SCIENCE SYLLABUS (2025-26)
CLASS VII

TERM - 1

Ch - 1 Nutrition in plants (April)

Ch - 3 Heat (April)

Ch - 2 Nutrition in Animals (May)

Ch - 12 Forests : Our Lifeline (May)

Ch - 13 Wastewater Story(July)

Ch - 9 Motion and time (July)

Ch - 5 Physical & Chemical changes (August)

Revision - August

Term 1 Exam - September

TERM - 2

Ch - 7	Transportation in animals and plants (October)
Ch - 4	Acids,Bases and Salts(October)
Ch - 6	Respiration in Organisms (November)
Ch - 11	Light(December)
Ch - 10	Electric Current and its effects(December)
Ch - 8	Reproduction in plants(January)
Ch-5	Physical and Chemical Changes(Term1)
	Revision - February,

Final Exam - March

CLASS - 7 SCIENCE LESSON PLAN (2025-26)) Biology

TOPIC : Nutrition in Plants (April)

No. of days needed for completing the topic – 15 days

Objectives:

Students will get knowledge about various modes of nutrition as Autotrophic, heterotrophic, saprotrophic, parasitic.

Students will be able to define photosynthesis and understand the importance of photosynthesis.

Students will also understand about symbiosis and insectivorous plants

.

Students will develop critical thinking about replenishment of nutrients in the soil.

- Previous Knowledge Testing :- The teacher will ask following questions.

What does the food give us?

Name various nutrients present in the food?

Name the process by which green plants make their food.

- Important spellings :-

Nutrition Autotrophic, Heterotrophic, Photosynthesis, starch, glucose, osmosis, semi-permeable membrane, guard cells, stomata, chlorophyll, chloroplasts etc.

- AIDS / Innovative methods used topic :- Visual clues, links of videos related to the topic

Discussion method, lecture method, activity based learning https://youtu.be/aBghNAghCYY https://youtu.be/l1LMLLwA48Y above links will be

shared in the class group for explanation. Students will make ppt and video related to topic and will be shared in class groups.

- Procedure :-

BRAIN STORMING : The class would start with a discussion on what the students have already learn in the previous classes and hence what is it that they would learn now. They would also be told about the significance of the topic that they would be starting during the online classes.

FLIP LEARNING : The teacher will explain various modes of nutrition with the help of various links.

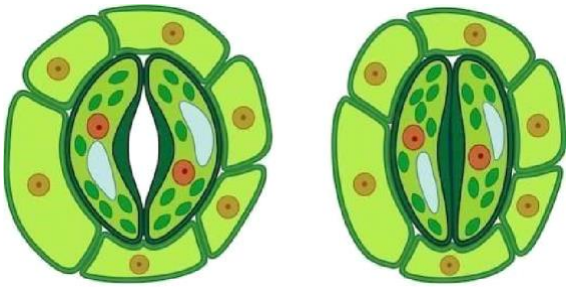
QUESTIONING : Multiple level questions -The teacher will prepare a list of various questions on the topic related to the content and discuss in the online class.

EXPLANATION :

The teacher will explain the raw materials used for photosynthesis along with the activities.

Structure of stomata will be drawn and explained.during online class through zoom app.

Digital content will shared during online classes.



Participation of Students :-

The students will actively participate in class discussion. Students will draw various diagrams, write questions / answers in their MCQ's and exercises will be done in books.

Students will make videos related to the topic.

Recapitulation :- The teacher will ask What is meant by nutrition?

Name green pigment present in the leaves.

What are the raw materials required for photosynthesis?

What will happen if plant leaves are devoid of stomata.?

Assignments :-

Draw diagram of open and closed stomata in N.B.

Pasting of pictures of autotrophs and Heterotrophs in N.B.

Why do some plants eat insects?

What is symbiosis?

Plants have mode ofnutrition.

lives in root nodules of legume plants.

Cuscuta is parasite.

What are the functions of stomata?

What are the raw materials required for photosynthesis?

Art Integration :-

Role play on Importance of photosynthesis will be done.

Chart on stomata (OPEN and CLOSED) will be made.

Students will make collage on different modes of nutrition.

technical and artistic skilsl will be develop while making ppt. and videos.

9. Learning Outcomes :-

Children will become aware about different modes of nutrition, replenishment of nutrients in the soil, stomata.

- students will be able to critically analyse the importance of plants for their survival on the earth.
- students will become environment friendly during this pandemic by getting knowledge about the variety of plants present in their surroundings.
- Resources :-

Everyday Science by Cordova Publications.

NCERT Exemplar

Links : https://youtu.be/l1LMLLwA48Y https://youtu.be/aBghNAghCYY

- Co-Scholastic Activities :-

Visual and thinking skills will be developed ,also acting and communication skills will be learnt.

12 . Assessment

It will be done on the basis of periodic test,class response, oral test, activities, quiz ,MCQ's etc.

Feedback and Remedial Teaching

- Focus on Reading skills
- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students
- Including hands on learning and sensory activities

CLASS- VII

TOPIC - HEAT & ITS EFFECTS (April) No. of

days for completing the topic : 15 days

LEARNING OBJECTIVES:

■ Given the content the learners will be able to explain the different modes of heat transfer.

■ They would be able to understand thermometers with 90% accuracy.

■ Students would be able to categorize hot and cold objects.

■ Students will be able to correlate the concept of heat with daily life.

■ They will be able to identify conductors and insulators with 100% accuracy.

PREVIOUS KNOWLEDGE TESTING:

- Can you feel the sense of hot and cold with your hand?
- How does your body feel when you have fever?
- How do you measure the temperature of your body?
- Do you have any idea, why does a spoon become hot when kept in a candle flame?
- What type of energy is given by sun?

The topic will be introduced in the class by giving the basic idea that heat is form of energy that gives us the sensation of hotness or coldness.

VOCABULARY AND IMPORTANT SPELLINGS:

Temperature, thermometer, conduction, convection, radiation.

PROCEDURE:

- Sense of touch will be explained using activity.

- Examples of hot and cold things will be discussed.
- Definition and unit of heat will be provided.
- Students will enlist uses of heat in daily life.
- Concept of temperature will be introduced.
- Device to measure temperature, i.e, thermometer will be introduced.

Difference b/w clinical and laboratory thermometer will be explained.

- Their construction, working principle and range will be given.
- Unit of temp and relation b/w the scales of temperature will be introduced.
- Modes of transfer of heat will be explained with the help of activity. (through

Shiksha House)

STUDENTS PARTICIPATION:

Students will observe the clinical thermometer carefully and them note down the temperature of their family members and will calculate the temperature

This will help them understand the normal body temperature.

Activity:

Videos on activities based on temperature, conduction and convection will be shared through zoom app (Links will be provided).

INTEGRATION WITH OTHER DOMAINS:

Integration with art as students learn to draw various diagrams. Integration with mathematics as they learn to solve numericals.

RECAPITULATION:

An e-quiz through zoom app will be conducted as a part of follow up revisions.

ASSESSMENT:

- The mode of heat transfer which requires a medium is _____.
- In liquids, heat transfer takes place through_____.
- The materials which do not allow heat to pass through then are known as _____

- _____and_____are examples of conductors.
- Air is a _____ conductor of heat.
- Transfer of heat takes place from a _____ body to a_____body.

LEARNING OUTCOMES:

- Students will be able to compare and contrast conductor and insulator.
- Students will know and understand land breeze and sea breeze.
- They will be able to define radiation and will also be able to interpret how heat from sun reaches earth.
- They will be able to analyse that dark. coloured clothes absorb heat and light coloured e-mil heat.
- They will be able to interpret different types of clothes worn in different seasons.

RESOURCES:

NCERT Text book for science.

Everyday Science by CORDOVA publications.

Virtual Lab Activities.

Youtube Links https://www.youtube.com/watch?v=uLtWRK_Pd5c&feature=youtu.be

https://www.youtube.com/watch?v=8_B35CUbrwQ&feature=youtu.be

https://www.youtube.com/watch?v=VwTpMhH34ro&feature=youtu.be

https://www.youtube.com/watch?v=0CxkdJeqNfM&feature=youtu.be

Feedback and Remedial Teaching :

- Focus on Reading skills
- Individualized educational program
- Using pictures /mazes /stories
- Praising student with positive remarks.
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without discrimination

- All students will be encouraged to participate

- Recognising, accommodating and meeting needs of all students.
- Including hands on learning and sensory activities.

TOPIC : NUTRITION IN ANIMALS (MAY)

1. Objectives

students will understand about different steps of nutrition i.e. Ingestion, Digestion, absorption, Assimilation, Egestion.

Modes of procuring food by different organisms.

Differences between Temporary and permanent teeth.

Meaning of Tooth decay and its causes.

How nutrition in Human-beings takes place.

Nutrition in Amoeba.

Why nutrition in Ruminants is different from human beings.

Students will be able to have a clear picture on nutrition in Human-beings, amoeba and ruminants

Previous Knowledge Testing :- What is nutrition?

Why is nutrition important?

How frogs take their food ?

Which organs help in chewing and mixing of food in case of human beings ?

Important Spellings :-

Ingestion, Digestion, absorption, Assimilation, Egestion, Incisors, Canines, Premolars, Molars.

AIDS/Innovative Methods Used :-

Students will beinvolved in various activities like how to brush teeth and flossing.

Digestive system in human will be explained with digital content.

Children will perform role play on different types of teeth.

LINKS

https://youtu.be/5_4Y0tTHqykhttpsyoutu.be/6uvXFpkabcwhttps://youtu .b
e/zr4onA2k_LY above link will be used for better understanding.

Students will make videos related to topic.

5.Procedure :-

BRAIN STORMING : The class would start with a discussion on what the students have already learn in the previous classes and hence what is it that they would learn now. They would also be told about the significance of the topic that they would be starting during the online classes.

FLIP LEARNING : The teacher will share various links to explain various topics related to the chapter in their class group. QUESTIONING : Multiple level questions -The teacher will prepare a list of various questions on the topic related to the content and discuss in the online class.

EXPLANATION : Different steps of nutrition in animals will be explained and different parts of Digestive system in Human will be drawn and also will be shown with the help of YouTube links to enhance their understanding and learning.
Different types of teeth will be drawn .

Stomach of Ruminants

Participation of Students :-

Children will draw teeth and Digestive system in N.B.

MCQ's will be done in books.

Questions from chapter will be asked from children.

Students will make videos and ppt. related topic and share in class groups.

Recapitulation /Assignment :-

Quiz will be conducted to check the learning of students.

Questions will be asked.

Name the organs of alimentary canal.

What are the functions of human tongue?

Define villi.

Which is the largest gland of human canal?

Name the tearing teeth.

m is the length of small intestine. stomach is found in ruminants.

The walls of large intestine absorb .

What is assimilation?

Discuss peristalsis.

Art Integration :-

Development of various skills through role play on different types of teeth.

Chart of Human Digestive System will be made by using colourful sheets and pens.

Technical skill will be develop while making ppt. and videos.

9. Learning outcomes

- Children will be able to differentiate nutrition in human ,amoeba and ruminants.
- students will be able to identify different types of teeth and its function i.e. incisors, canines, Premolars, Molars .
- students will learn to stay healthy by following a healthy lifestyle and keep a check on their eating habits during pandemic.
- students will get a knowledge about the oral hygiene.
- Resources :-

Everyday Science by Cordova Publishers.

NCERT Exemplar Online resources.

Diksha platform etc

LINKS https://youtu.be/5_4Y0tTHqykhttpsyoutu.be/6uvXFpkabcwhttps://youtu .b
e/zr4onA2k_LY

- Co-Scholastic Activities :-

Learning and visual skill will be developed, also acting skill be learnt by enacting in Role Play.

12 . Assessment

It will be done on the basis of periodic test, class response, Oral test, activities

and MCQ's etc.

Feedback and Remedial Teaching

- Focus on Reading skills
- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
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CLASS – VII SUBJECT – SCIENCE (CHEMISTRY) SESSION – 2025-26(MONTH-MAY)
TOPIC - FORESTS : OUR LIFELINE
No. of days needed for completing the topic – 15 days

OBJECTIVES :

- To discuss about the variety of life forms in forests.
- To provide information about various layers of forest.
- To explain occurrence of various food chains in an ecosystem.
- To impart knowledge about interdependence between plants and animals. ➢ To explain the importance and conservation of forests.

PREVIOUS KNOWLEDGE TESTING :

Questions to be asked.... ➢ Can you name any decomposer?

- Do the animals help in pollination?
- Name the gas released by plants during photosynthesis.

IMPORTANT SPELLINGS :
Canopy, Understorey, Orchids, Jaguars, Leopards, Lichens, Millipedes, Sheesham, Cinchona, Taxol, Turpentine, Eucalyptus, Humus, Conservation, Pesticides, Afforestation, Van Mahotsava

INNOVATIVE PEDAGOGIES:

- Use of smart class to show various layers of forests and medicinal uses of trees and plants.
- Video will be shown to explain the concept of Global Warming

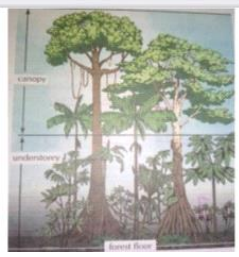
(https://www.youtu.be/x_sJzVe9P_8) ➢ Debate on – How forests help to decrease various types of pollution (Air, water, land and noise pollution). ➢ Video will be shown on the topic Flow of Energy – Food Chain and Food Web

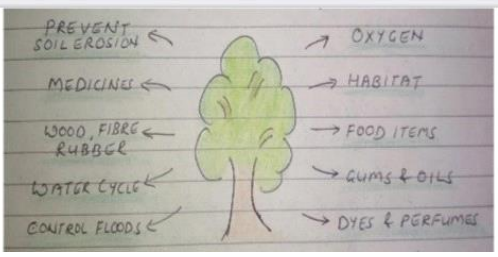
(https://www.youtu.be/hLq2datPo5M) ➢ Poster making in class-
Importance of Forests and Saving Trees.

- Making of concept maps and flowcharts.

PROCEDURE :

- Various horizontal layers formed in the forest – canopy, understorey, forest floor will be explained in the smart class
- The role of decomposers, importance of food chain, food web, will be explained with examples.
- Various uses of forests in our daily life will be discussed in the smartclass with the help of video.





- The causes and effects of deforestation will be discussed in details by citing various examples. ➢ The ways of conservation of forests will be explained highlighting the importance of Van Mahotsava.
- Revision of various subtopics will be taken up(MCQ, short questions, definitions, reason based questions, diagrams) and NCERT Exemplar questions will be discussed.

PARTICIPATION OF STUDENTS :

- The students will draw diagrams of various layers of forests and food chains.
- The students will draw poster on – Importance of forests- in the class and paste it in their notebook.
- The students will participate actively during class discussions, answer the questions and clarify their doubts.

RECAPITULATION :

- How do plants and animals depend on each other in a forest?
- How does absence of trees of forest lead to soil erosion and floods?
- Why are forests called green lungs in nature?
- What is the role of decomposers in the forest?

ASSIGNMENTS :

- The students will collect more information about global warming and its causes/effects.
- They will collect information about the work done by environmentalists like Sunder Lal Bahuguna, and write in their notebook.
- They will prepare for the debate in groups highlighting how forests help in reducing various types of pollution.
- Project on – Medicinal Plants and their Uses RESOURCES :
- NCERT Exemplar
- Everyday Science (Cordova Publication)
- MCQ/assignments
- Videos (https://www.youtu.be/hLq2datPo5M) (https://www.youtu.be/x_sJzVe9P_8)

ART INTEGRATION AND OTHER DOMAINS :

- Poster making (Art education)
- Case study about environmentalists (Social Science)

INNOVATIVE PEDAGOGIES :

- The students will be guided how to enact in the role play on interdependence between plants and animals.
- PPT will be shown about various environmentalists and their contribution towards saving of forests will be highlighted. ➢ Planting of trees in July month by the children.
- Making of concept maps and flowcharts

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Co-SCHOLASTIC ACTIVITIES:

- Students will develop thinking and decision making skills by discussing importance of plants and animals.

  ➢ They will think critically about various environmental issues and will show kindness towards animals.

LEARNING OUTCOMES :

- The students will be able to enlist various animals and plants found in various layers of forests. ➢ They will be able to find answers to queries about interdependence of plants and animals and importance of plants and trees in our daily life.
- They will be able to analyse various food chains and conclude that energy is transferred from one organism to other in the form of food.
- They will be able to apply the need of conservation of plants in their home and society by celebrating Van Mahotsava - tree plantation drive in their locality.

Remedial Teaching

Teacher once again repeat the lesson.

1.Teacher discuss about the topic content

- Those students who are found lacking in any of the above steps,

  then remedial teaching is given.
- Find the slow learners and give two more explana- tions and

  activities
- Use topic related videos for Remedial Teaching

Writing

Focus on Reading skills

- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students
- Including hands on learning and sensory activities

TOPIC – WASTE WATER STORY
No. of days needed for completing the topic – 15 days

OBJECTIVES :

- To explain the harmful effects of sewage.
- To provide knowledge about various contaminants present in the sewage.
- To teach students about various steps of waste water treatment.
- To make them aware about better house keeping practices and how to maintain sanitation at public places.

PREVIOUS KNOWLEDGE TESTING :
Questions to be asked.....

- Name some disease causing microbes.
- What is the use of water in our daily life ?
- Which animal is used in vermicomposting method ? ➢ Name any disease caused by water

pollution.

VOCABULARY & IMPORTANT SPELLINGS :
Sewage, sewer, poisonous, contaminants, accumulation, diarrhoea, cholera, dysentery, jaundice, eutrophication, pavement, screening, grit, sludge, clarified, aeration, anaerobic, sanitation, skimmer, municipality.

INNOVATIVE PEDAGOGIES :

- Explanation of major sources of wastewater in the smart class.
- Activity to purify water.

- Poster making on sanitation at public places or better housekeeping practices.
- The students will be shown video related to wastewater ➢ Eutrophication process will be explained with the help of videos
- Making of concept maps and flowcharts.

PROCEDURE :

- The sources of wastewater and contaminants present in the sewage will be discussed in the smart class.
- Harmful effects of sewage like spreading of diseases and water pollution will be discussed.
- Various stages of treatment of sewage in wastewater treatment plant will be shown in the smart class or video and uses of Biogas as by product will be discussed.
- The process of eutrophication ,its causes and effects will be discussed with the help of video. ➢ Discussion regarding the use of low cost onsite sewage disposal systems will be done with the help of pictures and videos in the smartclass.

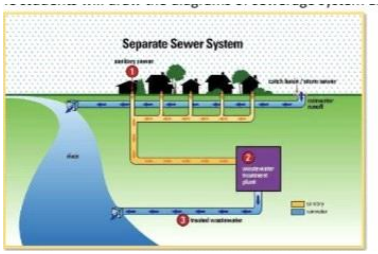
-SEPTIC TANK
-BIOGAS PLANT
-VERMICOMPOSTING TOILETS

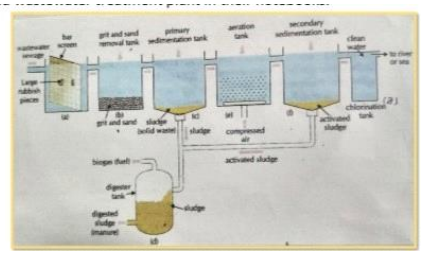
- The students will be advised to follow better housekeeping practices like avoid throwing of fats, oils, tea leaves, solid food, paint, solvents, medicines in the drain. They should adopt sanitation practices at public places.
- Revision of various sub topics will be taken up in the class(MCQ, short questions, definitions, reason based questions, diagrams)

and NCERT Exemplar questions will be discussed

PARTICIPATION OF STUDENTS :

- The students will draw the diagrams of sewerage system and wastewater treatment plant in their notebooks.





- They will speak on the topic -Why manholes are provided in sewer pipelines ?

- They will participate in the discussion on the topic-Health hazards caused due to open drains and stagnant water.
- They will write definitions of important terms like aeration, activated sludge, chlorination, clarified water, eutrophication.
- They will draw poster on sanitation practices in the class.
- They will actively answer the questions, draw diagrams, solve MCQs and objective questions in the class.

RECAPITULATION :

- What is the other term used for eutrophication?
- Where are manholes provided in the sewerage system?
- Which bacteria help in production of biogas?
- Which chemicals can be used to disinfect water? water.

RESOURCES:

- NCERT Exemplar,Everyday Science (cordova publications)
- Videos
- Diagrams of sewerage system layout & WWTP (Art Education)
- Collecting information about environmentalists /social workers (Environmental Education)

Co-SCHOLASTIC ACTIVITIES :

- Hands on learning experience by the students while performing purification of water activity in the groups and will develop team spirit & decision making skills.
- The students will discuss in the groups about bacteria present in wastewater treatment and their role in wastewater treatment and clarification of water thus developing communication and collaboration skills.
- They will interact with peers and explain the working of wastewater treatment plant thus developing critical thinking.

LEARNING OUTCOMES :

- The students will be able to summarize how wastewater is generated in day to day activities.
- They will be able to draw diagrams of sewerage system and WWTP.
- They will be able to critically analyze the importance of using better housekeeping practices & sanitation and their importance in real life.

- They will be able to describe how water can be conserved by using some easy tricks for disposal of household water.

ASSESSMENT :

- Quiz in the form of teams.
- Daily practice problems.
- Multiple choice questions.
- Peer Assessment.
- Group discussions.
- Projects/Surveys/Activities.
- Class tests and Periodic tests.

Remedial Teaching

Teacher once again repeated the lesson.

1.Teacher discuss about the topic content

- Those students who are found lacking in any of the above steps, then remedial teaching is given.
- Find the slow learners and give two more explana- tions and activities
- Use topic related videos for Remedial Teaching

Writing

Focus on Reading skills

- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students

Including hands on learning and sensory activities

Class: Vll

CLASS- VII

TOPIC - Motion and time (July)

No. of days for completing the topic : 15 days

LEARNING OBJECTIVES:

■ Learners will be able to understand the relation between distance, speed and time.

■ They would be able to solve numerical on speed with 90% accuracy.

■ Students will be able to classify different types of motion.

■ Learners will be able to interpret slow or fast object.

■ They will be able to differentiate between uniform and non- uniform motion.

■ They will be able to measure time period and frequency of simple pendulum.

■ Students will be able to contrast between speedometer and odometer.

■ Learners will be able to interpret distance- time graph.

PREVIOUS KNOWLEDGE TESTING:

- Name the ancient and present devices to measure time.
- How do you distinguish between a slow moving and a fast moving object?
- What are the SI units to measure time and distance?

VOCABULARY AND IMPORTANT SPELLINGS:

Simple pendulum time period, frequency, amplitude, speed, odometer, speedometer uniform

motion, non-uniform motion

EXPLANATIONS:

Teacher will explain the chapter. " Time and motion" topic wise by including various innovative methodology of teaching using various videos & activities via zoom app Shiksha House

ACTIVITY:

Teacher will perform an activity in the class to note down the time period of simple pendulum.

Students will participate actively in noting down the time.

PROCEDURE:

- Starting from the concept of simple pendulum, various terms related to it will be explained, i.e., time period, frequency, amplitude etc.
- Students will draw the diagram of simple pendulum in their notebooks.
- The concept of speed will be introduced by making them understand the concept of slow and fast motion.
- Video from Youtube link will be shared to make them understand the same concept.
- SI units will be introduced.
- Devices to measure speed and distance covered by automobiles will be introduced.

Teacher would encourage the learners to note down the distance covered by their automobiles.

- Concept of uniform and non-uniform motion will be introduced by using number line. The definition of uniform.
- and non-uniform motion will be given.
- The concept of distance time graph will be introduced.

Students will be able to plot the graphs.

RECAPITULATION:

Illustrate with examples the measurement of time in ancient time.

Define simple pendulum.

Construct a simple pendulum.

INNOVATIVE PEDAGOGIES

ASSIGNMENT:

- Various techniques will be used to check the understanding of the concepts taught in the class.
- Quiz on ancient methods of time measurement

INTEGRATION WITH OTHER DOMAINS:

- The knowledge of speed will be shared by solving numericals which is an integration of the subject with is an integration of the subject with mathematics.
- The concept of uniform and non-uniform motion will be introduced by plotting graphs. (Integration with art)

LEARING OUTCOMES:

- Students will be able to identify relations between speed and time.
- Students will be able to interpret position time graphs.
- They will be able to classify different types of motion.
- They will be able to cite examples of slow and fast moving objects.

RESOURCES:

NCERT Text book for Science

EVERYDAY SCIENCE BY CORDOVA PUBLICATIONS.

Extra marks slides. Youtube Links

https://www.youtube.com/watch?v=uLtWRK_Pd5c&feature=youtu.be

https://www.youtube.com/watch?v=)oda03DGRgY&feature=youtu.be

Feedback and remedial teaching

1.Focus on reading skills

2.Individualized educational program

3.Praising student with positive remarks.

Inclusive practices and full participation without discrimination

1.All students will be encouraged to participate.

2.Recognising and meeting needs of all students.

3Including hands on learning and sensory activities

TOPIC :PHYSICAL AND CHEMICAL CHANGES (August)

No. of days needed for completing the topic – 15 days

OBJECTIVES :

- To discuss about various physical and chemical changes occurring in our daily life.
- To make them understand about the changes caused during a chemical reaction and a physical change.
- To explain the causes of rusting and the damage done by it.
- To impart knowledge about various methods of prevention of rusting.

PREVIOUS KNOWLEDGE TESTING : Questions to be asked....

- Can we obtain milk back from curd ?
- Do the wooden pieces remain same after burning ?
- What does the seed change into after germination ?
- What does water change into if we keep it in refrigerator ?

IMPORTANT SPELLINGS:
Irreversible, Stretching, Magnetisation, Hammering, Magnesium, Reactants, Products, Precipitate, Exothermic, Endothermic, Electrolysis, Displacement, Rusting, Galvanisation, Alloying, Crystallisation.

INNOVATIVE PEDAGOGIES:

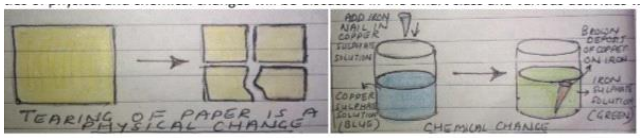
- Various physical and chemical changes will be discussed in the smart class and a video will be shown to discuss more examples (https://youtu.be/BgM3e8YZxuc)
- Activity to explain physical changes like tearing of paper will be performed.
- Chemical reactions will be shown in virtual lab or some of them will be performed in chemistry lab.
- The video on topic Rusting-its causes and prevention will be shown

(https://youtu.be/jQoE_9x37mQ)

- Galvanisation process will be discussed with the help of video (https://youtu.be/ZXvLLljBMvo)
- Making of concept maps and flowcharts

PROCEDURE :

- The difference between reversible and irreversible changes will be explained with the help of examples.
- The properties of physical and chemical changes will be discussed in the smart class and various activities will be performed in the class.



- Various types of chemical reactions (combination , decomposition, displacement, double displacement reactions) will be discussed briefly.
- The process of rusting , its necessary conditions and effects of rusting will discussed.
- Various methods to prevent rusting will be shown in smart class /video.
- The method of crystallisation will be shown in the virtual lab.
- Revision of various subtopics will be taken up(MCQ, short questions, definitions, reason based questions, diagrams) and

NCERT Exemplar questions will be discussed.

PARTICIPATION OF STUDENTS :

- The students will record observations of various activities and analyze the result of those changes.
- They will collect pictures of various methods of prevention of rusting and paste them in their notebook . They will also speak about these methods in groups in the class.
- Quiz will be conducted in the class on various physical and chemical changes.
- The students will actively participate in various discussions, answer questions and also clear their doubts during revision.

RECAPITULATION :

- What are the conditions necessary for rusting of iron?
- How can you say that burning of candle is a physical as well as chemical change ?
- Which alloy is used in making of utensils ?
- What are applications of galvanisation process?

ASSIGNMENTS :

- The students will enlist various characteristics of physical and chemical changes with examples in their notebook.
- The students will collect old coins of different metals at their home and observe colour changes in those coins.
- They will write an article on pollution caused due to explosion of fire crackers. The effects of that chemical change and various

types of pollution caused by it will be discussed along with effects on health of human beings and animals.

RESOURCES :

- NCERT Exemplar
- Everyday Science (Cordova Publications)
- MCQ/assignments
- Videos

(https://youtu.be/BgM3e8YZxuc) (https://you.be/ZXvLLljBMvo) (https://you,be/jQoE_9x37mQ)

ART INTEGRATION AND OTHER DOMAINS :

- Colour changes in different coins (Art Education).
- Different types of pollution caused by burning of crackers (Environmental education).

INNOVATIVE PEDAGOGIES :

- Hands on learning activities about various changes will be performed in the class.
- Some chemical reactions will be shown in Visual Lab.
- The students will depict harmful effects of noise pollution due to burning crackers in the form of short play or mime.
- Making of concept maps and flowcharts.

Co-SCHOLASTIC ACTIVITIES :

- The students will develop team spirit while performing activities in the groups.
- They will develop decision making skills while adopting the method of prevention of rusting. ➢ They will think critically about the harmful effects of various chemical changes in the environment.

LEARNING OUTCOMES :

- The students will be able to conduct simple investigations to classify whether the change is physical or chemical.
- They will be able to write the word equations for some chemical reactions
- They will be able to relate the phenomenon of rusting with its effects on the economy of the nation.
- They will be able to apply the scientific concepts in day-to-day life and will take measures to prevent rusting & pollution.

Remedial Teaching

Teacher once again repeat the lesson.
1.Teacher discuss about the topic content
2. Those students who are found lacking in any of the above steps, then remedial teaching is given. 3. Find the slow learners and give two more explana- tions and activities
4. Use topic related videos for Remedial Teaching
Writing
Focus on Reading skills

- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students • Including hands on learning and sensory activities

TERM - 2

Topic: TRANSPORTATION IN ANIMALS & PLANTS (October)

No.of days needed for completing the topic:12 days

OBJECTIVES: Students will be able to Define the terms

like circulatory system, pulse,

pulse rate, heart beat , dialysis, vascular tissue xylem & phloem, transpiration etc. Explain circulatory system, excretory system Explain transportation in animals & plants.

PREVIOUS KNOWLEDGE TESTING: - The teacher will ask about-

Name the various parts of circulatory system How much blood is present in an adult person. Name the components of blood. What are the functions blood. IMPORTANT SPELLINGS -: erythrocytes, leucocytes, thrombocytes, capillaries, arteries, vein, septum, auricle, ventrical, systole, diastole, stethoscope, nephridia, phloem, osmosis, dialysis, uric acid, faeces.

EXPLANATION WITH INNOVATING METHODS USED

Activities

To calculate the pulse rate

To compare the pulse rate at rest & after heavy exercise.

To make stethoscope by using stretched rubber sheet, glass funnel & rubber tube. To demonstrate that transpiration occurs through leaves.

Videos will be shared to students in class group to understand components of blood, blood vessel & its types, internal structure of heart & blood flow , excretion in animal etc.

Link- https://m.youtube.com/watch?v=7jLWcAeSap0

https://youtu.be/0CAVZ_R0MQ4 https://youtu.be/8emdiPXNLcU

PROCEDURE:

- Brain storming- The class would start with adiscussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told about the significance of the topic that they would be studying.

Introduction of the topic - ppt & digital content would be shared.

Questioning -: Multiple level question -:

Teacher will prepare a list of question on the topic - why transport in animals & plant is a complex process & its necessity.

STUDENTS PARTICIPATION: -

The students will draw various diagrams related to the topic They will actively participate in quiz,solving daily practice problems, solving mcq.s loud reading, collaborative learning , roleplay etc

They will actively participate in the activities by sharing videos in group.This will make students learn better joyfully.

fig.11.9 (a) Model of a stethoscope

{b) Model of a stethoscope

Fig.11.5 Measuring the pulse rate

RECAPITULATION / ASSIGNMENTS

The teacher will ask various questions orally like Why is it necessary to excrete waste material? Arteries have thick & elastic muscular walls. Why ?

How does transpiration help in the transport of water & minerals in plants ? Written Assignment For Practise Will Be Given

Name the following:-

A network of tubes through which blood flows□

Fluid component of blood□

RBCs are produced in□

Extremely thin blood vessels which connect arteries to veins□□The number of beats per minute is called□□Doublelayered membranous sac in which heart is enclosed□□The partition wall present in heart□□

An instrument used to measure blood-pressure□□

Answer the following:-

Define

Heart Beat

Excretion

Osmosis

Dialysis

Ascent of sap

Give the importance of transpiration.

Write the excretory organs in the following animals. Amoeba,Paramecium□□

Earthworms,Leeches□

Insects like

Cockroaches□

Vertebrates□

Independent practice -: Students will do the questions in their notebooks from the book.

ART INTEGRATION WITH OTHER DOMAIN-:

Students would be able to:

-Draw different types of diagram in a beautiful manner with coloured sheet & pens -Skills will be developed by making various videos.

LEARNING OUT COMES -:

Students will know and understand about :

-Their body and able to analyse it.

-How to remain healthy by keeping a check on circulation.

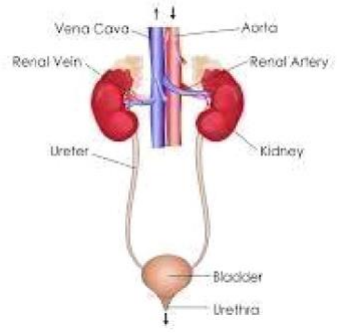
-Function of different parts of circulatory & excretory system.

-Why transportation is an important life process? -The difference between arteries, veins & capillaries

RESOURCES -:

Everyday science by Cordova

Publications NCERT exemplars.



Diagrams like Excretory system in Human will be screen shared through zoom app and students will draw side by side. https://youtu.be/0CAVZ_R0MQ

4 https://youtu.be/8emdiPXNLc CO

SCHOLASTIC ACTIVITIES

The students would be able to :
-Collaborate with each other to explain the transportation in animal and plants through group discussion.
-Critically analyze the importance of circulatory system & excretory system.

-Built character amongst themselves by discussing / communicating the importance of transport in plants & animals.

ASSESSMENT :It will be done on the basis of the activities. responses & the classification chart including quiz mcq's, oral & written test , periodic test etc.

Feedback and Remedial Teaching

- Focus on Reading skills
- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students • Including hands on learning and sensory activities

CLASS-VII SUBJECT-SCIENCE

(CHEMISTRY) SESSION – 2025-26 (MONTH-October)

TOPIC :ACIDS,BASES & SALTS

No. of days needed for completing the topic – 15 days

OBJECTIVES :

- To teach students about various types of acids found in edible substances.
- To explain the term indicator and cite examples of some natural indicators from day to day life.
- To make students aware that chemicals can be detected easily with the help of synthetic indicators. ➢ To make them understand applications of neutralization in everyday life.

PREVIOUS KNOWLEDGE TESTING :

Questions to be asked....

- What is the taste of curd?
- Can you taste the chemicals present in the lab?
- What is the colour of turmeric used at home?
- Which substance is used as preservative in making of pickles? ➢ What are different types of tastes?

VOCABULARY & IMPORTANT SPELLINGS :

Edible, tamarind, vinegar, ascorbic, malic, tannic, ketchup, indicator, laboratory, dangerous, corrosive, concentrated, neutral, turmeric, litmus, phenolphthalein, neutralization, indigestion, quicklime, slaked lime, calamine, formic, milk of magnesia.

INNOVATIVE PEDAGOGIES :

- Explanation of properties of acids, bases and salts in the smartclass
- Colour changes in acidic and basic solutions due to presence of indicators will be explained with the help of videoColourful magic trick with acids and bases (https://youtu.be/ujkuW-0cpNw
- Use of natural indicator turmeric will be explained by showing a video

(https://youtu.be/Olezbt9cxfo

)➢ Activity to test different materials with the help of litmus paper will be performed in the class.

- Testing of different samples of soil with litmus paper will be done.
- The students will make greeting card or bookmark with the help of turmeric paper and soap

solution.

- Explanation of neutralization in daily life with the help of video

  https://m.youtube.com/watch?v=QWYcYfS_URc ➢ Making of concept maps and flowcharts.

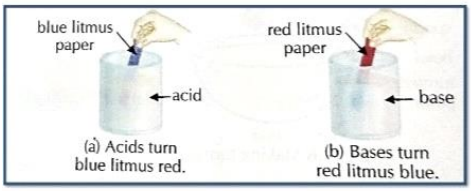
PROCEDURE :

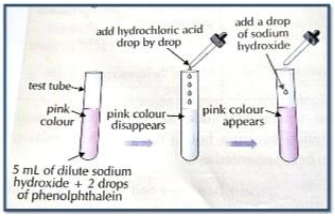
- Different types of acids (natural & mineral) and their sources will be explained with examples.
- It will be discussed that bases are different from acids. They are bitter in taste and soapy to touch while acids are sour in taste.
- The uses of acids and bases in daily life will be discussed in the smart class.
- The examples of neutral substances and indicators for testing acids and bases will be shown in the smartclass.

- Activity for testing different materials like lemon juice, tap water, detergent or soap solution, sugar solution with the help of natural indicators (litmus paper & litmus solution) and synthetic indicators (phenolphthalein, methyl orange) will be taken up in the class.
- Testing of different samples of soil (by mixing in distilled water) will be done with blue and red litmus paper.
- Use of other indicators like china rose, purple cabbage juice will be explained through video.
- With the help of various examples ,it will be explained in the virtual lab that when an acidic solution is mixed with a basic solution, both the solutions neutralise the effect of each other.

ACID + BASE SALT + WATER + HEAT

- An activity to study the neutralization reaction will be taken up in the class/laboratory.





- The students will be told to write various color changes due to different indicators in acids and bases in their notebooks.
- The subtopic neutralization in everyday life will be discussed with the help of smart class.

-INDIGESTION- Excess acid is neutralized by antacids like Milk of Magnesia.

-SOIL TREATMENT-Acidic soil is treated with bases like quicklime {CaO} or slaked lime {Ca(OH)2}.Basic soil is treated with organic matter.

-ANT or BEE's STING-Formic acid is neutralized with baking soda/ calamine.

-FACTORY WASTES- Acidic waste is neutralized with basic substances,

- The formation of acid rain, its causes and effects will be discussed in the smartclass.
- Revision of various sub topics will be taken up in the class & MCQ ,short questions, definitions, reason based questions, diagrams and NCERT Exemplar questions will be discussed.

PARTICIPATION OF STUDENTS :

- The students will make a list of various natural acids and their sources.
- They will record the observations of various activities of testing of different materials and soil with indicators.
- They will make greeting card /bookmark with the help of turmeric paper indicator, laminate it and then paste it in their notebook.
- They will write about the effects of various indicators in acids and bases in a tabular manner in their notebooks.

	INDICATOR	COLOUR CHANGE IN ACID	COLOUR CHANGE IN BASE
1.	TURMERIC	No change	Turns red
2.	BLUE LITMUS	Turns red	No change
3.	RED LITMUS	No change	Turns blue
4.	CHINA ROSE	Turns magenta	Turns green
5.	PHENOLPHTHALEIN	No change	Turns pink
6.	METHYL ORANGE	Turns red	Turns Yellow

- They will write definitions of natural acids, mineral acids, dilute acids, concentrated acids, bases, alkalis, neutral substances , salts, indicators ,neutralization ,aqua regia with examples.
- They will actively answer the questions, draw diagrams, solve MCQs and objective questions & clear their concepts.

RECAPITULATION :

- Why is vinegar added to packaged food items?
- How can acid be diluted?
- How is litmus solution prepared?
- Why does turmeric stain on cloth turn red when washed with soap? ➢ What is pH value for neutral, acidic and basic solutions?

- What is the use of aqua regia?
- What happens in the stomach when we eat very spicy food?

ASSIGNMENTS :

- The students will be told to paste labels of various food products (sauce, ketchup, pickles, juices) in which acids are used as preservatives.
- They will be told to make greeting card with the help of turmeric paper & soap solution and bring it in the class.
- They will paste pictures of some common acids like Hydrochloric acid, Nitric acid, Sulphuric acid & common bases like Sodium hydroxide, Ammonium hydroxide and Calcium hydroxide with their uses.

RESOURCES :

- NCERT Exemplar
- Everyday Science (Cordova Publications)
- mcq/ assignment
- Videos (https://youtu.be/ujkuW-0cpNw)

(https://youtu.be/Olezbt9cxfo)

(https://m.youtube.com/watch?v=QWYcYfS_URc)

ART INTEGRATION AND OTHER DOMAINS :

- Making of greeting card (Art Education)
- Diagrams of colour changes due to different indicators (Art Education)

Co-SCHOLASTIC ACTIVITIES :

- The students will have hands on learning experience and enhance their ability to make correct observations.
- They will develop analytical skills and decision making skills while using the concept of neutralization in their everyday life.
- They will develop thinking skills while discussing about acid rain effects and its impact on our environment.

LEARNING OUTCOMES :

- The students will be able to cite examples of different natural indicators and study their application.
- They will be able to identify the variations shown by different indicators in acidic and basic solutions.
- They will be able to write the word equations for acid base reactions.
- They will able to differentiate between acids, bases , neutral substances and salts & will apply the concept of neutralization in their daily life.

ASSESSMENT :

- Quiz in the form of teams.
- Daily practice problems.
- Multiple choice questions.
- Peer Assessment.
- Group discussions.
- Projects and Activities.
- Class tests & Periodic tests.

Remedial Teaching

Teacher once again repeat the lesson.

1.Teacher discuss about the topic content

- Those students who are found lacking in any of the above steps,

  then remedial teaching is given.

- Find the slow learners and give two more explana- tions and

  activities

- Use topic related videos for Remedial Teaching

Writing

Focus on Reading skills

- Individualized educational program
- Using pictures/mazes/ stories
- Praising the student with positive remarks

Inclusive Practices and Full Participation without Discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting the needs of all the students
- Including hands on learning and sensory activities

Class: Vll

Subject: Science (Biology)

Topic: Respiration In Organisms (November)

No.of days needed for completing the topic: 12 days

Obectives

Students will be able to you know and understand:

To follow Healthy lifestyle so as to increase the lungs capacity.

How do we respire?

Differentiate between breathing and respiration.

Various organs involved in the respiration and their function.

Meaning and differences between aerobic and anaerobic respiration.

Previous knowledge testing

The teacher will ask:

What is breathing? Is breathing

and respiration same? What is

meant by inhalation?

Define exhalation. Important spellings aerobic or anaerobic, muscle cramps, larynx, trachea,

bronchiole, bronchus, alveole, diaphragm, internal respiration, external respiration, enzymes

etc.

Explanation with innovative methods used

Activities:

Videos will be made and shared by the students in the class group on the topic differences between aerobic and anaerobic respiration.

To see the variation in the breathing rate during different activities. To demonstrate the mechanism of breathing through video sharing.

Videos will be shown to the students to understand aerobic and anaerobic respiration, how do we breathe, how air enters the lungs, what we breathe out etc. Link - https://youtu.be/l-RFAEJ6OCE https://youtu.be/koQb2e7BGL4

Procedures

Brain Storming: The class would start with the discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told about the significance of the topic that they would be studying during the online classes.

Introduction of the topic: Flip learning - Digital content would be shared with students in the class group.

Questioning- Multiple level questions: Teacher will prepare a list of questions on the topics respiration and its types respiration in human etc.

Students participation

-Students will actively participate in the various activities , make videos and share in the class group.

-They will draw various diagrams related to the topic.

-They will actively participate in the quiz, solving daily practice problems, solving MCQs etc.

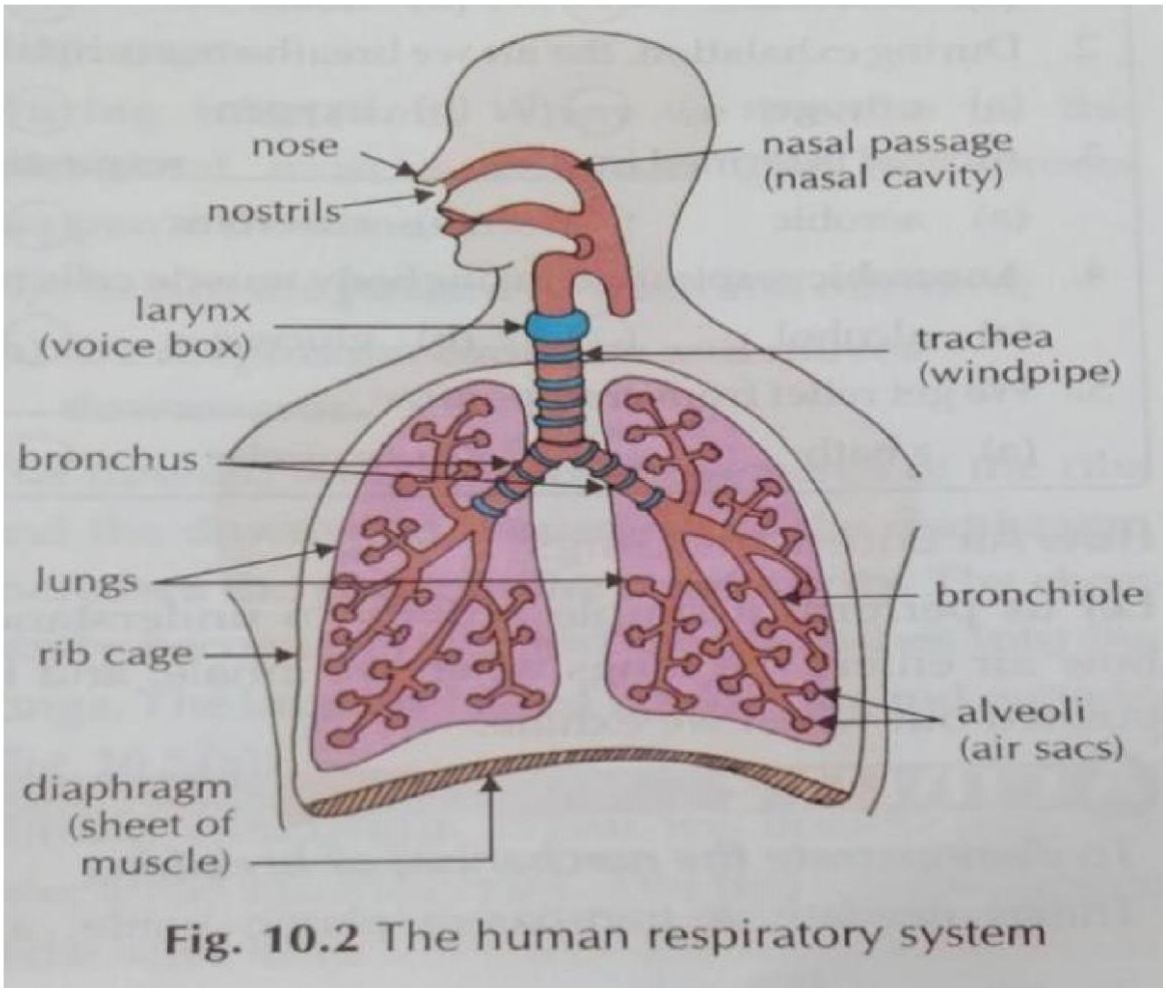


Fig. 10.2 The human respiratory system

Assignments /Recapitulation

The teacher will also ask various questions as follows and give assignments:
1.What happens to your breathing rate when you (a)Exercise (b)Go to sleep?
2.Why should we breathe in only through our nose?

3.What is, the respiration which can occur without oxygen, called? 4.Distinguish between photosynthesis and respiration.

- turns limewater milky.
- On an average , an adult human being , at rest breeds in and out times in a minute. 7.End products of anaerobic respiration are and .

- External respiration is also called .
- Ribs are pushed and during inhalation.

10.Which acid is produced during muscle cramps .

Independent practice

Students will do the questions in their notebook from the textbook.

Art integration with other domain

Students should be able to :

-Draw different diagrams in a beautiful manner with coloured sheets and pens.

-Develop their skills by making various videos related to the topic.

Learning outcomes

Students will be able to know and understand :

-How do we respire?

-Critically analyse the importance of breathing clean air.

-To follow healthy lifestyle so as to increase the lungs capacity.

• Differentiate between breathing and respiration.

-Mode of breathing in humans and muscle cramps.

Resources

Everyday Science by Cordova publication, NCERT Exemplar, various online resources including YouTube videos , Deeksha platform etc Link - https://youtu.be/l-RFAEJ6OCE https://youtu.be/koQb2e7BGL4 Co-scholastic activities

Students would be able to:

-Collaborate with each other to explain the different organs involved in respiration in humans.

-Critically analyse the importance of breathing clean air.

• Build character amongst themselves by discussing/ communicating the importance of exercise.

Assessment

It will be done on the basis of the activities, responses, classification chart made including quiz, MCQs, oral and written tests, Periodic tests etc.

Feedback and Remedial Teaching

• Focus on Reading skills

• Individualized educational program

• Using pictures/mazes/ stories

• Praising the student with positive remarks

• Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without Discrimination

• All students will be encouraged to participate

• Recognising, accommodating and meeting the needs of all the students • Including hands on learning and sensory activities

CLASS- VII TOPIC - LIGHT (December)

No. of days for completing the topic : 15 days

OBJECTIVES:

Students will be able to understand reflection of light.
Learners will be able to differentiate between real and virtual image.
Learners will be able to compare and contrast concave and convex mirrors.
They will be able to draw conclusions on the uses of spherical mirrors.

P.K. TESTING:

Q Can we see in dark ?

(Expected Response: No) QWhat
enable us to see ?
(Expected Response Light)
Today we will learn about light in detail.
VOCABULARY AND IMPORTANT SPELLINGS:

- Rectilinear
- Refection
- Incident
- Normal
- focus
- Diminished
- real
- virtual
- lateral invasion
- spherical
- erect
- enlarged
- concave
- convex
- center of curvature
- pole
- inverted
- reflectors

EXPLANATION
All the topics will be explained using various methods like showing a plane mirror to explain the concept of reflection, real and virtual images will be explained by using spherical mirrors, ray diagrams by sharing various videos from Youtube.
PROCEDURE
The Concept of reflection of light will be introduced by using a plane mirror strip.
*Students will narrate the characteristic of image formed by plane mirror by their own observations.

Teacher will introduce the term lateral inversion.

*Videos to show formation of real and virtual image will be shared.

*Terms related to spherical mirror will be introduced to the learners.

*Explanation of ray diagrams using videos from Shiksha House.

• Students will draw it in their notebooks.

• Uses of spherical mirror will be explained by making use of students' daily life observation.

STUDENT'S PARTICIPATION

Students will learn an activity to locate the focus of concave mirror and will be able to calculate its local length.

RECAPITULATION:

Q: Which mirror is used as rear view mirror and why ?

Q: Give the uses of concave mirror.

Q: Give any three characteristics of image formed by a plane mirror.

Q: Name the diverging mirror.

Q: Define focus of a concave mirror.

Q: Which mirror always forms virtual, erect and diminished image

INTEGRATION WITH OTHER DOMAIN:

Integration with art as they will learn to draw various ray diagrams. Integration with mathematical geometry as they will be able to take proper measurements to locate 'C' and 'F' of spherical mirrors.

LEARNING OUTCOMES:

Learner will be able to define reflection of light.

They will be able to classify spherical mirrors.

They will be able to value the use of spherical mirrors in daily like.

They will be able to demonstrate that light travels in a straight line.

RESOURCES:

NCERT TEXT BOOK

EVERYDAY SCIENCE BY CORDOVA PUBLICATIONS.

CBSE EXEMPLAR

Youtube Links https://www.youtube.com/watch?v=xhILp4biCGA&feature=youtu.be

https://www.youtube.com/watch?v=Ne87gW7X970&feature=youtu.be

https://www.youtube.com/watch?v=b-9qgQyirvk&feature=youtu.be

https://www.youtube.com/watch?v=WMxagUf8WD4&feature=youtu.be

Feedback and Remedial Teaching :

- Focus on Reading skills
- Individualized educational program
- Using pictures /mazes /stories
- Praising student with positive remarks.
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting needs of all students.
- Including hands on learning and sensory activities

TOPIC - ELECTRIC CURRENT AND ITS EFFECTS (December) No. of days for completing the topic : 15 days

OBJECTIVES:

*Learner will be able to compare and contrast the effects of electric current

Students will be able to draw conclusions for the flow of electric current in an

electric circuit.

*They will be able to compare and contrast open and closed circuit.

They will be able to understand application of electric current in real life.

P.K.TESTING:

Q What makes electric iron hot ?

(Expected Answer: Electric Current)

Q What make electromagnet act as a magnet ?

(Expected answer : Electric current)

Today we will learn about the effects of electric current.

VOCABULARY & IMPORTANT SPELLINGS:

Convenient, series, parallel, electrons, conductors, insulators, heating, magnetic, resistance, application, fuse, bureau, compact fluorescent lamps Electromagnet, electric bell, nichrome, tungsten.

EXPLANATION:

All the topics will be explained using various methods like, showing various electrical components, making a simple electric circuit, making a solenoid using an iron bar and copper wire through Zoom app using various links from Youtube to explain the activities.

PROCEDURE:

- Teacher will start explaining the chapter by the introduction of importance of electricity.
- Images of various electrical components will be shown, like, cell, battery, resistance, Ammeter, Voltmeter, plug key.
- Difference between closed and open circuit will be explained. * Students will be asked to classify the given set of items into conductors and insulators.
- Heating effect of electric current will be explained by giving examples from real life situations like electric iron, heater, geyser, electric fuse etc.
- Learners will perform an activity to make a simple electromagnet.
- Uses of electromagnet and the concept of electric bell will be

explained by sharing various videos.

STUDENT'S PARTICIPATION:

- Students will arrange the electrical components to understand the difference between series and parallel combination.
- An activity to make electromagnet will

RECAPITULATION

- Name some devices which work on heating effect of electric current and magnetic effect of electric current.
- Why a magnetic compass near a wire carrying current show deflection?
- Why an electric fuse should not be replaced by a thick wire?
- Give the factors on which heat produced in a wire depends.
- What is an electromagnet ? How can its strength be increased ?

INTERGRATION WITH OTHER DOMAIN:

- Integration with art as students learn to draw various diagrams. * Integration with economies as they will understand how using CFLs or LEDs reduce electricity cost than using the tungsten light bulbs.

LEARNING OUTCOMES:

- Students will be able to draw symbols of electric components. * Students will be able to construct electric circuit using various component from. real life.
- They will be able to interpret working of electric fuse.
- They will be able to apply magnetic effect of electric current in real life.

RESOURCES:

NCERT TEXT BOOK

EVERYDAY SCIENCE BY CORDOVA PUBLICATIONS

CBSE EXEMPLAR

Youtube Links https://www.youtube.com/watch?v=na_FpTXLFa8&feature=youtu.be

https://vvvvw.youtube.com/watch?v=i55LBdRZJNk&feature=youtu.be

https://www.youtube.com/watch?v=BcsYLbjEe8g&feature=youtu.be

Feedback and Remedial Teaching :

- Focus on Reading skills
- Individualized educational program
- Using pictures /mazes /stories
- Praising student with positive remarks.
- Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without discrimination

- All students will be encouraged to participate
- Recognising, accommodating and meeting needs of all students. • Including hands on learning and sensory activities

TOPIC: REPRODUCTION IN PLANTS (January)

No. Of days needed for completing the topic: 9 days

OBJECTIVES :

Students will be able to Explore different varieties of plants.

Define the terms - asexual & sexual reproductions, pollination, fertilization. Explain the different types of asexual reproduction. Understand the sexual reproduction in plants

Explore the different modes of seed dispersal . PREVIOUS

KNOWLEDGE

TESTINGS :

The teacher will ask about - What is reproduction? Name its two types.

Which is the most attractive part of a plants

? Name various parts of a flower.

IMPORTANT SPELLINGSS : asexual & sexual reproduction, fragmentation, spore, cutting , layering , grafting, tissue culture, unisexual, bisexual, pollination, fertilization, dispersal, germination, drumstick plant, orchids, dandelion, madar calotropis .

EXPLANATION WITH INNOVATING METHODS USED :

Activities -: To observe spore formation on a bread mould.

Pasting of flowers after drying, to differentiate between unisexual & bisexual flowers.

Collecting & pasting of different types of seeds.

Videos will be made by the students and shared in their class group on the topic sexual & asexual reproduction.

Videos will be shared with the students in their class group to understand different types asexual reproduction, sexual reproduction in plants, different modes of seed dispersal. Link- https://m.youtube.com/watch?v=1OFF2qYvLag https://youtu.be/P9qbtia8vSI

PROCEDURE :

Brain storming - The class would start with adiscussion and what the students have already learnt in the previous classes & hence what is it that they would learn now. They would also be told about the Introduction they would be studying during the online classes.

Introduction of the topic- Flip learning - Digital content would be shared with the students in the class group.

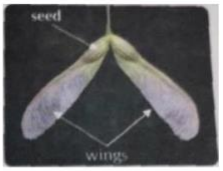
Questioning - Multiple level question teacher will prepare a list of question on the topic- Why reproduction in plant is a complex process & its necessity .

STUDENTIS PARTICIPATION :

-The students will draw various diagrams related to the topic

-They will actively participate in quiz, solving daily practice problem, solving MCQ's etc.

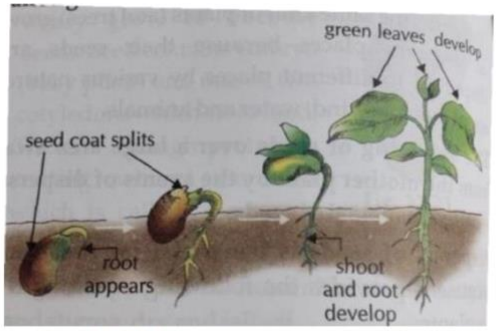
-They will actively participate in the activities , make videos and share in the class group.



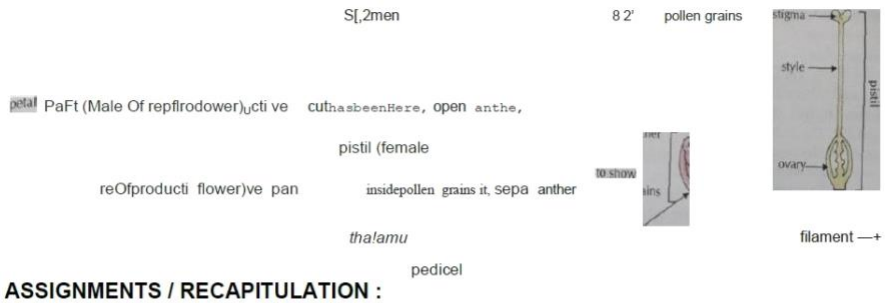
(a} wingedseedofdrumstick (b) winged seeds *oi maple*

le) hairy seeds of madar *(aak)* (d) seed of cotton

Fig 12.23 Seeds are dispersed by wind



*T*tg. J2.27 Seeds germinate under suitable conditions to produce new plants.



ASSIGNMENTS / RECAPITULATION :

The teacher will also ask various questions as follows and give assignments :

1.Why are artificial vegetative reproduction methods so commonly used nowadays?

2.What is the name of yellow powdery substance present in the anther of a flower ?

3.Why is dispersal of seeds essential for plants?

4.Vegetative propagation in potato takes place through_.

5.The ovules present in an ovary grow to become .

6.The anther contains .

7.Ripened ovary is known as .

8.Seeds of drumstick plant are dispersed by .

The fusion of male gamete with the female gamete to produce zygote is called .
Independent practices- Students will do the questions in their notebooks from the text book. ART INTEGRATION WITH OTHER DOMAIN :

Students would be able to

Draw different types of diagrams in a beautiful manner with coloured sheets and pens Paste picture of different flowers whose seeds are dispersed by different methods.

LEARNING OUTCOME :

Students will known and understand:-

-Importance of nature and plants.

-The nature and their surroundings by exploring different types of plants around them and becoming more close to the nature.

-Terms related to different types asexual reproduction

-Functions of different part of plants in the process of reproduction.

-The differences between asexual & sexual reproduction

-Modes of dispersal of seeds .

RESOURCES :

Everyday Science by Cordova Publications ,NCERT Exemplar , Various online resources including YouTube videos , Diksha Platform etc.

Link- https://m.youtube.com/watch?v=1OFF2qYvLag https://youtu.be/P9qbtia8vSI
COSCHOLASTIC

ACTIVITIES :

The students would be able to :- -Collaborate with each other to explain the parts of flower.

-Critically analyze the importance of reproduction. -Use analytical & critical skills to find why seeds are dispersed.

-Built character amongst themselves by discussing / communicating the importance of reproduction for the continuity of life on earth.

ASSESSMENT :
It will be done on the basis of the activities responses & the classification chart including quiz, MCQs, oral & written test , Periodic test etc.
Feedback and Remedial Teaching
• Focus on Reading skills

• Individualized educational program

• Using pictures/mazes/ stories

• Praising the student with positive remarks

• Support program (Train student who excel in particular subject to become little teacher)

Inclusive Practices and Full Participation without Discrimination
• All students will be encouraged to participate

• Recognising, accommodating and meeting the needs of all the students

• Including hands on learning and sensory activities

February - Revision

March - Final Exam