different contexts, and by using dictionary, thesaurus and digital facilities.

Lesson 4: Truly Beautiful Mind (A biographical narrative about Albert Einstein)

QR codes of the textbook have some additional activities. These could be used by all learners.

https://epathshala. nic. in//process.php?id =students&type=eTex tbooks&ln=en

http://ncert.nic.in/ textbook/textbook. htm?iewe1=4-11 (Workbook)

WEEK 9

Competency/Skill—Vocabulary

Thematic vocabulary (used/read in the lesson)

Words and phrases from the text read.

Teachers may ask learners to

- Learning to use the words and categorise into groups and make a word web or mind map of the words. One word which can substitute a clause.
- Create a dictionary of words you come across in the text.
- Find the meaning of words and write them down in their notebook.





Vocabulary

Post Reading activity

Vocabulary learning

Let learners consult the dictionary online or offline to find the meaning of words / phrases that they find it new in the passage they read.

The learner

 uses grammar items (Participle phrases) in context such as reporting verbs, passive and tense, time and tense etc. **Lesson 4:** Truly Beautiful Mind (A biographical narrative about Albert Einstein)

QR codes of the textbook have some additional activities. These could be used by all learners.

Grammar

Notices the grammar item in the text from the given exercises under grammar part of the textbook.

https://epathshala. nic.in//process.php?id =students&type=eText books&ln=en (Text book)

http://ncert.nic.in/ textbook/textbook.htm ?iewe1=4-11 (Workbook)

https://www.youtube .com/user/kankoduthav anithan

https://www.you tube. com/watch?v=MhMKKd Wftwk&t=4s

Lot of resources available on this, like,

Any Newspaper report

Use Newspaper as a resource

- Try to make sentences using the words.
- Do the activities and task in the work book for Class X, Words and Expressions I.

WEEK 10

Grammar Item in Context

Use of Participle Phrases in context from the textbook as well as the workbook, Words and Expressions 1.

Teacher gives additional activities/tasks to help learner understand and use the reported speech aspect on their own.

WEEK 11

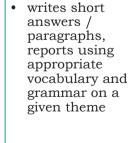
Writing

Writing a Newspaper Report

Teacher may give additional report writing tasks to make them learn to write.

Let learner understand the process of writing by writing. (Adopting the strategy of 'learning to do by doing things.')

The whole week can be spent in enabling learners to write.





Process Approach to Writing

Process approach to writing emphasises the steps a writer goes through when creating a wellwritten text. The stages include:

Brainstorming: writing down many ideas that may come to an individual's mind or through discussions, pair work, group work

Outlining: organising the ideas into a logical sequence

Drafting: writer concentrates on the content of the message (rather than the form).

Revisions: in response to the writer's second thoughts or feedback provided by peers or teacher, the draft is revised.

Proof-reading: with an emphasis on form. Correct the language and appropriateness of its use.

Final draft: Write the final draft now.

The learner

- uses appropriate punctuation marks and correct spelling of words while taking down dictation.
- takes notes and makes notes while listening to TV news, discussions, speech, reading aloud/silent reading of texts, etc., and summarises.

For the teacher

Dictation is not just **Dictation** memory exercises where learners are given some words the day before and asked to write the day after. There are many ways Dictation that can be used to engage learners. Here are some ways.

- Can be used as an interactive activity
- Can be considered a good learning technique to improve students' proficiency

Integrated Language Practice

Design tasks for dictation in many ways as suggested in the previous column.

Teachers may use texts from Science, social Science textbooks for various types of dictation.



 edits passages with appropriate punctuation marks, grammar and correct spelling.

Jig-saw dictation

Children listen to a short text read by teacher and write down chunks of the text in the form of phrases or short sentences (understanding and listening to the gist of the text)

Partial dictation

Children work in pairs. A text is divided in half. Two of them work out the whole text. (reading, speaking, listening & writing task)

Running Dictation

Children work in groups (four/five). One child is responsible for writing the text while the other member takes turns to read out the text sentence by sentence.

This enables children to work together. All the skills (LSRW) involved.

Grammar Dictation

Children work in groups

They listen to a short text read by the teacher at a normal speed and jot down some important words.

They pool their resources, discuss and work to compose a text nearest to the original text possible. (listening, speaking, writing skills and children do it together)

Composition Dictation

Group work (four / five). Children listen to a text read by the teacher at normal speed and jot down familiar words as they listen. They use their limited number of isolated words or fragments



of sentences to reconstruct their version. Text need not be the same as original text. Let children discuss, compare, seek help from peer and edit their texts before the final submission.

(Source: Davis & Rinvolucri 1988, Wainryb 1992 and many others)

Use dictation as a learning technique to engage learners with language, not as a testing device.

The learner

- interprets theme, ideas and events of the poem
- appreciates literary language /poetry
- reads with comprehension the given text/ materials employing strategies like skimming, scanning, predicting, previewing, reviewing, inferring, and summarising.
- reads silently with comprehension and interprets layers of meaning.

Innisfree by W.B. Years

Use the audio book to enable learners to listen to the poem many times.

https://ciet.nic.in/ pages. php?id=bee hive&ln=en

Supplementary Reader (Extensive Reading)

Audio book

https://ciet.nic.in/ pages. php?id=moments&ln=en

PDF version with QR code

http://ncert.nic.in/ textbook/textbook.htm ?iemo1=1-10

Poem: The Lake Isle of WEEK 11 (CONTINUED)

Learners learn to appreciate and interpret ideas and language of the poem. (We need not teach other language aspects through a poem. Poetry is for enjoyment.)

Do the tasks from the Workbook

http://ncert.nic.in/ textbook/textbook.htm ?iewe1=4-11

WEEK 12

Lesson 1: The Lost Child by Mulk Raj Anand

(A child goes to a fair with his parents. He is happy and excited and wants the sweets and toys displayed there. But his parents don't buy them for him. Why does he refuse when someone else offers them to him?)

This is extensive reading and reading for pleasure.

Teacher need not set tasks for detailed language activities. Learners be able to read, interpret and appreciate the story.

Teacher enables learners to do tasks at the end of the text and few extrapolative tasks for appreciation and moving beyond the text.

Teacher may supply or use the suggested text given at the end of the lesson to read by learners.



Social Science

Social Science as a subject at the Secondary Stage comprises the components of History, Geography, Political Science and Economics. Therefore, while preparing the eight-week calendar in Social Science, these components have been divided into 4 + 4 (total 8 weeks for Social Science and 2 weeks for each component). Accordingly, a two weeks calendar for History has been planned for each of Class IX and Class X

(a) History

Learning Outcomes	Sources and Resources	Week-wise Suggested Activities (to be guided by Parents under the guidance of teacher)		
The learner • identifies	Textbook: India and the Contemporary World I	Chapter Revision		
reasons for participation of different	Textbook in History for Class IX	In the previous calendar we have learned about the Significance of powerful ideas generated during the French Revolution		
sections of society in	Theme	and their spread to Europe; Differing vie of Political Traditions; Socio-Economic a		
the February Revolution of 1917	Socialism in Europe and the Russian Revolution	Political factors that led to the outbreak of the Revolution; Impact of World War I.		
classifies and compares relevant	QR Code mapped E Content in "Rise of Socialism in Europe and	Week 5		
information data/events pertaining to the February and October Revolution	the Russian Revolution" (Class IX textbook) Dictionary of History for Schools (Trilingual) http://www.ncert.	The focus will be on events leading to the February Revolution of 1917 and the end of monarchy; the October Revolution of 1917 and the changes brought about by the Bolsheviks immediately after October 1917.		
 explains the impact of significant 	nic.in/publication/ Miscellaneous/pdf_files/ Dic_History.pdf	Activity 1: Preparing a table of classification of factors		
events such as the February Revolution and October revolution		Teacher may recapitulate with students on the factors which led to the outbreak of the Revolution (which was done in the previous weeks). Students may be given some time to		
constructs views or arguments on reading primary sources		read Section 3 on the February Revolution (p. 35-36) followed by discussion. They may analyse the reasons why different sections of society participated in the protests leading to the February Revolution. After reading students may place relevant information / analysis in the columns placed below.		
constructs a timeline in order to grasp the pattern of events and not just a				
mechanical listing of events.		Factory Worker Women Soldier		



Activity 2: Reading and analysing Sources

Students may be asked to read Source A on p. 32 and Box 1 on p. 36. After reading both the sources students may be asked to write down their understanding of the following:

- What was the mood of the workers and what changes can you identify in their moods?
- How did women cope with both situations and what changes did they witness?

Activity 3: Question and Answer Session

This is a largely factual section of the lesson. A teacher can make students grapple with these facts—through a question and answer session. Thus, the teacher can ask students the following straightforward questions to involve everyone in the class and write down the right answers.

Students may read Section 3.1 on p. 36-37. and then answer the following questions.

- What was the most significant impact of the February Revolution?
- What was the April Theses and what were the key demands?
- What changes did Russian society see in the aftermath of the February Revolution?
- What measures did the Provisional Government take to check the influence of the Bolsheviks?

Activity 4: Preparation of Comparative Chart on the February Revolution and October Revolution

The teacher may explain to students the factors that led to the October Revolution of 1917.

Students may then be asked to prepare 'comparative charts' in order to compare significant events/various factors that led to the February Revolution and October Revolution; and changes brought about after both the revolutions.



The chart may have two columns and each column may contain visuals/images, etc., contribution of leaders, women, etc.

Comparative Chart

	Factors/ Events/ Leaders/ People/ Women	Impact on Polity, Economy and Society
February Revolution of 1917		
October Revolution of 1917		

Activity 5: Write a letter to Lenin

Teacher may ask students to imagine themselves to be writers/artists. They may write a letter to Lenin explaining why they are disillusioned with the Bolsheviks and what were their expectations from Lenin.

Activity 6: Discussion on the Civil war

Teacher may ask students to read Sections 4 and 4.1 on pages 39-41 and then initiate a discussion on the following—

- What measures did the Bolsheviks take to do away with private property?
- Why were some sections of society disillusioned with the Bolsheviks?
- Who constituted the non-Bolsheviks and why did their leaders move to south Russia?
- What were the reasons that led to the Civil War?

WEEK 6

Activity 1: Project work

Students may be asked to prepare a project—



'Towards a Socialist Society in Russia'. Students may consult books, journals and relevant websites in consultation with parents/teachers.

The following aspects may be included in the project—

- Idea of Socialism and its spread to different parts of the world including Russia
- Political, social and economic conditions on the eve of the revolution
- Spread of Socialism and the role of Vladimir Lenin
- Factors that led to the 1905 Revolution, February Revolution and the October Revolution
- Participation of different sections of the society including women
- The Bolsheviks and their attempts to bring about a socialist society
- Timeline- Significant events/developments /dates

Activity 2: Making a Poster

Students may be asked to make a poster on any one of the following—

- Karl Marx
- · Vladmir Lenin
- Stalin

The poster may highlight contributions, important written works, quotes, visuals/cartoons, etc.

Activity 3: Analysing a Source

Dreams and Realities of a Soviet Childhood in 1933

Students may be asked to read Source C on p. 43. After reading the source, students may write down their views /understanding on the following—

- Why did the 13-year-old boy choose to write to the Soviet president?
- What hardships did the boy have to undergo?

