

Grade IV

മലയാളം

പഠനനേട്ടങ്ങൾ

പഠന നേട്ടങ്ങൾ

Grade -IV

1. വടക്കൻ പാട്ടുകൾ തെക്കൻ പാട്ടുകൾ ഇവയിൽ വടക്കേ മേഖലയിലെ നായന്മാരുടെയും തീയൻമാരുടെയും കഥകൾ വിവരിക്കുന്നു.
2. ഉത്തര കേരളത്തിലെ പ്രാചീന വീരഗാനങ്ങൾ മനോഹരമായ കൽപനകളും സംഘർഷഭരിതമായ സംഭവങ്ങളും ആഖ്യായനവും കൊണ്ട് ഹൃദ്യമാണ്.
3. പശ്ചിമഘട്ടത്തിൽ നിന്നാണ് കേരളത്തിലെ നദികൾ ഉത്ഭവിക്കുന്നത്.
4. പ്രകൃതി നമുക്ക് നൽകിയ വിലയേറിയ അനുഗ്രഹമാണ്.
5. ആപത്തിൽ സഹായിക്കുകയും സഹാനുഭൂതി പ്രകാശിപ്പിക്കുകയും ചെയ്യുന്നയാളാണ് നല്ല അയൽക്കാരൻ.
6. വൃക്ഷം തലമുറകൾക്ക് തണലും ധനവും നൽകുന്നു.
7. സംഗീതം, സാഹിത്യം, നൃത്തം, നാട്യം, മേളം തുടങ്ങിയ സുന്ദര കലകളുടെ സമ്മേളനമാണ് കഥകളി.
8. പച്ച, കത്തി, കരി, താടി, മിനുക്ക് എന്നിവയാണ് കഥകളിയിലെ വേഷങ്ങൾ.
9. ആഘോഷങ്ങൾക്കും വിനോദങ്ങൾക്കും മതസൗഹാർദത്തിലേക്കു നോക്കേണ്ട നാടാണ് കേരളം.
10. കണ്ണുകൊണ്ട് കാണുന്നതെല്ലാം സത്യമാണ്, ചെവികൊണ്ട് കേൾക്കുന്നതെല്ലാം സത്യം ആയിരിക്കണമെന്നില്ല ഇതൊരു പ്രപഞ്ച സത്യമാണ്.
11. തുള്ളൽ പ്രസ്ഥാനത്തിന്റെ ഉപജ്ഞാതാവാണ് കുഞ്ചൻ.
12. ഓട്ടൻ, പറയൻ, ശീതങ്കൻ എന്നീ മൂന്ന് വിധം തുള്ളലുകളുണ്ട്.

13. ഉണരുക, എഴുന്നേൽക്കുക, ലക്ഷ്യം നേടുന്നതുവരെ പ്രവർത്തിക്കുക ഇവയാണ് സ്വാമിവിവേകാനന്ദൻ തത്ത്വങ്ങൾ.

14. രാജാവിവർമ്മ യാണ് ആധുനിക ഭാരതീയ ചിത്രകലയുടെ.

Grade IV

English

Listening and Speaking

Children are involved in listening and speaking through various classroom activities that include debates, role plays and discussions.

Learning Outcomes:

Children will be able to:

- Engage meaningfully in discussions with teachers/peers on a range of topics.
- Respond to specific questions and make comments and elaborate further on the topic.
- Report on a topic or text, in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes,
- Tell a story, or recount an experience in a logical and coherent manner, speaking clearly and at an understandable pace.
- Show enthusiasm listening to English poems/songs/riddles /tongue twisters etc.
- Identify key situations, share ideas and express opinions.
- Take dictation of a 'seen passage'.

Reading and Writing

Children read texts to identify and grasp the main idea for interpretation. They write paragraphs / letters on a variety of topics using a range of vocabulary

Learning Outcomes:

Children will be able to:

- Read texts with comprehension, locate details, identify/ locate the sequence of ideas and events, and grasp the main idea in print and braille.
- Relate ideas with their personal experiences including self-awareness.
- Engage in reading beyond the text materials and enjoy reading.
- Infer the meaning of unfamiliar words by reading the main context.
- Use a dictionary/thesaurus (while using a computer) to look up the meaning of words.
- Write at least two paragraphs of about 150 words at a more advanced level on any given topic.
- Write narratives that recount a well-elaborated event or short sequence of events: that includes details to describe actions, thoughts, and feelings.
- Organize and structure meaningful sentences in a sequential manner.
- Use 'firstly', 'then', 'later', 'finally', etc. to link sentences to indicate passage of time and provide a sense of closure.
- Draw from and write about their personal experiences or real-life situations.
- Use words and phrases to the class appropriate level, including those that convey emotions, actions, etc.
- Write a letter to a parent, friend, relative etc.

Grammar and Vocabulary in Context

Enrichment of vocabulary through the introduction of a variety of idioms and phrases in context. Use of appropriate grammar in a range of written tasks.

Learning Outcomes:

Children will be able to:

- Recognise and explain the meaning of common idioms, adages and proverbs.
- Gain proficiency in the subject-verb agreement.

- Use capital letters for appropriate words in titles, e.g. “The Adventures of Tom Sawyer”, “Stopping by the Woods on a Snowy Evening”.
- Learn the correct use of punctuations in dialogue.
- Learn to use an apostrophe to show singular possession and know the difference between plurals and possessives.
- Spell words correctly that are class appropriate, consulting references as and when required.

Grade IV

Hindi

कक्षा- IV

थीम1: सुनना और बोलना

बच्चे भाषण, कहानी, नाटक, कविता और अब वक्तव्य आदि को ध्यानपूर्वक सुनकर समझते हैं। सुनी गई सामग्री के मुख्य भाव और सार को स्पष्ट उच्चारण के साथ बताते हैं। सामूहिक क्रियाओं के लिए निर्देशों को सुनकर क्रमवार उनका पालन करते हैं। सुनी गई कहानी, कविता और अपने अनुभवों को प्रवाहपूर्ण भाषा में सुनाते हैं।

अधिगम उपलब्धियाँ (Learning outcomes)

- पूर्व कक्षाओं में अर्जित कौशलों का सहज उपयोग कर सकेंगे और दिन-प्रतिदिन के जीवन की आवश्यकताओं के अनुसार उनका विस्तार कर सकेंगे।
- सरल वक्तव्यों और भाषणों को सुनकर समझ सकेंगे।
- किसी क्रियाकलाप को करने के लिए दिए गए क्रमवार निर्देशों को सुनकर समझ सकेंगे और उनका पालन कर सकेंगे। खेल के मैदान में सांस्कृतिक आयोजनों आदि पर निदेश दे सकेंगे।
- समसामयिक विषयों पर आयोजित समूह चर्चाओं में भाग लेंगे और अपने तर्कसम्मत विचार स्पष्ट रूप से प्रस्तुत कर सकेंगे।
- प्रश्नों को ध्यान से सुनकर समझ सकेंगे और उनका तर्कसम्मत उत्तर दे सकेंगे।
- किसी घटना, कहानी, प्रसंग विशेष का प्रत्यास्मरण कर सुना सकेंगे।
- अधूरी कहानी को अपनी कल्पना, अनुभवों के आधार पर पूरा कर सकेंगे।
- तुकबंदी वाली कविताओं को आगे बढ़ा सकेंगे।
- समाचार पत्र के समाचार पढ़कर प्रातः कालीन सभा में सुना सकेंगे।
- रेडियो/ मोबाइल फोन/ कम्प्यूटर आदि द्वारा सुनाए जा रहे संवाद को ध्यान से सुनकर अपने अनुमान से वस्तुस्थिति का पूरा परिचय दे सकेंगे।
- अपने सहपाठियों के घरों में तथा आसपास के परिवेश में बोली जाने वाली अनौपचारिक भाषा तथा विद्यालय की औपचारिक भाषा के अंतर को पहचान सकेंगे।

थीम 2: पढ़ना एवं लिखना (पठन एवं लेखन कौशल)

बच्चे हस्तलिखित और मुद्रित सामग्री को समझकर पढ़ते हैं। उसके मुख्य भाव तथा सार को अपने शब्दों में लिखते हैं। वे अनुच्छेद, औपचारिक और अनौपचारिक पत्र लिखने लगते हैं। मुहावरों को समझकर उनका प्रयोग करते हैं। उनके शब्द-भंडार में तेजी से वृद्धि होती है।

अधिगम उपलब्धियाँ (Learning outcomes):

- पूर्व की कक्षाओं में अर्जित कौशलों का सही प्रयोग कर सकेंगे।

- सुनी और पढ़ी कहानी से अपने संस्मरण जोड़कर लिख एवं पढ़कर सुना सकेंगे।
- सुनी और पढ़ी कहानी को अपने शब्दों में लिख सकेंगे और पढ़कर सुना सकेंगे।
- बाल साहित्य और पत्रिकाओं से कविताएँ, कहानियाँ, नाटक आदि विराम चिहनों का ध्यान रखते हुए उचित बलाघात व अनुतान से पढ़कर सुना सकेंगे।
- सुनी और पढ़ी कहानी के आधार पर पूछे गए 'क्यों' और 'कैसे' प्रश्नों के उत्तर लिख सकेंगे। स्वयं तरह- तरह से प्रश्न बना सकेंगे। जैसे-
 - पठन क्षमता का आकलन करने वाले प्रश्न।
 - कहानी को विस्तार देने वाले प्रश्न।
 - तर्क प्रस्तुत करने वाले प्रश्न ।
- अधूरी कहानी पूरी कर के लिख सकेंगे और पढ़कर सुना सकेंगे।
- स्थानीय समुदाय के किसी व्यक्ति (उल्लेखनीय) कारीगर, श्रमिक आदि से भेंटवार्ता के लिए प्रश्नावली तैयार कर सकेंगे और भेंटवार्ता की कार्यवाही को लिखित रूप से दर्ज कर सकेंगे।
- दूसरों की लिखी हस्तलिखित सामग्री को पढ़ सकेंगे।
- वाक्य संरचनाओं को समझ सकेंगे और दिए गए विषय पर अनुच्छेद तथा अनौपचारिक और औपचारिक पत्र
- लिख सकेंगे (वर्तनी और विराम चिहनों का ध्यान रखते हुए) रचनात्मक लेखन कर सकेंगे।

Grade IV

Mathematics

Theme 1: Numbers

The basis of understanding multi digit numbers lies in the understanding of the place value system. Thus, it is important to start with the concept of place value through manipulatives like place value cards, spike abacus, unifix cubes and expanded and short form of numbers in class. International system of numeration is different than the one used in India. Children will understand that the difference lies in the process of grouping the digits called periods. They should be able to relate to various types of numbers learnt earlier i.e. counting numbers, common fractions and decimal fractions. A clear understanding about the relationship among these numbers will help them in further using these for problem solving strategies. Providing opportunities of using these in different contexts (familiar and unfamiliar) are important to develop strategies to deal with them.

Learning Outcomes:

Children will be able to:

1. Acquire understanding of 6 digit numbers and their use in daily life.
 1. Read and write numbers up to 6 digits(lac) using the Indian system of writing large numbers.
 2. Use place value to write a number in expanded form and vice-versa.
 3. Compare numbers using place value and arrange them in ascending and descending order.
 4. Use the given 6 digits to form the greatest and smallest number.
 5. Represent the numbers (up to 39) using Roman numerals.
2. Work with fractions.
 1. Identify half, one-fourth, three-fourths in a given picture (by paper folding) and also in a collection of objects.
 2. Represent fractions as half, one-fourth and three fourths by using symbols $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ respectively.
 3. Show the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ and other fractions.

Theme 2: Number Operations

This theme aims at children gaining a broader and deeper understanding of the standard algorithms by having many and varied opportunities to use concrete materials such as place-value charts, unifix cubes and base ten blocks in problem-solving situations. The use of these tools will greatly enhance children's exploration of addition, subtraction, and multiplication involving regrouping, and multi digit division. Teaching the standard algorithms through problem solving using manipulatives will help children develop their conceptual understanding of the standard algorithms. Once children have a thorough understanding of the standard algorithms, it will enable them to work flexibly with algorithms and determine when their use is appropriate.

Learning Outcomes:

Children will be able to:

1. Apply operations of numbers in daily life.
2. Add and subtract numbers (up to 4 digits) with or without regrouping.
3. Solve problems involving addition and subtraction in different real life contexts presented through visuals and stories.
4. Construct and write multiplication tables up to 10.
5. Multiply two and three digit numbers using standard algorithm and lattice algorithm.
6. Divide a given number by another number (single digit) by drawing dots and grouping, using multiplication facts and by repeated subtraction.
7. Apply four operations-addition, subtraction, multiplication and division in solving real life situations.
8. Frame word problems based on a mathematical statement.
9. Estimate sum differences and products of two or more given numbers without using paper/pen.
10. Multiply 2 and 3 digit numbers.
11. Divide a number by another number using different methods such as:
 1. Pictorially (by drawing dots)
 2. Equal grouping
 3. Repeated subtraction
 4. Establishing an inter-relationship between division and multiplication
2. Create and solve simple real life situations/ problems related to money, length, mass and capacity by using the four operations.

Theme 3: Playing with Numbers

The theme will promote children's exploration with various facts and properties of counting numbers which lead to many important aspects of the use of mathematics in daily life activities. It will encourage children to work with numbers, identify the patterns and make general rules. The concepts like factors, multiples, common factors and multiples lead to classification of numbers into various interesting groups. Children will be encouraged to work in groups to generalize their explorations about number properties and enjoy working with numbers.

Learning Outcomes:

Children will be able to:

1. Find out factors, prime factors and multiples of numbers.
2. Understanding prime and composite numbers.
3. Understand divisibility by numbers.
4. Calculate HCF & LCM of numbers.

Theme 4: Geometry

In the primary grades, learning of mathematics encourages children to focus on geometric features of two-dimensional shapes and three-dimensional figures. Instructional activities provide opportunities for children to manipulate, compare, sort, classify, compose, and decompose these geometric forms. These types of activities help children to identify and to informally describe some attributes and geometrical properties

of two-dimensional shapes and three-dimensional figures. In the teaching learning process children continue to learn about the properties of two-dimensional shapes and three-dimensional figures through hands-on explorations and investigations.

Learning Outcomes:

1. Acquire an understanding about shapes around them.
2. Identify the center, radius and diameter of a circle.
3. Find shapes that can be used for tiling.
4. Draw cube/cuboids using the given nets.
5. Show through paper folding/paper cutting, ink blots, etc., the concept of symmetry by reflection.
6. Draw top view, front view and side view of simple objects.
7. Observe, identify and extend geometric patterns based on symmetry.
8. Represent the collected information in tables and bar graphs and draw inferences from these.
9. Use tangrams to create different shapes.
10. Tile a given region using one and more than one shape.
11. Draw a circle-free hand, using a round object or a compass and identify center, radius, diameter.
12. Explore the area and perimeter of simple shapes.
13. Intuitively draw the plan, elevation and side view of different objects based on observation.

Theme 5: Measurement

In this theme children will not only learn direct measurement but also develop the understanding of indirect measurements of time and temperature. These cannot be measured directly they require instruments that indirectly translate evidence of their presence into a measurable form. Children will be made aware about this. Previous learning had initiated children the learning of direct measurement i.e., by applying a unit directly to the object being measured. For example, to measure length, area or volume a specific unit is required. Selecting a unit is an arbitrary act and the units used are only conventions accepted by all to bring in uniformity for measurement.

Learning Outcomes:

Children will be able to:

1. Convert meters into centimeters & vice versa.
2. Solve problems involving lengths & distances in daily life contexts.
3. Use estimation and verification to find out the distance between two locations.
4. Use a balance to weigh different objects using standard weight like grams, kilograms etc to different objects.
5. Estimate and verify the weights of different objects using a balance.
6. Measure volume of different containers using containers marked with standard units of multi-liter and liter.
7. Correlate different units of standard measurement like milliliter and liter with different objects.
8. Estimate and verify capacities of different containers by measurement.
9. Explore the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of a given shape as a unit like the number of books that can completely fill the top of a table.
10. Convert meter into centimeter and vice-versa.
11. Estimate the length of an object/distance between two locations, weight of various objects, volume of liquid, etc and verify them by actual measurement.

12. Solve problems involving daily life situations related to length, distance, weight, volume and time involving four basic arithmetic operations.
13. Read clock time in hours and minutes and express the time in a.m. and p.m..
14. Relate the 24 hr clock with respect to the 12 hr clock.
15. Calculate time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction.

Theme 6: Data Handling

This theme will enable children to discover and learn varied mathematical ways of collecting and using information. In this class, the emphasis is given to more efficient ways of representing data by pictures and graphs. The reading and interpretation of graphs is further enhanced to inculcate the data handling skills. Children will also be encouraged to draw their own graphs and pictures for the data collected by them as they will be in a better position to do so.

Learning Outcomes:

Children will be able to:

1. Represent collected data in pictographs using stickers, pictures etc
2. Read bar graphs and make observations based on more or less.

Theme 7: Patterns

The aim of this theme will be to make children aware of and practice how to find patterns, extend them and express in various ways thereby enabling them to initiate the process of thinking towards generalizations which is termed as algebra in upper primary classes. The decimal system (base 10 place value system) has its base on patterns and their further extension from one to tens to hundreds to thousands . . . Similarly, characteristics of shapes and figures are generalized on the basis of patterns.

Learning Outcomes:

Children will be able to:

1. Observe and identify patterns with more than one characteristic: like growing and reducing patterns.
2. Create a rule based on observations for extending the pattern in shapes and numbers.

Grade IV

SOCIAL STUDIES

Theme 1: The Earth – Its Movements & Forms

Learning Outcomes:

Children will be able to:

1. Identify major landforms and water bodies.
2. Locate oceans and continents on the map.
3. Differentiate between physical and political maps.
4. recognise the different landforms on the Earth.
5. describe the formation of fold and block mountains.
6. locate each of these landforms in India and the world.
7. appreciate the difference between perennial and non-perennial rivers, distributaries and tributaries of rivers.

Chapter 1: Landforms of the World

Theme 2: India

Learning Outcomes:

Children will be able to:

0. Identify the major physical divisions of India.
0. Locate major mountains, hills, rivers, plateaus on the map of India.
0. Identify similarities and differences in the lives of people in India.
0. Appreciate unity despite diversities in their country.

Chapter 2: India

Chapter 3: Northern Mountains

Chapter 5: The Great Indian Desert

Chapter 7: The Coastal Plains and Islands

Chapter 14: Our Culture and Heritage

Theme 3: The Climate of our Country

Learning Outcomes:

Children will be able to:

0. The difference between weather and climate.
0. The factors that influence the climate of a place.
0. The three main seasons of India-summer, monsoon and winter.

Chapter 8: The Climate of Our Country

Theme 4: Soils of India

Learning Outcomes:

Children will be able to:

- 0. determine the importance of soil and appreciate human dependency on soil
- 0. be aware of how soil is formed
- 0. identify the different types of soil found in India
- 0. describe the types of crops grown in each soil
- 0. recognise the importance of soil and appreciate that soil erosion must be prevented for crops to grow well
- 0. list various ways to avoid soil erosion

Chapter 9: Soils of India

Theme 5: Forest of India

Learning Outcomes:

Children will be able to:

- 0. define natural vegetation
- 0. recognise the importance of forests and how it helps humans
- 0. list the different types of forests in India
- 0. locate the states where these forests occur
- 0. identify the types of trees that grow in these forests
- 0. assess the importance of conserving these forests appreciate the various movements in India to save the forest cover
- 0. list the wildlife sanctuaries established by the government to save forests

Chapter 10: Forest of India

Theme 6: Water Resources

Learning Outcomes:

Children will be able to:

- 0. list the uses of water
- 0. identify the sources of water
- 0. recognise how precious water is, list the reasons for shortage of drinking water
- 0. recognise the uneven distribution of water on the Earth
- 0. specify the various ways water is sourced-from rivers, wells, dams, irrigation canals
- 0. list the major dams in India and discuss the advantages and disadvantages of building big dams
- 0. recognise the importance of rainwater harvesting

Chapter 11: Our Water Wealth

Theme 7: Mineral Resources

Learning Outcomes:

Children will be able to:

- 0. appreciate that minerals and metals have to be mined from under the ground
- 0. distinguish between metals and non-metals
- 0. list the metals and non-metals
- 0. locate on a map of India the states from where the metals and non-metals are mined
- 0. explain what metals and non-metals are used for
- 0. comprehend that metals and non-metals have to be conserved for the future
- 0. differentiate between exhaustible and inexhaustible sources of energy and the need to conserve them

Chapter 12: Our Mineral Wealth

Theme 8: Agriculture and Industries

Learning Outcomes:

Children will be able to:

- 0. appreciate the vital role played by agriculture and industries in the progress of the country
- 0. list the different crops grown in India
- 0. locate on a map the states that grow the crops
- 0. describe the importance of the Green Revolution and how it has helped the farmers
- 0. distinguish between raw materials and finished goods
- 0. recognise the three types of industry-cottage, small-scale and large-scale industry
- 0. locate the large-scale industries on a map of India

Chapter 13: Agriculture and Industries

Theme 9: Constitution

Learning Outcomes:

Children will be able to:

- 0. define what is a Constitution
- 0. recognise the preamble to our Constitution
- 0. differentiate between socialist, secular, democratic and republic way of governance
- 0. list the fundamental rights of the people and their duties
- 0. name the directive principles listed in the constitution

Chapter 19: Our National Symbols

Chapter 18: Our Rights and Duties

Grade IV Science

Theme 1: Human Body: Food we Eat

The underlying aim of this theme is to provide information about and discuss the various components of food and also develop an awareness regarding the importance of eating a balanced nutritious diet. The content would further help in developing skills such as, i.e., classification, and sensitivity towards environment and sensitivity towards wastage of food.

Learning Outcomes:

Children will be able to:

1. Discuss and share various kinds of food items used by a family on various occasions.
2. List out food items based on 'energy giving', 'bodybuilding' and 'protection from diseases'.
3. Classify food items into various components based on their function and cite examples of each component of food.
4. Explain the need for a balanced diet in their own words.
5. Discuss the need of each food component for healthy living.
6. Infer why different groups of people require different amounts and kinds of food (child, adult, elders, etc.).
7. Suggest various ways to avoid food wastage.
8. Appreciate the need and importance of plants/ environment in our life.
9. Develop a sensitivity towards plants and the environment.

Theme 2: Human Body: The Teeth

The main focus of this theme is to create awareness regarding the various kinds of teeth in human beings and the importance of dental care and regular check-ups. The theme will also focus on the need for daily brushing to keep teeth healthy and strong for healthy living.

Learning Outcomes:

Children will be able to:

1. Identify and name the different kinds of teeth in human beings.
2. Draw pictures of each kind of tooth and label the parts of a tooth.
3. Discuss the need for various kinds of teeth in human beings and explain their functions.
4. Infer why the old people, adults and children have different numbers of teeth.
5. Demonstrate healthy habits related to taking care of their teeth.
6. Give reasons why the gums and teeth get spoilt/damaged.
7. Suggest ways to keep teeth and gums healthy and strong.
8. Appreciate the importance of regular check-up of teeth.
9. Relate healthy food habits with the development of healthy teeth and proper brushing.

Theme 3: Human Body: The Digestive & Excretory Systems

The main objective of this theme is to create an awareness and understanding regarding the functioning of the digestive and the excretory systems in the human body. The theme also aims at promoting healthy habits for healthy living. While transacting this theme, the concepts covered in this theme may be related with the themes 'Food we Eat' and 'The Teeth' to develop a better understanding on related concepts.

Learning Outcomes:

Children will be able to:

1. Draw and label parts of the digestive system.
2. Name and identify organs of the digestive system.
3. Discuss the functions of the digestive system in the human body.
4. Explain the functions of each digestive organ in his/her own words.
5. Give reasons for chewing food for better digestion.
6. Name and identify organs of the excretory system.
7. Explain the functions of each organ of the excretory system.
8. Draw and label parts of the excretory system.
9. Discuss the need for the excretory system in the body.
10. Identify various habits that help to keep the digestive and excretory organs healthy.

Theme 4: Adaptation in Animals

The theme 'Adaptation in animals' would discuss need for adaptation in animals by referring to the different habitats. The theme would also discuss adaptations seen in the bodies of herbivores, omnivores and carnivores. Some key concepts such as need for adaptation, reasons for adaptation in animals would also be discussed to create awareness amongst children by using various examples.

Learning Outcomes:

Children will be able to:

1. Discuss the need for adaptation in animals to survive in their different habitats.
2. Enlist reasons for adaptation in animals: on land, in air and in water.
3. Give examples of adaptations of animals: on land and in water.
4. Relate modification of body parts in various animals due to food habits (herbivores, carnivores, omnivores).
5. Give examples of herbivores, carnivores and omnivores.
6. Develop empathy, love and concern for animals.

Theme 5: Adaptation in Plants

The theme 'Adaptations in Plants' is expected to provide awareness and information regarding the need for adaptation in plants on land, in water and due to variation in habitat, along with examples. The theme would also be expected to develop skills related to observation, concern and care for plants.

Learning Outcomes:

Children will be able to:

1. Discuss the need for adaptation in plants to survive in their habitat.
2. Enlist reasons for adaptations in plants on land, water, desert and hilly areas.
3. Give examples of plant adaptations on land, water, desert and hilly areas.
4. Draw pictures of various adaptations in plants.

Theme 6: Plants in the Surroundings and Environment

The aim of this theme is to acquaint children with the classification of plants and functions of different parts of plants. The functions of leaves along with the processes of transpiration and photosynthesis will also be discussed in a simple manner. The theme would also highlight the significance of plants in our lives by taking different examples from children's daily lives.

Learning Outcomes:

Children will be able to:

1. Identify plants as herbs, shrubs and trees.
2. Identify the kind of roots seen in plants (through observation).
3. Differentiate between tap and fibrous root (through observation).
4. Cite examples of plants with the tap and fibrous root systems.
5. Draw pictures and label each kind of root system.
6. Identify variations in leaves (observation).
7. Discuss the process of photosynthesis in their own words (simple non-technical language).
8. Demonstrate the presence of iodine in a leaf through a simple experiment (with support of elders).

Theme 7: Air

'Air' is an important component for our life. Many activities are carried out with the help of air. This theme will help to develop clarity in children regarding properties of air, besides discussing the causes of air pollution and remedies for the same. The theme is also expected to develop experimental and observational skills.

Learning Outcomes:

1. Give reasons why air is important for living beings.
2. Demonstrate some properties of air through simple experiments (air has weight, occupies space, expands and has no color).
3. Demonstrate the process of inhalation/exhalation of air.
4. Discuss causes of air pollution in the environment / surroundings.
5. Suggest ways/remedies to reduce air pollution in the environment.
6. Show concern about the environmental activities which cause air pollution.

Theme 8: Materials and Solutions

The theme 'Materials and Solutions' is expected to develop in children an understanding of the meaning 'solute', 'solvent' and 'solution' through daily life examples. The theme would also deal with various methods of separation of insoluble material from water/liquids.

Learning Outcomes:

Children will be able to:

1. Discuss/share examples of solvent, solute and solution in day-to-day life.
2. Explain each term in their own words.
3. Conduct experiments to make solutions by using solute and solvent.
4. Identify various methods of separation of solute and solvent from solution.
5. Distinguish between the methods of sedimentation, filtration and evaporation.
6. Give an example of the methods of - sedimentation, filtration and evaporation.
7. Differentiate between soluble and insoluble substances in liquids.
8. Cite examples of soluble and insoluble substances.

Theme 9: Light

The expectation of this theme is to create awareness about various sources of light in the environment and simple properties of light, by taking examples from daily life. The theme is also expected to provide an understanding of how a shadow is formed and various uses of natural sources of light. The theme would also focus on how to save and conserve light energy in our day-to-day lives.

Learning Outcomes:

Children will be able to:

1. Identify various sources and uses of light in the environment.
2. Distinguish between natural and artificial sources of light.
3. Cite examples of natural and artificial sources of light.
4. Appreciate the use of natural sources of light in our day-to-day life.
5. Differentiate between luminous and non-luminous objects.
6. Differentiate between transparent, translucent and opaque objects in the surroundings.
7. Cite examples of each type of object, i.e. transparent, translucent and opaque.
8. Explain the process of shadow formation in simple language.

Theme 10: Measurement

The theme 'Measurement' is expected to develop an awareness and understanding of the need for a unit of measurement to explain any object, process and phenomenon. The theme would also discuss various measuring instruments used in daily life. The emphasis of this unit is not only to develop scientific understanding but also to create a functional understanding of measurement in children.

Learning Outcomes:

Children will be able to:

1. Appreciate the need for measurement of various things/phenomena.
2. Identify various instruments used for measurement.
3. Differentiate various instruments based on their uses in daily life.
4. Give examples of units of measurement of some objects.
5. Cite examples of activities where unit of measurement is required.

Theme 11: Push and Pull

In this theme, children will learn that pushes and pulls are examples of Force which can change the shape/ direction of an object. Children will also be familiarized with the various kinds of forces experienced in day-to-day life.

Learning Outcomes:

Children will be able to:

1. Discuss examples of push and pull seen in day-to-day life.
2. Differentiate between push and pull and give examples of each.
3. Describe push and pull in their own words (not definition).
4. Identify various kinds of forces seen in day-to-day life (muscular, gravitational, magnetic, frictional).
5. Explain each force in their own words.
6. Cite examples of each force by relating it with daily life.
7. Demonstrate push and pull situations in a group activity (with safety precautions).

Theme 12: Friction as a Force

In this theme, children will build on their previous knowledge of Forces and learn more about Friction as a force and the role it plays in our lives. The theme will focus on uses of friction and also on concept formation by using simple examples.

Learning Outcomes:

Children will be able to:

1. Cite examples of friction observed in daily life and explain friction in their own words.
2. Explain uses and harmful effects of friction in daily life.
3. Conduct simple activities/experiments demonstrating friction.

Grade IV

Computer Application

Topic 1: Computers – Storage and Memory device

A Computer system is a highly organised system that processes data which is a representation of facts, concepts or instructions. Processed data become information on which decisions and actions are based. Bits and Bytes are the basic units to represent data in the computer system. Computer data storage often called storage or memory is a technology used to retain digital data internally or externally. There are two types of memory – Internal and External.

Learning Outcomes:

Children will be able to:

1. Differentiate between the terms data and information.
2. Explain the purpose of internal and external memory.
3. Describe different data storage units.
4. List the primary and secondary data storage devices.

Chapter 1 : Computer Devices

Topic 2: GUI Operating System – Desktop Management

The Graphical User Interface (GUI) operating system has a visual environment using windows, buttons, and icons. Using this interface, user can customise the wallpaper, screen/desktop, set time/date, etc.

Learning Outcomes:

Children will be able to:

1. Recall the features of OS and GUI.
2. Identify and use the Task Bar, Quick Launch Bar and shortcut menu.
3. Customize the windows setup.

Chapter 2 : Windows 10

Topic 3: Tools of Word Processor

Editing tools present in the word processing software are used to modify documents while Formatting tools are used to design how each page of the document will appear when it is printed. The printer is an output device (hardware) connected to the computer, that enables the user to take a hard copy of the files stored in the internal/ external storage devices.

Learning Outcomes:

Children will be able to:

1. Use various features of editing and formatting.
2. Use shortcut keys.

3. Prepare a document based on their requirement.
4. Preview and print a document.

Chapter 5 : MS Word 2016

Chapter 6 : Formatting a Word Document

Topic 4: The Internet - Web Browser

A web browser is a software which enables the user to interact with text, images, videos, music, and other information present on the internet.

The Search Engine is a software that is used to search information on the Internet. While searching for information using Search Engines, the user has to use the appropriate keywords. It is important to be more responsible and follow Netiquettes for safe browsing on the internet.

Learning Outcomes:

Children will be able to:

1. Label the parts of a browser window.
2. Define the terminologies related to Internet Network.
3. Use appropriate keywords to collect information.
4. Make responsible decisions while browsing.

Chapter 8 : Internet

Topic 5: Presentation Software – An Introduction

The presentation software is a software that enables the user to present information, graphics, videos, etc. through slide shows in an attractive way. This software ensures that important points are highlighted effectively.

Learning Outcomes:

Children will be able to:

1. Explain the purpose of presentation software.
2. Choose appropriate layouts according to the requirement.
3. Create, add text and images to the slide.
4. Navigate between the slides.
5. Present a slideshow.

Chapter 7 : Introduction to MS PowerPoint 2016

Topic 6: Stepwise Thinking

Step-Wise Thinking helps in converting complicated tasks into simple steps, predicting the possible solutions to achieve the desired goal. For example – Planning and organising a birthday party, summer trip.

Learning Outcomes:

Children will be able to:

1. Analyze the task.

2. Break up the task into simple steps.
3. Predict possible solutions.

Enhance Your Knowledge

Topic 7: Features of File Management

Folder is a location to store information in the computer. It is used to organize files and folders according to the user's requirements.

Learning Outcomes:

Children will be able to:

1. Copy and move a file/folder.
2. Rename and delete files and folders.
3. Inculcate habits not to tamper others' files or folders.

Chapter 2 : Windows 10

Arts Education

Theme 1: Form | CLASSES 04 - 05

Learning Outcomes:

Children will be able to:

1. Identify different geometrical shapes in furniture items, school buildings, plants and trees and other objects..
2. Draw and paint objects using different shapes of different sizes on paper.
3. Make objects using shapes of different sizes with clay.
4. Draw patterns using different lines namely: straight, curved, smooth, crooked, vertical and horizontal lines.
5. Share and communicate (verbally and in writing) the meaning of form.
6. Differentiate between geometrical and natural forms.
7. Demonstrate use of extended vocabulary related to the theme.
8. Link the experience and understanding of forms (in line, shape and size) with mathematics.
9. Engage and learn to observe and explore immediate surroundings for the joy of knowing more.

Theme 2: Colour | CLASSES 04 - 05

Learning Outcomes:

1. Identify and name different colors / shades of household objects, furniture items, flowers, vegetables, fruits, plants & trees etc..
2. Drawing and painting images of their liking from immediate surroundings and color them with their appropriate colors.
3. Create secondary colors and their shades by mixing primary colors.
4. Identify neutral colors and use them for creating tones.
5. Demonstrate use of extended vocabulary related to the theme.
6. Link the experience and understanding of colors with learning of language and EVS.
7. Feel better emotionally/internally after experiencing and expressing through colors.
8. Appreciate the beauty of colors in nature and in human-made objects around.

Theme 3: Texture | CLASSES 04 - 05

Learning Outcomes:

Children will be able to:

1. Identify and name different textures and surfaces of the household objects, flowers, vegetables, fruits, plants & trees, animals, fabrics, wool, sponge etc..
2. Create new textures in 2-D and 3-D mediums and materials.
3. Demonstrate use of extended vocabulary related to the theme.
4. Link the experience and understanding of textures with learning of language and EVS.
5. Engage and learn to observe and explore immediate surroundings for the joy of knowing and experiencing different surfaces and textures.
6. Appreciate beauty and the variety of surfaces in nature.

Theme 4: Composition | CLASSES 04 - 05

Learning Outcomes:

Children will be able to:

1. Select compositions from the immediate surroundings, using the viewfinder.
2. Draw or paint compositions on themes, such as. festival/s I like, Hockey/Football/Cricket match, landscape, seascape..
3. Compose posters and greeting cards.
4. Install 3-D objects in a given theme.
5. Demonstrate use of extended vocabulary related to the theme.
6. Link the experiences gained while creating composition, with learning of other subjects.
7. Engage with and learn to observe and explore their immediate surroundings for the joy of knowing different compositions.
8. Feel better emotionally/internally after communicating and expressing through their
9. Arrangement of visual images.

Theme 5: Tools and Techniques | CLASSES 04 - 05

Learning Outcomes:

Children will be able to:

1. Identify and name the age appropriate tools and materials.
2. Differentiate and describe different age appropriate techniques, such as. drawing, coloring, painting, pen & ink, block printing, 2-D and 3-D work, origami, coil, slab and pinching methods of clay modeling, paper masks, 3-D masks and puppets, simple crafts (local specific) rangoli, wall painting, etc..
3. Create artworks using age appropriate tools and techniques.
4. Demonstrate use of extended vocabulary related to the theme.
5. Create their own tools and techniques of visual expression.
6. Link the experience and understanding of tools and techniques with learning of other subjects.
7. Engage and learn to explore the use of materials for the joy of knowing and creating with different materials.
8. Appreciate beauty and a variety of methods and materials for visual expression.

Theme 6: Art Vocabulary (Visual Arts) | CLASSES 04 - 05

Learning Outcomes:

Children will be able to:

1. Identify different tools and techniques, such as. round brushes, flat brushes, hard and soft brushes, type of scissors, rollers/rolling pins, drawing & painting, printing, clay modeling, pottery, spray painting, Reverse techniques, origami, construction, Round and relief work, 2-D and 3-D work, paper craft.
2. Name terms/specifications of materials, such as. colors, medium of colors, water colors, pastel colors, neutral colors, shades and tones of colors, paints, background and foreground in the composition, landscapes, seascapes, lines of different types, shapes and sizes .
3. Narrate art experiences using appropriate (age appropriate) vocabulary.

4. Communicate their art experience with appropriate use of art vocabulary.
5. Demonstrate use of extended vocabulary related to the theme.
6. Link the knowledge of art vocabulary with learning of other subjects.
7. Appreciate beauty and variety of artistic expression using appropriate vocabulary.

Theme 7: Responding to the Artifacts and Nature | CLASSES 04 - 05

Learning Outcomes:

Children will be able to

1. Describe the objects, scenes and situations of their liking in the immediate surroundings.
2. Respond to the good in art work done by their classmates and self.
3. Appreciate nature and natural beauty based on form, colors, composition, etc.. such as plants, flowers, animals, lakes, deserts, sea beaches, rivers, mountains, clouds, wind and rain, sun, moon and stars, rainy day, starry night, sunny day.
4. Describe artifacts of different kinds. paintings, pottery, terracotta and sculptures, installations, etc. of known artists.
5. Write their experiences of the art museum, by explaining artifacts seen.
6. Demonstrate use of extended vocabulary related to the theme.
7. Link the knowledge of appreciation and responding to nature and to the artifacts with learning of other subjects.