ENGLISH

Listening and Speaking

Listen and critically examine the topic and share views in the class or a specific situation. While speaking, the emphasis is on appropriate use of tone, stress and intonation to convey meaning.

Learning Outcomes:

Children will be able to:

- ☑ engage effectively in sharing and explaining their ideas and viewpoints;
- ☑ ask and answer questions based on the concerned topic;
- ☑ interpret and analyse content;
- ☑ evaluate and draw conclusions using key details from the text;
- ☑ use parallel resource material to reinforce learning (e.g. use material from the internet to corroborate what is being taught in class);
- ☑ interpret the speaker's message (verbal and nonverbal);
- ☑ make personal connections with texts, comparing ideas and information;
- ☑ make appropriate gestures, eye contact with peers and teachers and exhibit clarity with pace;
- ☑ take dictation of an unseen passage.

Listening and Speaking		
Suggested Areas/Content	**Suggested Transactional Processes**	**Suggested Learning Resources**
⯈ Listen and analyse ideas and viewpoints from content across the curriculum. ⯈ Raise specific questions and draw conclusions. ⯈ Interpret the speaker's message (verbal and nonverbal). ⯈ Give opinions while speaking ⯈ Debate, discussion, drama etc. ⯈ Aspects of spoken language such as tone, intonation, body language, facial expression ⯈ Dictation of an unseen passage	⯈ Reviewing and building on previous learning. ⯈ Singing songs and rhymes ⯈ Listening to stories in audio, video and print. ⯈ Teacher narration and interaction. ⯈ Introducing / Familiarizing (children) to a variety of food, clothes, custom, etc. ⯈ Role play, dramatization, reading aloud, recitation of rhymes, poems. ⯈ Telling and re-telling of stories, ⯈ interpreting pictures, sketches, cartoons. ⯈ Providing a range of materials such as unseen passages/newspaper/magazine/ audio video clips etc. for listening and encouraging children to explore ideas and opinions expressed. ⯈ Encouraging children to raise questions and express opinions	⯈ Simple projects ⯈ Picture books and children's Literature. ⯈ Songs, Poems and Rhymes. ⯈ Stories. ⯈ Audio / video programmes of 5 to 20 minutes duration. ⯈ Online resources/audio/video clips/animated clips /poems/ narratives/autobiographies /biographies [e.g.: a clip from Gulliver's Travels]. ⯈ Articles, current affairs from magazines, newspapers, etc. (*focusing on drug menace and abuse, discrimination, stigmatization, myths and misconceptions*). ⯈ Posters/ Models/ Charts/advertisements etc. ⯈ Reading material in different areas. (These *will help in focusing on personalities to develop positive attitudes, values and life skills.*)

Listening and Speaking		
Suggested Areas/Content	**Suggested Transactional Processes**	**Suggested Learning Resources**
	on the passage read out or the clip shown.	
	❯ Creating learning situations for children to infer, interpret and evaluate the content.	
	❯ Encouraging children to explore and speak on related material.	
	❯ Stressing on the need and importance of verbal and non-verbal clues in communication.	
	❯ Providing opportunities and context to speak on specific topics and listen to others' point of view by use of appropriate stress, intonation, tone.	
	❯ Giving dictation of unseen passages as per the level, context and level of the children.	
	❯ Organising debate, drama and discussions forums e.g. 'Save the girl child'	
	NOTE: The examples given above are intended merely as guidelines. The teachers are welcome to be as innovative as the classroom situation allows.	
	The activities suggested above are not necessarily restricted to listening and speaking. As the language teacher is well aware, all four language skills are inter-related and often overlap.	

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

Read seen and unseen text to analyse and evaluate the ideas to draw conclusions. Writing encompasses process approach that reflects use of phrases, idioms, metaphors etc.

Learning Outcomes:

Children will be able to:

- identify the main aspects   of a text and explain how they are supported by key details;
- comprehend and identify the broad outline of the narrative;
- explain events, procedures, share ideas, or concepts including what happened and why, based on specific information in the text;
- link opinion and reasons using words, phrases, and clauses;
- infer the meaning of words and phrases as they are used in a text, including figurative language such as similes;
- use technology to gather information for project presentation;
- 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; include 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;
- write short notes, write ups based on positive self-concept, understanding and respecting diversity and responsible behaviour from personal experiences or real life situations;
- use words and phrases at the grade appropriate level, including those that convey emotions, actions, etc.;
- follow process approach to writing - planning, writing, revising, editing, rewriting.

Reading and Writing

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
Read seen and unseen texts on a variety of themes to comprehend, infer and interpret (intensive reading) Texts can be: ☛ *Prose* ☛ *Poetry* ☛ *Drama* ☛ *Diary* ☛ *Anecdote* ☛ *Jokes* ☛ *Riddles* ☛ *Auto/biographies* ☛ *Picture reading* ☛ *Article Report etc.* Reading for pleasure e.g. magazines, stories, poems, narratives from other subject areas.	Reviewing and building on previous learning. Providing texts (different forms) comprehend, infer and evaluate. Encouraging children to evaluate, present own view points and connect to the world outside. Creating opportunities for reading across curriculum. Encouraging the children to read and appreciate the usage of language in the text. Creating situations for children to follow the process to write. Providing opportunities to children to learn new words to	Pictures Books, Cartoons with audio or text. Self / teacher created materials. Magazines, newspapers Text types: Very short stories, poems and songs, texts with visuals, etc. Age appropriate magazines, newspapers, picture books, story books etc. *(for reading and connecting it to their own experiences.)* Realia/ Flashcards/ Posters/ puppets/ Charts etc. *(to stimulate language.)* Establish a class library /Reading Corner.

Reading and Writing

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
- Use of dictionary both print and online. - Creative writing - Paragraph writing (150 words) - Personal experience - Story - Poem - Anecdote - Letter to a friend, relative etc. - Organise and structure meaningful sentences in a sequential manner. - Use of 'firstly', 'then', 'later', 'finally', etc. to link sentences to indicate the passage of time and provide a sense of closure. - Process approach to writing. - Write Notice, message etc.	incorporate / include in their writing. E.g.: verbal, audio visual stimulus, brainstorming etc. - Familiarizing children with the basic process of writing. - Providing opportunities to develop different styles/ types of writing e.g. *a short description of a person, thing, place or experience.* *notice,* *message for concerned individuals.* *short composition based on pictures.* *Giving dictation from a range of texts.*	

Grammar and Vocabulary in Context

Children use age appropriate vocabulary. They understand the use of grammar, reflected through the use of simple and compound sentences with appropriate use of punctuations, prepositions etc.

Learning Outcomes:

Children will be able to:

- use vocabulary as per different registers of language;
- understand and use adverbs and their kinds;
- use conjunctions, prepositions, and interjections;
- learn the meaning and use of common idioms and proverbs;
- use plural possessives, adjective and adverb comparisons, apostrophes in contractions (basic examples – can't, won't etc.);
- introduce and reinforce the use of irregular verbs in their simple and continuous tense. (break, broke, broken – eat, ate, eaten);
- use correct spelling of commonly used words;
- learn to use direct and reported speech in dialogues;
- develop higher level of proficiency in the use of subject verb agreement.

Grammar and Vocabulary in Context

Suggested Areas/Content	Suggested Transactional Processes	Suggested Learning Resources
- Adverbs, conjunctions, prepositions, and interjections. - Common idioms and proverbs. - Plural possessives, adjective and adverb comparisons, apostrophes in contractions - Irregular verbs in their simple and continuous tense. - Vocabulary in context as per the register for e.g. cookery, yoga, sports etc. - Direct and reported speech in dialogues. - Subject verb agreement.	- Reviewing and building on previous learning. - Providing examples of grammar in context to make children understand various aspects of grammar e.g. (basic examples of possessive pronouns – can't, won't etc.). - Creating and using worksheets /tasks for children to use grammar in context e.g. (Break, broke, broken – eat, ate, eaten) - Providing audio - visual and verbal clues to reinforce the use of grammar and develop language skills. - Creating opportunities for use of idioms, phrases and vocabulary in context e.g. use of phrases: look: look down, look up. Look down upon, look into etc.	- Self / teacher created materials e.g. worksheets, activities/tasks on grammar in context. - Audio, video, print /text (tactile form) - Authentic tasks and activities of short duration which would bring in an engagement with ☛ words, ☛ word chunks, ☛ formulaic use ☛ collocations ☛ expressions in dialogue. ☛ Word / Languages games. - Vocabulary in context - Realia/ Flashcards/ Posters/ puppets/ Charts etc. (to *stimulate language.*)

ENGLISH LITERATURE

Literature encompasses both literary and non-literary writings. Literary writing is an expression of life through the medium of language that is aesthetically pleasing. Literature makes us think about ourselves and our society, allows us to enjoy language and beauty. It helps us to appreciate life in its myriad colours along with language learning. Children get exposure to rich use of language through carefully structured sentences and words. Different forms of literature such as prose, poetry, and drama use rhyme, rhythm, alliteration, irony, dialogue and a number of other devices that help develop appreciation and language. These forms of literature introduce children to a range of writings such as story, bio/autobiography, letter, poetic drama, different genres of poetry etc. In literary writing, imagination plays the most important role that would help develop creative expression, sensitization to local and global issues. Non-literary texts such as reports, articles etc. provide academic information thereby enriching the repertoire of children and introduce them to different registers of language.

Suggested Reading List

Classes I & II
- The Ladybird Read Aloud Series
- Aesop's Fables
- Panchatantra Tales/ Karadi Tales
- Jataka Tales
- Adventures of Pinocchio
- The Tale of Peter Rabbit – Beatrix Potter
- Noddy Stories (with plenty of illustrations)
- Grandfather Gandhi – Arun Gandhi
- Stories such as Fantastic Mr. Fox
- Horrid Henry – Francesca Simon
- The Sheep – Pig : Dick King Smith

Class III
- Stories by Ruskin Bond e.g. The Blue Umbrella, Grandfather's Private Zoo
- Finn Family Moomintroll – Tove Janssen
- The Wizard of Oz – L. Frank Baum
- The Borrowers by Mary Norton
- The Water Babies – Charles Kingsley
- Charlotte's Web – E.B. White
- The Wind in the Willows – Kenneth Graham
- Roald Dahl's Children's Books (e.g. The Witches, Matilda etc.)
- Heidi – Johanna Spyri
- Daddy-Long-Legs – Jean Webster
- Star stuff – Carl Sagan – Stephanie Suss Rison
- Graphic novels: Amar Chitra Katha (To explore the world of historical and Mythological stories)
- Truckers: The First Book of the Nomoes – Terry Pratchett

Class IV

- Ruskin Bond's Children's Books
- Feluda Stories – Satyajit Ray
- Black Beauty – Anna Sewell
- Alice's Adventures in Wonderland & Through the Looking Glass – Lewis Carroll
- The Narnia Books – C.S. Lewis
- The Adventures of Robin hood
- Harry Potter Books by J.K. Rowling
- Astrid Lindgren books (PippiLongstocking, Ronia the Robber's daughter etc)
- A.A. Milne (Winnie-the Pooh Books, Collections of poems for children)
- The Railway Children – Edith Nesbit
- Roald Dahl's Children's Books- (James and the Giant Peach, Charlie and the Chocolate Factory etc.)
- Black Beauty- Anna Sewell
- On a Beam of Light – Jennifer Berne (Story of Albert Einstein)
- Who was Helen Keller? – Gare Thompson
- Graphic novels: Tin Tin series
- Graphic novels: Amar Chitra Katha (To explore the world of historical and Mythological stories)

Class V

- Rabindranath Tagore's stories/poems such as Kabuliwala
- Ruskin Bond Omnibus/ Stories for Children
- Gulliver's Travels – Swift (Abridged)
- Peter and Wendy (Peter Pan) – J. M. Barrie
- Adventures of Don Quixote (Abridged) – Miguel D Cervantes
- A Little Princess/ The Secret Garden – Frances Hodgson Bennett
- Little Women – Louisa M. Alcott (Abridged)
- Treasure Island – RL Stevenson
- The call of the Wild – Jack London
- Oliver Twist – Charles Dickens (Abridged)
- David Copperfield – Charles Dickens (Abridged)
- Robinson Crusoe – Daniel Defoe
- The Three Musketeers – Alexandre Dumas
- Graphic novels/ comics: Tin Tin
- Graphic novels: Amar Chitra Katha (To explore the world of historical and Mythological stories)
- Auto/biographies of great men such as Gandhi Ji, A.P.J. Abdul Kalam, Jawaharlal Nehru, Nelson Mandela
- The diary of Anne Frank/Zalata

HINDI

थीम 1: सुनना और बोलना

बच्चे अपने आस-पास की परिस्थितियों एवं परिवेश का अवलोकन करते हैं और अपने अनुभवों और विचारों को मौखिक रूप से अभिव्यक्त करते हैं। टी०वी०, रेडियो आदि पर विभिन्न कार्यक्रम सुनकर – देखकर उनपर अपनी समझ बनाते हैं। अतिथियों के भाषण आदि सुनकर भी समझते हैं। स्थिति और संदर्भ के अनुकूल औपचारिक या अनौपचारिक भाषा का प्रयोग करते हैं।

अधिगम उपलब्धियाँ (Learning outcomes):

- विद्यालय में आयोजित प्रतियोगिताओं और समारोहों में प्रस्तुत कविता पाठ, कहानी कथन, नाटक, वाद – विवाद, भाषण आदि को समझते हुए सुन सकेंगे।
- **पठन सामग्री को सुनकर निष्कर्ष निकाल सकेंगे और अपना मत बना सकेंगे।**
- किसी विषय सामग्री को सुनकर उसकी मुख्य बातें और विचारों को समझ सकेंगे तथा उसमें **कार्य-कारण संबंध स्थापित कर सकेंगे।**
- सुनी गई विषय वस्तु के आधार पर **क्यों, कैसे, कब, कहाँ, अनुमान आदि प्रश्नों के उत्तर** स्पष्ट उच्चारण के साथ पूरे – पूरे वाक्यों में दे सकेंगे।
- बोलने के शिष्टाचार का पालन कर सकेंगे।
- किसी कार्य या गतिविधि विशेष के लिए दिए गए निर्देशों को समझेंगे तथा साथियों को निर्देश व संदेश दे सकेंगे।
- समूह चर्चाओं में भाग ले सकेंगे।
- स्थिति और संदर्भ के अनुकूल औपचारिक या अनौपचारिक भाषा का प्रयोग कर सकेंगे।
- अपने अनुभवों, भावनाओं, विचारों, एवं मतों को प्रवाह के साथ अपनी भाषा में अभिव्यक्त कर सकेंगे।

सुनना और बोलना		
सुझावित विषय / क्षेत्र	**सुझावित शिक्षण-अधिगम प्रक्रिया**	**सुझावित अधिगम स्रोत**
▸ विभिन्न की परिस्थितियाँ एवं परिवेश का संदर्भ	▸ आस-पास के परिवेश और परिस्थितियों का अवलोकन करने के अवसर दें। बच्चों को प्रश्न पूछने और परिकल्पनाएँ करने के लिए प्रेरित करें।	▸ ऑडियो सी०डी०, बाल साहित्य – कहानी, कविता, एकांकी, नाटक, संवाद आदि
▸ अपने अनुभवों, भावनाओं, विचारों एवं मतों की मौखिक अभिव्यक्ति	▸ अपने अनुभव, भावनाओं, विचारों और मतों को तार्किक रूप से प्रस्तुत करने के लिए कहें।	▸ पहेलियों का संग्रह
▸ दूसरों के अनुभव, भावनाओं, विचारों एवं मतों का श्रवण	▸ बोलने और सुनने के शिष्टाचार का कक्षा में पालन करवाएँ। बच्चे उत्साह रुचि और धैर्य से दूसरों के अनुभव, विचारों और मतों को सुनें और समझें।	▸ मुखौटे
▸ किसी विषय पर स्वतंत्र रूप से बातचीत (कोई त्योहार, टी०वी०, प्रोग्राम, खेल की सामग्री की उपलब्धता आदि)	▸ कक्षा में बातचीत का आयोजन करें और बच्चों को उसमें स्वतंत्र रूप से खुल कर हिस्सा लेने और अपने विचार प्रकट करने का अवसर दें तथा	▸ समाचार पत्र

सुनना और बोलना		
सुझावित विषय / क्षेत्र	**सुझावित शिक्षण-अधिगम प्रक्रिया**	**सुझावित अधिगम स्रोत**
▸ बोलने का शिष्टाचार ▸ कहानी, कविता पर चर्चा ▸ अपने साथियों को मौखिक रूप से दिए गए निर्देश ▸ किसी समूह टोली को किसी काम की प्रक्रिया का स्पष्टीकरण ▸ सवालों, पहेलियों और समस्याओं को हल करने के अपने तरीकों की मौखिक अभिव्यक्ति ▸ मूक अभिनय, एकांकी, नाटक में अभिनय एवं संवाद ▸ श्रुतभाव – ग्रहण के लिए विषय-सामग्री ▸ 'क्योंकि', 'इसलिए' व 'कैसे' का उपयोग का विवरण ▸ अंतर / समानता बताने के लिए 'जबकि' का प्रयोग ▸ किसी विषय सामग्री को सुनकर मुख्य बातों की समझ तथा अपने शब्दों में कथन ▸ वक्तव्य ▸ समाचार ▸ साक्षात्कार	प्रोत्साहित करें। ▸ किसी गतिविधि या क्रियाकलाप के लिए अपने साथियों को मौखिक रूप से निर्देश देने को कहें और अवलोकन करें कि साथी निर्देशों को सुनकर उनका सही ढंग से पालन कर रहे हैं। ▸ बच्चों से पहेलियाँ पूछें और उन्हें बोलने के लिए प्रोत्साहित करें। ▸ मूक अभिनय करवाएँ। ▸ एकांकी या नाटक का अभिनय करवाएँ। बच्चे पात्रों के मुखौटे भी बना सकते हैं। उन्हें अपनी ओर से संवाद जोड़ने और बोलने को प्रोत्साहित करें। ▸ किसी विषय पर दो पात्रों को आपस में काल्पनिक संवाद बनाकर बोलने के लिए प्रोत्साहित करें। जैसे – सड़क पर बैठी दो गायों के बीच संवाद, खंभे और पेड़ के बीच संवाद, बच्चे और उसके पालतू पशु के बीच संवाद आदि। ▸ सुनी गई विषय सामग्री के आधार पर बच्चों से क्यों, कैसे आदि वाले प्रश्न पूछें तथा उन्हें कारण बताते हुए तथा विवरण देते हुए उत्तर देने के लिए प्रेरित करें। ध्यान दें कि बच्चे 'क्योंकि', 'इसलिए', ' जबकि' आदि का प्रयोग करते हुए स्पष्ट रूप से उत्तर दें। ▸ बच्चों से सुनी गई सामग्री की मुख्य बातों को कक्षा में बोलकर बताने के लिए प्रेरित करें। ▸ बच्चों को सुने गए समाचार आपस में साझा करने या एक दूसरे को सुनाने के लिए कहें। ▸ विद्यालय के किसी कर्मचारी, पास-पड़ोस के किसी प्रिय या महत्वपूर्ण व्यक्ति से साक्षात्कार और प्राप्त जानकारी को कक्षा में बोलकर सुनाने को प्रेरित करें। ▸ सरल विषय पर एक मिनट कक्षा के बच्चों के सामने वक्तव्य देने को कहें।	

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

बच्चे, कहानी, कविता, अनुच्छेद, विवरण, विज्ञापन, संदेश को सही उतार-चढ़ाव तथा विराम-चिह्नों का ध्यान रखते हुए पढ़ते हैं और समझते हैं। **चित्र, नक्शा, तालिका आदि को भी पढ़कर समझते हैं।** पठित सामग्री के प्रश्नोत्तर, सार, विवरण आदि को अपने शब्दों में लिखते हैं। **रचनात्मक लेखन जैसे – अनुच्छेद, निबंध, पत्र, संवाद, कहानी, कविता, चित्र-लेखन** आदि करने में रुचि लेते हैं।

अधिगम उपलब्धियाँ (Learning outcomes):

- अलग-अलग तरह के लेखन जैसे – कहानी, कविता, नाटक, विवरण, चुटकुले, दोहे, चित्र, रेखाचित्र, निर्देश, नक्शे आदि को समझते हुए उचित प्रवाह व उच्चारण के साथ पढ़ सकेंगे।
- **उच्चरित और लिखित भाषा के बीच के अंतर को समझ सकेंगे।**
- **मौन पठन कर सकेंगे।**
- समाचार पत्र आदि में दिए गए विवरण एवं विज्ञापनों को पढ़कर समझ सकेंगे और उस पर चर्चा कर सकेंगे।
- पाठ्य सामग्री को पढ़ कर समझ सकेंगे और उसके आधार पर प्रश्नों के उत्तर लिख सकेंगे।
- **पाठ्य सामग्री की मुख्य बातों और सार को अपने शब्दों में लिख सकेंगे।**
- कहानी, कविता, विवरण, वस्तु, स्थान, घटना, परिस्थिति, अनुच्छेद को पढ़कर उसके मूल भाव को ग्रहण करेंगे और उस पर चित्र बना सकेंगे।
- **लिखित सामग्री के संदर्भ में आए चित्रों, रेखाचित्रों, छायाचित्रों का अवलोकन करते हुए लिखित सामग्री के साथ उसका संबंध जोड़ सकेंगे।**
- चित्रों के आधार पर रचनात्मक लेखन कर सकेंगे।
- **पढ़ी - सुनी गई कहानियों को नाटक / संवाद के रूप में लिख सकेंगे।**
- आवश्यकता एवं स्थिति के अनुसार औपचारिक एवं अनौपचारिक पत्र, अनुच्छेद, संवाद, कहानी, कविता आदि लिख सकेंगे।

पढ़ना एवं लिखना

सुझावित विषय / क्षेत्र	सुझावित शिक्षण-अधिगम प्रक्रिया	सुझावित अधिगम स्रोत
- लेखन के विभिन्न रूपों की समझ - कहानी, कविता, अनुच्छेद, विवरण, सन्देश, निर्देश व विज्ञापन का पठन - मौन पठन एवं सस्वर वाचन - पठित सामग्री के आधार पर प्रश्नों के उत्तर का लेखन	- स्तर के अनुकूल ऐसा बाल-साहित्य एवं लिखित सामग्री उपलब्ध करवाएँ जिससे बच्चे लेखन के विविध रूपों को पढ़ सकें और पहचान सकें। - बच्चों से निर्देशित मौन पठन करवाएँ जिससे उन्हें ध्यानपूर्वक पढ़ने और विशेष जानकारी प्राप्त करने के उद्देश्य से पढ़ने का अभ्यास हो जाए। - सही उच्चारण के साथ भावपूर्ण सस्वर वाचन	- बाल-साहित्य, ऑडियो, वीडियो, पत्र-पत्रिकाएँ, प्रपत्र, चार्ट, बुलेटिन बोर्ड, वर्ग-पहेली, शब्द-सीढ़ी - व्याकरण चार्ट - फ़्लैश कार्ड - कार्य प्रपत्र

पढ़ना एवं लिखना		
सुझावित विषय / क्षेत्र	**सुझावित शिक्षण-अधिगम प्रक्रिया**	**सुझावित अधिगम स्रोत**
▶ पाठ्य सामग्री की मुख्य बातों का रेखांकन एवं अपने शब्दों में लेखन ▶ पाठ / अनुच्छेद / विवरण का सार लेखन ▶ कहानी, कविता, विवरण, वस्तु, स्थान, घटना परिस्थिति, अनुच्छेद का पठन एवं उसके आधार पर चित्रकारी ▶ लिखित निर्देशों का पठन, उसके अनुसार क्रियान्वयन ▶ लिखित सामग्री के संदर्भ में आए चित्रों, रेखाचित्रों, छायाचित्रों, का पठन और लिखित सामग्री से उनके जुड़ाव के प्रति समझ ▶ अपने अनुभव, विचारों, इच्छाओं, भावना की लिखित अभिव्यक्ति ▶ छोटी-छोटी कहानियों का नाट्य रूपांतरण लिखित रूप में ▶ अपने और दूसरों के अनुभवों की लिखित में तुलना **संदर्भ में व्याकरण** ▶ संज्ञा, सर्वनाम, विशेषण, क्रिया-भेद सहित ▶ पाठ्य-सामग्री में प्रयुक्त उपसर्ग / प्रत्यय वाले शब्द	करवाएँ। ▶ पठन सामग्री के आधार पर प्रश्नों पर चर्चा करें और लिखने के लिए प्रेरित करें। ▶ बच्चों से पढ़ी गई सामग्री का केंद्रीय भाव और सार लिखवाएँ। ▶ पठित सामग्री के आधार पर बच्चों से चित्र बनाने को कहें। ▶ लिखे गए निर्देशों को पढ़वाएँ और देखें कि बच्चे निर्देशानुसार कार्य कर रहे हैं। ▶ इस बात पर ध्यान दें कि पाठ में आए चित्रों / छायाचित्रों के साथ लिखित सामग्री का संबंध जोड़ सकें। ▶ घर, खेल का मैदान, कक्षा, बाज़ार, बस आदि से जुड़े अपने अनुभवों को लिखें और एक-दूसरे से साझा करें। ▶ कहानियों का नाट्य रूपांतरण कर उसका अभिनय करने को कहें। ▶ समाचार पत्र और पत्रिकाओं से लेख और विवरण पढ़ने के लिए कहें। ▶ पठन सामग्री में से संज्ञा, सर्वनाम, विशेषण और क्रिया के भेदों की पहचान करवाएँ। ▶ उपसर्ग-प्रत्यय वाले शब्दों को चुनकर मूल शब्द और उपसर्ग / प्रत्यय की पहचान करवाएँ, जैसे – *उपसर्ग शब्द* ☛ *विजय = वि जय* ☛ *अजय = अ जय* *प्रत्यय शब्द* ☛ *समानता = समान ता* ☛ *भारतीय = भारत ईय* ▶ पाठ्य-सामग्री कुछ सामासिक शब्द चुनकर अभ्यास करवाएँ। ☛ *राष्ट्रपति = राष्ट्र + पति* ☛ *विद्यालय = विद्या + आलय*	

पढ़ना एवं लिखना		
सुझावित विषय / क्षेत्र	**सुझावित शिक्षण-अधिगम प्रक्रिया**	**सुझावित अधिगम स्रोत**
▶ पाठ्य-सामग्री में प्रयुक्त सामासिक शब्द ▶ अनुस्वार और अनुनासिक ▶ परसर्गों का प्रयोग ▶ काल ▶ योजकों का प्रयोग ▶ विराम-चिह्न ▶ मुहावरे **रचनात्मक लेखन** ▶ निबंध ▶ पत्र-लेखन ▶ संवाद-लेखन ▶ कहानी लेखन ▶ चित्र-लेखन ▶ कविता-लेखन ▶ अपठित-गद्यांश	▶ अनुस्वार और अनुनासिक के प्रयोग वाले शब्द छटवाएँ और उनमें अंतर स्पष्ट करें। ▶ परसर्गों की समझ और प्रयोग के लिए अभ्यास करवाएँ। पठन और लेखन में उचित विराम-चिह्नों के प्रयोग पर ध्यान दिलवाएँ, जैसे – रुको, मत जाओ। रुको मत, जाओ। ▶ पाठ्य-सामग्री में प्रयुक्त मुहावरों का उचित संदर्भों में वाक्य प्रयोग करवाएँ। ▶ निबंध लेखन के लिए बच्चों के परिवेश से जुड़े विषयों पर निबंध लिखने को कहें। ▶ औपचारिक और अनौपचारिक पत्रों का प्रारूप स्पष्ट करके विषय देकर पत्र लेखन करवाएँ। ▶ बच्चों को संवाद, कविता, कहानी और चित्र लेखन करने के लिए प्रोत्साहित करें। ▶ बच्चों के कार्य को बुलेटिन बोर्ड पर प्रदर्शित करें।	

MATHEMATICS

Theme 1: Numbers

Children will be enabled to understand how the place value system works thereby helping them to think about the size of large numbers that they have not counted. Estimation is an essential skill that demonstrates number sense about base 10 system. Activities based on items such as beans or marbles help children develop strategies for estimating quantities. Numerals are written in both compact form and expanded form is used in algorithms. Rounding is a skill to estimation that requires understanding of a relationship between numbers. Opportunities will be provided to facilitate children's use of the place value frame and place value chart to represent large numbers. They will learn to express numbers in many ways like with words (number names), numerals and words, numerals only and finally develop scientific or exponential notations for large numbers in higher classes.

Learning Outcomes:

Children will be able to:

- read and write large numbers up to crores using the Indian numeration system;
- compare the Indian numeration system with the International system and read, write numbers using International numeration system;
- use place value to write a number in expanded form and vice versa;
- compare large numbers using place value;
- use place value to form greatest and smallest numbers from the given digits;
- round off numbers to nearest 10s, 100s or 1000th;
- represent numbers using roman symbols;
- acquire understanding about fractions;
- find the fractional part of a collection;
- identify and form equivalent fractions of a given fraction;
- express a given fraction $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ in decimal notation and vice-versa. For example, in using units of length and money - ₹ 5 is half of ₹ 10.

Numbers

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
► Indian and International system of numbers- 9 digits numbers. ► Place value and face value. ► Expanded form. ► Comparison of the numbers. ► Ascending and descending order of numbers. ► Formation of greatest and smallest numbers from the given digits.	► Collecting and discussing various contexts in which large numbers are used like cost of properties, distance between planets etc. ► Involving children in collecting information from newspapers and magazines having large numbers should be encouraged to write the equivalent	► 9 Sets of number cards from 0-9 to create large numbers. ► New papers and magazine cutting having references of large numbers. ► Spike abacus with 9 spikes to represent numbers up to 9-digits.

Numbers		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▷ Rounding off numbers- nearest 10, 100, 1000. ▷ Construction of Multiplication Tables - 2 to 20. ▷ Addition, Subtraction, Multiplication, Division by 2-digit division. ▷ Word problems. ▷ Roman numerals for large numbers.	Indian/International number system. ▷ Practicing place value and its understanding through games/activities and concrete materials. ▷ Encouraging children to form rules for comparison of large number through exploration/patterns. ▷ Using newspapers and other reports to show how approximation of numbers is used in day to day life. Children should also be encouraged to discover rules of rounding off/approximation.	

Theme 2: Number Operations

The confidence gained in using standard algorithms for operations on whole numbers leads children to use them efficiently for problem solving and in addition, subtraction, multiplication and division of common fractions, decimal fractions and integers in later classes. Using manipulatives like place-value charts, unifix cubes and base ten blocks, 10X10 number grid and number line strengthens the understanding of standard algorithms. In using manipulatives in this context, children can be encouraged to work in pairs, one working with the models and the other recording the steps. It is important that children record the steps as they model them.

Learning Outcomes:

Children will be able to:

- apply the understanding of place value of numbers beyond 1000 in the four operations;
- divide a given number by another number (up to two digits);
- estimate sum, difference, product and quotient of numbers and verifies the same;
- use standard algorithms in addition subtraction and multiplication of numbers;
- divide a given number by another number (up to 2 digits) by using standard algorithm;
- solve problems involving four operations addition, subtraction, multiplication and division in different real life contexts;
- frame word problems based on mathematical statements involving number operations;
- explain the meaning of factors, multiples prime and composite numbers;
- find and displays multiples and factors of numbers using various techniques (e.g. factor tree);
- discover prime & composite number in the number sequence up to 100.

Number Operations

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
⏵ Standard algorithms for addition subtraction and multiplication of large numbers. ⏵ Division of given number by another number (up to 2 digits). ⏵ Framing and solving Problem from real life contexts involving number operations. ⏵ Estimation of the sum, difference, product and quotient of two or more	⏵ Exploring alternate algorithms for all four operations in addition to standard algorithms. ⏵ Dividing numbers using different strategies like using standard algorithms or breaking a number and then using operation. (*For example, to divide 9450 by 25, divide 9000 by 25, 400 by 25, and finally 50 by 25 to obtain the answer by adding all these quotients*). ⏵ Providing opportunities to explore the meaning of factors.	⏵ Number cards and place value cards. (*These will be used to demonstrate various algorithms for operations on numbers*). ⏵ Play money notes and coins (*for representation of numbers according to place value*).

Number Operations		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
numbers.	❯ Creating contextual problems (within the child's daily life context) as word stories and exchange them with peers to solve. ❯ Providing opportunities for children to frame rules for estimation of the net result of four operations applied on numbers in daily life contexts.	

Life Skills: solving daily life problems

Theme 3: Fractions and Decimals

Children's comprehension of whole numbers and common fractions forms the basis for their understanding of decimal fractions. Real-world examples of things separated into tenths and hundredths are less common than are examples of common fractions. A better understanding will be developed through metric sub units like Deci (one-tenth), centi (one-hundredth), milli (one-thousandth) etc. An understanding of decimal fractions and their relationship with common fractions develops gradually, thus the focus will be on work with physical material, diagrams and real life situations.

Learning Outcomes:

Children will be able to:

- define proper, improper and mixed fractions;
- write equivalent fractions of given fraction by multiplying/dividing numerator and denominator;
- compare 3 or more fractions;
- add and subtract unlike fractions and mixed numbers;
- solve word problems on addition and subtraction of fractions;
- explain multiplication of fraction as 'of';
- multiply fractions- fraction by a whole number, fraction by fraction;
- relate fractions with denominator 10, 100, 1000 as decimal fraction;
- represent decimal fractions pictorially;
- find place value of decimal fractions as -tenths, hundredths, thousandths etc.;
- expand decimal fractions e.g. $234.67 = 200 + 30 + 4 + \frac{6}{10} + \frac{7}{100}$;
- classify decimal fractions as equivalent, like, and unlike;
- compare and order decimal fractions;
- add and subtract decimal fractions;
- solve word problems on addition and subtraction of decimal numbers;
- construct rules to multiply decimal fraction by 10, 100, 1000;
- multiply decimal number by whole number and decimal number by decimal number.

| Fractions and Decimals		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
- Comparison of 3 or more fractions. - Addition and subtraction of unlike fractions. - Addition and subtraction of mixed numbers. - Word problems on addition and subtraction of fractions. - Multiplication of fractions- fraction by whole numbers and fraction and fraction. - Division of fractions- whole number by a fraction, fraction by a fraction. - Relationship between fractions and Decimals fraction. - Pictorial representation of decimal fraction. - Place value of decimal fraction- tenths, hundredths, thousandths. - Expanded form: Decimal and fraction expansion - Types of decimal fractions- equivalent, like, and unlike - Comparing decimal fractions. - Ordering of decimal fraction - Addition and subtraction of decimal fraction. - Word problems on addition and subtraction of decimal fraction. - Multiplication of decimal fractions by 10, 100, 1000. - Multiplication of decimal number by whole number and decimal number by decimal number.	- Using Paper folding to demonstrate like-unlike fractions, addition and subtraction of fractions and equivalent fractions. - Encouraging children using origami paper for folding into equal number of parts to show fractions and their operations. - Conducting activities for multiplication of fraction by another fraction as operation "of" through paper folding, coloring and forming rules. For example, $\frac{1}{2} \times \frac{1}{3}$ is half of one $-$ third - Associating the idea of division of fractions with division of whole numbers as number of times the divisor lies in the dividend. For example, $\frac{1}{2} \div \frac{1}{4}$ means number of $\frac{1}{4}$ in $\frac{1}{2}$ which is nothing but 2. - Introducing through demonstration -decimal fractions as fraction with 10, 100, 1000 etc. as denominators and discussing the ways in which such numbers can be written using place value system. - Involving children in framing rules to operate decimal fractions using the rules used for operating fractions. - Measuring tape and scale can be used to demonstrate fractions, decimals and their relationship.	- Origami paper (*for showing fractions and their operations by folding in to equal number of parts*). - Bending wire. - Wooden sticks. - Number cards. - Measuring tape and scale.

Theme 4: Playing with Numbers (Factors and Multiples)

There are many relationships in the Numbers system which include even and odd numbers, prime and composite numbers. The classification of numbers into two groups is made on the basis of some properties of the numbers. Factors are one of such properties. Work with prime and composite numbers extends understanding of factors, divisors and multiples encountered in the study of multiplication and division. Children should learn that factors and division mean the same thing and that they can be used interchangeably. When two whole numbers are multiplied they should yield a product and can be called either factors or divisors of their product (exceptionally zero can be a factor but not a divisor). The product of two numbers also called multiple of the two numbers is another concept that is directly related with multiplication of numbers. The children then can adopt any of the two ways of finding factors of numbers; determining by examination and the second more systematic way is using factor trees. children must be advised to use the examination method to factor numbers and to name the greatest of them as HCF. Likewise they should adopt their own ways to find and name the smallest multiple of two or numbers as their LCM.

Learning Outcomes:

Children will be able to:

- write multiples of numbers;
- find factors of numbers;
- identify prime and composite numbers, twin primes and co-prime numbers;
- test divisibility of numbers by 2, 3, 4 and 5;
- find prime factors- by Factor Tree;
- find the Highest Common Factor (HCF)- Listing Method and Common Division;
- find the Lowest Common Multiples (LCM)- Listing Method and Common division;
- relate HCF and LCM and uses to find one when other is given.

Factors and Multiples

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▶ Factors, common factors and Highest common factors of two numbers.	▶ Exploring counting numbers for multiples of numbers through various strategies like multiplication tables, number line, skipping the number etc.	▶ Set of counters. (so *that children can make equal groups to understand factors like, 24 counters can be grouped equally in to 24, 12, 8, 6, 4, 3, 2 and 1 groups*)
▶ Multiples, common multiples and Lowest Common multiples of two numbers.		▶ Wooden sticks of same and different sizes.
▶ Prime and composite numbers, Twin primes and co-prime.	▶ Using various strategies by children monitored by the teacher to find factors of a number.	
▶ Prime factors- Factor Tree Method.		
▶ Highest Common Factor(HCF)- Listing Method	▶ Involving children in finding and displaying	

Factors and Multiples		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
and Common Division. ▷ Lowest Common Multiples(LCM)- Listing Method and Common Division. ▷ Relationship between HCF and LCM. ▷ Test for divisibility by 2, 3, 4, 5, 9 10, 11 (forming rules by observation).	multiples and factors of numbers using various techniques (e.g. *factor tree, multiplication tables, skip counting on a number line etc.)* ▷ Encouraging children to find prime numbers based on factors. Discussion may be held with them focusing on why prime numbers are important and useful. ▷ Involving children in discovering prime and composite numbers in the number sequence up to 100.	

Theme 5: Introduction to Negative Numbers

The concept of a number having a value of less than zero and number indicating a direction are not easily understandable through words alone. In this theme   children through situations will be exposed to involving negative and positive number (integers). This will enable children to visualize and understand them better. Number line helps children understand moving up and down the number sequence, magnitude of numbers and the concepts of more than and less than. When used to compare numbers, children see that any number is greater than any other number to its left. The same property holds for negative numbers too. When integers are ordered on a number line, as negatives number get larger their value get smaller and smaller.

Learning Outcomes:

Children will be able to:

- represent whole numbers through number line;
- develop idea of integers as counting number, zero and negatives of counting numbers;
- compare integers through number line;
- arrange integers in ascending and descending order;
- add and subtract integers.

Introduction to negative numbers

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▷ Introduction to negative numbers through number line. ▷ Idea of integers as counting number, zero and negatives of counting numbers. ▷ Comparison of integers through number line. ▷ Ascending and Descending order of integer. ▷ Rules for addition, subtraction of integers.	▷ Involving children in discussion to have necessity of numbers less than zero like having measurement in opposite directions with reference to a point (*above and below sea level, temperature above and below zero etc.*) ▷ Encouraging children to use number line for representation of negative numbers. ▷ Letting children explore the ways to name negative and positive numbers together along with zero. ▷ Using number line to show that negative numbers are mirror image points corresponding to counting numbers (*natural numbers*) ▷ Number line may be used to represent integers and their ascending and descending orders.	▷ Number line. ▷ Counters of two colours where the colours represent opposite numbers.

Theme 6: Geometry

The levels described by the Van Hieles are sequential, and success at one level depends on the development of geometric thinking at the preceding level. Typically, children at the primary level demonstrate characteristics of level 0 and are moving toward level 1 of the Van Hieles' levels of geometric thought. Children entering the class V are most likely functioning in the visualization and analysis levels (0 and 1) of geometric thought. The goal of teaching geometry at this stage is to provide instructional activities that will encourage children to develop thinking and reasoning skills needed to move towards level 2 of the hierarchy, informal deduction (at upper primary stage). Building on children's experiences with non-standard to standard measures they are ready to begin work with acquiring a confidence in using standard units and relate bigger to smaller and vice-versa.

Learning Outcomes:

Children will be able to:

- explore idea of angles and shapes;
- classify angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing;
- identify 2D shapes from the immediate environment that have rotation and reflection symmetry like alphabet and shapes;
- identify angles in the environment through observation and paper folding;
- identify rights angles in the objects and in the environment;
- classify angles into right, acute, obtuse angles based on their visible attributes;
- represent different angles (like acute, obtuse, right angles) by drawing and tracing on the paper;
- explore symmetry in familiar 3D shapes;
- explore reflection symmetry and rotational symmetry w.r.t. to familiar 2D- geometrical shapes;
- construct the shapes of cubes, cuboids, cylinders and cones from the given nets (designed for this purpose).

Geometry

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▶ Angle and its measures. ▶ Classification of angles into right, acute, obtuse angles. ▶ Identification and representation of acute, obtuse and right angles. ▶ Symmetry in familiar 3D	▶ Using paper folding activities (fold art angle) right angles can be identified in the vicinity and in objects. ▶ Buildings, class room door windows etc. can provide excellent concrete support to the concept of an angle.	▶ Coloured papers, cardboards, scissors, etc. ▶ Small pieces of mirrors with rounded edge. ▶ Empty card board boxes. ▶ Thick card board sheets, pencils, markers and cutters.

Geometry		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
shapes like Cube, human body, buildings etc. ▷ Reflection and rotational symmetry in familiar 2D-geometrical shapes like circle, rectangle, square, triangle and circles. ▷ Nets of cubes, cuboids, cylinders and cones.	▷ Classification of angles may be encouraged by finding obtuse and acute angles in surroundings and in the objects around us. ▷ Discovering symmetry in the objects/environment may be encouraged. ▷ Using concrete materials to explore reflective as well as rotational symmetry. Card board cut out shapes, may be rotated from different points to find out their rotational symmetry. Paper folding, making shapes/designs using carbon papers etc. may be used for developing a deeper understanding of concept of the symmetry. ▷ Encouraging children to bring empty boxes, open them up and trace their nets. Also using the nets so traced are able to create boxes.	

Integration: Science (Solids, Liquids and Gases)

Theme 7: Measurement

The early learning of measurement is largely inventive and investigative by nature. Children up to primary grades begin with activities to establish the everyday contexts for measurement and to introduce measurement with nonstandard units. This theme will enable children to begin to conserve length and area and understand that these concepts do not change, even when an object's position or appearance is altered. Children will also learn to use standard units by providing them frequent opportunities to measure objects so that they construct their understanding of units and of the measurement process.

Learning Outcomes:

Children will be able to:

- relate different commonly used larger and smaller units of length, weight, time and money and convert larger units to smaller units and vice versa;
- estimate the volume of a solid body in known units like volume of a bucket in about 20 times that of a mug;
- apply the four operations in solving problems involving money, length, mass, capacity and time intervals;
- explain the terms area and perimeter of simple geometrical shapes;
- compute area and perimeter of simple geometrical shapes.

Measurement

| Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▷ Area and perimeter of simple geometrical shapes; ideas and their measurement. ▷ Daily life problems involving length, weight, time, money & volume: Use of four number operations. ▷ Idea of larger and smaller units of length, weight, time, money & volume and conversion .	▷ Developing and using Square grids, dot grid to facilitate the understanding of concepts related to area and perimeter. ▷ Conducting exploration activities with groups of children to infer that area and perimeter are not co-related i.e. figures having same area may have different perimeters. ▷ Creating and solving contextual problems regarding calculations of length, weight, volume etc. ▷ Providing practice questions for inter conversion of bigger units into smaller units and vice versa in various interesting ways.	▷ Squared grid papers, dot grid printed papers. ▷ Coloured markers, scissors etc. ▷ Daily life objects such as match boxes, sugar cubes, paper weight, etc. (*for demonstration of length, area, volume and weight*).

Integration: Science

Life Skills: solving daily life problems

Theme 8: Introduction to Percentage

This theme will focus on children becoming aware and understanding the importance use and different applications of percentage in a variety of ways in many daily life aspects. Percent expresses a relationship between some number and 100. The symbol % and word percent means per hundred or out of hundred. The children at this stage will be provided opportunities to understand the meaning of percent through their experiences. As percent is common fraction with 100 as denominator, so it is also a decimal fraction representing hundredths. A conscious attempt will be made to extensively build on children's understanding about these earlier learnt concepts to further build their understanding about percent.

Learning Outcomes:

Children will be able to:

- define percentages as fraction with 100 as denominator;
- establish relationship between fractions, decimal fractions and percentages;
- pictorially represent percentage;
- convert fractions to percentages and vice-versa;
- convert decimals to percentages and vice-versa;
- solve simple word problem on percentage.

Introduction to Percentage

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▸ Introduction of percentages. ▸ Relationship between fractions, decimals and percentage. ▸ Pictorial representation of percentage. ▸ Conversion of fractions to percentages and percentages to Fractions. ▸ Conversion of decimals to percentages and percentages to decimals. ▸ Simple word problems on percentage.	▸ Introducing percentage as fraction with denominator as 100 and relating it with decimal representation. ▸ Letting children form the rules for percentage and conversion using the known rules of fractional and decimals. ▸ Encouraging children to relate their marks obtained in different subject with percentage. ▸ Measuring tapes, scales may be used to explain fractions and decimals.	▸ Measuring tape. ▸ Scale. ▸ Number sticks. ▸ Paper magazine cuttings.

Life Skills: solving daily life problems

Theme 9: Data Handling

Various graphs like pie charts, line graphs and bar graphs relate to children's daily life experiences like newspapers and sports transmission shown on TV. Children will be encouraged to devise their own ways of reading and interpreting these pictographs. At this stage children are skilled to attempt the drawing of bar graphs for the data either collected by them or obtained from other sources. The data related to issues related to environment, classroom activities etc. will help children in connecting the skill of data handling with their daily activities.

Learning Outcomes:

Children will be able to:

- collect data related to various daily life situations, represents it in tabular form and by bar graphs and interpret a given bar graph.
- interpret pie charts and line graphs generally found in newspapers and magazines.

Data Handling

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
- Pictorial representation of the raw data. - Interpretation of Bar graph, line graph and pie chart.	- Conducting group activities on data collection, tabulation (in graphic form) and interpretation within and outside classrooms. - Advising children to make presentation as groups on their whole activity as a project. This should have tabular and graphical representations as used in newspaper/magazines - Providing opportunities to interpret pie charts and line graphs given in textbooks, newspaper and magazine cuttings.	- Coloured papers, stickers of different objects, glue sticks. - Newspaper and magazines cuttings having bar graphs, pie charts and line graphs.

**Integration:** Arts Education

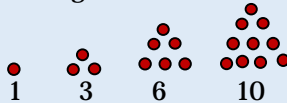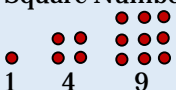**Life Skills**: analysis and interpretation

Theme 10: Patterns

Children are now confident at this stage with observing and generalizing patterns in numbers and shapes. This will help them in other themes of mathematics like applying operations on numbers (whole numbers, common and decimal fractions), properties of various 2-D shapes and 3-D figures and measurements. They should explore additional properties of whole numbers like triangular and square numbers through patterns.

Learning Outcomes:

Children will be able to:

- observe and identify patterns with a unit of repeat and extend it;
- observe and generalize a rule to extend a progressive pattern;
- create a pattern with more than one characteristic;
- observe and generalize patterns of triangular and square numbers.

Patterns

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▶ Patterns with a unit of repeat and their extension. ▶ Progressive patterns. ▶ Extension of progressive patterns. ▶ Patterns with more than one characteristic. ▶ Triangular and square numbers.	▶ Providing a lot of patterns that are in the near vicinity of children and have a unit of repeat. Let them identify this unit and extend the pattern. ▶ Dividing children in to group of two-three each. Let one group form a pattern with repeat and other extend it. ▶ Giving exposure to progressive patterns which are commonly found in numbers and shapes. For example: ▶ 2, 4, 6, ...; 5, 10, 15, 20, ... △ ◸ ◿△ ▶ Providing opportunities for finding a rule for extension of the pattern of numbers that can be placed as triangle and square. Let children find further few terms on the basis of the rule and without finding all previous terms. ▶ Triangular numbers 1　3　6　10 Square Numbers 1　4　9	▶ Number sticks. ▶ Triangular, square, rectangular shapes made from thick paper cutter. ▶ Use of charts showing patterns with numbers, and different shapes.

Integration: Arts Education

Life Skill: Logical thinking, reasoning

SCIENCE

Theme 1: Human Body: The Circulatory System

The prime focus of this theme is to introduce children to the different organs involved in the process of blood circulation and to make them understand how the different organs of the circulatory system function. The second focus of this theme is to develop awareness regarding how to keep the body healthy by using some simple physical/ yogic exercises.

Learning Outcomes:

Children will be able to:

- ☑ identify organs of the circulatory system in a picture/model;
- ☑ locate position of each organ on the human body (Cut outs);
- ☑ draw pictures of various organs of the circulatory system and label them;
- ☑ describe functions of each organ and explain the process of circulation using scientific terms/words;
- ☑ differentiate between arteries and veins and name the major arteries and veins;
- ☑ explain functions of blood;
- ☑ discuss various ways (yoga exercises) to keep the heart healthy and strong;
- ☑ do simple yogic exercises to keep the body strong and healthy under the guidance of expert /teacher (deep breathing).

Human Body: The Circulatory System		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
⯈ Revisit learning of Class IV on human body. ⯈ Circulatory System. ⯈ Organs/Parts of the circulatory system, their structure, functions (heart, arteries, veins), functions of blood. ⯈ Process of circulation through pictures, visuals in simple terms (no technical knowledge to be given).	⯈ Providing opportunities to children to observe various organs related to the circulatory system (using models, pictures). ⯈ Organizing group discussion to observe chart showing various organs & process of circulation. ⯈ Providing opportunities to children to develop working model on circulatory system. ⯈ Performing simple *Asanas* to show deep breathing pranayama and asking the children to follow and practice doing the same ⯈ Drawing and labelling circulatory system individually in the class. ⯈ Showing slides of blood and discussing blood reports. ⯈ Demonstrating inhaling and exhaling process	⯈ Pictures / diagrams of internal organs. ⯈ Diagram of the circulatory system, model of heart. ⯈ Working model of the circulatory system. ⯈ Cut outs of the human body showing the circulatory system. ⯈ Material on process of circulation ⯈ Diagram made by children of the circulatory system and organs. ⯈ Microscope to observe blood slides ⯈ Video.

Theme 2: Human Body: The Skeletal System

This theme introduces children to the Skeletal System. The main objective of this theme is to provide information related functions of bones, body movement and movement of different kind of joints. The theme is also expected to provide awareness regarding how to keep the body healthy by performing simple exercises. Importance of a healthy diet for bones and muscles to function, will also be discussed in this theme.

Learning Outcomes:

Children will be able to:

- identify major bones of the human body and name them;
- draw diagrams of major bones and name them;
- describe functions of major bones of the human body;
- locate major joints of the human body and discuss their functions;
- draw diagrams of the shoulder and knee joints and their location in the body;
- give examples of other kinds of joints in the human body;
- identify food items that are calcium rich;
- following simple exercises (under guidance) to make bone and muscles strong;
- demonstrate correct posture to keep body healthy and strong both in sitting /standing position.

Human Body: The Skeletal System		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Skeleton system-bones. ▶ Importance of bones, muscles and joints for the body. ▶ Functions of bones, major bones of the body - arms, legs, chest bone, skull, jawbone, backbone. ▶ Care of bones and joints, food items to make the bones strong. ▶ Importance of good posture and exercise.	▶ Providing opportunities to children to share and discuss information related with this theme. ▶ Providing opportunities to observe visuals and pictures of actual bones, in the skeleton system to develop clarity on this theme. ▶ Making drawings of bones/muscles and labelling them. ▶ Giving opportunities to children to observe different kinds of joints and demonstrating how they work. ▶ Demonstrating simple physical exercises to improve body posture. ▶ Initiating discussions related to improving body health. ▶ Demonstration of correct posture for standing and sitting positions. ▶ Yoga exercises for muscles and joints	▶ Skeleton of whole human body. Bones, Joints of knee, shoulder, elbow. ▶ Charts showing different bones, joints, jaws, etc. ▶ Children's drawing of major bones and joints. ▶ Food items rich in calcium and minerals.

Theme 3: Food and Health

In the previous classes, children learnt about the significance of various components of food for healthy living. In this theme, children will learn about diseases related to food habits / lifestyle, along with deficiency diseases. Harmful effects of junk food and ways to avoid them will also be covered in this theme.

Learning Outcomes:

Children will be able to:

- discuss various components of food required for healthy living;
- give reasons of the need for a balanced diet;
- enlist healthy and junk food items and differentiate between them;
- suggest/find out some ways to make diet healthier;
- give reasons for some deficiency diseases and find out ways to prevent/reduce them;
- develop awareness regarding adulteration in food items;
- find out diseases related to life style, including those related to food habits;
- state symptoms of some lifestyle diseases such as obesity, anaemia, diabetes, blood pressure;
- suggest some ways to avoid these diseases;
- infer why sprout food and fermented food is good for health;
- appreciate the use of various components of food for our body.

Food and Health

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
Revisit previous learning. ▷ Components of a balanced diet, importance of eating a balanced diet. ▷ Junk food: meaning and examples; adverse effects of eating junk food. ▷ Ways to make diet more healthy (e.g. sprouting, fermentation). ▷ Diseases related to food habits, life style (obesity, anaemia, diabetes, blood pressure); and symptoms of the diseases in simple terms. Prevention of these diseases in non-technical terms. ▷ Deficiency diseases - some common deficiency diseases (Kwashiorkor, marasmus, night blindness, anaemia, rickets, scurvy, beriberi, goitre); and ways to prevent them.	▷ Building on previous learning. ▷ Providing opportunities to children to discuss components of food & their effects on health. ▷ Organizing simple activities to classify junk and healthy food. ▷ Undertaking project work and evolving ways to avoid junk food and writing slogans and exploring various other practical solutions. ▷ Conducting small group activities with children for them to find out the kind of food adulterants, and their effects (support material). ▷ Providing opportunities to see films on lifestyle related diseases and discussion on for their prevention. ▷ Organizing talks and interaction with a doctor to	▷ Children's experiences related to daily life. ▷ Various kind of food items rich in carbohydrates, protein, fats, vitamins and minerals. ▷ Various food items shown as junk food. ▷ Examples of various kinds of food items as rich in carbo-hydrates, proteins, fat, minerals vitamins, roughage and water. ▷ Material on various kinds of diseases (other than textbook) ▷ List of healthy food items (examples). ▷ Materials/pictures on various deficiency diseases. ▷ Narratives on deficiencies / life style related.

Food and Health		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
› Meaning of food adulteration; examples of some common adulterants (awareness level only).	learn more about healthy food habits, deficiency diseases and ways to prevent them. › Conducting survey in the children's surroundings/local neighbourhood. › Discussing diseases related to life style and ways to avoid them. › Discussing diseases related to deficiency of food components.	

Integration: Languages

Theme 4: Pollination

This theme aims to introduce children to the process of pollination in plants.

Learning Outcomes:

Children will be able to:

- ☑ identify various parts of flower and label each part;
- ☑ draw diagrams of each part of a flower (after observation);
- ☑ locate parts of a flower involved in the process of pollination;
- ☑ explain/discuss process of pollination by using technical terms;
- ☑ differentiate between self and cross pollination and cite examples of each kind (showing pictures);
- ☑ recognise and relate the need of the pollination for plants.

Pollination

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
Revise parts of a flower. ▶ Androecium and gynoecium. ▶ Pollination. ▶ Bisexual and mon0sexual flowers. ▶ Process of pollination. ▶ Some ways of pollination (self and cross pollination).	▶ Revisiting previous concepts and learning. ▶ Building on previous learning. ▶ Showing pollen grains in flowers, and their transfer. ▶ Creating opportunities for group discussion, asking questions and sharing experiences by children. ▶ Conducting simple experiments/activities to locate different parts of the reproductive organs in a flower ▶ Asking children to draw pictures of a flower, parts of reproductive organs and to label them. ▶ Making worksheets on the concepts related with this theme.	▶ Different flowers with reproductive parts (male and female) ▶ Bisexual and mono -sexual flower diagrams made by children of the flower and reproductive parts. ▶ Charts/ diagrams of different kind of flowers. ▶ Charts/ pictures/ e-content depicting pollination/process. ▶ Examples of self and cross pollination in flower. ▶ Worksheets.

Theme 5: Plant Reproduction

The theme introduces children to sexual and vegetative reproduction in plants. Methods of seed dispersal will also form a part of this theme.

Learning Outcomes:

Children will be able to:

- ☑ draw and label the male and female reproductive parts of a flower;
- ☑ discuss the need for the process of fertilization in plants;
- ☑ explain the process of fertilization in plants;
- ☑ identify the different kinds of reproduction in plants (by observing pictures);
- ☑ cite examples of different kinds of reproduction in plants;
- ☑ identify various parts through which vegetation reproduction takes place and give examples.
- ☑ give examples of each kind of seed dispersal;
- ☑ discuss the need and significance of seed dispersal.

Plant Reproduction		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
‣ Process of sexual reproduction in plants: fertilization and formation of seed. ‣ Dispersal of seeds (air, water, animals). ‣ Other ways of reproduction in plants: Vegetative reproduction: meaning; vegetative-reproduction from stem cuttings (potatoes, onion, ginger) root (carrot), leaf (Bryophyllum).	‣ Conducting simple activities (small group/individually) to observe, draw, compare and clarify different parts of reproductive organ in plants. ‣ Arranging visits to a nursery for children to observe vegetative reproduction in some plants. ‣ Worksheets on new concepts practiced by children. ‣ Collecting different seeds and their classification based on dispersal methods. ‣ Project work by children in groups or individually on growing plants through vegetative propagation in potato. ‣ Demonstrating experiments on process & conditions for seed germination.	‣ Children's drawings, visuals/charts of the reproductive organs. ‣ Flowers with androecium, gynoecium. ‣ Chart/e-program showing the fertilization process. ‣ Plants having vegetative reproduction (i.e. potato, carrot, ginger). ‣ Nursery/ School garden. ‣ E-content-on plant reproduction. ‣ Children's project work. ‣ Collection of different kinds of seeds. ‣ Examples of various kind of dispersal of seeds.

Integration: Social Studies.

Theme 6: Solids, Liquids and Gases

The theme introduces children to different forms of matter (solids, liquids and gases) and their physical properties through simple demonstration and activities. The theme is also expected to develop an understanding of a number of concepts related to the properties of solids, liquids and gases.
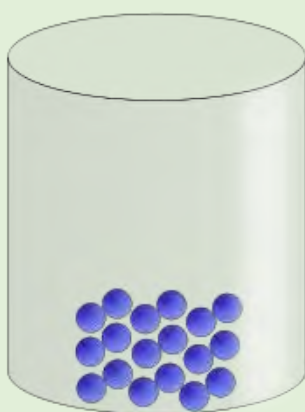
Learning Outcomes:

Children will be able to:

- ☑ identify different forms of matter and cite examples of each based on observable properties;
- ☑ state simple properties of solids and demonstrate the same through simple activities;
- ☑ state simple properties of liquids and demonstrate the same through simple activities;
- ☑ state simple properties of gases and demonstrate the same through simple activities;
- ☑ describe composition of air and depict it diagrammatically;
- ☑ cite examples of warm and fresh air in different situations in daily life;
- ☑ differentiate between wind, breezes, storms and give examples;
- ☑ explain why ventilators and windows are needed in houses, buildings and halls;
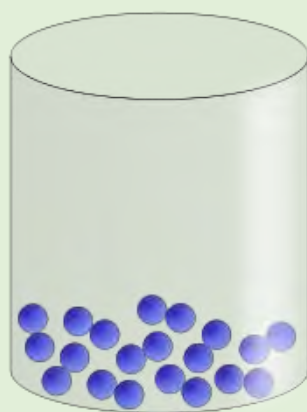- ☑ relate the use of fans, air conditioners and coolers in different seasons.

Solids, Liquids and Gases

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
Revision of Class III learning	▷ Revisiting concepts.	▷ Some crystals of sugar, copper sulphate and potash alum.
▷ Solids: Properties of solids: definite shape, geometry. Give examples of sugar crystals.	▷ Building on previous learning.	
	▷ Showing some crystals of sugar, copper sulphate, potash alum to children.	▷ Soluble and insoluble substances; examples of soluble and insoluble substances.
▷ Liquids: Properties of liquids: occupy space, flow from high level to low level, take the shape of the container.	▷ Conducting experiments to demonstrate how to make solutions by using various solvents.	▷ Apparatus for conducting simple experiments to describe properties of solids, liquids and gases.
▷ Separation of liquids from solids.	▷ Conducting activities/experiments demonstrating various ways of separating impurities. Take a liquid- milk, water, some juice etc. Take different containers like test tubes, beakers, glasses of different sizes. Transfer a definite volume of liquid from one container to the other. Show that the liquid changes its shape and takes the shape of the container.	▷ Different sizes of containers and liquids.
▷ Gases: Properties of gases: no definite shape and volume.		▷ Sand, water, sieve and filter paper.
▷ Composition of gases in air; with experiment- land and sea breezes, monsoon breezes.		▷ Gas chimneys, exhaust fan in kitchens and laboratories.
▷ Role of ventilators in houses/halls, closed spaces- warm air lighter than fresh air.	▷ Conducting simple experiments showing soluble and insoluble substances in solvents.	
	▷ Citing examples of various solutions used in day-to-day life.	
	▷ Organizing demonstration to show the	

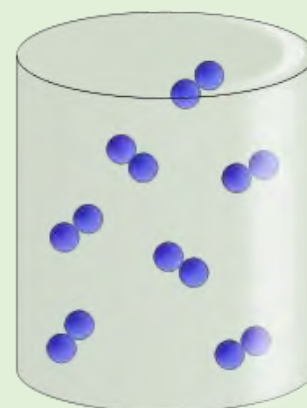| Solids, Liquids and Gases		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
	processes of separation, sedimentation, decantation, filtration, and their examples.	
	⯈ Asking children to blow air into a balloon. Showing them that air occupies different volumes in balloons and that balloons can expand.	
	⯈ Giving examples of filling air in tyres of bicycle, cars, trucks, etc.	
	⯈ Giving examples of coolers and exhaust fans. Showing children how smoke is thrown out by exhausts and chimneys.	

Solid

Liquid

Gas

Theme 7: Interdependence in Living Beings-Plants and Animals

This theme aims to develop an understanding of the relationship between producers (as plants) and consumers (as animals) and their inter- relationship in the environment. Concepts related to the food chain, producers, consumers will also be developed under this theme.

Learning Outcomes:

Children will be able to:

- ☑ differentiate between plants and animals based on some features (plants as producer while animals as consumers);
- ☑ infer why plants can make their own food;
- ☑ cite examples of producers and consumers;
- ☑ classify living beings as producers and consumers;
- ☑ explain the food chain by taking examples as seen in daily life;
- ☑ identify decomposers, scavengers and cite their examples;
- ☑ discuss and explain causes of imbalance in nature;
- ☑ generalize/ infer the effect of hunting, forest fires in the environment.

Interdependence in Living Beings-Plants and Animals

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
▷ Plants as producers, living things as consumers, their examples. ▷ Simple food chains, scavengers and decomposers. ▷ Causes of imbalance in nature (some example: hunting, forest fire).	▷ Creating opportunities for group discussion, asking questions and sharing experiences by children. ▷ Organising group activities to identify producers and consumers. ▷ Providing material on producers/ consumers and making e-material available. ▷ Developing/creating worksheets for new concepts. ▷ Providing learning opportunities to children to make a model of the food chain. ▷ Initiating a class discussion on what would happen if one of the producers or consumers in the food chain disappeared. ▷ Organising project work on field visit experiences.	▷ Pictures/ materials on producers and consumers. Examples of various producers and consumers. ▷ Examples and visuals of the food chain. ▷ Visuals and examples of decomposers. ▷ Visual and examples of scavengers. ▷ Children's experiences.

Integration: Social Studies, Languages

Theme 8: Sound and Noise

The theme 'Sound and Noise' has been included in the Science curriculum with the aim of developing awareness regarding the negative effects of noise on health. The theme will discuss ways of reducing noise in the surroundings. It also aims to generate understanding of the difference between noise and sound, causes of noise in the surroundings and uses of sound as warning signals.

Learning Outcomes:

Children will be able to:

- identify objects that produce pleasant sounds and objects that produce unpleasant sounds;
- recognise sounds produced by some common objects;
- identify sounds produced by some animals and mimic them;
- identify sounds produced by trees and fallen leaves;
- appreciate the importance of sound as a warning signal to save life;
- enlist causes of noise pollution;
- suggest some ways to reduce noise in the surroundings;
- discuss how loud sound affects health.

Sound and Noise		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Sounds made by common objects (clock, whistle, tea kettle, cooker, piano, call bell, flute, etc.). ▶ Sound made by living beings – plants, animals, human beings. ▶ Sound made by trees and fallen leaves. ▶ Pleasant and unpleasant sounds. ▶ Warning sounds (fire alarm, ambulance siren). ▶ Harmful effect of loud noise (vehicle, loud speaker, fire cracker). ▶ Ways to reduce noise pollution.	▶ Providing opportunities to children to share personal experiences related to sounds that are pleasant /unpleasant. ▶ Citing examples of pleasant and unpleasant sounds. ▶ Organising group activity to identify sounds of some objects (by using audios tape or mobiles. ▶ Discussing various causes of noise pollution (based on personal experiences) and suggesting ways to overcome them. ▶ Discussing uses of warning sounds (doing mock exercises). ▶ Organizing quizzes/riddles on issues related to noise pollution.	▶ Personal experiences of children. ▶ Mimic of various sounds. ▶ Documentary film on sounds of various vehicles, warning sounds. ▶ Sounds, made by various vehicles/ objects / instruments.

Integration: Social Studies, Languages

Theme 9: Work and Energy

This theme aims at developing an understanding of 'Work' and 'Energy' and the relationship between the two. The theme further discusses renewable and non-renewable sources of energy used in daily life and the need to save energy.

Learning Outcomes:

Children will be able to:

- indicate various food items that give more energy than other food items;
- discuss the meaning of work by taking examples from daily life;
- cite examples and explain the situations where work is done/ work is not done;
- demonstrate through activity, work done/ work not done, in different situations;
- explain why energy is needed for work;
- differentiate between work and energy with examples;
- give examples from daily life of the amount of energy required for different kinds of work;
- enlist different forms of energy (light, electricity, heat, sound) and give examples of each kind;
- appreciate the importance of energy (light) in daily life.

Work and Energy		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▷ Meaning of work, examples of work done/not done. ▷ Definition of energy; energy is need for work. ▷ Renewable and non-renewable sources of energy, examples of each kind. ▷ Various kinds/forms of energy - light, heat, electricity, sound.	▷ Initiating discussion on personal experiences of children and sharing with peers. ▷ Introducing new concept (work, energy) by giving various examples. ▷ Conducting simple activities with children that help to demonstrate when work is done in different situations. ▷ Demonstrating different forms of energy through various forms of energy activities.	▷ Personal experiences of children. ▷ Narratives to save energy. ▷ Examples of different kinds of work done/not done. ▷ Demonstration/ activities depicting meaning of work done. ▷ Examples of different forms of energy with and without pictures.

Integration: Social Studies.

Theme 10: Light and Shadows

The aim of introducing this theme is to develop concepts related to light and shadow. Some physical properties of objects i.e. transparent, opaque, translucent would also be discussed with examples. Another objective is to introduce some simple features of light and its uses and process of shadow formation in simple language.

Learning Outcomes:

Children will be able to:

- ☑ conduct simple activities by using various objects and classify them;
- ☑ record observations of each object (as kind of material);
- ☑ conduct simple experiment/activity to form the shadow (with the support of elders);
- ☑ infer why a shadow is formed and what conditions are required for its formation;
- ☑ enlist changes seen in sun in the morning, afternoon, evening and night (advise not to see sun with naked eyes);
- ☑ infer why day/night are formed;
- ☑ differentiate between different motions of earth (revolution of earth);
- ☑ explain the phenomenon of solar eclipse in simple language.

Light and Shadows

Key Concepts	Suggested Transactional Processes	Suggested Learning Resources
Revisit previous learning: Objects as transparent, translucent, opaque; features of each type of objects. ▶ Formation of shadows: in day, night, dim light; ▶ Condition for formation of shadows; ▶ Day and night formation; some idea of solar and lunar eclipses	▶ Providing opportunities to children to share their personal experiences, discussion with teacher and peer group. ▶ Conducting simple activities/experiment to observe simple properties of light. ▶ Providing opportunities to observe and classify objects as transparent, translucent and opaque. ▶ Conducting simple activities by children to demonstrate shadow formation with the support of teacher. ▶ Creating opportunities to enlist uses of light in daily life. ▶ Conducting simple experiment to demonstrate how day and night are formed (simple idea – to be dealt with in greater detail in Social Studies/ Geography). ▶ Depicting activities on movement or revolution and rotation of earth ▶ Demonstrating through simple experiment how solar and lunar eclipses are formed. ▶ Filling up of work sheets by children on learnt concepts.	▶ Live experiences of children related to this theme. ▶ Luminous and non-luminous objects. ▶ Material used to show objects as transparent, translucent and opaque. ▶ Examples of transparent, translucent and opaque objects ▶ Experiment/activities explaining how shadow is formed. ▶ Picture depicting how day /night is formed ▶ Activities/demonstration depicting movement or revolution and rotation of earth. ▶ Picture/demonstration to show solar and lunar eclipses.

Theme 11: Simple Machines

The theme 'Simple Machine' aims to help students understand how machines have made our lives simple and the variety of machines used in our daily lives. The children will also be introduced to the various kinds of levers.

Learning Outcomes:

Children will be able to:

- ☑ appreciate the discovery and use of simple tools/machines in daily life;
- ☑ enlist tools/ simple machines used in day-to-day life;
- ☑ classify simple machines based on their working principles (levers I, II, III);
- ☑ give examples of each kind of simple machines;
- ☑ discuss the need for levers to form different kinds of machines;
- ☑ draw picture of each kind of machine and label major parts;
- ☑ conduct simple experiments/activities to demonstrate how simple machines function.

Simple Machines		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▸ Need for machines. ▸ Types of simple machines used in day-to-day life (lever, screw, pulley). ▸ Need for levers, types of levers, I, II, III order, examples related to daily life.	▸ Creating various situations to listen children's experiences related with the use of machines in daily life. ▸ Relating the theme to body parts joints, acting as levers (e.g. elbow joint, knee joint). ▸ Showing simple machines, which are used in kitchen, at home and in school. ▸ Explaining principles on which different machines function. ▸ Conducting activities to identify different kind of machines and classifying them into 3 categories (Lever I, II, III). ▸ Drawing of different kinds of machines in the class. ▸ Giving hands-on experiences to make models of machines. ▸ Demonstrating and conducting activities on how simple machines work.	▸ Children's experiences related to simple machines. ▸ Various kind of simple machines used in daily life. ▸ Activities conducted to classify machines having levers as I, II, III. ▸ Pictures of different kinds of machines. ▸ Children's drawings.

Theme 12: Cleanliness and Hygiene

The theme Cleanliness and Hygiene is viewed as an essential area and has therefore been included in EVS as well in Classes I & II. The idea of including this theme in Class V is to reinforce healthy habits for healthy living. In addition, it will help to create an awareness in children about how one can contribute towards keeping the surroundings clean.

Learning Outcomes:

Children will be able to:

- demonstrate when and how to wash their hands for healthy living;
- identify causes of source disease which occur due to unclean surroundings, personal hygiene;
- develop awareness and sensitivity towards keeping public places clean;
- share cleanliness issues with family members so that healthy habits can be developed among family members as well;
- identify degradable and non-degradable garbage in the surroundings and give examples of each;
- discuss how to reduce non-degradable garbage to keep the surroundings clean;
- create slogans and demonstrate how to dispose-off garbage in the surroundings.

Cleanliness and Hygiene		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
Revisit learning of Class III particularly for inculcation of healthy habits. ▷ Cleanliness of body, body parts, their care, cleanliness of clothes, food, water, healthy habits. ▷ Diseases due to lack of personal hygiene and unclean surroundings. ▷ Degradable and non-degradable garbage with examples. ▷ How to reduce non-degradable garbage in the surroundings.	▷ Building on children's previous learning. ▷ Providing opportunities to children to discuss, interact, ask questions, and share personal experiences during T-L process. ▷ Demonstration of some hands -on activities for habit formation (hand washing). ▷ Providing opportunities to children as part of group work to discuss issues related to cleanliness. ▷ Preparing work sheets for practice. ▷ Arranging and conducting quizzes/ question answer sessions. ▷ Conducting awareness campaigns on cleanliness personal hygiene. ▷ Assigning project work on various issues (e.g. slogan for awareness on cleanliness. ▷ Showing children degradable and non-degradable materials in the environment and encouraging them to segregate at source. ▷ Giving projects to children to identify ways in which they can reduce non-	▷ Materials used for cleanliness (*House). ▷ Personal cleanliness material (Body). ▷ Demonstration on proper washing hands (by elders). ▷ Hand wash material. ▷ Posters on communicable diseases ▷ Matching cards (Names of diseases & their symptoms). ▷ Examples of degradable materials. ▷ Examples (material) of non-degradable material. ▷ Slogans on awareness generation on garbage disposal. ▷ Worksheets, quizzes and riddles on the theme.

Cleanliness and Hygiene		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
	biodegradable garbage in their own homes/ schools. ➤ Asking children to prepare slogans on awareness generation on garbage disposal. ➤ Asking children to make two dust bins – for degradable and non-degradable garbage in the class.	

Integration: Languages, Health and Physical Education

Note: *Hand washing and cleanliness messages need to be reinforced regularly in all grades so as to make this as habit.*

SOCIAL STUDIES

Theme 1: Evolution of Mankind

The theme "Evolution of Mankind" enables children to become aware and appreciate how man has evolved through the ages. It enables them to understand how constant evolution has made significant changes in the lifestyle of mankind. The pedagogies equip them with skills to make a comparative study of the different ages.

Learning Outcomes:

Children will be able to:

- ☑ identify the stages of the evolution of mankind;
- ☑ list the sources of evidence of man's evolution;
- ☑ identify, compare and contrast the features of the four stone ages;
- ☑ identify and reflect on the stages of evolution in modes and system of transport and communication;
- ☑ discuss and appreciate the developmental process of human life on earth.

Evolution of Mankind

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
Evolution of mankind: ☞ Brief introduction of story of Human evolution on earth ☞ Sources/evidences (fossils, bones, utensils, cave paintings, tools, etc.) **The four stone ages:** ☞ Paleolithic ☞ Mesolithic ☞ Neolithic ☞ Chalcolithic **Iron age** **Evolution of Transport and Communication:** ☞ Invention of the wheel and beginning of transport. ☞ Reaching distant places. ☞ Trade and voyages. ☞ Modern means of transport. ☞ Need for writing. ☞ Use of pigeons ☞ Invention of telephone and telegraph ☞ Printing press, ☞ Computers ☞ Satellites	▷ Discussing and mind mapping to explain the sources of evidence to trace human evolution. ▷ Providing information about the four stone ages and the iron age through videos and PPTs followed by discussions. ▷ Collecting information using digital media on the evolution of mankind and on early archaeological sites in India. ▷ Arranging a visit to a museum and to an archaeological site followed by a class discussion. ▷ Comparing and contrasting means of transport through the ages ▷ Discussing and analysing how the evolution of transport and physical features of a place helped trade and commerce to flourish. ▷ Showing videos and/or displaying books about famous voyages. ▷ Discussing the evolution of communication and depicting this through a timeline (from pigeons to satellites). ▷ Making a Power Point Presentation on the four Stone age and Iron age.	▷ Collecting information from digital media. ▷ Videos and PPTs. ▷ Pictures and documentaries on early man. ▷ Clay Tablets and sticks to write with. ▷ Videos on archaeological sites. ▷ Old newspapers for making homemade paper. ▷ Flashcards, pictures and charts showing buildings and monuments. ▷ *Amar Chitra* Katha. ▷ Videos and books on famous voyages. ▷ Guest lecture

Evolution of Mankind		
Key Concepts/Concerns	**Suggested Transactional Processes**	**Suggested Learning Resources**

	➤ Organising Activity:
	  ☛ Making a chart by groups of children to depict the sources of evidence to trace evolution of mankind.
	➤ Role play:
	  ☛ *On the life of early men.*
	  ☛ *On Gulliver's Travel*
	➤ Guest Lectures:
	  ☛ *Inviting a historian and discuss – How do we trace history through archaeological sources?*
	➤ Debate and discussion on the life before the invention of printing press.	

Integration: Arts Education, Science, Languages

Life Skills: Sharing, working in groups, leadership.

Theme 2: The Constitution of India – Basic features

'The Constitution of India- Basic Features' familiarizes children with the Indian Constitution and the form of governance in the country. It aims in helping to develop in them a sense of responsibility and realize the importance   exercising rights and duties as a citizen.   It will also enable children understand the importance and the process of holding elections in a country.

Learning Outcomes:

Children will be able to:

- ☑ analyse the need and importance of a Constitution;
- ☑ identify and list the   fundamental rights and duties as a good citizen;
- ☑ state the features of the Indian government;
- ☑ illustrate the stages of election;
- ☑ discuss the importance of choosing the right representative;
- ☑ describe the responsibilities of a citizen in a democratic polity.

The Constitution of India – Basic Features

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
⯈ The Indian Constitution (formation, nature, need, and guiding principles). ⯈ Fundamental Rights and Duties. ⯈ Basic features of the democratic form of government. ⯈ Importance of Elections. ⯈ Responsibilities of a citizen in a democratic polity.	⯈ Showing the school almanac to explain the concept of the Constitution. ⯈ Discussing and mind mapping to explain the nature, need, formation, and guiding principles of guiding constitution. ⯈ Compiling a list of children's rights and duties in school and at home. This can be followed by giving them information on Fundamental Rights and Duties. ⯈ Conducting a class debate on rights and duties to make children aware of the 'Fundamental Rights and Duties'. ⯈ Facilitating a class discussion on the hierarchical structure in school to explain the structure of the Government of India. ⯈ Acquiring knowledge through books, internet and encyclopaedias about the different types of government in the world. ⯈ **_Organising Activities_** ☛ Asking children to read the school Almanac and conduct a debate/quiz on the rules followed in the school.	⯈ Hands-on experiences. ⯈ School Almanac. ⯈ Class elections ⯈ Drawing a chart ⯈ Reference Books ⯈ Internet ⯈ Encyclopaedia ⯈ Audio visual aids.

The Constitution of India – Basic Features		
Key Concepts/Concerns	**Suggested Transactional Processes**	**Suggested Learning Resources**
	☛ Draw a chart or make a power point presentation to show the structure of the Government of India. ☛ Conducting a class election to let the children have a hands-on experience of the steps and importance of a free and fair election.	

Integration: Languages

Life Skills: Interpersonal skills, cooperation and leadership qualities

Theme 3: The Earth – Its Geographical Features

This theme will help children understand the importance of latitudes and longitudes to locate any place on the globe and map. Information on location and extent of Temperature zones of the earth will enable them to relate with their own region. In addition, they will understand what is climatic change and how this phenomenon plays out and affects the earth as a whole.

Learning Outcomes:

Children will be able to:

- ☑ discuss the terms- latitude and longitude;
- ☑ identify different places on the map with the help of latitude and longitude;
- ☑ explain the concept of the major temperature zones;
- ☑ differentiate between weather and climate;
- ☑ enlist the major temperature zones;
- ☑ identify climates and find out the reasons for climatic changes.

The Earth – Its Geographical Features

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
Locating places on the Earth: ☛ Latitudes (introduction, characteristics, important latitudes). ☛ Longitudes (introduction, characteristics). **Weather and Climate:** ☛ Difference between the weather and climate. ☛ Factors that affect climate of a place. **Solar and Lunar Eclipse** **Major temperature zones of the Earth:** ☛ Torrid ☛ Temperature ☛ Frigid	▷ Using maps and the globe to understand and locate the important latitudes and longitudes. ▷ Explaining and facilitating children to find the difference in time zones. ▷ Studying the globe understanding and locating the three major temperature zones. ▷ Showing videos and /or diagrams to explain the temperature zones. ▷ Providing opportunities to children to share their personal experiences related to different weather and climates. ▷ Asking questions and facilitating discussion related to likes and dislikes about various weather conditions. ▷ Discussing on the factors that affect the climate of a place with examples. ▷ Discussing with diagrams the solar and lunar eclipses. ▷ Project work on the reasons that affect the climate of a place. ▷ Case study on the climate of a particular place. ▷ Collecting news clippings or TV reports on weather for a week and preparing a comprehensive report on it. ▷ Guest lecture by a specialist on making a weather forecast.	▷ Personal experiences of children. ▷ News clippings on weather report. ▷ Globe and maps, Digital globe ▷ Web sources ▷ Charts and posters, models, diagrams, etc. ▷ Newspaper clippings. ▷ Project work. ▷ Case studies. ▷ Guest lectures.

Theme 4: India – A Diverse Country

The theme will help children realise the strategic importance of the location of India in relation to neighbouring and other countries of the world. They will also appreciate the diversity of climate and the natural vegetation of India.

Learning outcomes:

Children will be able to:

- ☑ identify and locate India on the world map;
- ☑ locate neighbouring countries of India on the map;
- ☑ compare the size of India with neighbouring countries;
- ☑ relate climate to the different regions of the country;
- ☑ identify various types of vegetation found in India;
- ☑ relate and compare vegetation and climate in different parts of India;
- ☑ describe importance of vegetation and its conservation.

India – A Diverse Country

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources

▸ India: Location and extent
▸ India and its neighbouring countries.
▸ Climate of India (Different Seasons)
  ☛ Summer season
  ☛ Winter season
  ☛ Rainy (Monsoon) season
▸ Natural vegetation
  ☛ Tropical evergreen
  ☛ Deciduous (monsoon forest)
  ☛ Thorn and Scrub
  ☛ Montane forest
	▸ Identifying and locating neighbouring countries of India on the World map.
	▸ Comparing the size and extent of India with other countries.
	▸ Discussing different types of climate in India and comparing the life of people living there.
	▸ Discussing with reasons about the varied climatic conditions in different parts of the country.
	▸ Preparing a project report by groups of children or individually on the climatic conditions of a place with reasons.
	▸ Showing Videos and/ or PPTs on different types of natural vegetation in different geographical conditions in the country.
	▸ **Organising activities**
	  ☛ Making charts/posters on conservation of natural vegetation.
	  ☛ Encouraging children to collect/write poems/songs on different seasons in India.
	  ☛ Making charts or posters on different types of trees and plants.
		▸ Personal experiences.
		▸ Wall maps of the world, India – Political and Physical.
		▸ Models and charts on different types of vegetation.
		▸ Audio-visual materials and web sources.
		▸ Poems and songs.

Integration: Science
Life Skills: Environmental conservation, empathy.

Theme 5: The Environment – Major Concerns

'The Environment – Major Concerns' aims at enabling children to understand the components of the environment and interdependence of people living in different regions of the world. Issues related to global warming and its effects and precautions related to natural disasters will also be dealt with to create an awareness on measures that need to be taken to reduce the adverse impact on the environment.

Learning Outcomes:

Children will be able to:

- identify the components of the environment;
- discuss critically the reasons for interdependence of people living in different parts of the world;
- explain reasons for ozone depletion;
- describe change in temperature due to global warming and its impacts;
- demonstrate rules to be followed to reduce pollution;
- discuss the precautions that need to be taken at the time of natural disasters.

The Environment – Major Concerns

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
- Components of the Environment (biotic and abiotic). - Interdependence of and between different regions of the world. - Impact of local events on global environment, global warming, - Natural disasters: - Earthquake, - Cyclones, - Floods, - Droughts, - Volcanic eruptions, - Landslides - Effects and Precautions of natural disasters.	- Showing PPTs/videos and encouraging discussions on the components of environment - Discussions on how do people living in different regions depend on each other. - Providing opportunities to enlist biotic and abiotic components of the environment. - Creating situation to analyse various reasons for global warming. - Showing videos and sensitising on harmful impacts of global warming - Discussing precautions to be taken at the time of natural disasters. ***Organising activities*** - Encouraging to prepare charts and writing slogans on global warming. - Organising mock drills on natural disasters and related safety measures. - Collecting newspaper clippings on natural disasters and writing report on it. - Motivating children to take a pledge to plant trees and not burst crackers. - Conducting cleanliness drive **Role Play:** - Performing Street plays to educate the mass about the effects of pollution	- Classroom discussions - Narratives and life experiences. - Newspapers, magazines, journals, charts, posters. - Audio-visuals and web sources. - Charts and Slogans. - Mock drills. - Role Play. - Tree Plantation.

Integration: Languages
Life Skills- Awareness on Environmental concerns

Theme 6: Natural Resources

This theme focuses on making children aware about the judicious use of natural resources since they are limited and also concerns related to the utility and availability of these resources. It will help children in the optimum use of resources with alternatives. This understanding is vital in today's ever-growing need for these resources and conserving them for posterity.

Learning Outcomes:

Children will be able to:

- ☑ discuss and understand the term resources;
- ☑ compare and differentiate between renewable and non-renewable resources;
- ☑ identify and enlist the resources;
- ☑ discuss the use of resources in life;
- ☑ suggest ways to conserve resources.

Natural Resources

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
▶ Meaning of resources. ▶ Renewable and Non-Renewable resources. ▶ Renewable resources – (air, water, soil, plants, animals, solar energy and wind energy) – brief description. ▶ Non-Renewable resources – (Coal and Petroleum, Minerals) – brief description.	▶ Providing opportunities to children to share their experiences with peers and discuss about various aspects in the theme. ▶ Facilitating class discussion on the term resources and providing examples. ▶ Providing facilities to identify and enlist various resources they see around them. ▶ Providing opportunities in groups /individually to observe and discuss the differences between renewable and non-renewable resources. ▶ Assigning project work to children on causes and the importance /necessity to conserve our resources. ▶ Inviting experts to talk on the theme and discuss issues with children. ▶ Organising a role play session on life without petroleum resources. ▶ Writing poems on the benefits of Nature (the sun, water, soil, plants etc.) in enriching our lives. ▶ Exploring and enlisting ways to conserve different resources.	▶ Pictures, charts and models. ▶ PPTs and Videos. ▶ Guest Lecturers. ▶ Coal, petroleum, different minerals etc.

Integration: Languages
Life Skill: Conservation of natural resources

Theme 7: Major Occupations in India

Agriculture and industry are the two major occupations in India. This theme will help children understand the work, process and hardships related to these two occupations. They will also appreciate the hard work of people involved in providing us the finished products that enrich and facilitate our lives.

Learning Outcomes:

Children will be able to:

- differentiate between man-made and machine made products;
- enlist the large-scale industries in our country;
- differentiate between raw material and finished products;
- compare old and new methods of farming;
- discuss our dependence on industries in day-to-day life;
- appreciate the skills of persons involved in crafts.

Major Occupations in India

Key Concepts/Concerns	Suggested Transactional Processes	Suggested Learning Resources
Agriculture: ☞ Types of crops, Food Crop, cash crop, ☞ Development of agriculture, ☞ Livestock rearing (map work). **Industries:** ☞ Major industries in India. ☞ Large scale industries and small scale industries. ☞ Other industries.	⮞ Providing opportunities to children to share their personal observations on various forms of occupations. ⮞ Facilitating class discussions to provide opportunities to children to ask questions and narrate experiences on agriculture being the main occupation in India. ⮞ Discussing old and new methods of cultivation in agriculture. ⮞ Facilitating work in small groups for children to observe and compare the difference between a raw and a finished product. ⮞ Showing samples of cash crops and food crops and narrating differences between them. ⮞ Visiting to a field and interaction with the farmer. ⮞ Taking children to a field and interacting with a farmer on soil, crops methods and income through cultivation, issues and hardships faced by them ⮞ Providing opportunities to observe, identify and classify man-made and machine made things. ⮞ Discussing the role of industries in our life. ⮞ Collecting news /information on	⮞ Children's personal experiences. ⮞ Samples of different crops. ⮞ Collection of Raw and Finished products. ⮞ Local Artisans /Farmers/People involved in other occupations.

Major Occupations in India		
Key Concepts/Concerns	**Suggested Transactional Processes**	**Suggested Learning Resources**
	major industries in India and analysing the same.	
	➤ Taking children to local artisans or a crafts mela and organising their interaction / discussion with the crafts person.	
	➤ Taking children to an industry and discussing the various processes in the industry.	
	➤ Visiting to an industry, interaction with workers and observing various processes.	
	➤ Visiting to local artisans or a crafts mela.	

Integration: Languages

COMPUTER STUDIES

Topic 1: Evolution of Computers

The evolution of computers started way back in the late 1930s and the first known device was Abacus. Based on the hardware, evolution of computers has been classified into five generations.

Learning Outcomes:

Children will be able to:

- ☑ describe the history of computers;
- ☑ state its characteristics and limitations;
- ☑ compare the generations of computers;
- ☑ keep pace with the latest developments related to technology.

Evolution of Computers		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
‣ History of Computers ‣ Characteristics of computers ‣ Limitations of a computer	‣ Demonstrating the history of computers through presentations/ videos/ Interactive classes. ‣ Providing opportunities to discuss the characteristics and limitations of computers. ‣ Illustrating the latest technological developments by using pictures or showing videos. ‣ Facilitating a quiz game on all the key concepts either as a group or whole class activity.	‣ Computers/ IWB with presentation software. ‣ Videos ‣ Projector, etc.

Integration: Social Studies

Life Skills: Critical thinking,

Topic 2: Types of Software

A software is the programme that makes the physical computer perform specific tasks. Based on function and purpose, software is broadly classified into System and Application software.

Learning Outcomes:

Children will be able to:

- ☑ define the term software;
- ☑ explain the types of software and their purpose with examples;
- ☑ differentiate between system software and application software;
- ☑ backup files;
- ☑ scan the System/Drive/File;
- ☑ use defragmentation utility.

Types of Software		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Types of software ▶ System software ▶ Operation support system ▶ Utility software ▶ Application software ▶ General Purpose Application Software ▶ Customized Software ▶ Backup of files. ▶ Utility Programs like backup, scanning, defragmentation	▶ Build on previous experience ▶ Explaining the classification of software: ▶ Discussing the importance of different utility programs ▶ Providing opportunity for hands on activity in groups/individually to children to use utility software in Group / individual level activities.	▶ Computers/ IWB with utility software ▶ Videos ▶ Projector, etc.

Life Skills: General awareness, decision making, problem solving and responsible behaviour.

Topic 3: Advanced Features of Word processor

Formatting and Editing tools are used to design how each page of a document will appear when it is printed. Additional features like find/ replace/insert are used for editing purposes and in some cases, to create a report. Using drawing tools like shape tools, user can insert pictures as per their requirements to enhance the look of the document.

Learning Outcomes:

Children will be able to:

- enhance the document by using advanced formatting tools;
- use editing tools;
- use drawing tools.

Advanced Features of Word processor		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
❯ Advanced formatting tools like Format painter, Subscript, Superscript shadows etc., ❯ Editing tools ❯ Header & footer ❯ Inserting column & column break, page break and line break ❯ Tabs, indent text, Margins ❯ Page orientation and page size ❯ Search and replace text ❯ Drawing tools ❯ Working with shapes ❯ Placing text in shapes ❯ Applying border and shading etc.	❯ Recollect activities discussed in classes earlier ❯ Demonstrating in group to children the advanced formatting tools to enhance the look of the document. ❯ Demonstrating in groups to children the editing tools of page setting ❯ Explaining the drawing tools	❯ Computer/ IWB with Word Processor. ❯ Hands on activity/ experiences ❯ Projector ❯ Demonstration by teacher

Integration: Languages
Life Skills: Creative thinking.

Topic 4: Presentation software – Special Effects

Presentations can be enhanced in an attractive manner by using various tools like clipart, word art, animations, etc. These ensure that important points are highlighted effectively.
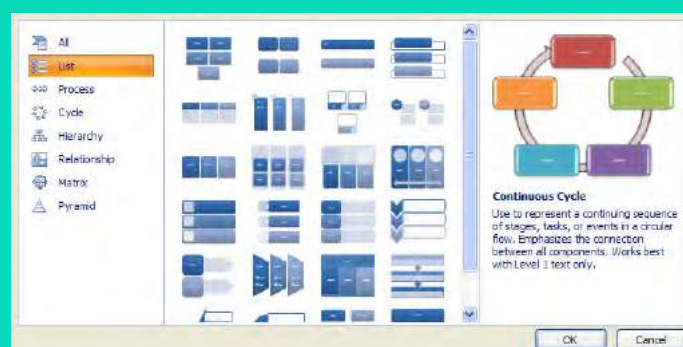
Learning Outcomes:

Children will be able to:

☑ express the topic attractively using different templates;
☑ enhance the presentation by applying formatting effects and inserting objects.

Presentation software – Special Effects		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Built-in templates ▶ Enhancing the look of a presentation ▶ Changing colour scheme, background colour. ▶ Specifying alignments. ▶ Inserting different objects like Clipart, Word art and shapes	▶ Recapitulation of previous learning. ▶ Demonstrating the procedure of using templates. ▶ Demonstrating applying different formatting effects Providing hands on experience in groups/individually to children in using the various formatting effects.	▶ Computers/ IWB with presentation software. ▶ Projector

Integration: Arts Education

Life Skills: Creative thinking

Topic 5: An Introduction to Scratch Programming

Programming is the process of taking an algorithm/stepwise-thinking and encoding it into a programming language, so that a computer can execute it and produce the desired output.

Scratch is a free programming software that enables children to create their own games, animated stories and interactive art.
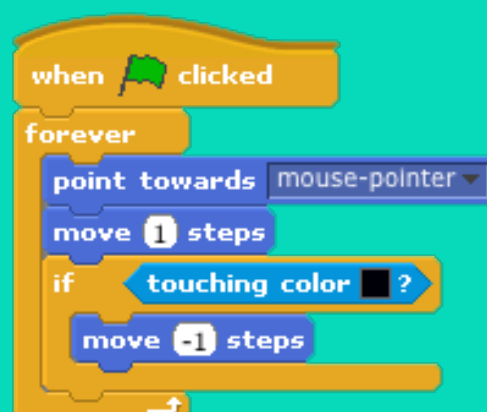
Learning Outcomes:

Children will be able to:

- ☑ explain the concept of programme and programming;
- ☑ work on scratch interface;
- ☑ handle basic commands;
- ☑ develop logical thinking.

An Introduction to Scratch Programming		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
⯈ Program Programming ⯈ Brief introduction of Scratch software ⯈ Use of basic commands in Scratch	⯈ Explaining the concept of program and programming ⯈ Hands on activity in groups/individually to children to get acquainted with Scratch and basic commands like 'motion', 'pen, and 'sound' blocks ⯈ Providing opportunities by using computers to develop creativity and imagination among children.	⯈ Computers/ IWB with Scratch software ⯈ Projector, etc.

Life Skills: Creative thinking
Integration: Mathematics

Topic 6: Internet Services

Internet services enables the user to access and gain information through use of the internet. There are different ways to connect to the internet. For example, dial-up, broadband and wireless services.

Learning Outcomes:

Children will be able to:

- ☑ identify the ways to connect to the Internet services;
- ☑ use the different internet services;
- ☑ follow Netiquettes while communicating online.

Internet Services		
Key Concepts	**Suggested Transactional Processes**	**Suggested Learning Resources**
▶ Ways to connect to the Internet ▶ Netiquettes while communicating online	▶ Organising active discussions /participation of children sharing their experiences related with the topic. ▶ Discussing and demonstrating different ways to connect to Internet services like dial-up, broadband and wireless. ▶ Discussing strategies to safeguard oneself while communicating online by following Netiquettes. ▶ Emphasising the importance of being a responsible netizen. ▶ Providing hands-on experience to children in groups/individually in actual use of the Internet. ▶ Facilitating a Quiz Game amongst children in groups/whole class on the key concepts.	▶ Computers/ IWB with presentation software

Life Skills: Interpersonal skills, net safety