SCIENCE SYLLABUS (2023-24) CLASS VI

TERM - 1

CHAPTER – 1 Sources of food (April)
CHAPTER – 2 Components of food (April)
CHAPTER – 3 Fibre to fabric (May)
CHAPTER – 4 Sorting materials into groups (May)
CHAPTER – 5 Separation of substances (July)
CHAPTER – 7 The Living and the Non Living (July)
CHAPTER –10 The Living Organisms & their surroundings (July)—(Internal Assessment)
CHAPTER – 11 Motion & Measurement of Distances (August)
CHAPTER – 12 Light , shadows and reflections (August)

REVISION – August
TERM 1 EXAM – September/October

TERM - 2

CHAPTER – 6 Changes around us (October)
CHAPTER – 8 Getting to know plants (November)
CHAPTER – 9 Body Movements (November)-(Internal Assessment)
CHAPTER – 13 Electricity and circuits (December)
CHAPTER – 14 Magnetism (December)
CHAPTER – 15 Water (January)
CHAPTER – 16 Air around us (January)
CHAPTER – 17 Garbage in , garbage out (February)

REVISION - February
FINAL EXAM – March

***Class: VI*- SCIENCE LESSON PLAN (2023-24)**

Topic: Sources of Food -APRIL MONTH

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

Objectives

Students will be able to:

- List the food variety and ingredients.
- Identify the sources of food material.
- Name edible parts of plants.
- The categorisation of animals into herbivorous, carnivorous and omnivorous.

Previous knowledge testing

The teacher will ask-

- What materials are needed to prepare idli, roti?
- Name two plants whose roots are eaten as vegetables.
- Your mother makes food, is she a producer? Why?
- From where do you get milk?

Important spellings

Ingredients, edible parts, producers, nutritious, herbivorous, carnivorous, omnivorous, parasites, scavengers, decomposers, food chain etc.

Explanation with innovative methods used

Activities-

- The students will be shown various parts of plants which are edible like potato, onion, carrot etc.
- Sprouts activity will be done by the students by the students and make videos.
- Videos will be shared with the students to understand different types of sources of food, edible parts, ingredients, categories of animals like herbivorous, carnivorous, omnivorous, parasites, scavengers, decomposers etc.

  Link https://youtu.be/XBoIV-oWDEs , https://youtu.be/5oBGXEuvx3E

Procedure

Brainstorming: The class would start with the discussion on what the students have 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 in the online classes.

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

Questioning- Multiple level questions: The teacher will prepare a list of questions on the topic-edible parts and category of animals, food chain, sources of food , etc.

Student's participation

- The students will draw various diagrams related to the topic.
- They will actively participate in quiz, solving daily practice problems, solving MCQs.
- They will actively participate in the activities and make videos which they will share in the class group.

Assignments / Recapitulation

- The teacher will also ask various questions as follows and give assignments:
- What are the ingredients used to cook rice?
- How is a scavenger useful for the environment?
- In a food chain Grass> Deer> Lion. The deer is what?
- Can a food chain starts from herbivorous? Why?
- Food provides us ___ to work and play.
- The sprouts contain more ___ and proteins.
- Honey bees are kept in ___ for rearing.
- We eat ___ of sweet potato.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students should be able to draw diagrams/Tables using coloured sheets and pens
- Make collage on animals like herbivorous, carnivorous, omnivorous.
- Make food chain by pasting pictures.

Learning outcomes

- Students would be able to-
- Explain the need of food variety collaboratively.
- List the ingredients to make various dishes.
- Analyse critically various parts to find the edible part.
- Make sprouts chart as healthy breakfast during this pandemic.
- Follow a more practical approach towards the things used in the kitchen.

Resources

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc.

Co-scholastic Activities

- Students would be able to -
- Build character amongst themselves by discussing / communicating the equal contribution of plants and animals in maintaining life.
- Critically categorise different kinds of plants and animals food products.

- Critically analyse the sprouting seeds & their importance.

Assessment

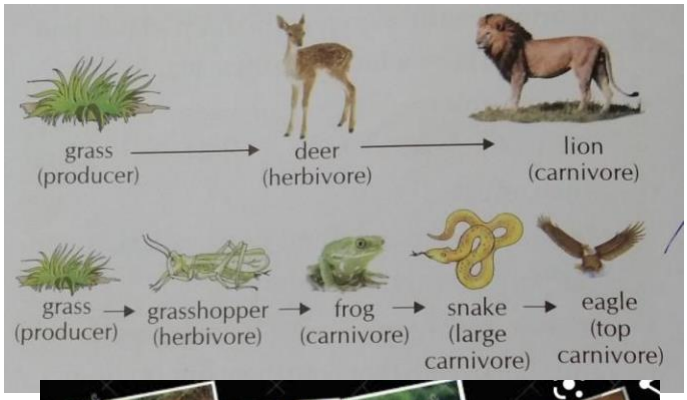
It will be done on the basis of the activities, responses, classification chart including quiz, MCQs, oral and written test etc.

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: VI* SCIENCE LESSON PLAN**

Topic: Components of Food – APRIL MONTH

No. of teaching days needed to complete the topic – 15days

Objectives

- Students will be able to:
- Know and list components of food.
- Define balanced diet.
- Understand loss of nutrients during cooking.
- List the symptoms of deficiency diseases.

Previous knowledge testing

The teacher will ask:

- What are the functions of food?
- What do food consists of?
- Name the various components of food. **Important spellings**

proteins, vitamins, minerals, carbohydrates, nutrients, deficiency diseases, scurvy, ricketts, anaemia, haemorrhage, marasmus, kwashiorkor, obesity etc.

Explanation with innovative methods used

Activities:

- Test the presence of starch and fats in a given food sample.
- Making of tables of vitamins and minerals deficiency diseases on colourful sheets.
- Videos will be shared with the students to understand about sources of proteins, carbohydrates, fats, vitamins, minerals etc.

Link https://youtu.be/wpLObj71wyc https://youtu.be/LiDPddiXWuc

Procedure

Brainstorming: The class would start with the discussion on what the students have 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 the students in their class group.

Questioning- Multiple level questions: Teacher will prepare a list of questions on the topic- components of food, balanced diet, deficiency diseases, obesity etc.

Student's participation

- Students will actively participate in the 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.

Assignments / Recapitulation

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

- Why are proteins called bodybuilding foods?
- Give functions of water.
- Why are vitamins and minerals called protective food?
- Name the deficiency diseases.
- _____is a complex carbohydrate.
- The colour of iodine solution is_____.
- Give full form of ORS.
- Our body needs about___litres of water everyday.

Independent practice: Students will do the questions in their notebook from the textbook.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students would be able to draw different diagrams/Tables in a beautiful manner with pictures and coloured pens
- Make deficiency diseases tables by pasting pictures.

SUSTAINABLE DEVELOPMENT GOALS

- Zero hunger.
- No poverty
- Good Health and Well being.

Learning outcomes

- Students will know and understand:
- Food components (carbohydrates, proteins, fats, minerals and vitamins)
- Test for carbohydrates and fats.
- Balanced diet of their age group.
- The functions of dietary fibres and water.
- Deficiency diseases and list their symptoms.
- Importance of healthy lifestyle by avoiding excessive intake of junk food.

Resources

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc.

Co-scholastic activities

- Students would be able to:
- Creatively prepare a diet chart to provide balanced diet to a 12 year old child.
- Critically categories deficiency diseases with the lack of particular kind of nutrient.

Assessment

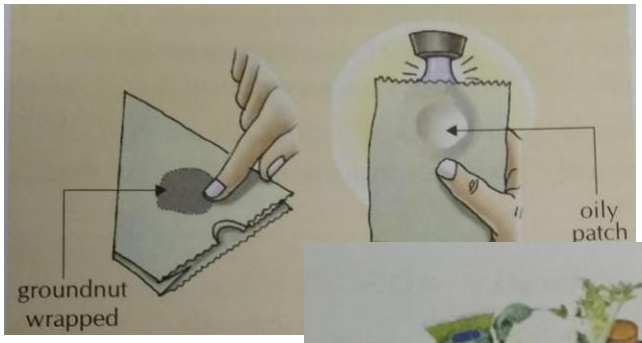
It will be done on the basis of their activities, responses, classification chart including quiz, MCQs, oral and written test etc.

Feedback and Remedial Teaching

- Focus on Reading skills
- Individual attention
- Use of pictures and mazes

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 VI - SCIENCE LESSON PLAN (2023-24)
Topic: Fibre To Fabric (**MAY MONTH**)
No. of days needed to complete the topic- 15 days

Objectives

Students will be able to know:

- The types of fibres.
- Process of obtaining cotton and jute fibre.
- Process of weaving and knitting.
- History of clothing material. **Previous knowledge testing**

The teacher will ask:

- Name our basic needs?
- What is cloth made up of?
- Fabric is commonly called?
- Name the types of fibres?
- From where do we obtain cotton? **Important spellings**

natural fibres, synthetic fibres, biodegradable, cotton balls, cultivation, maturation, polyester, terylene, acrylic, powerlooms, ginning, spinning, weaving, knitting, shearing, sericulture, etc.

Explanation with Innovative Methods used

Activities:

- To mark different states where jute and cotton is cultivated in Indian political map.
- Videos to observe the absorption of water by different types of fabrics (synthetic and cotton) will be made by the students and share in the class group.
- Fabrics of cotton and jute will be pasted.
- To make a mat to show weaving pattern by using coloured strips.
- Videos will be shared with the students in the class group to understand about fabrics and their types, cotton and jute, processes from fibre to fabric, history of clothing material etc. Link https://youtu.be/FziVnaPN7vs https://youtu.be/q68kIdOnEtk

Procedure

Brainstorming:

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- fibres and their types, cotton and jute, process from fibre to fabric, history of clothing material etc.

Students Participation

- The students will make a mat to show weaving pattern by using coloured strips.
- They 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.

Assignments / Recapitulation

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

- What did people in the earlier days used to wear?
- Name some unstitched clothes?
- What advantages does cotton have over synthetic clothes?
- What type of soil and climate is good for growing cotton?
- Jute is commonly called as____in Hindi.
- Synthetic fibres are mostly obtained from____.
- The process of changing fibre into yarn is called___.
- In India___is the largest producer of jute.

Independent Practice: Students will do the questions in the notebooks from the textbook.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students would be able to collect different fibres& paste them in their notebook

Learning outcomes

- Students will be able to know and understand:
- Importance and types of fabrics.
- Difference between natural fibre and synthetic fibre.
- Meaning and importance of spinning, weaving, knitting.
- History of clothing material.

Resources

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc..

Co-scholastic activities

Students will be able to:

- Collaboratively make a chart by collecting and pasting different fabrics.
- Critically study the evolution of clothing material.

Assessment

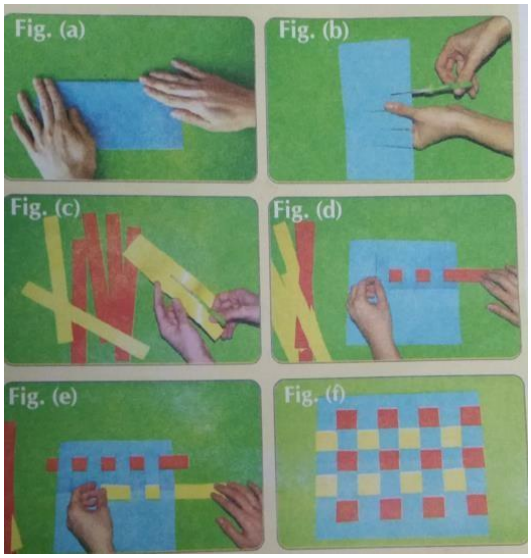
It will be done on the basis of the activities, responses, classification chart including quiz, MCQs, oral and written test etc.

Feedback and Remedial Teaching

- Individual attention
- Using pictures/mazes/stories

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: VI* SCIENCE LESSON PLAN**

Topic: Sorting Material Into Groups (**MAY MONTH**)

No. of days needed to complete the topic-15 days

Objectives

- Students will be able to know and understand different kinds of materials.
- Properties of materials.
- Elaborating on the need of classification.

Previous knowledge testing

The teacher will ask

- what do you mean by object?
- Are all objects same in shape, size and colour?
- Why do we classify the objects?
- What is a material?

Important Spellings

classification, materials, appearance, texture, hardness, soluble or insoluble, floating, sinking, transparent, opaque, translucent, nitrogen, methane, alcohol, miscible, immiscible.

Explanation with innovative methods used

Activities:

- Role play on the topic differences in solid liquid and gas
- Role play on the topic differences between transparent translucent and opaque materials.
- To understand sinking and floating objects in water through activity.
- To separate miscible and immiscible liquids in water through activity.
- Students will be shown the following video:

Link:

https://youtu.be/jKgXUek8XPs

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.

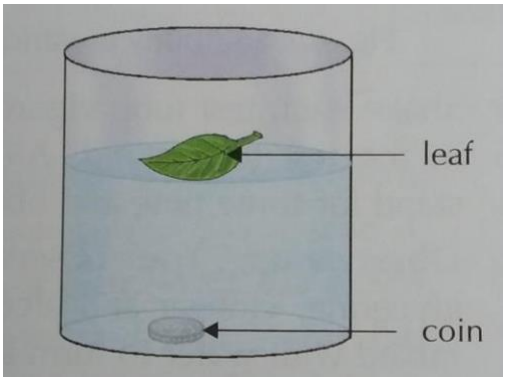
Introduction of the topic: PPT and digital content would be shared.

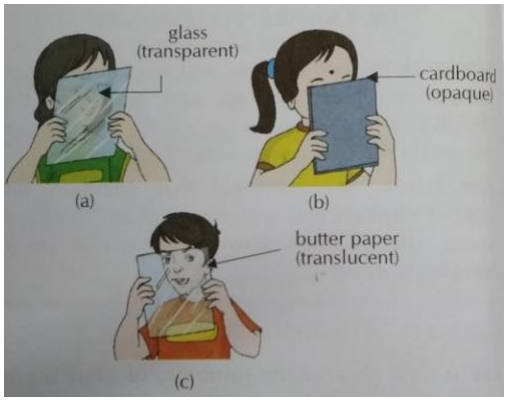
Questioning- Multiple level questions: The teacher will prepare a list of questions on the topic classification of objects and its importance, different kind of materials, properties of materials.

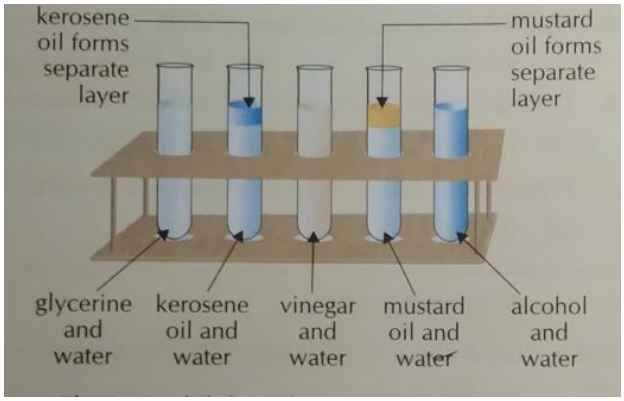
Think-pair-share: Students will read the topic again after the teachers explanation and then discuss in pair about the topics discussed in class.

Students participation

- Students will actively participate in the various activities done in the class.
- They will draw various diagrams related to the topic.
- They will actively participate in the quiz, solving daily practice problems, solving MCQs, loud reading, collaborative learning, role play etc.







Recapitulation/ Assignments

The teacher will ask:

- On what basis do we classify objects?
- Why gold and silver are used to make jewellery?
- Name two liquids which are miscible in water?
- Why does sugar disappear in water?

Independent practice: Students will do the questions in their notebook from the textbook.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students should be able to draw different diagrams in a beautiful manner with coloured sheets, pictures and pens.
- Develop their skills through role play.

Learning outcomes

Students will be able to know and understand:

- Different kind of materials.
- Classification and its importance.
- Properties of materials.
- Differences between solid, liquid, and gas.

Resources

Everyday Science by Cordova publication, NCERT Exemplar.

Co-scholastic activities

Students would be able to

- Collaboratively discuss about different kinds of materials.
- Critically analyse various properties of materials.
- Critically classify materials on the basis of all the properties.

Assessment

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

Feedback and Remedial Teaching

- Focus on Reading skills
- Giving positive remarks
- Using pictures/ mazes/ stories
- Discussing sub topics with more examples

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- VI SCIENCE LESSON PLAN (2023-24)

TOPIC:SEPARATION OF SUBSTANCES (July Month)

No. of days needed to complete the topic-15 days

OBJECTIVES:

- To make the students aware of concept of a mixture and its types.
- To explain the need for separation of substances in a mixture.

PREVIOUS KNOWLEDGE TESTING-

Teacher will show a sample of grains and husk mixed together to the students and ask them whether this is a mixture or not. The students will answer 'YES'.

The teacher will then ask the students:

- What is a mixture?
- Name the types of mixture?
- What is the need for separation of substances in a mixture?
- Which method you will use to separate stones from pulses?

IMPORTANT SPELLINGS

Homogeneous mixture, Heterogeneous mixture, threshing, winnowing, sieving, filtration, loading, solution, solute, distillation.

EXPLANATION WITH INNOVATIVE METHODS

- To study the process of loading by using a piece of alum in muddy water.
- To study the process of sedimentation, decantation and filtration through an activity.
- The processes of hand-picking, threshing, winnowing and sieving can be explained through role-play.
- Concept of solution will be explained with activity.

PROCEDURE:

- The teacher will explain mixture by giving examples. To explain types of mixture, teacher will make three groups of students in classroom. Then teacher will explain that the group having similar members like only boys or only girls is a homogeneous group and group having both boys and girls is heterogeneous group. The teacher will correlate this example with homogeneous and heterogeneous mixtures in order to clarify them.
- Teacher will then explain various methods of separation of substances from a mixture as well as its need to the students by taking examples from day to day life .
- The teacher will explain loading, sedimentation, filtration with an activity.
- Concept of solution will be explained by teacher with an activity.

STUDENT'S PARTICIPATION:

- The students will take part in various activities performed in class.
- The students will take part in role play to make the topics more interesting.
- The students will draw various diagrams related to the chapter.
- Fill-ups, true/false, MCQ's will be solved in book.
- Q/Ans will be done in notebook.

RECAPITULATION: The teacher will ask:

- What is meant by filtrate?
- Give two examples of miscible liquids?
- Why is water called universal solvent?

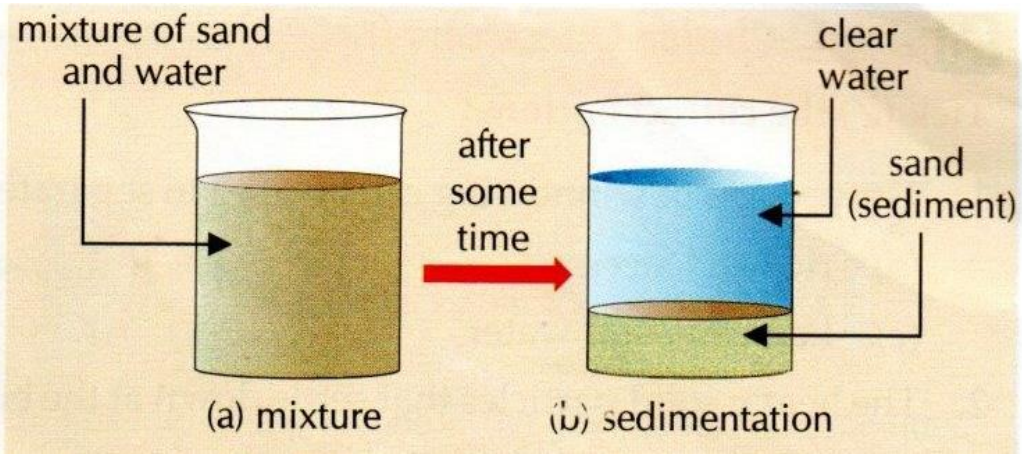
ASSIGNMENT:

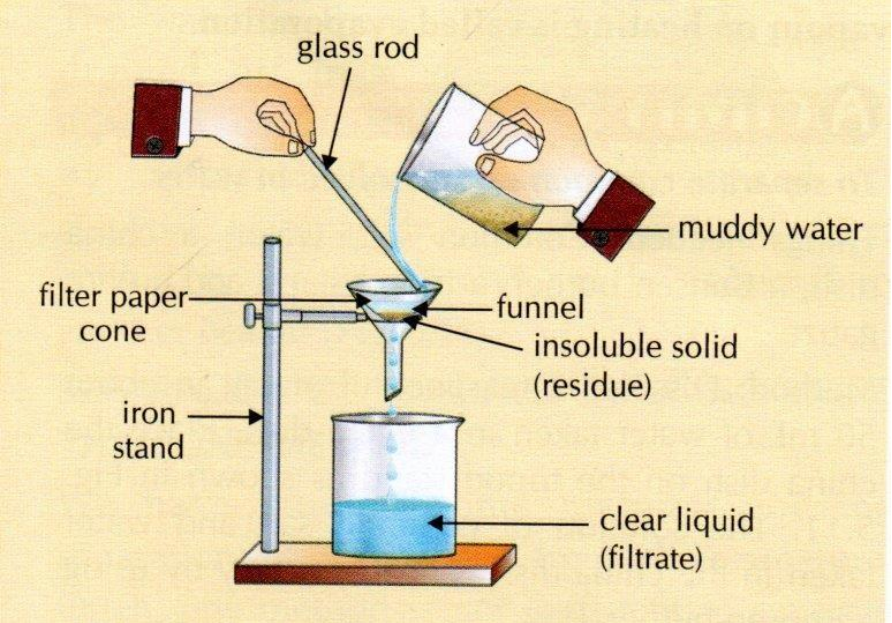
- Diagrams like processes of sedimentation, decantation and filtration will be given as homework.
- Students will be asked to perform an activity "to check the amount of various solids which can dissolve in given solvent at room temperature."
- Students will be asked to make videos on different activities discussed in class.

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

- Students will be able to collaboratively make a chart on various methods of separation by using different colored sheets.
- They will also learn about various methods of separation through role-play.
- Students will draw diagrams of processes of sedimentation

filtration, etc.





SUSTAINABLE DEVELOPMENT GOALS

- Industry, innovation and infrastructure.
- Decent work and economic growth.

LEARNING OUTCOMES;

- Students will be able to differentiate between heterogeneous and homogeneous mixtures.
- They will learn about need for separation of substances in a mixture.
- The students will get knowledge about need for separation of substances in a mixture.
- The students will get knowledge about various methods of separation of substances (solid, liquid or gas) from a mixture.

RESOURCES:

- Everyday Science by Cordova publications
- NCERT Exemplar
- The following video will be shown to the students:

Link: https://youtu.be/1eR0dXX10MM

Co-scholastic activities:

Critical thinking, communication, collaboration skills will be developed in students by various activities.

ASSESSMENT:

Answer the following:

- What is filtrate?
- Name two heterogeneous mixtures.
- What is loading?
- Define solubility.
- What is meant by residue?
- Fill ups:

1._____ and_____ can be used for separating insoluble solid from liquid.

2.The extent to which a substance gets dissolved in liquid is called its_____

Feedback and Remedial Teaching

- **Individual attention to the students**
- **Enhancing Reading skills**
- **Using pictures/mazes/Examples/Diagrams**

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 6 – SCIENCE LESSON PLAN (July Month)

TOPIC – The Living and The Non Living

-The Living Organisms and their Surroundings(Internal Assessment)

PROCEDURE

- Reading and discussion of these chapters will be taken up in the class
- These chapters will be taken up for internal assessment (Individual project)

CLASS 6 -SCIENCE LESSON PLAN

TOPIC – MOTION & MEASUREMENT OF DISTANCES (AUGUST MONTH)

No. of days needed to complete the topic-15 days

OBJECTIVES

- To make students understand about ancient and standard units of measurement
- To make students convert units of measurement of Distances
- They should be able to take necessary precautions while using a scale.
- To make students understand about the concept of rest and motion.
- They should be able to differentiate between various types of motion

PREVIOUS KNOWLEDGE TESTING-The teacher will ask the students

- How did people travel from one place to another in ancient time?
- What are the present means of transport?

IMPORTANT SPELLINGS

Vacation, Measurement, Temperature, Handspan, Cubit, Pace, Fathom, kelvin, Stationary, Relative, Translatory, Rectilinear, Curvilinear, Circular, Rotatory, Spinning, Periodic, Multiple

EXPLANATION WITH INNOVATIVE METHODS

- **Different means of transport in ancient and modern times will be discussed.**
- **The students will compare the length of table by Handspan method and using measuring tape.**
- **Different types of motion will be explained with the help of examples and videos**

PROCEDURE –The teacher will start the topic by Handspan activity and precautions to be taken while using a scale will be discussed. Types of motion with examples will be discussed through videos/smart class.

STUDENT'S PARTICIPATION

The students will record the result of Handspan activity in their notebook.

They will paste pictures related to different types of motion.

ASSIGNMENTS/RECAPITULATION

- The teacher will give numericals related to conversion of units of distance.
- They will measure the length of the curved line by using a thread.
- The teacher will ask the students –

What is Measurement?

What are various standard units of measurement ?

What is difference between rest and motion

Can different motions occur at the same time ?

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS –

The students will draw / paste coloured pictures of various types of motion

LEARNING OUTCOMES – Students will be able to –

- Define measurement and standard units of measurement
- Describe the ways to measure length
- Explain the concept of rest and motion
- Define & describe different types of motion

RESOURCES

- Everyday Science by Cordova publications
- NCERT Exemplar
- Diksha platform
- Videos/Smart class

Co-scholastic Activities

Comparison of ancient methods and standard units of measurement of length

Measurement of length of curved line by using thread or divider

ASSESSMENT

The teacher will take tests related to different types of motion with examples.

Numerical solving ability will be judged by giving various questions to solve

FEEDBACK & REMEDIAL TEACHING

- Focus on Reading skills and numerical solving ability
- Individual attention to the student
- Support program (Train student who excel in particular topic 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 6 Science Lesson Plan(AUGUST MONTH)

TOPIC: LIGHT, SHADOWS AND REFLECTIONS

No. of teaching days needed to complete the topic-15 days

OBJECTIVES:

- Students will learn about transparent, translucent and opaque materials.
- They will learn about shadow and its characteristics.
- They will understand pinhole Camera.
- They will learn about rectilinear propagation of light, mirrors and reflection of light.

Previous Knowledge Testing

The teacher will ask the students:

- Are we able to see things in dark room?
- Can we see everything around us when tune light is switched on?
- What is needed to see different things around?
- What is light?

IMPORTANT SPELLINGS:

Luminous objects, shadows, opaque, Pinhole camera, mirrors, reflection, image.

EXPLANATION WITH INNOVATIVE METHODS:

- Teacher will explain different sources of light with examples.
- Teacher will explain different types of objects and materials by taking examples from day to day life.
- Rectilinear propagation of light, concept of shadows, reflection of light will be explained with help of suitable activities.
- Teacher will also explain the concept of Pinhole Camera with help of activities.

PROCEDURE

- Teacher will explain concept and properties of light and shadows with help of suitable activities.
- Teacher will explain different objects and materials by taking examples from day to day life.
- Concept of Pinhole Camera will be explained with help of activities.
- Reflection of light and mirrors will be explained through activities.

PARTICIPATION OF STUDENTS:

- The students will help the teacher in the activities to be conducted in class.

- Q/Ans will be done in notebook.
- Fill-ups, true/false etc will be done in book.

RECAPITULATION:

The teacher will ask:

- What are opaque materials?
- What are characteristics of shadow?
- What is Pinhole Camera?

ASSIGNMENTS:

- Learning of Q/Ans and reading of chapter pages will be given as H.W.
- Discussion will be done in class "How different our world would be if light did not travel in straight line"
- Students will be asked to make videos on different activities discussed in class.

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

- Students will be able to make a chart on transparent, translucent and opaque materials.
- Students will be able to make a pinhole camera by using a cardboard.

LEARNING OUTCOMES

Students will know and understand:

- Concept of light and reflection of light.
- Concept of shadows.

RESOURCES:

- Everyday Science by Cordova publications
- NCERT Exemplar
- The following video will be shown to the students: Link for video:

https://youtu.be/MP244jr51Tw

CO-SCHOLASTIC ACTIVITIES

Critical thinking, communication, collaboration skills will be developed in students by various activities.

ASSESSMENT:

- Differentiate between an image and shadow.
- What is lateral inversion.

- What is meant by reflection of light?
- What is meant by translucent material?
- Name three opaque mater

FEEDBACK & REMEDIAL TEACHING

- Focus on Reading skills
- Individual attention
- Taking small tests topic wise

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

Class VI SCIENCE LESSON PLAN

TOPIC: CHANGES AROUND US (October Month)

No. of days needed to complete the topic- 7days

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OBJECTIVES

Students will be able to

- differentiate between reversible and irreversible changes
- list various changes
- explain the term expansion and contraction in relation.

PREVIOUS KNOWLEDGE TESTING -: The teacher will ask

- Heating and cooling change
- Basic knowledge of heating and cooling.
- Basic knowledge of state of matter

IMPORTANT SPELLINGS - :Reversible changes irreversible changes , physical and chemical changes, temporary permanent, charred sugar, properties, contracts expands, pressure, mixing etc.

EXPLANATION WITH INNOVATIVE METHODS USED

Activities

- Various activities will be done by the students and make the videos to show reversible and irreversible changes like tearing of paper , burning of paper. Inflating of balloon, bursting of balloon.
- Videos will be shared with students in their class group to explain expansion & contraction of a metal rim.

Link- https://m.youtube.com/watch?v=Y99KKzeKqAQ https://youtu.be/58dZOViQdvI

PROCEDURES -:

- **Brain Storming** The class would start with a discussion on what the students have already leant 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.

- Activities will be done by students about the usefulness of explanation & contraction in day to today life.

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

- **Questioning** -: Multiple level questions - Teacher will prepare a list of question about the types of changes and ask these questions during discussion.

STUDENT'S PARTICIPATION -:

- The students will draws various diagrams related to the topics.
- 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.

Assignments / Recapitulation

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

- What are reversible Changes

- How heating and cooling processes go in nature.
- Why is mercury used in the thermometers?
- An object expands on_____.
- Glass is a_____substance.
- Ripening of fruits is an example of____change.
- Salt is more____in water than sugar.
- When quicklime is mixed with water, it is converted into____.

Independent Practice -: Students would do the questions in their notebook from the text book

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

Students would be able to

- Make different diagrams in an artistic way.
- Make a chart pasting different types of changes (i.e reversible & irreversible) by using different colorful sheets.

LEARNING OUTCOMES -:

The students will be able to

- Categorize the various changes around them as reversible and irreversible.
- Enhance their level of understanding of different changes by applying it in different situations around them.
- Explain expansion & contraction by taking examples from day to day life.

Resources

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc.

COSCHOLASTIC ACTIVITIES -:

The students would be able to

- through effective reasoning & critical thinking, classify changes into as reversible and irreversible category
- conduct experiments based on various reversible and irreversible
- draw inference from them by reflecting critically on learning experience & processes.
- critically think & collaboratively carry out the discussion to explain expansion & Contraction of metal.

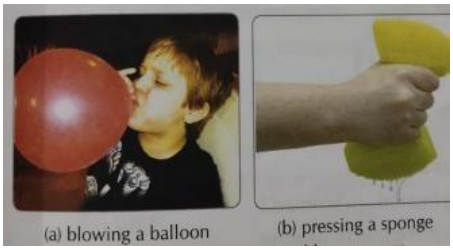
ASSESSMENT -: it will be done on the basis of the activities as well as responses to the probed questions made for class discussions like quiz, mcq's oral & written test, Periodic test etc

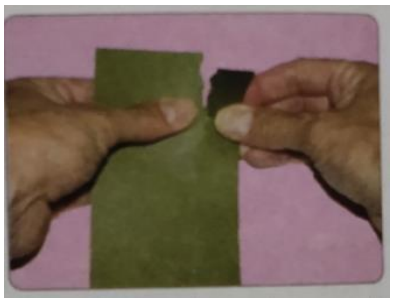
Feedback and Remedial Teaching

- Focus on Reading skills
- Individualized educational program
- Using pictures/ mazes/stories/examples

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 VI LESSON PLAN

TOPIC-: Getting to know plants. (November Month)

No. of days needed to complete the topic-15 days

OBJECTIVES :- Students will be able to know about

- different kinds of plants
- understand functions of leaf, stem, root
- differentiate tap root & fibrous root
- recognise parts of flower

PREVIOUS KNOWLEDGE TESTING -: The teacher will ask

- Classify the following plants into herbs, shrubs & trees Sunflower, China rose ,mango, tomato, lemon, gulmohar
- Which is the most attractive part of a plant?
- Why leaves are green in colours?

IMPORTANT SPELLINGS -: creepers, climbers, tap root, fibrous root, conduction, pneumatophores, rhizobium bacteria, reticulate, parallel venation, transpiration, pollination, fertilization, pedicel, thalamus, nodes, internodes, stigma, style, ovary, pistil anther, filament etc,

EXPLANTION WITH INNOVATIVE METHODS USED

Activities

- Collection & pasting of different types of leaves on the basis of leaf venation.
- Pasting of flowers after drying to differentiate its various parts.
- To take impressions of leaves with colours to understand different types of venation.
- Various videos will be made by the students and shared in their class group.
- Video will be shown to students to understand photosynthesis, modified function of stems, root & leaves.

Link - https://m.youtube.com/watch?v=oVzTO0GZbH4 https://youtu.be/9P5yjMeZxqk

PROCEDURE

Brain Storming -: The class would start with a discussion on what the students already know about different kinds of plants in their 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 their class group.

Questioning -: Multiple level questions - Teacher will prepare a list of question about the types of plants & will ask these questions during discussion.

STUDENT'S PARTICIPATION

- The students will draw various diagrams related to the topic.

- They will actively participate in quiz solving daily practice problems, solving MCQ'S etc.
- Various videos will be made by the students and shared in their class group.

Assignments / Recapitulation

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

- Why are leaves known as 'kitchen of the plant'
- How does exchange of gases take place in plant.
- Why is stem called a two-way street?
- Define venation. Name its two types.
- Give two modified functions of stem.
- _____is the male reproductive part of a flower.
- China rose is a herb or shrub_____.
- Plants with reticulate venation in their leaves have____roots.
- Bleaching removes_____from the leaves.
- The fusion of male and female sex cells is called_____.

Independent Practice -: Students would do the questions in their notebook from the text book.

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

Students would be able to-

- Draw different diagrams in a beautiful manner with colured sheets & pens.
- Pasting pictures of different kinds of herbs ,shrubs ,trees ,creepers, climbers in a collage form.
- Develop their skills through the videos which they will share in their group.

SUSTAINABLE DEVELOPMENT GOALS

- Life on Land.
- Life below Water

LEARNING OUTCOMES

The students will be able to know & understand

- Care for the environment specially by planting some trees.
- Basic difference between Herbs shrubs, trees, creepers, climbers Differentiate parts of leaf & modified functions.
- Identify Tap root & fibrous root.
- Differentiate parts of a flower & their natural surroundings.

RESOURCES -:

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc.

COSCHOLASTIC ACTIVITIES- The student will be able to **learn**

- Through effective reasoning & critical thinking,
- classify the various plants into different categories.
- Critically analyse various parts of leaf as well as flowers & their importance.
- Draw interferences from them by reflecting critically on learning experiences & processes.
- Collaboratively carry out the discussion to explain various topic of the chapters

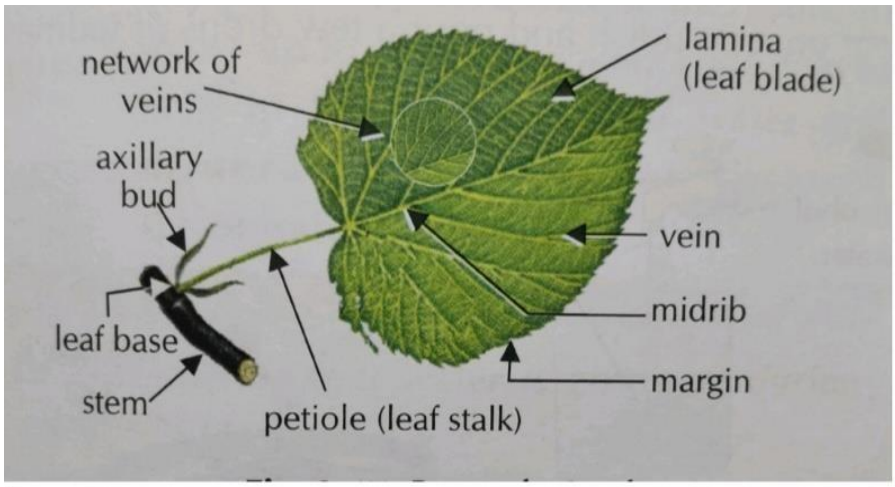
ASSESSMENT-: It will be done on the basis of the activities responses & the classification char including quiz, problem solving, MCQ'S, oral & written test, Periodic test, etc.

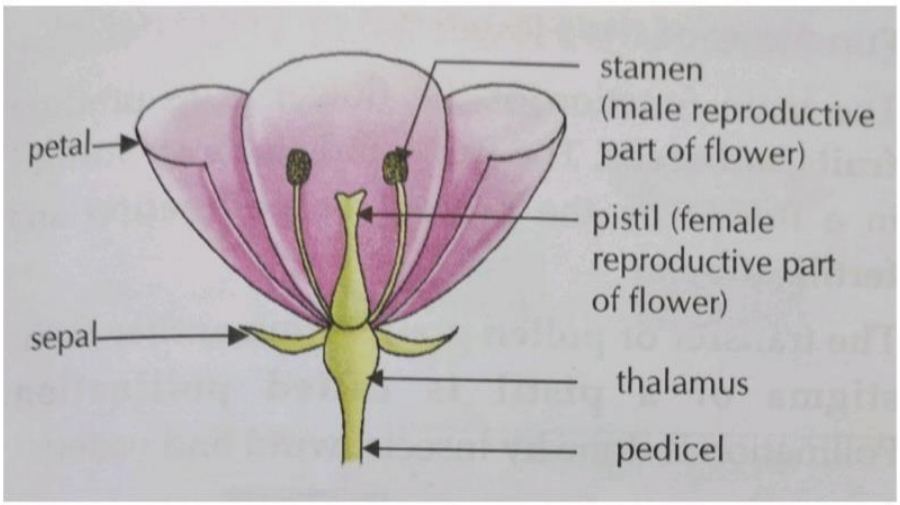
Feedback and Remedial Teaching

- **Focus on Reading skills**
- **Using pictures/Diagrams/Videos**
- **Individual attention to the student**

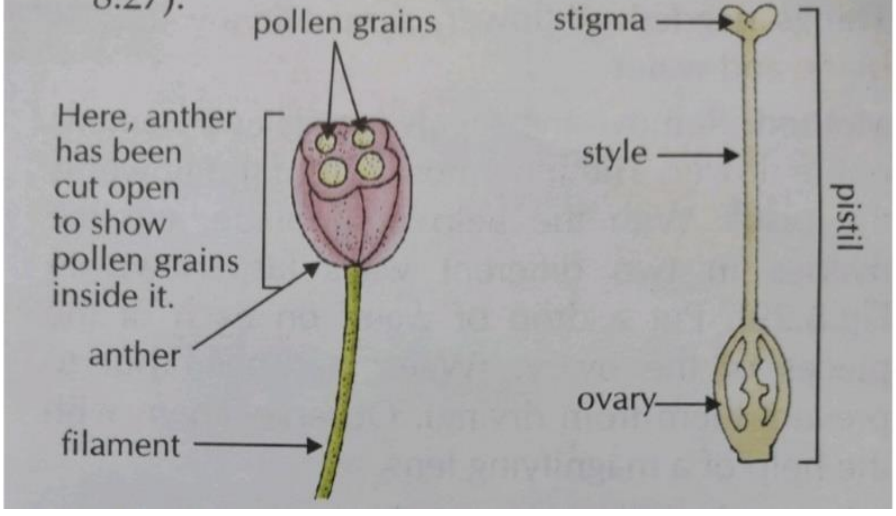
Inclusive Practices and Full Participation without Discrimination

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


network of veins
lamina (leaf blade)
axillary bud
vein
midrib
leaf base
margin
stem
petiole (leaf stalk)


stamen (male reproductive part of flower)
petal
pistil (female reproductive part of flower)
sepal
thalamus
pedicel

8.27).


pollen grains
stigma
Here, anther has been cut open to show pollen grains inside it.
style
pistil
anther
ovary
filament

CLASS – 6 – LESSON PLAN

TOPIC– Body Movements (November Month)

No. Of days needed to complete the topic-7days

PROCEDURE

- Reading and discussion of back exercises from the book will be taken up.
- This topic will be taken up for internal assessment (MCQ/One Word/Role play

CLASS 6 -SCIENCE LESSON PLAN

Topic: Electricity and Circuits (December Month)

No. of days needed to complete the topic-15 days

Objectives:

- To make students aware of concept of electricity.
- To explain about electric cell, electric bulb.
- To explain about electric switch.
- To explain working of electric torch and concept of conductors, insulators.

PREVIOUS KNOWLEDGE TESTING-

Teacher will ask the students:

- What is needed for functioning of television, computer?
- How does bulb of electric torch glow?
- What is electricity?

Important Spellings:

Electric energy, chemicals, manganese dioxide, ammonium chloride, filament, tungsten, electric circuit, electric switch, electric torch, battery, charcoal, electric cell, conductors, insulators.
Explanation with innovative methods:

- Teacher will explain the concept of electric cell and electric bulb with help of colourful drawings made to work on them.
- The concept of electric cell, electric bulb and electric circuit will be made clear with help of suitable activities.
- Teacher will explain working of electric torch with help of a suitable drawing made on it.
- Teacher will explain conductors and insulators through activities.

Procedure: Teacher will explain the concept of electric cell, electric bulb, electric circuit, electric conductors and insulators by performing different activities. Teacher will show colourful diagram of electric torch and will explain its working. The concept of electrical safety will be explained by taking examples from day to day life.

Participation of students:

- The students will help the teacher in the activities to be conducted in class
- The students will draw various diagrams related to chapter.
- MCQ's, fill ups, true/false will be solved in book.
- Q/Ans will be done in notebook.

Recapitulation: The teacher will ask:

- What is an electric cell?
- What is an electric circuit?
- What are conductors?

Assignments:

- Diagrams like electric cell, electric bulb, electric torch will be given as homework.
- Students will be asked to make videos on different activities discussed in class.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students will be able to collaboratively make a chart on different sources of electric energy by using different coloured sheets.

SUSTAINABLE DEVELOPMENT GOALS

- Responsible consumption & Production.
- Save electricity by turning the appliances off when not in use.
- Turn off the lights if you don't need them, as your T.V. or computer screen provides a cosy glow.

Learning Outcomes:

Students will know and understand:

- Concept of electric cell, electric bulb, electric circuit.
- Working of electric torch.
- Electric conductors, electric insulators and electrical safety.

Resources:

- Everyday Science by Cordova Publications
- NCERT Exemplar

- The following video will be shown to the students:

Link for video:

https://youtu.be/uvg_1JiNUYA

Co-scholastic Activities:

Critical thinking, communication, collaboration skills will be developed in students by various activities.

Assessment: The following questions will be asked in test for assessing performance of students:

Tick the correct option:

- The electricity that we use at our homes comes from

(a)battery

(b)cells

(c)electric power station

(d)solar system

- The flow of electricity is called as electric

(a)Energy

(b)Power

(c)Generator

(d)Current

- Answer the questions:

1.In which direction electric current flow?

2.What is open circuit?

3.Draw diagram of electric bulb?

4.Name one non-metal which is good conductor of electricity?

Feedback and Remedial Teaching

- Focus on Reading and diagrammatic skills.
- Individual attention to the student
- Using pictures/ electric circuits

- Positive remarks for rectifying the difficulty in various subtopics

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 6 -Science Lesson Plan

Topic: Magnetism (December Month)

No. of days needed to complete the topic-15 days

Objectives:

- To make the students aware of concept of magnets.
- To explain the properties of magnet.
- To explain concept of magnetism and demagnetisation.

Previous Knowledge Testing:

- If we leave the door of a refrigerator slightly open, it shuts down automatically. Why?
- Why do common pins stick to the holder in pinholder?
- What are magnets?

Important Spellings:

Magnets, Magnetite, Natural magnets, Artificial Magnets, attractive property, directive property, attraction and repulsion property, magnetism, magnetic compass.

Explanation with innovative methods:

- Teacher will explain concept of magnet, types of magnet and making of magnet with examples and activities.
- The properties of magnet will be explained by performing suitable activities.
- The concept of magnetic compass will be explained with activity.
- Teacher will explain concept of magnetism and demagnetisation with different examples.

Procedure: Teacher will explain discovery of magnet, types of magnet and making a magnet with examples and activities. Different activities will be performed in class to explain properties of magnet and magnetic compass. The concept of magnetism and demagnetisation will be made clear with help of activities .Important concepts related to magnets will be made more clear by showing videos to students.

Participation of students:

- The students will help the teacher in activities to be conducted in class.
- MCQ's, fill ups, true/false will be solved in book.
- Q/Ans will be done in notebook.

Recapitulation:

- What are magnets?
- Give properties of a magnet?
- Give few uses of magnets?

Assignment:

- Make a list of things at your home in which magnets are used.
- Discuss in class "The use of magnets."
- Students will be asked to make videos on different activities discussed in class.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students will be able to make a chart on magnet and its properties using different coloured sheets.
- Concept of magnets will be explained through role play.

Learning Outcomes

Students will know and understand:

- Concept of Magnet and its properties.
- Concept of Magnetism, Magnetic Compass and Demagnetisation.

Resources:

- Everyday Science By Cordova publications
- NCERT Exemplar
- The following videos will be shown to the students:

Links:

https://youtu.be/ZDNlskpHpKc https://youtu.be/_X0VfCm4klg

Co-scholastic activities:

Critical thinking,communication,collaboration skills will be developed in students by various activities.

Assessment:The following questions will be asked in test for assessing performance of students:

- What is meant by directive property of magnet?

- What are magnetic substances?
- Name two objects that are attracted by magnets?
- What is meant by poles of magnet?Where are poles of a bar magnet located?
- What does a magnetic compass tell about?

Feedback and Remedial Teaching

- Focus on Reading skills
- Paying individual attention
- Use of diagrams/ Magnetic compass/Magnetic toys

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 6 Science Lesson Plan

Topic – Water(January Month)
No.of days needed to complete the topic-15 days

OBJECTIVES

- To make students understand why water is essential for survival of organisms.
- To make students understand about the methods of conservation of water.

PREVIOUS KNOWLEDGE TESTING-

- Is drinking of contaminated water good for health?
- How are wet clothes dried ?
- Does the water evaporate from plants ?

Important spellings –

Radiators, Photosynthesis, Jaundice, Malaria, Evaporation, Condensation, Humidity, Transpiration, Precipitation, Cholera, Dysentery, Droughts Availability, Harvesting.

Explanation with Innovative Methods

- Different states of water and how they are interchanged will be discussed in the class with examples and activities.

- Activity to show condensation of water vapour on cooling will be taken up in the lab.
- Project on effects of floods and droughts (Individual/group)

PROCEDURE -Various uses of water, conservation of water and causes of natural disasters like floods and droughts will be discussed in the class. The students will list the amount of water used in daily activities. The students will speak on the topic – Effect of polluted water on aquatic plants and animals.

Student's participation

- Students will draw diagrams of water cycle and rainwater harvesting in their notebook.
- They will speak on various methods of conservation of water

Assignments /Recapitulation

- The teacher will ask students definitions of evaporation, humidity, condensation, transpiration, rainwater harvesting
- The students will draw a poster on conservation of water.

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

- Poster making
- Model of Water Cycle

SUSTAINABLE DEVELOPMENT GOALS

- Clean water and sanitation.
- Sustainable cities and communities.
- Responsible consumption & Conservation of Water.

LEARNING OUTCOMES

Students will be able to –

- List the importance and uses of water.
- Describe sources of water
- Explain Water Cycle
- Describe floods and droughts
- Explain Water problem and how to conserve water

RESOURCES

- Everyday Science by Cordova publications
- NCERT Exemplar
- Diksha learning platform

Co-scholastic Activities and Assessment

Students will participate in speaking about water conservation methods in the class.

They will complete project on effects of floods and droughts.

The teacher will assess the students by --

- Taking oral and written test of various subtopics
- Completion of assignment in the notebook

FEEDBACK and REMEDIAL TEACHING

- Focus on Reading skills.
- Drawing of diagrams
- Paying individual attention
- Use of pictures/stories related to natural disasters

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 6 Science Lesson Plan

Topic:Air Around Us (January Month)

No. of days needed to complete the topic-15 days

Objectives:

- To explain the presence of air all around us.
- To explain the composition of air.
- To explain how air supports life and also uses of air.
- To explain how the balance of oxygen and carbon dioxide is maintained in nature.
- To explain role of atmosphere.

Previous Knowledge Testing:

- Name few factors essential for survival of living things?
- Which is the most important factor for living things to survive?
- Can we smell air?
- Can we see air?
- Is the air present all around us?

Important Spellings: atmosphere, oxygen, nitrogen, carbon dioxide, humidity, smoke, respiration, gills, stomata, photosynthesis, interdependence, compressed, pollination.

Explanation with innovative methods:

- To show that air is present all around us and air occupies space with help of activity.
- To show presence of oxygen and nitrogen in air with help of activity.
- To show presence of air in water and soil with help of activity.
- Composition of air, importance of air for life, balance of oxygen and carbon dioxide in nature will be explained through different examples.

Procedure: The teacher will explain air is present all around us, air occupies space, air contains oxygen and nitrogen, air contains carbon dioxide, presence of air in water and soil, air contains dust particles by performing various activities in classroom. The concept of atmosphere, composition of air, balance of oxygen and carbon dioxide in nature will be explained with different examples. Teacher will explain importance and uses of air by taking different examples.

Participation of students:

- The students will help the teacher in the activities to be conducted in class.
- Fill -ups, true/false will be solved in book.
- Q/Ans will be done in notebook.

Recapitulation: The teacher will ask:

- What is atmosphere?
- How air supports life?
- Discuss the uses of air?

Assignments:

- Discuss in the class: 'Interdependence of plants and animals'.
- Make a windvane.
- Students will be asked to make videos on different activities discussed in class.

Art Integration / Interdisciplinary linkages and Infusion of Life Skills

- Students will make a poster showing balance of oxygen and carbon dioxide in air.
  SUSTAINABLE DEVELOPMENT GOALS
- Calculate your carbon footprint and offset your remaining carbon emissions.
- Sustainable cities and communities.

Learning Outcomes:

Students will know and understand:

- Concept and various properties of air.
- Composition, importance and uses of air.
- Concept and role of atmosphere.
- Balance of oxygen and carbon dioxide in nature.

Resources:

- Everyday Science by Cordova publications
- NCERT Exemplar
- The following video will be shown to the students:

Link:

https://youtu.be/ltapZhWh9Hc

Co-scholastic Activities:

Critical thinking, communication, collaboration skills will be developed in students by various activities.

Assessment:

The following questions will be asked in test for assessing performance of students:

- How is air helpful for us in different ways?
- How plants and animals maintain balance of oxygen and carbon dioxide in nature?
- Which gas is rare in earth's atmosphere?
- Give one use of windmill?

Feedback and Remedial Teaching

- Focus on Reading skills
- Use of pictures/slogans/stories
- Individual attention to the student
- Motivation by 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 VI Science Lesson Plan

Topic- Garbage in, Garbage out (February Month)

OBJECTIVES: Students will be able to

- Differentiate between biodegradable and non-biodegradable substances.
- Explain the process of vermicomposting
- Understand the ways of reducing waste
- Know about the methods of garbage disposal.

PREVIOUS KNOWLEDGE TESTING

- The teaches will ask about
- What is garbage.
- Where you throw the waste ?
- Name some sources of waste
- Do you segregate waste at your home ?

IMPORTANT SPELLINGS -: Biodegradable, non- Biodegradable, segregation, reduce, reuse, recycle, composting, landfill, incineration, boon or curse, management, plastic, minimizing, vermicomposting.

EXPLANATION WITH INNOVATING METHODS USED:

- **Activities** -: To understand the concept of recycling, the students will make some useful things from waste material.
- Poster on the topic 'Say No to Plastic'
- Videos will be made on the topic Segregation of Garbage and shared in the class group.
- Videos will be shared with the students in their class group to understand different types of biodegradable & non-biodegradable wastes as well as methods of garbage disposal.

Link- m.youtube.com/watch?v=4JDGFNoY-rQ https://youtu.be/VReXwIwB73E

PROCEDURE :

Brain storming - The class would start with adiscussion on what the students have already know about garbage, sources of waste 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 their class group.

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Questioning -: Multiple level question. Teacher will prepare a list of questions on the topic methods of garbage disposal, ways of reducing waste & will ask questions during discussion.

STUDENT'S PARTICIPATION:

- The students will draw various diagrams related to the topic.
- They will actively participate in quiz solving daily practice problems, solving MCQ'S etc.
- The students will actively participate in the activities, make videos and share in the class group.

Assignments / Recapitulation

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

- Why is disposal of non- biodegradable waste - a big problem
- Which is better & why ? Compositing or vermi compositing.
- What are the basic approaches to the management of wastes?
- _____is natural fertilizer.
- Don't use_____bags to store eatables.
- Solid wastes are commonly called as_____.
- Example of a landfill park in Delhi_____.
- Hospital waste are usually burned in_____.

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

ART INTEGRATION / INTERDISCIPLINARY LINKAGES AND INFUSION OF LIFE SKILLS

- Students would be able to - draw different types of dustbins with different colours. paste picture of different types of biodegradable non biodegradable wastes
- . Poster – on the topic how can we minimize the overuse of plastics.

SUSTAINABLE DEVELOPMENT GOALS

- Sustainable cities and communities.
- Affordable and clean energy.
- Stop paper bank statement and pay your bills online or via mobile so as to reduce paper waste.

LEARNING OUTCOMES

Students will know and understand

- care for their environment by following three R's Principle.
- Importance of nature and natural resources.
- to deal with garbage disposal. the terms (a) Garbage (b) landfill the waste as the waste which rots & which does not rot.
- explain the terms like vermicomposting and recycling.

RESOURCES:

Everyday Science by Cordova Publication, NCERT Exemplar, Various Online resources including YouTube Videos, Diksha Platform etc.

Co SCHOLASTIC ACTIVITIES:

The students will be able to

- Develop the ability to differentiate between various types of methods of garbage disposal
- Critically analyze the three R's principle.
- Design creative methods to show how can we minimize the overuse of plastics by posters
- Collaborate with each other to discuss the methods to reduce the use of plastics & dealing with garbage.

ASSESSMENT

It will be done on the basis of the activities, responses & the classification chart including quiz, problem solving questions, MCQ'S , oral & written test, Periodic test etc.

Feedback and Remedial Teaching

- Focus on Reading skills

- Use of pictures/slogans/stories
- Individual attention to the student
- Motivation by 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