

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 teacher/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.

Listening and Speaking		
Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Range of topics for discussion e.g. cleanliness, road safety, computers, games etc. ➤ Develop a topic from a variety of themes in an organized manner, using appropriate facts and relevant, descriptive details to support the main ideas or themes. ➤ Tell stories, recite poems, or recount/ narrate an experience in a logical and coherent manner. ➤ Speak clearly at an understandable pace. ➤ Listen to English poems/songs/riddles /tongue twisters etc. and identify the key situations get ideas and express opinions. ➤ Listen in context to e.g. announcements etc. school and outside, speech etc. ➤ Take dictation of a seen passage. 	<ul style="list-style-type: none"> ➤ Reviewing and building on previous learning. ➤ providing a topic and encouraging children to have a discussion on it. e.g.: my favourite book / TV programme/ why recycle/Go green etc. ➤ Reading aloud/ playing audio recordings of poems, narratives, anecdotes, etc. and asking them to identify the main ideas (E.g. listen to an autobiography read aloud and create your own.) ➤ Listening in contexts, (e.g. at the airport, assembly etc.) ➤ Introducing words specific to particular fields through a variety of listening activities such as sports, cookery, music life skills etc. ➤ Reciting poems on different themes and encouraging children to recite/sing along. 	<ul style="list-style-type: none"> ➤ Free online resources/audio/video clips/animated clips /poems/ narratives/autobiographies /biographies (5 Minutes to 20 Minutes. Can be separate or in series) ➤ Listening to Authentic themes / situations: ➤ Poetry, songs, stories, ➤ Group Discussion/ pair work ➤ Role play/dramatization. ➤ Posters/ Models/ Charts/advertisements etc.

Listening and Speaking

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
	<ul style="list-style-type: none">▶ Providing opportunities and context to speak on a specific topic and listen to others' point of view. (e.g. Health and hygiene/ self-care/ positive body image / Road safety)▶ Creating learning situations to listen to various announcements. Speech, conversation▶ Giving dictation of a connected passage.	

NOTE: *The examples given above are intended merely as guidelines. The teachers are welcome to be as innovative as the classroom situation allows.*

The individual needs of children with disabilities (CWD) ought to be considered and appropriate methodology and interventions adopted.

The activities suggested above are not necessarily restricted to listening and speaking. As the language teacher is aware, all four language skills are inter-related and often overlap.

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, 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 enjoys 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;
- organise 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.

Reading and Writing		
Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Seen and unseen texts on a variety of themes for extensive and intensive reading. ➤ Picture reading. ➤ Beyond the text reading for pleasure e.g. magazines, stories, poems, narratives etc. ➤ Use of dictionary both print and online. <ul style="list-style-type: none"> • Creative writing • Paragraph writing (150 words) • Personal experience • Story • Poem • Anecdote • Letter to a friend, relative etc. • (Informal letter) ➤ Organise and structure meaningful sentences in a 	<ul style="list-style-type: none"> ➤ Introducing different kinds of texts such as prose, poetry, play for reading with comprehension. ➤ Discussing / Explaining concepts such as rhyme, rhythm, simile in a poem. ➤ Providing additional material such as stories focusing on the needs and abilities of differently abled advertisements, notices, signboards, menus, posters etc. that go beyond the text. ➤ Facilitating reading of newspapers, magazines and children-chosen texts. ➤ Encouraging children to raise questions based on their reading habits. 	<ul style="list-style-type: none"> ➤ Pictures ➤ Big books, Cartoons with audio or text. ➤ Self / teacher created materials. ➤ Magazines, newspapers. ➤ Activities/tasks for relating ideas of the text with their lives. ➤ Text types: Very short stories, poems and songs, texts with visuals, etc. ➤ Age appropriate magazines, newspapers, picture books, story books etc. <i>(for reading and to connect it to their own experiences.)</i> ➤ Realia/ Flashcards/ Posters/ puppets/ Charts etc. <i>(to stimulate language.)</i> ➤ Establish a class library/Book/Reading Corner

Reading and Writing

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
<p>sequential manner.</p> <ul style="list-style-type: none">▶ Use of 'firstly', 'then', 'later', 'finally', etc. to link sentences to indicate passage of time and provide a sense of closure.	<ul style="list-style-type: none">▶ Creating situations/context to write letters /Poems/ list/ narratives/ e-mail/ etc.▶ Encouraging children to follow the process approach of writing (brain storming, writing, reviewing, editing, rewriting).▶ Providing rubrics / checklists to revise the written material.	<ul style="list-style-type: none">▶ Locating from different sources reading material as per the interest (under supervision).

Grammar and Vocabulary in Context

Enrichment of vocabulary through 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.

Grammar and Vocabulary in Context

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Common idioms, adages and proverbs. ➤ Subject-verb agreement. ➤ Punctuation e.g. Capital letters for appropriate words in titles, e.g. “The Adventures of Tom Sawyer”, “Stopping by the Woods on a Snowy Evening”. ➤ Apostrophe to show singular possession and knows the difference between plurals and possessives. ➤ Age appropriate vocabulary in context. ➤ Referencing as required. 	<ul style="list-style-type: none"> ➤ Reviewing and building on previous learning. ➤ Providing examples of grammar in context to make children understand the various aspects of grammar. ➤ Creating worksheets for learners to use grammar in context. ➤ Providing audio - visual and verbal clues to reinforce the use of grammar and develop language skills. ➤ Creating activities/tasks to develop vocabulary in context. 	<ul style="list-style-type: none"> ➤ Self / teacher created materials e.g. worksheets, activities. ➤ Audio, video, print / text. ➤ Authentic tasks and activities of short duration. (<i>These will be used to lead to an engagement with</i> <ul style="list-style-type: none"> ☛ words, ☛ word chunks, ☛ formulaic use ☛ collocations ☛ expressions in dialogue.) ➤ Word / Languages games. ➤ Realia/ Flashcards/ Posters/ puppets/ Charts etc. (to <i>stimulate language.</i>)

थीम 1: सुनना और बोलना

बच्चे भाषण, कहानी, नाटक, कविता और अब वक्तव्य आदि को ध्यानपूर्वक सुन कर 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 निर्देश 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 फ़ोन / कंप्यूटर 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।

सुनना और बोलना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
<ul style="list-style-type: none"> ➤ सरल वक्तव्य और भाषण ➤ कहानी / घटना / तथ्यों का संग्रह और प्रत्यास्मरण ➤ कक्षा / प्रातः कालीन सभा में समाचारों का श्रवण ➤ दैनिक समाचार ➤ बाल-साहित्य से ली गई विभिन्न विषयों की कहानियाँ 	<ul style="list-style-type: none"> ➤ अतिथियों को आमंत्रित करके वक्तव्य / भाषण का आयोजन करवाएँ। ➤ वक्तव्य / भाषण ऑडियो / वीडियो द्वारा भी सुनवाएँ। ➤ कहानियाँ सुनाएँ / पढ़वाएँ। अधूरी कहानी को अपनी कल्पना और अनुभवों के आधार पर पूरा करने के लिए कहें। ➤ बच्चों को पुस्तकालय का लाभ उठाने के लिए प्रेरित करें। 	<ul style="list-style-type: none"> ➤ सी०डी० ➤ ऑडियो / वीडियो ➤ वीडियो क्लिपिंग ➤ समाचार पत्र ➤ बाल – साहित्य

सुनना और बोलना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
<ul style="list-style-type: none"> ➤ समसामयिक विषय जैसे – प्रदूषण, जल संकट, त्योहार ➤ विद्यालय के नियम, खान – पान की बदलती तस्वीर (फास्ट फूड), वायरल फीवर – बचाव के तरीके आदि पर चर्चा ➤ रोचक संस्मरण ➤ पाठों एवं उनसे इतर पठन सामग्री पर प्रश्न-उत्तर 	<ul style="list-style-type: none"> ➤ कहानी को नाटक के रूप में प्रस्तुत करवाएँ। ➤ सामूहिक चर्चा का आयोजन करवाएँ। ➤ वीडियो क्लिपिंग दिखाकर भी सामूहिक चर्चा का अवसर दें। (छोटे समूह में, बड़े समूह में, चर्चा के अवसर दिए जाएँ)। ➤ बच्चों को अपने परिवार, मित्र या आस-पड़ोस के रोचक संस्मरण सुनाने के लिए प्रेरित करें। ➤ पाठों एवं उनसे इतर पठन सामग्री पर मौखिक प्रश्न-उत्तर सत्र का आयोजन करें। ➤ बच्चों द्वारा संकलित तथ्यों / कहानियों / प्रसंगों को साझा करने के अवसर प्रदान करें। ➤ समाचार पत्रों से प्रातःकालीन सभा में समाचारों का वाचन करवाएँ। 	

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 चिह्नों 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 चिह्नों का ध्यान रखते हुए) रचनात्मक लेखन कर सकेंगे।

पढ़ना एवं लिखना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
<ul style="list-style-type: none"> ▶ विभिन्न विषयों जैसे – साहस, देशभक्ति, वीरता, बलिदान, जीवन-मूल्यों, प्रेम, संवेदनशीलता आदि की कहानियों का पठन एवं लेखन ▶ स्थानीय समुदाय के महत्वपूर्ण व्यक्ति, कारीगर, श्रमिक आदि से भेंटवार्ता के लिए प्रश्न – निर्माण ▶ हस्तलिखित सामग्री पठन 	<ul style="list-style-type: none"> ▶ विभिन्न विषयों की कहानियाँ विराम चिह्नों और उचित अनुतान के साथ बच्चों से पढ़वाएँ। ▶ कहानियों की घटनाओं, पात्रों आदि के प्रति प्रतिक्रिया प्रकट करने को कहें। ▶ कहानियों से संबंधित – प्रश्नों के उत्तर लिखने को कहें। ▶ कहानी के बारे में उनसे प्रश्न बनवाएँ। बच्चों से अधूरी कहानी को लिखकर पूरा करने के लिए कहें। 	<ul style="list-style-type: none"> ▶ बाल साहित्य ▶ पत्र – पत्रिकाएँ ▶ व्याकरण के चार्ट, कार्ड, पोस्टर ▶ सी०डी० ▶ ऑडियो / वीडियो ▶ भाषायी खेल – वर्ग – पहेली, शब्द – सीढ़ी आदि

पढ़ना एवं लिखना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
<p>संदर्भ में व्याकरण</p> <ul style="list-style-type: none"> ➤ पूर्व की कक्षाओं में सीखी गई व्याकरणिक संरचनाओं की पहचान एवं प्रयोग की गतिविधियाँ ➤ संज्ञा के भेदों – व्यक्तिवाचक, जातिवाचक, एवं भाववाचक की पहचान ➤ सर्वनाम की पहचान एवं व्यावहारिक प्रयोग ➤ विशेषण एवं क्रिया का प्रयोग ➤ लिंग और वचन की पहचान एवं अनुप्रयोग और परिवर्तन ➤ अनेक शब्दों के लिए एक शब्द ➤ समानार्थी शब्द / अनेकार्थी शब्द ➤ रचनाओं में आए मुहावरे रचनात्मक लेखन ➤ अनुच्छेद लेखन - लगभग 80 शब्द - <ul style="list-style-type: none"> ☛ चित्र आधारित ☛ निर्देशित ➤ रोचक एवं कल्पनाशीलता का पोषण करने वाले विषय, जैसे – <ul style="list-style-type: none"> ☛ यदि मैं तितली बन जाऊँ, यदि आकाश में दो चंद्रमा आ जाएँ, चौथी कक्षा में मेरा पहला दिन, वर्षा और सड़कों पर जमा होता पानी, मेरा मनपसंद खेल आदि ➤ पत्र लेखन - अनौपचारिक (संबंधियों, मित्रों को पत्र, जैसे अपनी पढ़ाई के बारे में बताना, जन्मदिन पर निमंत्रण, बधाई देना आदि) 	<ul style="list-style-type: none"> ➤ सभी बच्चों से अपनी – अपनी कहानी का वाचन करवाएँ। ➤ भेंटवार्ता के लिए प्रश्न सूची तैयार करवाएँ। ➤ भेंटवार्ता से प्राप्त जानकारी बच्चों से लिखकर लाने को कहें। ➤ बच्चों को एक दूसरे की लिखित सामग्री पढ़कर सुनाने को कहें। ➤ पाठ्य – सामग्री में संज्ञा, सर्वनाम, विशेषण, क्रिया आदि शब्दों की पहचान करवाएँ और बच्चों से छाँटने के लिए कहें। ➤ छाँटे गए संज्ञा शब्दों के भेदों की पहचान करवाएँ। ➤ लिंग और वचन की पहचान करवाएँ। यह कार्य सिर्फ शब्दों से न करवाया जाए बल्कि समूचे वाक्य के आधार पर करवाया जाए। जैसे – <ul style="list-style-type: none"> ☛ एक लड़का मेरी कक्षा में आया। ☛ एक लड़की मेरी कक्षा में आई। ☛ फूल पर तितली बैठी है। ☛ फूल पर तितलियाँ बैठी हैं। ➤ इसी प्रकार काल, क्रिया आदि का अभ्यास पूरे – पूरे वाक्यों में करवाएँ। ➤ अनेकार्थी शब्दों के अभ्यास वाक्य में करवाएँ जैसे - <ul style="list-style-type: none"> ☛ मेरे मित्र ने फूलों से सुंदर हार बनाया। ☛ वह खेल में हार गया। ➤ पाठ्य सामग्री में प्रयुक्त मुहावरों की ओर संकेत करें और बच्चों से वाक्य बनवाएँ जिसमें उनका अर्थ स्पष्ट हो। ➤ बच्चों को औपचारिक और अनौपचारिक पत्रों का प्रारूप लिखकर बताएँ। ➤ उचित विराम चिह्नों का प्रयोग करते हुए छोटे छोटे अनुच्छेदों में पत्र लिखने को कहें। ➤ बच्चों के लिखे पत्रों को बुलेटिन बोर्ड पर प्रदर्शित करें। ➤ चित्र देखकर उस पर एक अनुच्छेद लिखने के 	<ul style="list-style-type: none"> ➤ चित्र ➤ बुलेटिन बोर्ड

पढ़ना एवं लिखना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
➤ औपचारिक (प्रधानाध्यापक या कक्षाध्यापक को अवकाश के लिए प्रार्थना पत्र, गमला टूटने पर क्षमा – याचना पत्र)	लिए कहें। कुछ शब्द देकर अनुच्छेद लिखवाएँ। कल्पनाशक्ति व सोच को विकसित करने वाले विषयों पर बच्चों से अनुच्छेद लिखवाएँ। बच्चे अपनी लिखित सामग्री पढ़कर सुनाएँ। बच्चों के लेखन को बुलेटिन बोर्ड पर प्रदर्शित करें।	

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:

- ✎ acquire understanding of 6 digit numbers and their use in daily life;
 - ☛ read and write numbers up to 6 digits (lac) using Indian system of writing large numbers;
 - ☛ use place value to write a number in expanded form and vice versa;
 - ☛ compare numbers using place value and arranges them in ascending and descending order
 - ☛ use the given 6 digits to form the greatest and smallest number;
 - ☛ represent numbers (up to 39) by Roman Numerals:
- ✎ work with fractions:
 - ☛ identify half, one-fourth, three-fourths in a given picture (by paper folding) and also in a collection of objects.
 - ☛ represent fractions as half, one-fourth and three-fourths by using symbols $\frac{1}{2}$, $\frac{1}{3}$, $\frac{3}{4}$ respectively.
 - ☛ show the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ and other fractions.

Numbers		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ 6 digits numbers (up to lac) using the Indian system of numeration. ➤ Place value and face values. ➤ Ascending and descending order of numbers. ➤ Greatest and smallest numbers from given digits. ➤ Roman Numerals using symbols I, V and X. ➤ Fractions as part of a whole and their representation as 	<ul style="list-style-type: none"> ➤ Providing opportunities to children to collect and discuss real-life context in which numbers up to a lac are used e.g. making large payments, huge crowd. etc. ➤ Building on previous learning by providing opportunities for application of place value learnt in previous classes by expanding it based on patterns. 	<ul style="list-style-type: none"> ➤ 5-6 sets of number cards from 0-9 to make 6 digit numbers. ➤ Cuttings from newspaper/ magazines about large numbers.

Numbers

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<p>number.</p> <ul style="list-style-type: none"> ➤ Types of fractions: Like, unlike, unit, equivalent. ➤ Visual idea of equivalent fractions like $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \dots$ ➤ Addition of subtraction of like fractions. 	<ul style="list-style-type: none"> ➤ Conducting activities so that children compare numbers using place value based and creating number sequence in ascending and descending order. ➤ Creating games/activities using number cards (0-9) to form 6 digit numbers (e.g. A number which has 8 at thousandth place & so on). ➤ Forming questions on the greatest and smallest numbers should be discussed with the strategy to do so. ➤ Introducing numerals from other Indian languages along with Roman numerals. 	

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:

- ✍ apply operations of numbers in daily life;
- ✍ add and subtract numbers (up to 4 digits) with or without regrouping;
- ✍ solve problems involving addition and subtraction in different real life contexts presented through visuals and stories;
- ✍ construct and write multiplication table up to 10;
- ✍ multiply two and three digit numbers using standard algorithm and lattice algorithm;
- ✍ divide a given number by another number (single digit) by drawing dots and grouping, using multiplication facts and by repeated subtraction;
- ✍ apply four operations-addition, subtraction, multiplication and division in solving real life situations;
- ✍ frame word problems based on a mathematical statement;
- ✍ estimate sum differences and products of two or more given numbers without using paper/pen;
- ✍ multiply 2 and 3 digit numbers;
- ✍ divide a number by another number using different methods such as:
 - ✍ pictorially (by drawing dots)
 - ✍ equal grouping
 - ✍ repeated subtraction
 - ✍ establishing an inter-relationship between division and multiplication
- ✍ create and solve simple real life situations/ problems related to money, length, mass and capacity by using the four operations.

Number Operations		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Addition and subtraction of numbers (up to 4 digits) with or without regrouping. ➤ Construct of multiplication table up to 10. 	<ul style="list-style-type: none"> ➤ Creating real life contexts involving addition/subtraction of 4 digit numbers Text based stories such may be used to practice solving such problems. ➤ Encouraging and facilitating children to develop multiplication tables 	<ul style="list-style-type: none"> ➤ Wooden sticks to demonstrate multiplication table. ➤ Napier sticks for multiplication. ➤ Geoboard and rubber band. <i>(to demonstrate</i>

Number Operations

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Multiplication of two and three digit numbers using standard algorithm and lattice algorithm. ➤ Division in single digit another numbers. ➤ Application of four operations-in solving real life situations. ➤ Word problems based on a mathematical statement. ➤ Estimation of sum, differences and products of two or more given numbers and mental verification. 	<p>rather than learning by rote.</p> <ul style="list-style-type: none"> ➤ Introducing standard algorithm initially with one number in expanded form so that better understanding of standard algorithm is developed e.g. $23 \times 3 = (20+3) \times 3 = 20 \times 3 + 3 \times 3$. ➤ Using repeated subtraction to create intuitive understanding of the division algorithm. ➤ Encouraging children to create real life contextual problems based on mathematical operations (not more than two at a time) and solving them. ➤ Involving children in estimating sum/differences of two numbers to do calculation mentally. ➤ Demonstrating the estimation of sum, difference of two numbers by using the Geoboard and rubber band. 	<p><i>estimation of sum, difference of two numbers.)</i></p>





Life Skills: solving daily life problems

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:

-  find out factors, prime factors and multiple of numbers;
-  understand prime and composite numbers;
-  understand divisibility by numbers;
-  calculate HCF & LCM of numbers.

Playing with Numbers		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Factors. ➤ Multiples. ➤ Prime and composite numbers. ➤ Test for divisibility by 2, 3, 4, 5, 9, 10. ➤ Prime factors- By Factor tree method and Prime Factorization Method. ➤ Highest common factor-listing method and Common Division. ➤ Lowest Common Multiples- Listing Method, Common Division. 	<ul style="list-style-type: none"> ➤ Encouraging children to understand factors of given number. ➤ Conducting activities in the class so that children use multiplication table for understanding multiplication facts. ➤ Encouraging children to first calculate common factors and then to find the highest common factor. ➤ Guiding children to calculate common multiples and then naming the smallest of them as lowest common multiples. 	<ul style="list-style-type: none"> ➤ Wooden sticks. ➤ Match sticks. ➤ Broom sticks.

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:

Children will be able to:

- ✎ acquire an understanding about shapes around them;
- ✎ identify the centre, radius and diameter of a circle;
- ✎ find shapes that can be used for tiling;
- ✎ draw cube/ cuboids using the given nets;
- ✎ show through paper folding/ paper cutting, ink blots, etc., the concept of symmetry by reflection;
- ✎ draw top view, front view and side view of simple objects;
- ✎ observe, identify and extend geometrical patterns based on symmetry;
- ✎ represent the collected information in tables and bar graphs and draws inferences from these;
- ✎ use tangrams to create different shapes;
- ✎ tile a given region using one and more than one shape;
- ✎ draw a circle-free hand, using a round object or a compass and identify centre, radius, diameter;
- ✎ explore reflective symmetry through ink blots paper cutting and paper folding;
- ✎ explore the area and perimeter of simple shapes;
- ✎ intuitively draw the plan, elevation and side view of different objects based on observation.

Geometry		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Tangram shapes ➤ Tessellation: Tiling using one and more shapes ➤ Circle: Centre, radius, diameter. ➤ Relation between diameter and radius of a circle ➤ Reflection symmetry ➤ Area and perimeter of simple shapes. 	<ul style="list-style-type: none"> ➤ Using tangrams to create intuitional understanding of physical attributes of different 2D shapes. ➤ Providing concrete shapes (created or procured) to children in groups to cover a surface with no gaps and overlapping using one or two shapes. Discussion on which shapes tile and why or vice versa may be done. ➤ Conducting paper folding activities 	<ul style="list-style-type: none"> ➤ Tangrams of 7 pieces. ➤ Cardboards, tape cutters, glue sticks (for <i>creating tiles of different shapes</i>) ➤ Colour paper, ink markers, scissors. ➤ Circular geoboard and rubber band.

Geometry

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Perspectives of shapes: Plan, elevation and side view. ➤ Introduction of terminology: Plane, point, line, line segment, ray, parallel. ➤ Lines, intersecting and perpendicular lines. 	<p>will go a long way to create a deeper understanding of a circle and various vocabulary related to it.</p> <ul style="list-style-type: none"> ➤ Discussing symmetry in daily life context before introducing reflection symmetry. ➤ Conducting individual activities so that child has experiential learning about symmetry and line of symmetry. ➤ Creating activities for drawing the plan, elevation and side view of 3 D objects. ➤ Conducting quizzes to create an understanding of the different views of objects, houses, places etc. For example, showing top view of a chair or table and asking to guess what this object is. 	

Integration: Arts Education

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:

- ✘ convert meters into centimeters & vice versa;
- ✘ solve problems involving lengths & distances in daily life contexts;
- ✘ use estimation and verification to find out the distance between two locations;
- ✘ use a balance to weigh different objects using standard weight like grams, kilograms etc. to different objects;
- ✘ estimate and verifies the weights of different objects using a balance;
- ✘ measure volume of different containers using containers marked with standard units of multi-litre and litre;
- ✘ correlate different units of standard measurement like millilitre and litre with different objects;
- ✘ estimate & verifies capacities of different containers by measurement;
- ✘ explore the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of given shape as a unit like the number of books that can completely fill the top of a table;
- ✘ convert metre into centimetre and vice-versa;
- ✘ estimate the length of an object/distance between two locations, weight of various objects, volume of liquid, etc., and verifies them by actual measurement;
- ✘ solve problem involving daily life situations related to length, distance, weight, volume and time involving four basic arithmetic operations;
- ✘ read clock time in hour and minutes and expresses the time in a.m. and p.m.;
- ✘ relate 24 hr clock with respect to 12 hr clock;
- ✘ calculate time intervals/ duration of familiar daily life events by using forward or backward counting/addition and subtraction.

Measurement		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Conversion of units: meters into centimeters grams into kilograms, litre into millilitre & vice versa. ➤ Solve problems involving lengths/distances, weight/ mass, volume/capacity in daily life contexts using four operations. ➤ Estimation and verification of length, weight, volume ➤ Conversion of days, hrs and minutes (Bigger to smaller units and vice versa). ➤ Approximate time elapsed through word problems. 	<ul style="list-style-type: none"> ➤ Organising activities for children to use appropriate units with lengths like smaller lengths using cm and metre/Km for large distances. ➤ Creating real life contexts for solving problems involving various units of lengths. ➤ Emphasizing on estimation skills and its development through activities. ➤ Creating contexts in which children use standard weights to find out the weights of different objects. ➤ Asking children to have collection of containers/pouches so as to discuss different things which are measured in milliliters and liters. Some of these containers may be used in conjunction with standard measures. ➤ Using of toy clocks/ prepared by children or other clocks in the classroom or at home to read time in hours, minutes and seconds. 	<ul style="list-style-type: none"> ➤ Measuring flasks with different markings for measurement. ➤ Shapes of cube, cuboid. ➤ Toy clock prepared by children (<i>to read time in hours, minutes, seconds</i>).

Integration: Science (Measurement)

Life Skills: solving daily life problems

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:

- represent collected data in pictographs using stickers, pictures etc.;
- read bar graphs and make observations based on more or less.

Data Handling		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none">Pictorial representation of the raw data.Interpretation of bar graph.	<ul style="list-style-type: none">Taking up data handling activities (slightly more complex) for representation in different graphical forms.Asking children to do simple graphical data representation from newspapers/magazines and interpreted in the class along with discussions on it.Organising group projects involving children in focusing on collecting data, interpreting it and then pictorially representing the same in terms of a bar graph.	<ul style="list-style-type: none">Coloured papers, glue sticks, markers, stickers of different objects.Cuttings of pictographs, bar charts, etc. from newspapers, magazines.Videos and PPTs (of simple data, findings that are presented in graphs).

Integration: Arts Education

Life Skills: Interpretation and analysis

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:

- observe and identify patterns with more than one characteristic, like growing and reducing patterns;
- create a rule based on observations for extending the pattern in shapes and numbers.

Patterns		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none">▶ Growing and reducing patterns.▶ Rule to extend a growing/reducing pattern in shapes and numbers.	<ul style="list-style-type: none">▶ Planning activities around patterns in which children are able to formulate a rule and verify it for the extension of pattern.	<ul style="list-style-type: none">▶ Shapes, coloured papers, stamping tools, stamp pads, ink, water colours, vegetables etc.

Integration: Arts Education

Life Skills: Logical thinking

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:

- ✔ discuss and share various kind of food items used by a family on various occasions;
- ✔ list out food items based on 'energy giving', 'body building' and 'protection from diseases';
- ✔ classify food items into various components based on their function and cite examples of each component of food;
- ✔ explain the need for balanced diet in their own words;
- ✔ discuss the need of each food component for healthy living;
- ✔ infer why different groups of people require different amount and kinds of food (child, adult, elders, etc.);
- ✔ suggest various ways to avoid food wastage;
- ✔ appreciate the need and importance of plants/ environment in our life;
- ✔ develop a sensitivity towards plants and the environment.

Human Body: Food We Eat		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<p>Revisit concepts/ skills of learnt in Class III.</p> <ul style="list-style-type: none"> ➤ Food for energy, for work, food for growth (body building), food for protection from diseases. ➤ Components of food: Carbohydrates, Proteins, Fats, Vitamins, Minerals, Water and roughage as essential components. ➤ Examples of each group of food component. ➤ An idea of a balanced diet. ➤ Care of food to avoid wastage. 	<ul style="list-style-type: none"> ➤ Revisit concepts learnt in Class III and build on previous learning. ➤ Providing opportunities to children to share their personal experiences about the food they generally eat, what they like and do not like, different kinds of food available around them etc.; ➤ Providing opportunities to children to observe various kinds of food items, and list out those that provide energy, vitamins, minerals, body building/wear & tear (actual/visuals); ➤ Organizing group activities to classify food items based on their functions (energy giving, body building and protection from diseases); ➤ Showing documentary films/charts on balanced diet and later organizing a discussion; ➤ Conducting individual activities by 	<ul style="list-style-type: none"> ➤ Live experience of children related to food. ➤ Various kinds of food items (actual). ➤ Picture cards of different food items and their role. ➤ Documentary film on a balanced diet. ➤ Doctor and/or Dietician. ➤ Charts and visuals on food items. ➤ Magazines describing more information on food items (food of children, adults, elders). ➤ Children's portfolio ➤ Children's drawings. ➤ Worksheets provided/prepared by the teacher.

Human Body: Food We Eat

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
	<p>asking each child to make a menu of one week keeping the need for a balanced diet in view (under supervision of elders).</p> <ul style="list-style-type: none"> ➤ Discussing / interacting with the Dietician. ➤ Assigning individual/group projects to children on: <ul style="list-style-type: none"> • <i>Drawing pictures/ collecting pictures of each kind of group of food;</i> • <i>Preparing a component-wise chart on different food items with examples.</i> ➤ Discussing ways to avoid food wastage. ➤ Conducting activities in the school (tree plantation, care of plants) to develop a habit for care and protection of plants. 	

Integration: Languages, Health and Physical Education, Social Studies (Our State - Agriculture (Types of Crops))

Life Skills: Sensitivity towards plants/environment, appreciating the value of avoiding wastage of food.



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:

- ☑ identify and name the different kinds of teeth in human beings;
- ☑ draw pictures of each kind of tooth and label the parts of a tooth;
- ☑ discuss the need for various kinds of teeth in human beings and explain their functions;
- ☑ infer why the old people, adults and children have different number of teeth;
- ☑ demonstrate healthy habits related to taking care of their teeth;
- ☑ give reasons why the gums and teeth get spoilt/damaged;
- ☑ suggest ways to keep teeth and gums healthy and strong;
- ☑ appreciate the importance of regular check-up of teeth;
- ☑ relate healthy food habits with the development of healthy teeth and proper brushing.

Human Body: The Teeth		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Kind of teeth in the mouth and location. ➤ Structure and Functions of each kind of tooth. ➤ Diagram with labelling of parts of a tooth, number of teeth of each kind in: infants and adults. ➤ Care of Teeth and Gums: Causes of cavities/ deficiencies and steps to prevent them. ➤ Need for regular check-up to keep teeth healthy; importance of healthy dental care habits. ➤ Role of food in the development of healthy teeth and gums. 	<ul style="list-style-type: none"> ➤ Providing opportunities to children to share their personal experiences (when did milk teeth first appear, how many teeth do they have, etc.) ➤ Organizing simple activities individually and in small groups with children such as: <ul style="list-style-type: none"> ☛ <i>Counting one's own teeth and sharing with the peer group;</i> ☛ <i>Visiting a dentist/ inviting a dentist to conduct a question answer session in the class;</i> ➤ Organizing discussion in small groups on care of teeth; ➤ Providing opportunities to draw pictures of kinds of teeth and labelling them; ➤ Making models of various types of teeth; ➤ Showing a documentary on care of teeth/steps showing the process to clean teeth followed by group activities to demonstrate healthy ways of brushing one's teeth. ➤ Maintaining children's portfolio to keep their medical report for regular check-ups. ➤ Discussing / interacting with the Dentist. 	<ul style="list-style-type: none"> ➤ Children's own experiences. ➤ Tooth brush, Tongue cleaner ➤ Pictures on the process of cleaning the teeth, tongue etc. ➤ Film on care of teeth. ➤ Magnifying glass to observe teeth/gums. ➤ Medical reports of children.

Integration: Health and Physical Education

Life skills: Healthy habits for a healthy living

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:

- ✓ draw and label parts of the digestive system;
- ✓ name and identify organs of the digestive system;
- ✓ discuss the functions of the digestive system in the human body;
- ✓ explain the functions of each digestive organ in his/her own words;
- ✓ give reasons for chewing of food for better digestion;
- ✓ name and identify organs of the excretory system;
- ✓ explain and functions of each organ of the excretory system;
- ✓ draw and label parts of the excretory system;
- ✓ discuss the need for the excretory system in the body;
- ✓ identify various habits that help to keep the digestive and excretory organs healthy.

Human Body: The Digestive and Excretory Systems

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Organs of the digestive system (mouth, food pipe, stomach, liver, small and large intestine, rectum, anus). ➤ Functions of various organs in digestion, need for chewing food well, and for regular bowel movements. ➤ Need for water. ➤ Organs of the excretory system and their functions. ➤ Healthy habits related to digestion and excretion. 	<ul style="list-style-type: none"> ➤ Providing opportunities to children to share their own experiences. ➤ Drawing attention to the various organs in a model/chart of the digestive and excretory systems. ➤ Opportunities to draw pictures of both the systems and labelling the organs in both the systems. ➤ Discussing the importance of water in the process of digestion and excretion. ➤ Discussing the functions of the different organs of the digestive and excretory systems, through models/charts. ➤ Discussing healthy food habits related to digestion and excretion and relating them with the children's own experiences 	<ul style="list-style-type: none"> ➤ Pictures/charts of the digestive and excretory systems. ➤ Models showing various organs of digestive and excretory systems. ➤ e-programme/content on digestive/excretory systems. ➤ Cut out of the human body locating places of various organs of both the systems. ➤ Diagrams on the digestive and excretory systems made by children. ➤ Discussion on junk and healthy food items

Integration: Languages, Health and Physical Education.

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:

- discuss the need for adaptation in animals to survive in their different habitats;
- enlist reasons of adaptation in animals: on land, in air and in water;
- give examples of adaptations of animals: on land and in water;
- relate modification of body parts in various animals due to food habits (herbivores, carnivores, omnivores);
- give examples of herbivores, carnivores and omnivores;
- develop empathy, love and concern for animals.

Adaptation in Animals		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Adaptation in animals. ➤ Need for adaptations in animals. ➤ Reasons of adaptations. ➤ Examples of adaptations in animals: on land, in water. ➤ Adaption in modification of body parts in herbivores, carnivores, omnivores. ➤ Examples of each. ➤ Care and concern for animals 	<ul style="list-style-type: none"> ➤ Sharing/listening to the experiences of children related to adaptation in animals. ➤ Showing a film/picture and then creating situations to identify adaptations in various animals have. ➤ Assigning project work to children in groups/individually to develop charts depicting adaptation in animals due to water, land, food habits; ➤ Assigning Project work to children in groups /individually to develop scrap books on adaptations in animals. 	<ul style="list-style-type: none"> ➤ Pictures of animals having adaptations. ➤ Flash cards. ➤ Digital images (in animals). ➤ Web map of animals showing adaptations on land. ➤ Web map of animals showing adaptations in water. ➤ Charts prepared by children. ➤ Documentary film on adaptation in animals.

Integration: Languages, Health and Physical Education, Social Studies (Our State-Landforms, Climate, vegetation)

Life Skills: Care 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:

- discuss the need for adaptation in plants to survive in their habitat;
- enlist reasons of adaptations in plants on land, water, desert and hilly areas;
- give examples of plant adaptations on land, water, desert and hilly areas;
- draw pictures of various adaptations in plants.

Adaptation in Plants		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Need for adaptation in plants. ➤ Examples of adaptation of plants on land with examples. ➤ Examples of adaptation of plants in water with examples. ➤ Examples of adaptation of plants in desert with examples. ➤ Examples of adaptation of plants in hilly areas with examples. 	<ul style="list-style-type: none"> ➤ Sharing/listening to the learning experiences of children related to adaptation in plants. ➤ Showing various plants having adaptations due to their habitats. ➤ Creating situations to identify various other plants having (after seeing pictures/films) adaptations. ➤ Assigning project work to: <ul style="list-style-type: none"> ➤ develop charts depicting adaptation of plants in different habitats i.e. water, land, ➤ develop scrap book on adaptation in different plants with examples ➤ Drawing of pictures by children of different adaptations seen in plants. 	<ul style="list-style-type: none"> ➤ Pictures. ➤ Flash cards. ➤ Digital images (various plants). ➤ Web map of plants showing adaptations. ➤ Examples of adapted plants. ➤ Charts prepared by children. ➤ Documentary film on adaptation in plants.

Integration: Languages, Social Studies (Our State-Landforms, rivers, climate, vegetation)

Life skills: Concern for the environment

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:

- ✓ identify plants as herbs, shrubs and trees;
- ✓ identify the kind of roots seen in plants (through observation);
- ✓ differentiate between tap and fibrous root (through observation);
- ✓ cite examples of plants with the tap and fibrous root systems;
- ✓ draw pictures and label each kind of root system;
- ✓ identify variations in leaves (observation);
- ✓ discuss the process of photosynthesis in their own words (simple non-technical language);
- ✓ demonstrate presence of iodine in a leaf through a simple experiment (with support of elders).

Plants in the Surroundings and Environment

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Parts of plants and their uses (Revisiting earlier concepts). ➤ Roots: kinds of roots, their functions and examples. ➤ Shoots: functions of the stem. ➤ Functions of the leaf: Photosynthesis, transpiration process (in simple language). ➤ Iodine test for starch in leaves. ➤ Products obtained from plants such as food items, wood, coir, rubber, fibres. 	<ul style="list-style-type: none"> ➤ Providing opportunities to observe various kinds of plants and categorizing them as herbs, shrubs and trees. ➤ Drawing pictures of leaves and colouring them. ➤ Showing through simple experiments different functions of the leaf (showing stomata, green pigment) to explain transpiration, photosynthesis (in simple language using non-scientific terms). ➤ Conducting simple experiments/ activities (hand lens) to locate stomata on the surface of leaf ➤ Providing opportunities to children to discuss various uses of plant products in our life, with examples ➤ Conducting experiment to demonstrate the process of photosynthesis ➤ Conducting experiment showing presence of starch in leaves using iodine test ➤ Providing opportunities to appreciate the significance of plants in our life. ➤ Creating a herbal garden. 	<ul style="list-style-type: none"> ➤ Various kind of leaves, different parts of plants ➤ Plant products-wood, coir, rubber. ➤ Hand lens. ➤ Apparatus required for experiments on photosynthesis and presence of iodine in leaves. ➤ Visuals /videos on the use of plants. ➤ Collection of products of plants. ➤ School's herbal garden.

Life Skills: Sensitivity towards plants and environment.

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:

Children will be able to:

- ☑ give reasons why air is important for living beings;
- ☑ demonstrate some properties of air through simple experiments (air has weight, occupies space, expands and has no colour);
- ☑ demonstrate the process of inhalation/exhalation of air;
- ☑ discuss causes of air pollution in the environment / surroundings;
- ☑ suggest ways/remedies to reduce air pollution in the environment;
- ☑ show concern about the environmental activities which cause air pollution.

Air		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<p>Revision of Class III-Matter</p> <ul style="list-style-type: none"> ➤ Some properties of air i.e., occupy space, weight, expands, no colour. ➤ Composition of air (gases + water vapour). ➤ Process of breathing and burning. ➤ Causes of air pollution – dust, smoke, spitting (germs/bacteria, Virus), preventive measures to keep air clean. 	<ul style="list-style-type: none"> ➤ Revisiting concepts learnt in the earlier classes. ➤ Building on children's earlier learning. ➤ Conducting simple experiments to demonstrate that air has weight, occupies space, air expands. ➤ Arranging live demonstration to show the process of inhalation/ exhalation of air by lungs. ➤ Arranging a class activity for all children to demonstrate the process of breathing and deep breathing for healthy living. ➤ Organizing group discussions to identify causes of air pollution. ➤ Assigning projects (group work) to children to list down ways to prevent air pollution. ➤ Facilitating origami activities with children like making kites, aeroplanes, etc. ➤ Decorating the classroom by making small kites. 	<ul style="list-style-type: none"> ➤ Apparatus /objects required to conduct experiments. ➤ Project work report on causes of air pollution. ➤ Project work report on ways to prevent air pollution. ➤ Origami material.

Integration: Languages, Health and Physical Education, Social Studies (Pollution- its impact on the environment, The Earth- Atmosphere)

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:

- discuss/share examples of solvent, solute and solution in day-to-day life;
- explain each term in their own words;
- conduct experiments to make solutions by using solute and solvent;
- identify various methods of separation of solute and solvent from solution;
- distinguish between the methods of sedimentation, filtration and evaporation;
- give an example of the methods of - sedimentation, filtration and evaporation;
- differentiate between soluble and insoluble substances in liquids;
- cite examples of soluble and insoluble substances.

Materials and Solutions		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<p>Revisit learning of Class III</p> <ul style="list-style-type: none"> ➤ Definition- solvent, solute and solution, giving examples of each (simple language). ➤ Soluble and insoluble substances giving examples of each (solubility in oil, water) ➤ Method of separation: sedimentation, decantation, filtration, evaporation. 	<ul style="list-style-type: none"> ➤ Building on previous learning and concepts. ➤ Conducting simple experiments to demonstrate how to make solutions in various solvents. ➤ Conducting activities/ to demonstrate various ways of separating impurities from a solution. ➤ Conducting simple experiments showing soluble and insoluble substance in solvent. ➤ Encouraging children to cite examples of various solutions used in day-to-day life. ➤ Citing examples of the process of sedimentation, decantation, filtration and evaporation. ➤ Demonstrating to children in groups and as a whole class: <ul style="list-style-type: none"> ☛ the process of sedimentation (sand + water, clay + water); ☛ the process of decantation, filtration and evaporation (sugar in water). 	<ul style="list-style-type: none"> ➤ Collection of soluble and insoluble substances. ➤ Apparatus to show making of a solution. ➤ Sieving apparatus, filter paper. ➤ Apparatus to show evaporation activity.

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:

- ✔ identify various sources and uses of light in the environment;
- ✔ distinguish between natural and artificial sources of light;
- ✔ cite examples of natural and artificial sources of light;
- ✔ appreciate the use of natural source of light in our day-to-day life;
- ✔ differentiate between luminous and non-luminous objects;
- ✔ differentiate between transparent, translucent and opaque objects in the surroundings;
- ✔ cite examples of each type of object, i.e. transparent, translucent and opaque;
- ✔ explain the process of shadow formation in simple language.

Light		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Source of light: natural and artificial. ➤ Examples of sources of natural and artificial light. ➤ Luminous/non-luminous objects. ➤ Properties of light. ➤ Transparent, translucent and opaque objects. Examples of each category of objects. ➤ Uses of these objects in daily life. ➤ Formation of shadows (how a shadow is formed - not in technical terms). 	<ul style="list-style-type: none"> ➤ Creating situations for sharing personal experiences of children and discussing them. ➤ Demonstrating luminous and non-luminous objects (plain paper and paper with oil drop). ➤ Initiating discussion, asking questions related to light and its properties, showing simple activities/experiments. ➤ Organizing activities to identify different objects as transparent, translucent and opaque. ➤ Conducting experiments to demonstrate how shadow is formed. 	<ul style="list-style-type: none"> ➤ Pictures/live examples of various sources of light. ➤ Objects depicting transparent, translucent, opaque features. ➤ Photographs/Pictures on the process of shadow formation.

Integration: Social Studies (Motions of the Earth)

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:

- ✔ appreciate the need for measurement of various things/phenomenon;
- ✔ identify various instruments used for measurement;
- ✔ differentiate various instruments based on their uses in daily life;
- ✔ give examples of unit of measurement of some objects;
- ✔ cite examples of activities where unit of measurement is required.

Measurement		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Need for measurement ➤ Examples of measurement in daily life (buying goods, watching time) ➤ Simple description of instruments used for measurement (ruler, tape, weighing machine, thermometer, clock) ➤ Use of each instrument, how to read/use them. 	<ul style="list-style-type: none"> ➤ Providing opportunities for discussion, interaction among peer group; child and teacher. ➤ Creating situations in the classroom for questioning, making questions. ➤ Demonstrating each instrument to observe and describe. ➤ Discussing uses of each instrument in daily life. ➤ Demonstrating 'How to use' with instructions. 	<ul style="list-style-type: none"> ➤ Discussion/question answer interaction among children and teacher ➤ Instruments used for measurement (scale, tape, weighing machine, ruler, clock, etc.) ➤ Examples/situations where unit of measurement is required ➤ Children's drawings.

Integration: Mathematics (Measurement)



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:

- ☑ discuss examples of push and pull seen in day-to-day life;
- ☑ differentiate between push and pull and give examples of each;
- ☑ describe push and pull in their own words (not definition);
- ☑ identify various kind of forces seen in day-to-day life (muscular, gravitational, magnetic, frictional);
- ☑ explain each force in their own words;
- ☑ cite examples of each force by relating it with daily life;
- ☑ demonstrate push and pull situation in a group activity (with safety precautions).

Push and Pull		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ The concept/ meaning of push and pull and difference between the two; ➤ Examples of push and pull. ➤ Force: meaning in simple terms, changes shape of objects and direction; ➤ Meaning of various types of forces – muscular, gravitational, magnetic and frictional. 	<ul style="list-style-type: none"> ➤ Showing and discussing the difference between push and pull and citing examples of each in groups; ➤ Sharing/showing push and pull situations as a demonstration activity and later involving students to do it in groups; ➤ Demonstrating various kinds of forces through simple activities, ➤ Organizing group activities for demonstration of various kinds of forces by children and explaining them in their own words 	<ul style="list-style-type: none"> ➤ Apparatus/Objects to demonstrate push and pull ➤ Pictures of examples of push and pull in real life situations.

Integration: Physical Education.



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:

- cite examples of friction observed in daily life and explain friction in their own words;
- explain uses and harmful effects of friction in daily life;
- conduct simple activities/experiments demonstrating friction.

Friction as a Force		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Friction – meaning, concept. ➤ How to reduce friction (oil, powder). ➤ Uses of friction. ➤ Harmful effects of friction. ➤ Examples of friction. 	<ul style="list-style-type: none"> ➤ Providing opportunities to children to discuss / share their experiences. ➤ Conducting activities / experiments that demonstrate friction. ➤ Creating situations to demonstrate friction on various kinds of surfaces. ➤ Asking children to identify situations where friction may be harmful. 	<ul style="list-style-type: none"> ➤ Children’s experiences. ➤ Oil, powder and other objects that can illustrate friction. ➤ Different surfaces ➤ Playing Carom Board.



Theme 1: The Story of the Past

"Story of the Past and Evidences in History" enables children understand the impact of past events in today's context. They learn to appreciate the rich heritage and traditions based on historical facts and evidences. Interesting pedagogies can be employed to familiarize them with the work of both historians and archaeologists.

Learning Outcomes:

Children will be able to:

- ☑ discuss the role and significance of historical events in today's context;
- ☑ reflect orally and in writing on historical events;
- ☑ differentiate between ancient, medieval and modern periods of history;
- ☑ differentiate between archaeological and literary sources;
- ☑ discuss the importance of preservation of sources to know history;
- ☑ differentiate between the job of a historian and an archaeologist.

The Story of the Past and Evidences in History

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<p>➤ Story of the Past – History</p> <ul style="list-style-type: none"> ➤ The need to study History ➤ Need to compartmentalise History into Ancient, Medieval and Modern periods. <p>➤ Evidences in History – Sources of history</p> <ul style="list-style-type: none"> ➤ Archaeological sources. ➤ Literary sources: Books and paper records. ➤ Need to preserve sources, job of a historian and of an archaeologist. 	<ul style="list-style-type: none"> ➤ Explaining what history is and asking children to relate their own past experiences and reflect on how it has influenced them today. ➤ Organising a discussion on the significance of learning history. ➤ Asking children to have interactive sessions with their grandparents to share their past experiences. Then, encouraging children to talk about their family history. ➤ Discussing the needs and various ways of compartmentalising history by historians to facilitate the learning of the topics. ➤ Showing videos of manuscripts and archaeological sources. ➤ Discussing the importance of maintaining records in terms of their notebooks, the class attendance registers and school display boards. ➤ Encouraging children to talk to their elders about carefully preserving family records and important documents. ➤ Organising trips to local monuments, historical places or a museum. ➤ Showing a video about how an 	<ul style="list-style-type: none"> ➤ Pictures and documentaries of early man. ➤ Clay Tablets and stick to write with ➤ Videos on archaeological sites and remains of past ➤ Old newspaper for paper-machine. ➤ Flashcards, pictures and charts depicting buildings and monuments. ➤ Collection of old coins. ➤ Collection of stamps. ➤ <i>Amar Chitra</i> Katha.

The Story of the Past and Evidences in History

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
	<p>archaeologist gathers information through archaeological sites and remains.</p> <ul style="list-style-type: none"> ➤ Facilitating role play to differentiate between what a historian and an archaeologist does. ➤ Displaying and studying of old coins. ➤ Displaying and studying of old and new stamps. <p><i>Organising and Providing opportunities for:</i></p> <ul style="list-style-type: none"> ☛ Writing on a clay tablet/ mud ☛ Making handmade paper through paper machine, and preparing a manuscript ☛ Matching game of pictures and names of monuments ☛ Coin rubbing and taking impressions of it on the paper 	

Integration: Languages

Life Skills: Care and appreciation of Cultural Heritage



Theme 2: Almanac

'Almanac' highlights the importance, significance and types of calendars. Sequencing of events and marking important dates on the time line will further enrich children with an understanding of the past.

Learning Outcomes:

Children will be able to:

- ☑ differentiate between the Gregorian and Saka calendars;
- ☑ draw a timeline and mark AD (CE) and BC (BCE) on it;
- ☑ design a calendar on the basis of their understanding of the rules;
- ☑ sequence events and mark them on a timeline;
- ☑ identify and mark important dates on the school calendar.

Almanac		
Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Gregorian calendar. ➤ Saka calendar. ➤ Time-line (A.D. and B.C.). ➤ Use of C.E. and B.C.E. 	<ul style="list-style-type: none"> ➤ Showing a calendar and asking children to mark specific events / important days on it. ➤ Helping children to mark the birthdays of class mates with the help of a collage / poster. ➤ Providing a brief and basic introduction to the Gregorian and Saka calendars. ➤ Discussing and highlighting the differences between the Gregorian and Saka calendars. ➤ Explaining the use of the terms AD and BC and the newer terminology CE and BCE on calendars and presenting it through a timeline. Creating futuristic calendar ➤ Drawing pictures / writing articles / poems etc. ➤ Writing narratives. <p><u>Providing opportunities for:</u></p> <ul style="list-style-type: none"> ☛ Enabling children to design, use their knowledge and innovation and create a futuristic calendar. ☛ Giving them a situation to observe a day without a calendar or clock and writing their own narratives. ☛ Designing a board game: Observing one day for causes such as Respect, Honesty, Praise, Compassion ☛ Designing a calendar and marking days and events of their choice on them. ☛ Drawing pictures or writing articles, poems about important national days or events in that months 	<ul style="list-style-type: none"> ➤ Calendars –present day calendars, Saka calendar, school calendar. ➤ Charts. ➤ Flash Cards. ➤ Board games.

Integration: Mathematics (Measurement)

Theme 3: Responsibilities of a Good Citizen

'Responsibilities of a good citizen' is crucial as it aims to make children understand the importance of civic sense and their responsibilities as a citizen of India. In an urban society that also reflects a sense of alienation, children must be taught how to develop a sense of unity and belongingness in a community. Varied interesting pedagogies enable them to observe and understand how these concepts play out in the world around us.

Learning Outcomes:

Children will be able to:

- ☑ discuss the term civic sense, and appreciate its significance;
- ☑ describe and reflect on the term citizen;
- ☑ demonstrate respect towards public and private property;
- ☑ suggest measures for proper upkeep of public property;
- ☑ initiate responsibilities for solving issues in school and in neighbourhood.

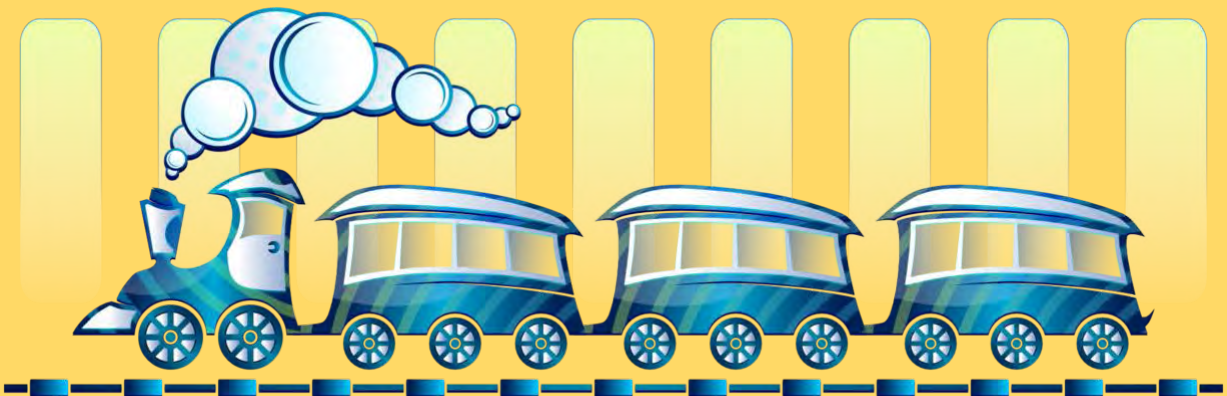
Responsibilities of a Good Citizen

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ▷ Introduction to Civics <ul style="list-style-type: none"> ☛ Definition of: Civics, Civic sense, Citizen. ☛ Importance of being a good neighbour and a good citizen. ▷ Responsibilities of a good citizen: <ul style="list-style-type: none"> ☛ Participation in elections. ☛ Caring for public and private place for example – schools, hospitals. Public transport, historical monuments, places of worship, parks, etc. 	<ul style="list-style-type: none"> ▷ Encouraging the sharing of experiences by children on studying together and helping one another. ▷ Facilitating classroom discussions on the meaning and maintaining of civic sense. ▷ Motivating children to adopt good civic habits in their daily lives. ▷ Analysing the need for caring for public property through classroom participation. ▷ Motivating children to create community awareness on cleanliness/road safety/value for work/ care for public property. ▷ Conducting group discussions in the classroom on the qualities of and expectations from a class representative or a prefect to make children understand their responsibility. ▷ Conducting class elections to choose a class monitor or a prefect. ▷ Report writing on the class elections. ▷ Encouraging children to research and gather information on the recent elections in their state, through newspapers and digital media. 	<ul style="list-style-type: none"> ▷ Community awareness programs. ▷ Print (newspapers, books...) and digital media. ▷ Flash cards. ▷ Coloured sheets for activities. ▷ Slogan writing. ▷ Role play.

Responsibilities of a Good Citizen

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
	<p><u>Providing opportunities for Activity</u></p> <ul style="list-style-type: none"> • Dividing the class into groups and giving them situations related to civic sense and good citizenship and having a discussion on what is civic sense and good citizenship. • Facilitating the preparation and presentation through street play/ slogan writing / skit / puppet show, etc. • Slogan making and designing a logo with mission and campaigning for the class election 	

Life Skills: *Developing good citizenship skills*



Theme 4: The Earth – Its Movements & Forms

'The Earth- Its Movement and Forms' enables children to understand the concept of movements of the earth. It aims to generate awareness about the four realms of the earth i.e. lithosphere, hydrosphere, atmosphere and biosphere. It will also enable them to identify and mark the major land forms of the Earth on an outline map of the world. Scale and cardinal directions will be introduced which will enhance their mapping skill.

Learning Outcomes:

Children will be able to:

- identify axis, rotation and revolution of the earth;
- explain causes of day and night and seasons;
- differentiate the four domains of the earth;
- identify major landforms and water bodies;
- locate oceans and continents on the map;
- differentiate between physical and political maps;
- use signs and symbols on the map;
- identify the purpose of using different colour schemes on the map;
- use scale and directions in mapping.

The Earth – Its Movements & Forms		
Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ▷ Motions of the Earth: <ul style="list-style-type: none"> ☛ Concept of Axis ☛ Rotation – Day and night ☛ Revolution - Seasons ▷ The Four Domains of the Earth: <ul style="list-style-type: none"> ☛ Lithosphere ☛ Hydrosphere ☛ Atmosphere ☛ Biosphere ▷ Major Land Forms: <ul style="list-style-type: none"> ☛ Mountains, Plateaus and Plains, deserts ☛ Continents and oceans ☛ Water bodies: oceans, seas, lakes and rivers ▷ Types and elements of Maps: <ul style="list-style-type: none"> ☛ Types of maps (physical, political) ☛ Scale ☛ Sign and symbols; Use of colours. 	<ul style="list-style-type: none"> ▷ Using a globe and torch to explain the rotation of the earth, day and night. ▷ Showing a video or diagrams to explain revolution. ▷ Discussing the four domains of earth using globe/model or PPTs with children. ▷ Explaining the difference between physical and political maps. ▷ Providing children maps to undertake mapping of landforms and water bodies. ▷ Marking and identifying continents and oceans on an outline map of the world. ▷ Discussing the utility and use of the scale on the map. ▷ Showing the use of different colours on a physical map of the world and explaining the purpose of their use. ▷ Taking children to an open area in the morning and helping them understand the directions facing the rising sun. ▷ Conducting class quizzes and providing worksheets to children to complete. <p><u>Providing opportunities for:</u></p> <ul style="list-style-type: none"> ☛ Making of models or charts to be made to depict the four domains ☛ Writing poems and organising activities on right and left and east, west, north and south directions. 	<ul style="list-style-type: none"> ▷ Globe ▷ Torch ▷ Videos/PPTs ▷ Maps ▷ Poems ▷ Hands -on activities ▷ Class quizzes

Integration: Science (Air, Light), Arts Education

Theme 5: Our State

'Our State' familiarizes children with the geographical features and climate of the state in which they live. It helps them identify the agricultural practices and major crops of the state. Children may be able relate to their own area with other parts of the state.

Learning outcomes:

Children will be able to:

- ☑ locate the state they live in on the map of India;
- ☑ locate the capital, important cities, landforms and rivers on the state map;
- ☑ learn about the climate (seasons), vegetation and agricultural crops;
- ☑ appreciate the cultural heritage of the state they live in.

Our State		
Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Location of States on the map of India. ➤ Neighbouring States/water bodies. ➤ State and its capital. ➤ Important cities. ➤ Land forms and rivers. ➤ Climate ➤ Vegetation ➤ Agriculture- Types of crops. 	<ul style="list-style-type: none"> ➤ Mapping the different states on the Map of India. ➤ Facilitating class discussions, showing videos or organising class trips to learn about the state capital. ➤ Identifying and naming the major landforms and rivers. ➤ Conducting quizzes on important features of the State. ➤ Showing videos and PPTs on the seasons, vegetation and crops-to be followed by a class discussion. ➤ Children discussing with elders and peer group on the important state festivals and in particular related to crops. ➤ Marking important rivers, mountains, hills, cities and the capital of the state on an outline map of the state by children individually. ➤ Assigning project work too small groups on the state (Writing a few simple lines about the state and attaching pictures). <p><u>Organising Activities</u></p> <ul style="list-style-type: none"> ➤ Local vegetables and samples of crops can be brought by the school or bought by children. Children can design name cards for them. ➤ Children can bring picture posts cards about the state and display these on the class bulletin board. ➤ Children can learn a traditional folk song or a folk dance and perform it in class. They can compose and set music to a song describing the state 	<ul style="list-style-type: none"> ➤ Map of India and the state (Physical and Political) ➤ Relevant videos and PPTs. ➤ Samples of crops and vegetables grown in the state. ➤ Videos /Audios on Folk songs and dances of the state. ➤ Information Brochures, cards and posters.

Integration: Languages, Science (Human Body-Food we eat, Adaptations in Animals/Plants)

Life Skills: Appreciate the Cultural Heritage

Theme 6: India – Unity in Diversity

India - Unity in Diversity familiarizes children with the diverse geographical features of the Indian subcontinent. They will be able to relate the geographical and socio-cultural features of the place in which they live with those of other parts of the country. Children would also understand and appreciate the similarities and differences in the lives of people living in different parts of the country.

Learning Outcomes:

Children will be able to:

- ☑ identify the major physical divisions of India;
- ☑ locate major mountains, hills, rivers, plateaus on the map of India;
- ☑ identify similarities and differences in the lives of people in India;
- ☑ appreciate unity despite diversities in their country.

India – Unity in Diversity		
Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ India – Physical Divisions <ul style="list-style-type: none"> ☛ The Himalayas ☛ Northern Plains ☛ Peninsular plateau ➤ Major Rivers of India <ul style="list-style-type: none"> ☛ Perennial and non-perennial (Krishna, Kaveri, Mahanadi, Narmada, Indus, Ganges, Yamuna, Brahmaputra) ➤ People <ul style="list-style-type: none"> ☛ Population ☛ Language ☛ Festivals ☛ Food Habits ➤ Unity in Diversity 	<ul style="list-style-type: none"> ➤ Locating and marking major mountains, hills, rivers and plateaus on the map of India. ➤ Encouraging the sharing of experiences of children on their visits to mountains, plains, water bodies, deserts etc. ➤ Discussion on the life of people living in mountains, deserts, plains etc. ➤ Discussion on effects of physical features of a place on density of population. ➤ Organising group work/projects on: <ul style="list-style-type: none"> ☛ Preparing a chart on different festivals and food habits of people living at different places in India. ☛ Searching and enlisting different languages spoken at different places in India. ➤ Discussing with children the factors that unite us despite diversities. ➤ Organising games, quizzes and puzzles on different rivers, languages, festivals and food habits of people. ➤ Preparing a menu card of important food items of the different states in India. ➤ Encouraging children to develop collages, poems etc. on the festivals of India. ➤ Celebrating different festivals in the school. 	<ul style="list-style-type: none"> ➤ Map, Wall map and Globe) ➤ Games and puzzles ➤ Pictures and Videos of Different Festivals in India. ➤ Collection of Menus /Food items from different parts in India and food habits. ➤ Pictures of People from different states - their dress, and accessories etc. ➤ List of Important Mountains, Rivers, Languages spoken etc.

Integration: Languages, Arts Education

Life skills- respect, empathy, sensitivity, compassion

Theme 7: Pollution – Its Impact on the Environment

This theme aims at generating awareness and an understanding amongst children about the effect and impact of pollution on the environment. It will also emphasize the importance of potable water and its scarcity in different parts of the world and children will be made aware and sensitized to take initiatives to save water in their home and neighbourhood.

Learning Outcomes:

Children will be able to:

- ☑ discuss various causes of pollution in the surrounding/environment;
- ☑ enlist kinds of pollution (their causes and effects).
- ☑ identify the causes of pollution.
- ☑ enumerate the effects of pollution.
- ☑ sensitize the children about the importance of preventing pollution.
- ☑ suggest ways to reduce various kind of pollution.
- ☑ demonstrate sensitivity towards right methods of waste disposal.

Pollution – Its Impact on the Environment

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ▷ Pollution – meaning ▷ Causes, effects and prevention of pollution. ▷ Waste disposal (Conserving the environment, Reduce, Recycle and Reuse) ▷ Case studies of air, water and noise pollution. 	<ul style="list-style-type: none"> ▷ Organising group discussions on children’s own experiences on pollution. ▷ Showing videos about pollution followed by children sharing their views on the videos. ▷ Providing information on causes and effects of pollution. ▷ Encouraging children to discuss and analyse the information provided about causes of pollution and suggest methods to prevent pollution. ▷ Creating situations to discuss various methods for disposal of waste necessary for conservation of environment (Reduce, Recycle and Reuse) ▷ Assigning project work (groups/individually)to children on causes of pollution and action required on their part and that of others to improve the environment. ▷ Creating situations for children to creatively express their ideas about pollution and its effect by writing slogans, poems, stories and/or drawings/paintings etc. 	<ul style="list-style-type: none"> ▷ Classroom discussions. ▷ Narratives – experiences of teachers and children. ▷ Videos/PPTs ▷ Charts ▷ Project work ▷ Dustbins – for biodegradable and degradable waste ▷ Case studies

Pollution – Its Impact on the Environment

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
	<ul style="list-style-type: none"> ➤ Collecting news /information on the theme and analysing/discussing them. ➤ Motivating and organising a case study on air, water and noise pollution. <p><i>Providing opportunities for activities:</i></p> <ul style="list-style-type: none"> ➤ Making of a group chart on the causes, effects and prevention of pollution ➤ Case study-water pollution in neighbourhood 	

Integration: Science (Air), Languages

Life Skills: Concern for the environment, care and concern for the resources



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:

- ☑ differentiate between the terms data and information;
- ☑ explain the purpose of internal and external memory;
- ☑ describe different data storage units;
- ☑ list the primary and secondary data storage devices.

Computers – Storage and Memory device		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Data vs Information ➤ Data storage units-basic facts ➤ Internal and External memory ➤ Primary and Secondary Storage Devices 	<ul style="list-style-type: none"> ➤ Discussing about data and information related to real-life scenario by using a computer. ➤ Explaining the concept of memory and its capacity related to the size of the storage devices. ➤ Introducing the basic concepts of bits and bytes. Relating the units to digital system (ON and OFF). ➤ Providing opportunities for hands on practice to the children through online Worksheets 	<ul style="list-style-type: none"> ➤ Physical memory devices/ visuals using IWB. ➤ Online Worksheets ➤ Online computer experiences.

Life Skills: General awareness

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:

- ☑ recall the features of OS and GUI;
- ☑ identify and use the Task Bar, Quick Launch Bar and short cut menu;
- ☑ customize the windows setup.

GUI Operating System – Desktop Management

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Recapitulation of the Topic done in previous class. ➤ Usage of Quick Launch Bar, Task Bar ➤ Setting Date, time and volume of the speaker. ➤ Use of shortcut menu 	<ul style="list-style-type: none"> ➤ Conducting activities to: ➤ Explaining the use of different task bars and customizing windows. ➤ Observing children work responsibly on the windows set up and providing a timely feedback. 	<ul style="list-style-type: none"> ➤ Computer / IWB with GUI operating system. ➤ Hands on experiences ➤ Worksheet analysis by teacher.

Life Skills: General Awareness



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.

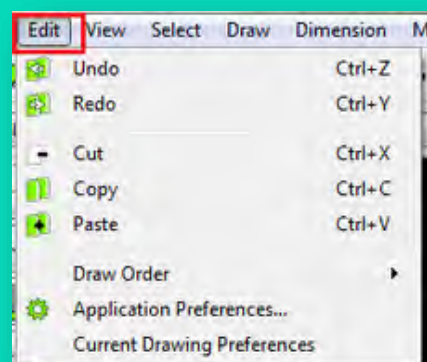
Learning Outcomes:

Children will be able to:

- use various features of editing and formatting;
- use shortcut keys;
- prepare a document based on their requirement;
- preview and print a document.

Tools of Word Processor		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Editing a document ➤ using Undo and redo commands ➤ checking spelling and grammar ➤ describing the purpose of using Thesaurus ➤ Formatting a document ➤ Font: Font size, colour, bold, italics and underline ➤ changing text alignment ➤ changing line spacing and paragraph spacing. ➤ Shortcut keys ➤ Using a printer for printing and print preview 	<ul style="list-style-type: none"> ➤ Recapitulation of the activities done in previous class. ➤ Review of the features done previously. ➤ Demonstrating various tools related to Editing and Formatting ➤ Providing opportunities through hands-on-experience to each child /in groups on the computer/s by: ➤ showing sample documents, to prepare required documents using the features learnt ➤ discussing in detail the difference between editing and formatting. ➤ demonstrating the use of print preview and the steps for printing the document. ➤ explaining the use of shortcut keys. ➤ Children doing all the above. 	<ul style="list-style-type: none"> ➤ Computer/IWB with a word processor software. ➤ Printer ➤ Hands on experiences – to work on computer

Life Skills: General awareness, Creative thinking, Decision making, Collaborative learning, presentation skills



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:

- ☑ label the parts of a browser window;
- ☑ define the terminologies related to Internet Network;
- ☑ use appropriate keywords to collect information;
- ☑ make responsible decision while browsing.

The Internet - Web Browser		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Network in terms of Internet ➤ Basic requirements for an Internet connection ➤ Parts of a browser window (address bar, refresh button, favourite, history, home, stop, back and forward, new tab) ➤ Related terms like www, URL, ISP, net surfing ➤ Search engine 	<ul style="list-style-type: none"> ➤ Recapitulation of previous learning on the Internet ➤ Explaining: <ul style="list-style-type: none"> ➤ the concept of Network through role play. ➤ The parts of a browser window ➤ terminologies ➤ Discussing various search engines and how to use them. ➤ Discussing usage of appropriate keywords to search information. 	<ul style="list-style-type: none"> ➤ Computers/IWB with an internet connection ➤ Worksheets

Life Skills: Work ethics, Decision making, Collaborative learning



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:

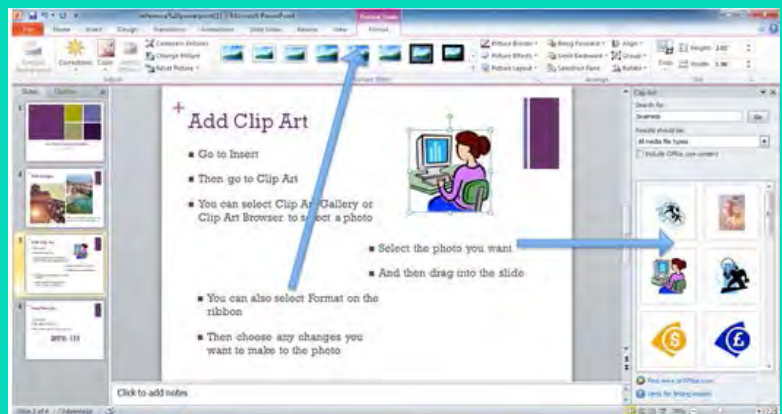
- ☑ explain the purpose of presentation software;
- ☑ choose appropriate layouts according to the requirement;
- ☑ create, add text and images to the slide;
- ☑ navigate between the slides;
- ☑ present a slide show.

Presentation Software – An Introduction

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Introduction to presentation software and its purpose ➤ Opening and exiting a presentation software ➤ Components of a presentation software window. ➤ Concept of slides and its layouts ➤ Slide show presentation 	<ul style="list-style-type: none"> ➤ Discussing the importance of presentation software as a group activity. ➤ Demonstrating how to: <ul style="list-style-type: none"> ☛ <i>Prepare layouts of slides and its uses according to the requirements.</i> ☛ <i>create, save, and close a file</i> ☛ <i>open and edit an existing file</i> ☛ <i>insert a slide to a presentation</i> ☛ <i>add of text and images to a presentation</i> ➤ Providing hands-on experience to children (individually /groups) for preparing a presentation on selected topics integrated with the curriculum/real-life scenario. 	<ul style="list-style-type: none"> ➤ Computers/IWB with presentation software.

Integration: Languages

Life Skills: Work ethics, Decision making, Collaborative learning, Creative thinking, Presentation skills



Topic 6: Step-Wise 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:

- ☑ analyse the task;
- ☑ break up the task into simple steps;
- ☑ predict possible solutions.

Step-Wise Thinking		
Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none"> ➤ Reasoning and problem solving – meaning ➤ Case studies 	<ul style="list-style-type: none"> ➤ Taking a real life scenario/ case study, to plan a task. ➤ Discussing with the children to break the task into small steps. ➤ Dividing the class into groups and assigning the same task to each group to find the solution. ➤ Suggested task could be - Planning for a picnic/a birthday party/visit to a park. 	<ul style="list-style-type: none"> ➤ IWB with presentation software ➤ Projector ➤ Case Study



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:

- copy and move a file/folder;
- rename and delete files and folders;
- Inculcate habits not to tamper others' files or folders.

Features of File Management

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
<ul style="list-style-type: none">▶ Copy and move a file/folder from one location to another▶ Rename a file/folder▶ Delete a file/folder.▶ Not tampering with others' files/folders.	<ul style="list-style-type: none">▶ Recollect the activities done in previous classes▶ demonstrating different operations of file management, like copying, moving, renaming, deleting a file/folder.	<ul style="list-style-type: none">▶ Computer / IWB

Life Skills: Work ethics