



IB Mission Statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. To this end the organization works with schools, governments and international organizations to develop challenging programs of international education and rigorous assessment. These programs encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

TIPS Mission Statement

"To nurture inquiring, knowledgeable and caring young lifelong learners who are engaged citizens of our world through intercultural understanding and respect".

Dear Parents,

At the outset, we would like to welcome you all to the new academic year. A combination of Performing Arts (PA), Physical Education (PSPE) and Academics has been incorporated in a well balanced manner to give children an all - round development.

Learning experiences throughout the year are designed towards fostering skill development, independent and collaborative decision making in order to prepare the students for smooth transitions every year. Students work in partnership with their peers, parents and teachers – each recognizing their individual and collective responsibilities to create a community of global learners ready to take on the challenges of the 21st century.

The learning environment at TIPS aims at the all round development of the child. It provides ample opportunities for development in academic, physical, emotional and social spheres. Individual attention is ensured as the staff caters to the distinctive needs and talents of a child which is nurtured in a full -fledged manner.

How can parents assist students?

Parents can help their child in a variety of ways:

- Establish a regular routine to complete the homework and assigned tasks independently in an appropriate location that best suits the family.
- Available to discuss homework assignments.
- Exhibit support by being focused on time management and choice of resources.
- As a courtesy to classroom teachers, parents are requested to notify, in writing, any change in the student's regular routine. Examples of these include: changes in bus routine or afternoon pick up or after school programs/schedule changes. It is recommended that notification occurs through:
 - Email: a day before (or as soon as possible)
 - A message in the student's diary

Communication with teachers

At TIPS, all teachers value open and constant communication. We encourage students and parents to work in partnership with each other to foster self-responsibility by reflecting on daily routines. Any concerns of teachers and parents should be communicated in a respectful congenial manner. We also encourage parents to use the parent portal for communication/concern.

If you wish to discuss any serious matter with the child's class teacher, please send us an email with the issue on hand and request for an appointment. We do not encourage appointments for general progress updates, since six open forums have been scheduled periodically throughout the year.

Communication Diary: The student diary contains important information concerning school expectations, and procedures. The purpose of the diary is to support students in their efforts to develop organizational and time management skills. It is an important means of communication between school and home.

School circulars: Specific information regarding class routines and organizational matters are communicated through circulars. Additional detailed curriculum information will also be sent home throughout the year in the form of circulars or flyers.

Enhanced PYP

The Primary Years Programme endorses a belief that students learn best when the learning is authentic, relevant to the real world and transdisciplinary, where the learning is not confined within the boundaries of traditional subject areas but is supported and enriched by them.

Agency and the learning community

The learning community recognizes that agency and self-efficacy are fundamental to learning. A learning community that supports agency offers opportunities for students to develop important skills and dispositions, such as critical and creative thinking, perseverance, independence and confidence. These are vital to the learning process and the development of self-efficacy. The learning community further offers students multiple opportunities to experience the impact of their choices and opinions, which support their evolving perceptions of their identity.



TIPS is a school, with a focus on agency considers its perceptions of how children learn, children's capabilities and the overall value of childhood. When teachers consider their beliefs around children's identities and rights, they are examining personal beliefs, theories, cultural backgrounds and values. For example, the teachers' beliefs and values will influence their choices of how to allocate time, how to set up learning spaces, choose and arrange materials and foster relationships within the classroom and the broader community.

Students have voice, choice and ownership for their own learning. When students' have agency, the relationship between the teacher and students becomes a partnership. Students with a strong sense of self-efficacy bring a stronger sense of agency to the learning community. The learning community supports agency and fosters self-efficacy.

PYP students with agency use their own initiative and will, and take responsibility and ownership of their learning. They direct their learning with a strong sense of identity and self-belief, and in conjunction with others, thereby building a sense of community and awareness of the opinions, values and needs of others.

Transdisciplinary: Transdisciplinary learning is the exploration of a relevant concept, issue or problem that integrates the perspectives of multiple disciplines in order to connect new knowledge and deeper understanding to real life experiences. Transdisciplinarity provokes the learner to reflect upon, and reconsider, what he or she believes about the world and about his or her place in it. Students will feel obliged to respond when faced with challenges relating to themselves or to any issues in the world.

Engaging with the concept of transdisciplinarity forces a paradigm shift that moves most teachers out of their comfort zone and an effective implementation of the PYP will bring about "a change in the relationship between students and teachers", whereby students "become co-investigators in dialogue with the teacher and jointly responsible for a process in which all grow".



PYP Curriculum Model

Contributing to transdisciplinary learning in the PYP is the student engagement with units of inquiry at each year level. These units are consolidated into a matrix known as the transdisciplinary programme of inquiry, whereby the themes of global significance, listed below, frame the learning throughout the primary years. The development of each unit of inquiry is focused on a central idea that supports conceptual development and extends understanding of the transdisciplinary theme. The PYP key concepts, themselves transdisciplinary, are embedded in the central ideas. Thus, the knowledge component of the written curriculum is built up of transdisciplinary layers, one supporting the other in the following six themes.

Transdisciplinary Themes

Who we are : An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; rights and responsibilities; what it means to be human.

Where we are in place and time: An inquiry into orientation with regard to time & place; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between individuals and civilizations, from local and global perspectives.

How we express ourselves:An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs, values; the aesthetic sense and creativity.

How the world works: An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.

How we organize ourselves: An inquiry into the interconnectedness of human made systems and communities; the structure and function of organizations; societal decision making; economic activities and their impact on humankind and the environment.

Sharing the planet: An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.

Programme of Inquiry: The programme of inquiry is a matrix made up of the six transdisciplinary themes running vertically, and the age groups running horizontally. Organizing the curriculum around the six transdisciplinary themes contextualizes the learning for the students. It enables them to experience a balance of subject-specific knowledge, concepts and skills in order to develop an understanding of the transdisciplinary themes.

Unit of Inquiry : A unit of inquiry is a 6-8 week in-depth exploration of a concept. Students will inquire into a central idea or a main understanding by being guided by lines of inquiry and prompting questions.

Central Idea: Each of the six units of inquiry has a central idea based on each theme. The central idea is written in one sentence that expresses precisely the context. Each central idea will support student's understanding of the particular transdisciplinary theme it is connected to, and would challenge and extend student's prior knowledge.

Lines of inquiry: Each unit will contain three or four lines of inquiry. The lines of inquiry clarify the central idea and define the scope of the inquiry. These contributing aspects of the central idea extend the inquiry, focus student research, and deepen student's understanding. Connections are made, as appropriate, between the lines of inquiry as well as with the central idea.

Concepts:

A concept - driven curriculum, helps the learner to construct meaning through improved critical thinking and the transfer of knowledge and understanding. The PYP key concepts— form, function, causation, change, connection, perspective, responsibility are themselves transdisciplinary and increase coherence across the curriculum. By identifying concepts that have relevance within each subject area, and across and beyond all subject areas, the PYP has defined an essential element for supporting its transdisciplinary model of teaching and learning. These concepts provide a structure for the exploration of significant and authentic content. In the course of this exploration, students deepen their understanding of the concepts and learn to think conceptually.

In planning units of inquiry, related concepts derived from the subject areas are also identified. These related concepts may be seen as subject-specific versions of the PYP key concepts, for example, transformation in science is a version of the key concept "change". These related concepts deepen an understanding of the subject areas while providing further opportunities to make connections throughout the learning, from one subject to another, and between disciplinary and transdisciplinary learning.

Key Concepts

- **Form:** The understanding that everything has a form with recognizable features that can be observed, identified, described and categorized.
- **Function:** The understanding that everything has a purpose, a role or a way of behaving that can be investigated.
- **Causation:** The understanding that things do not just happen, that there are causal relationships at work, and that actions have consequences.
- **Change:** The understanding that changes is the process of movement from one state to another. It is universal and inevitable.
- **Connection:** The understanding that we live in a world of interacting systems in which the actions of any individual element affect others.
- **Perspective:** The understanding that knowledge is moderated by perspectives, different perspectives lead to different interpretations, understandings and findings. Perspectives may be individual, group, cultural or disciplinary.
- **Responsibility:** The understanding that people make choices based on their understandings, and the actions they take as a result do make a difference.

Approaches to learning : These inquiries also allow students to acquire and apply a set of transdisciplinary skills: social skills, communication skills, thinking skills, research skills, and self-management skills. These skills are relevant to all learning, formal informal, in the school, and in events experienced beyond its boundaries. Students also develop skills and strategies drawn from the subject areas, but aligned with the five transdisciplinary skills.

For example, becoming literate and numerate enhances student's communication skills. The acquisition of literacy and numeracy, in their broadest sense, is essential as these skills provide students with the tools of inquiry. Within their learning throughout the program, students acquire a set of transdisciplinary skills - social, communication, thinking, research and self management. These skills are valuable not only in the unit of inquiry, but also for any teaching and learning that goes on within the class room and in life outside the school.

Thinking skills

- Critical-thinking skills: Analysing and evaluating issues and ideas
- Creative-thinking skills: Generating novel ideas and considering new perspectives
- Transfer skills: Using skills and knowledge in multiple contexts
- Reflection/metacognitive skills: (re)considering the process of learning

Research skills:

- Information-literacy skills: Formulating and planning, data gathering and recording, synthesizing and interpreting, evaluating and communicating
- Media-literacy skills: Interacting with media to use and create ideas and information
- Ethical use of media/information: Understanding and applying social and ethical technology

Communication skills

- Exchanging-information skills: Listening, interpreting, speaking
- Literacy skills: Reading, writing and using language to gather and communicate information
- ICT skills: using technology to gather, investigate and communicate information

Social skills

- Developing positive interpersonal relationships and collaboration skills: Using self-control, managing setbacks, supporting peers
- Developing social-emotional intelligence

Self-management skills

- Organization skills: Managing time and tasks effectively
- States of mind: Mindfulness, perseverance, emotional management, self motivation, resilience

IB Learner Profile Attributes:

The kind of student we hope, who graduates from a PYP school, will be laying the foundation upon which international mindedness will develop and flourish. The attributes of such a learner, as shown below are relevant to both students and adults in a PYP school. They are interpreted and modeled for students. The purpose of the modeling is not to encourage students to mimic but to provide support a metacognitive framework, to help students reflect on and develop their own set of values, albeit in the context of that being demonstrated. The teacher looks for authentic demonstrations of these attitudes in the daily life of the students in order to make them inquisitive, and build an appreciation for them.

IB learners strive to be:

Inquirers: We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

Knowledgeable: We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

Thinkers: We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

Communicators: We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

Principled: We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

Open minded: We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

Caring: We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

Risk takers: We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

Balanced: We understand the importance of balancing different aspects of our lives intellectual, physical, and emotional to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

Reflective: We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

SLC Overview

Student Led Conference is a platform to get a better picture of each child. It forces parents and teachers to sit down with each student and review strengths and weaknesses. These conversation/ presentations inform teaching and learning more than perhaps conventional assessments. **Student**-led Conferences communicate not only how a student is performing but also why. It also enable **the** student to take responsibility and control of their own efforts to learn and at the same time be a team member and ensure success for all.

Schedule of SLCs & PTMs:

- Students of Grade 1 to 5 will have 3 SLCs and 3 PTMs in an Academic Year.
- SLC may be scheduled in between or before completion of the ongoing inquiry.
- SLC 1 & 2 will be held on a scheduled date in two sessions.
- SLC 3 - Project Exhibition and Presentation.

SLC Format:

- **SLC-1** to focus on the curriculum covered from the beginning of the academic year to the date of first SLC.
- **SLC-2** to focus on the curriculum covered from the first SLC to second SLC across subject areas.
- **SLC-3** the final SLC to focus on an elaborate Science Project undertaken by the students as part of their Science Learning till date.
 - Students will be able to choose from one of 2 science projects given to them based on the science learning completed during the academic year.
 - Students in their groups to develop and exhibit their understanding of the selected project with the help of working models/ ppts / displays and oral presentation as specified by the project document.
 - The assessment criteria and rubrics will be shared with the students for their selected science project.
 - The students would be assessed for their individual as well as group performance.
 - Project selection and project details will be completed by Nov/Dec to provide ample time for successful project completion.

SLC Overview – (1 & 2):

- At the beginning of each SLC timeframe, each student to be assigned in a group.
- Group to consist of 3 or 4 students.
- Each member of the group to choose a subject and topic to present for 5 mins
- All group members to choose different subjects to present
- Group members to prepare and support each other in planning
- Each member to present independently during the SLC
- Each SLC will cover the learning experiences of the students from one SLC to another.
- Presenters may make use of PPT/ Working Model/ Live demonstration/ Experiment/ Manipulative/ Note-books etc to showcase their learning experiences

Presentation Format: time allotted 5 mins for each team member (20 mins per group)

- Introduction
- Significance of the topic
- Content development
- Conclusion
- Acknowledgements

Essential conditions for SLC:

- Parental participation in all the SLCs is mandatory. The student will be assessed by both the parent and the teacher.
- Absentees will be marked zero
- Parents to assess on the given criteria, out of FIVE points.
- Teachers to assess each member of the team on the given criteria, out of TEN.
- The final points will be an yearly average of all SLC's

Expectations from the Parents:

- Be present for the SLC on time
- Encourage the child in her/his preparation
- Ask relevant questions to prepare the child as per the expectations
- Assess the child without bias

SLC Assessment: Each child is assessed on the following criteria by parents and teachers alike.

- Presentation style and confidence
- Clarity
- Subject content
- Self-Management skills
- Team work

Both parents and teachers are integral in ensuring student success.

Project-based learning

Project-based learning (PBL) is an instructional framework that encourages critical thinking, creativity, innovation, inquiry, collaboration and communication. Students investigate real-world questions and solve authentic challenges. Science-based PBL integrates science, technology, engineering, math, language arts, and other content areas.

Each PBL pack presents a scenario that establishes a problem to be solved and asks a **Driving Question**. This question sets a purpose for a student-driven investigation or challenge. Then students design a solution to the problem, develop a project, and deliver a presentation to the audience.

Based on the PBL units,

- Students are segregated in groups.
- Each group will research, plan, create and present the project based on the driving question of the unit.
- Each child will be receiving a student booklet which comprises of Project Outline, Project planner, Vocabulary, KWLS, Recommended Reading, Project Ideas, Project Description, Project Check Up, Presentation Rubric, and Team Reflection.

Parents participation is very essential in organizing the groups, providing the materials needed and supporting the child in every step to complete the project.

This inquiry based student-directed instruction will help the children to communicate and collaborate with others to solve problems which is an integral part in the real world.

Parent Teacher Meeting

PTM is an informal session in the class room of your child with the class teacher. The Coordinators can also be met on the same day. This is an opportunity for parents to review their child's progress and discuss other issues with the class teacher. Parental participation in PTM is mandatory. School will organize 3 PTMs in an Academic Year.

Management Review Meetings:

The management of TIPS receives feedback about the academic year from the parents as well as shares the future plans with them. This platform provides another opportunity for parents to communicate and put forward their suggestions directly. The management provides an excellent platform for direct communication to the parents. They receive individual feedback about the academic year and about the future plans of the school.

5 Initiatives 2022-23

TIPS group has taken a '5 point change' initiative to help our students become future ready and serve better to our community. The initiatives will provide parents and students scope to explore a variety of learning areas, building them into confident individuals who are ready to shape the world.

Following are the **five select focus areas** that will give impetus for the upcoming year:

1. **Introducing AI, Coding and Rocketry – Space Tech**

TIPS is taking a major leap by introducing new integrated ICT and Applied Science curriculum to better prepare our students for the future technological revolution along with introducing Rocketry (Space Tech) from primary years and participating in 75 Students' Satellite Mission. TIPS is the first and the only school to participate in this mega event.

- a) The ICT-AI-Coding curriculum has been updated to include coding, app development, web development, and machine learning principles. The key advantages of this curriculum are that it successfully and practically teaches elementary students complex modern-day technologies through hands-on activities.
- b) The STEM curriculum based Rocket laboratory to include all the components necessary to design and build model rocket including nose cones, body tubes, adapter cones and rocket motors. The lab will be equipped with remote ignition system and launcher apparatus. The best feature of the lab is the Propulsion Test Stand. This test lets the students measure various metrics of the rocket motor like total impulse and burn time, which is captured on a computer rig to receive data. This data is further used by the students to design rockets with predictable performance along with designing and launching Satellites.
- c) 75 Student Satellite Mission- In the 75th year of Indian Independence, the nation is embarking on the launch of 75 student developed satellites. TIPS takes immense pride in being the first school to take part in this incredible project. This unique collaboration platform will provide our learners the distinctive opportunity to design and structure Cubesats under the guidance of the eminent scientists from ITCA and ISRO. The students who enroll for the 75 Students' Satellite Mission will be able to leverage the end-to-end lifecycle expertise including design, development, manufacture, integration, testing, launch services facilitation and satellite operation, thereby using a high-performance Space-Tech ecosystem at TIPS.

2. Enhancements of offerings for AY 2022-23:

Along with introducing the new initiatives, TIPS has enhanced offering in the following areas of school life.

- a. **Online Third Language Learning** : In addition to meeting the needs of future students, **Mother Tongue and Foreign - language learning and acquisition** will be introduced from Grade I-V for AY 2022-23. Children can choose to learn the language of their choice for basic speaking, reading and writing every Saturday from the comfort of home in online classes. The language offered are as follows:
National Languages: Tamil/ Kannada/ Telugu/ Malayalam/ Hindi
Foreign Language: French/ Spanish/ German
- b. **Virtual PTMs:** Parent teacher meetings are a prominent and notable feature of the school curriculum. Post COVID digital interaction is the need of the hour. The PTMs will be available from KG to 12 in both the modes (Physical meeting / Online Meeting) for all the parents as per their availability throughout the year.
- c. **More to Extended School Program (ESP):** The ESP **program** will strive to provide Creative Arts along with various areas of Performing Arts & Sports already offered by us. This is offered to meet the needs of children and further enhance their skills in creative areas too.
- d. **IXCEED Program:** IXCEED Program is being introduced from Grade I-VIII, to make children independent and confident in basic and core mathematical concepts and topics by giving level based additional practice worksheets. Children will be

attempting the level based mathematical problems independently and will continue to do others level worksheets as per their progress. Trained teacher support will be provided to the students. No concept teaching will be done by the staff.

3. **Internships: Skill Based Learning Program**

With the intention to provide our students platforms where they get an opportunity to apply knowledge learned and explore various career options, the school now plans to launch its ***Pilot Internship Program*** for Grades IX to DP2 students during the summer and winter breaks in the upcoming academic year (2022-23). The Program is divided into 2 groups –

- a. Grade IX & X: 3 internship programs within the 2 year period, each consisting of a minimum duration of 1 week.
- b. Grade XI & XII: 1 internship program of 1 month duration within the DP study period. (Mandatory)

4. **Moral and Social Responsibility**

The sense of being socially responsible starts from the early stages of a child's life. Engaging the students to help them evolve as a responsible person shouldering the responsibility of the nation, is the need of the hour. At TIPS we take this responsibility to heart and have initiated Farming and joining hands with AATRAL Foundation to extend our support in the building of national character through our own small steps.

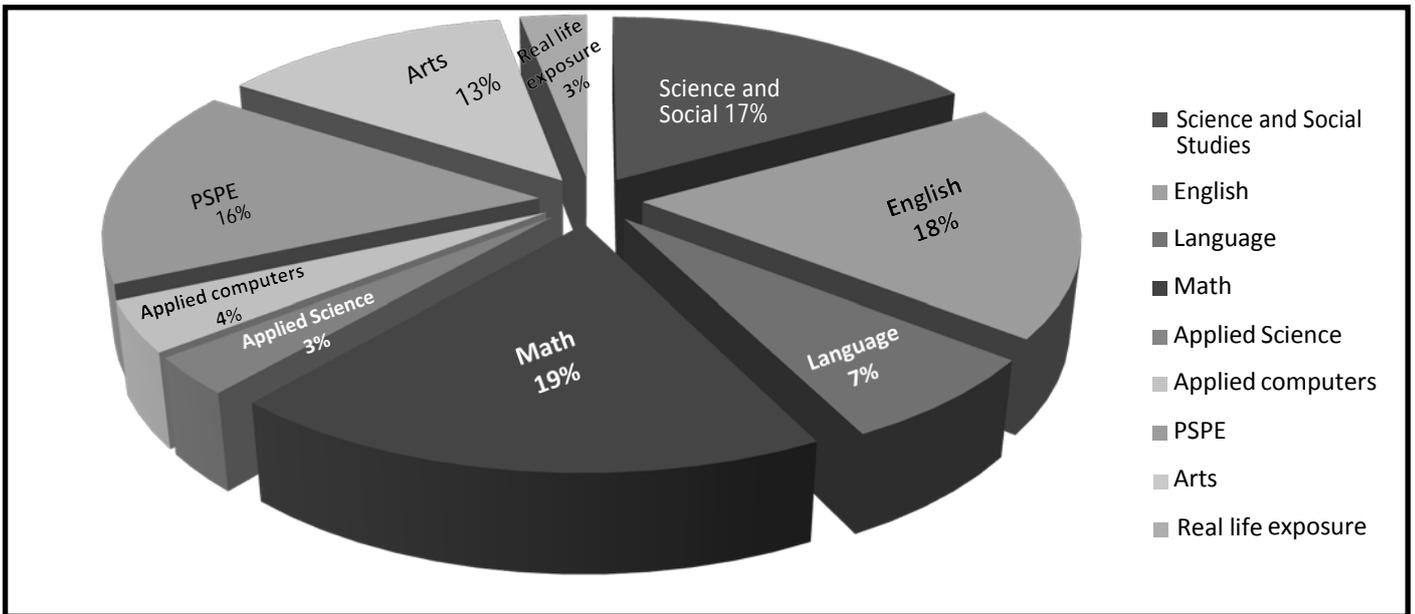
- a. **Farming: Introduction of Farming as a part of Indian social and cultural fabric:** Agriculture plays a critical role in the entire life and is a backbone of the economic system of a given country. This is especially true of India. TIPS has planned to offer Farming as part of the regular curriculum which will encourage the children to appreciate and understand the complexities of life. Farming practices for grade 3 to 9 & DP1 has been scheduled in such a way that there is coherence in the understanding and learning of them.
- b. **Social Responsibility through Service:** The TIPS school community has decided to offer consistent and continuous programs to help the underprivileged involving Children, Parents, Teachers, Staff, and Local Community with focus on life skills learning. We expect our students to understand the realities of the world outside their protective zone and help in making the world a better place for all.

5. **TIPS Media Centre – An Initiative by the TIPS Students**

TIPSMedia Centre, led by the senior students is an initiative where the students will get a productive opportunity to express themselves. Specially post Pandemic times where students are more into gadgets, TIPS will provide an eco-system for the students to aperture their creative wisdom be it short films, advertisements, posters, shorts, reels and other creative ideas.

All the shared initiatives will ensure TIPS students the competitive edge by introducing our youngsters to the world beyond, by instilling and developing in them the skills and abilities needed to thrive in the ever-changing world. To this end, we plan to keep the momentum and keep ourselves ahead of time, as has been TIPS legacy.

ANNUAL CURRICULUM PLAN



This pie- chart gives you an approximate break-up of the various disciplines offered by the TIPS curriculum. **The subjects focused in each theme will be integrated in the units of inquiry.**

Our Grade III children will be inquiring into the following Transdisciplinary themes

ANNUAL CURRICULUM OVERVIEW- UOI		
Discipline	Objective	
UOI	Where we are in place and time	SEM - I
	Who we are	
	How we express ourselves	
	How we organize ourselves	SEM - II
	Sharing the planet	
	How the world works	

Where we are in place and time: An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.

Central idea

Human migration is a response to challenges, risks and opportunities

Key Concepts

- Causation
- Connection
- Perspective

Related Concepts

- Factors
- History
- Transformation

Lines of Inquiry

- Reasons behind migration
- Human Migration through history
- Effects of migration on individuals and communities

Subject Focus : Social Studies, Math and Language

Strands

- Social Studies : Continuity and Change Through Time, Human and Natural Environments
- Math : Money
- Language : Visual - Viewing and Presenting

The learning outcomes after the inquiry are that the students will be able to

- explain why humans migrate including push and pull factors
- describe categories of people who migrate
- articulate changes and continuities of the experience of migrations across a range of histories and geographies
- understand and explain the positive and negative impacts of migration

Expected Transdisciplinary skills while inquiring into this theme

- Communication skills
- Social skills

While inquiring into this theme, children exhibit these learner profile attributes

- Inquirers
- Open- minded
- Communicators

Students have an access to the following resource during this inquiry

Reading Resources

- Caribbean family history – Vic Parker
- Why do animals migrate – Bobbie Kalman
- Migration – Monica Hughes
- Moving People – Louise Spilsbury
- How much should human immigration be restricted – Andrew Langley

Vocabulary

- Human migration
- Push factors
- Pull factors
- Voluntary migration
- Involuntary migration
- Emigration
- Immigration
- Migrant
- Industrialization
- Immigrant
- Relocation
- Emigrant
- Economic
- Environmental
- Political
- Population

Who we are: An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; rights and responsibilities; what it means to be human.

Central idea

The effective interactions between human body systems contribute to health and survival

Key Concepts

- Form
- Function
- Responsibility

Related Concepts

- Body Systems
- Interdependence
- Health

Lines of Inquiry

- Major body systems and how they work
- Functions and interdependence of the body systems
- Impact of lifestyle choices on our body

Subject Focus: Science, Math and PSPE

Strands

- Science : Living things
- Math : Measurement
- PSPE : Active Living

The learning outcomes after the inquiry are that the students will be able to

- list and describe the parts and functions of major body systems
- explore how different systems within the body work independently and together to form a functioning human body
- explain the importance of good health in relationship to the body

Expected Transdisciplinary skills while inquiring into this theme

- Research skills
- Social skills
- Communication skills

While inquiring into this theme, children exhibit these learner profile attributes

- Inquirers
- Balanced
- Reflective

Students have an access to the following resource during this inquiry

Reading Resources

- Human Body
- Asthma
- Exercise: Get Moving!
- Sports Injuries
- Your Hardworking Heart
- Skin: It has you covered

Possible Hands on Activity

- Experiment – Meter-stick drop

Project Based learning

- Effects of exercise on body system

Vocabulary

- Arteries
- Bladder
- Blood stream
- Bone marrow
- Brainstem
- Cardiac muscle
- Liver
- Cerebrum
- Cerebellum
- Circulatory System
- Esophagus
- Large intestine
- Small intestine
- Respiratory system
- Inhale
- Exhale
- Lungs
- Diaphragm
- Excretory system
- Digestive system
- Kidneys
- Sweat glands
- Skeletal system
- Spine
- Trachea
- Pancreas
- Pelvis

Note to parents: If you find any other useful books / website please email to us

How we express ourselves: An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.

Central idea

A variety of signs and symbols facilitates local and global communication

Key Concepts

- Form
- Connection
- Perspective

Related Concepts

- Opinion
- Media
- Pattern

Lines of Inquiry

- Signs and symbols
- Role of signs and symbols in communication system
- Specialized systems of communication

Subject Focus : Social Studies, Arts and PSPE

Strands

- Social Studies : Social Organization and Culture
- Arts : Responding and Creating
- PSPE : Interaction

The learning outcomes after the inquiry are that the students will be able to

- explore and understand signs and symbols in their community
- explain how signs and symbols are used in communication system
- communicate complex ideas through the visual art medium

Expected Transdisciplinary skills while inquiring into this theme

- Communication skills
- Self-management Skills
- Thinking Skills

While inquiring into this theme, children exhibit these learner profile attributes

- Knowledgeable
- Risk-takers
- Communicators

Students have an access to the following resource during this inquiry

Reading Resources

- The Printing press – Richard tames
- Inventions and discoveries – Communication – World Book Inc
- How do animals communicate – Bobbie Kalman
- Communicating Today – Post - Chris Oxlade
- Animal Communication – Phil Gates

Vocabulary

- Sign
- Symbol
- Gesture
- communication
- Visual
- Verbal
- Semiotics
- Icons
- Pattern
- Hieroglyphics
- Character
- Perceive
- Countenance
- Cipher
- Silhouette
- Eloquent

Note to parents: If you find any other useful books / website please email to us

How we organize ourselves: An inquiry into the interconnectedness of human made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on human kind and the environment.

Central idea

Technological innovations often alter the relationships people have with their local and global environment

Key Concepts

- Change
- Causation
- Responsibility

Related Concepts

- Communication
- Ethics
- System

Lines of Inquiry

- Technology and inventions at home, workplace and leisure activities
- The positive and negative aspects of current technology
- Responsible use of technology

Subject Focus: Science, Social Studies, Language, and PSPE

Strands

- Science : Forces and Energy
- Social Studies : Resources and the Environment
- Language : Written - Reading and Writing
- PSPE : Identity

The learning outcomes after the inquiry are that the students will be able to

- explain how technology has made an impact in day to day life
- analyze the positive and negative effects of technology
- explain and demonstrate ethical use of technology

Expected Transdisciplinary skills while inquiring into this theme

- Research Skills
- Self-management skills

While inquiring into this theme, children exhibit these learner profile attributes

- Principled
- Balanced
- Thinkers

Students have an access to the following resource during this inquiry

Reading Resources

- Learn about science Inventions – World Book Inc
- The story of inventions – Anna Claybourne
- Inventing the camera – Joanne Richter
- The inside and out guide to inventions – Chris Oxlade
- Science and Technology – Jane Bingham
- Inventions and Discoveries – Industry and Manufacturing – Paul.A.Kabosa

Vocabulary

- Automation
- Applied science
- Gadgets
- Machinery
- Technique
- Techie
- Computers
- Computerized
- Innovative
- Mechanics
- Development
- Revolution
- Mechanization
- Information
- Obsolete
- Robotics
- Technology
- Telecommunications
- Technical

Note to parents: If you find any other useful books / website please email to us

Sharing the Planet: An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; and the relationships within and between them; access to equal opportunities; peace and conflict resolution.

Central idea

Over time, living things need to adapt in order to survive

Key Concepts

- Form
- Causation
- Change

Related Concepts

- Adaptation
- Habitat
- Evolution

Lines of Inquiry

- Concept of adaptation
- Circumstances that lead to adaptation
- How plants and animals adapt or respond to environmental conditions

Subject Focus : Science, Social Studies, and Math

Strands

- Science : Living Things
- Social Studies : Human and Natural Environment
- Math : Data Handling

The learning outcomes after the inquiry are that the students will be able to

- understand the different types of adaptations exhibited by living organisms.
- recognize how and why plants, animals including human and other organisms adapt to the environment.
- analyze the effect of human activities on nature and how plants and animals have to adapt to changes in the ecosystem.

Expected Transdisciplinary skills while inquiring into this theme

- Research Skills
- Thinking Skills
- Self-management skills

While inquiring into this theme, children exhibit these learner profile attributes

- Knowledgeable
- Thinkers
- Caring

Students have an access to the following resource during this inquiry

Reading Resources

- Adaptations
- Plant Behavior
- Dogs by Design
- Emperors of the Ice
- The Curious Case of the Peppered Moth
- Darwin's Finches

Possible Hands on Activities

- Exploration - Bird Beak Adaptations
- Experiment - Controlling Water Loss from Leaves
- Projects - Design Animal Adaptations

Vocabulary

- Habitat
- Species
- Organisms
- Mutation
- Reflex
- Extinct
- Inherited
- Naturalist
- Adapt
- Behaviour
- Characteristics
- Environment

Note to parents: If you find any other useful books / website please email to us

How the world works: An inquiry into the natural world and its laws; the interaction between the natural world(physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.

Central idea

Humans use their understanding of scientific principles to make their lives easier

Key Concepts

- Function
- Perspective
- Responsibility

Related Concepts

- Force
- Design
- Mechanics

Lines of Inquiry

- Simple machines and how they work
- Applying scientific knowledge to create complex machines
- Impact of machines in our daily life

Subject Focus : Science and Math

Strands

- Science : Forces and Energy
- Math : Shape and Space

The learning outcomes after the inquiry are that the students will be able to

- identify the different simple machines (Lever, Pulley,Inclined Plane, Screw, Wheel & axle Wedge),their function and the type of force applied.
- understand that two or more simple machines makes a complex machine.
- create / invent a machine interpreting the basic principles of simple machine.
- understand how machines make our work easier.

Expected Transdisciplinary skills while inquiring into this theme

- Thinking Skills
- Self-management skills

While inquiring into this theme, children exhibit these learner profile attributes

- Risk-takers
- Reflective
- Thinkers

Students have an access to the following resource during this inquiry

Reading Resources

- Simple and complex machine
- The mole machine
- Let's ride a bike
- Spaceship motion and deep deep oceans
- Wrecking Ball Vs Strong Wall
- Water wheels and windmills

Possible Hands on Activity

- Exploration - Design Machine

Project Based learning

- Design a machine to solve problem

Vocabulary

- Axle
- Fulcrum
- Gear
- Simple Machine
- Wedge
- Complex machine
- Inclined Plane
- Lever
- Screw
- Tool
- Force
- Load
- Machines
- Pulley
- Ramp
- Friction
- Work
- Earth Mover
- Excavator
- Robot

Note to parents: If you find any other useful books / website please email to us

ANNUAL CURRICULUM OVERVIEW – ENGLISH

Discipline	Objectives		Time Frame
English	Reading Readiness		Week 1 - 2
	Reading Comprehension	Analyze character	Week 3 - 5
		Analyze Plot	Week 6 - 7
		Analyze setting	Week 8 - 9
		Author's purpose(Entertain)	Week 10 - 12
		Author's purpose(Inform)	Week 13 - 14
		Author's purpose(Persuade)	Week 15 - 16
		Author's point of view	Week 17 - 18
		Identify Character point of view	Week 19 - 20
		Compare and Contrast	Week 21 - 22
		Cause and Effect	Week 23 - 24
		Fact or Opinion	Week 25 - 26
		Main idea and Details	Week 27 - 28
		Make Inferences and Draw Conclusions	Week 29 - 30
		Problem and solution	Week 31 - 32
		Reality and fantasy	Week 33 - 34
		Sequence Events	Week 35 - 36
	Spelling	Warming up	Week 1 - 2
		Vowel Teams AI and AY	Week 3
		Ways to Spell / ā/	Week 4 - 5
		Silent E Book	Week 6 - 7
		C + <u>l</u> - e Syllable Type , Part 1	Week 8 - 9
		C + <u>l</u> - e Syllable Type , Part 2	Week 10
		The /er/ of Nurse	Week 11
		Y Can Say /ē/	Week 12
		Vowel Teams OA and OW	Week 13
		Ways to Spell /ō/	Week 14
Consonant Suffixes		Week 15	
Vowel Suffixes		Week 16	
The 1-1-1- Rule		Week 17 - 18	
Words beginning with WH		Week 19	
The long Sound of /oo/ Spelled OO		Week 20	

	Spelling	Ways to Spell /k/	Week 21
		Long E Spelled EA	Week 22
		Ways to Spell /ē/	Week 23 - 24
		Suffix ED	Week 25
		The Drop the E Rule	Week 26
		The /er/ of <i>First</i>	Week 27
		Ways to Spell /er/	Week 28
		The Short Sound of /oo/ Spelled OO	Week 29
		Three – Letter I	Week 30 - 31
		Ways to Spell /ī/	Week 32 - 33
		The Change the Y to I Rule	Week 34
		Contractions	Week 35
		Homophones	Week 36
	Writing	Writing Readiness	Week 1 - 2
		Fairy Tale	Week 3 - 5
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Informational Report	Week 6 - 8
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Informative Speech	Week 9 - 11
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	
Persuasive Pro/Con		Week 12 - 14	
Introduction, Focused grammar, Sample discussion			
Independent Practice			
Assessment			
Persuasive Opinion		Week 15 -- 18	
Introduction, Focused grammar, Sample discussion			
Independent Practice			
Assessment			

	Writing	Biography	Week 19 - 22
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	Personal Narrative
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	How To?
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	Experimental Report
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
		Assessment	Descriptive Writing
		Introduction, Focused grammar, Sample discussion	
		Independent Practice	
	Assessment	Realistic Fiction	
	Introduction, Focused grammar, Sample discussion		
	Independent Practice		
	Assessment		
	Language skills	Warming up	Week 1 - 2
		Nouns	Week 3
		Common and Proper nouns	Week 4
		Singular and Plural Nouns	Week 5
		Possessive Nouns 1	Week 6
		Possessive Nouns 2	
		Personal Pronouns	Week 7
		Pronouns: I and Me, They and Them	Week 8
Possessive Pronouns			
Action and Linking verbs		Week 9	

	Language skills	Helping Verbs	Week 10	
		Verb Review 1	Week 11	
		Verb Tenses	Week 12	
		Regular Verbs		
		Singular and Plural Verbs	Week 13	
		Irregular Verbs	Week 14	
		Verb Review 2	Week 15	
		Adjectives 1	Week 16	
		Adjectives 2	Week 17	
		Proper Adjectives	Week 18	
		Compound Adjectives	Week 19	
		Adverbs	Week 20	
		Prepositions	Week 21	
		Conjunctions	Week 22	
		Interjections	Week 23	
		Part of Speech Review	Week 24	
		Simple Subjects and Predicates	Week 25	
		Subject of a Sentence	Week 26	
		Predicate of a Sentence		
		Subject and Predicate Review	Week 27	
		Simple and Compound sentences	Week 28	
		Declarative and Imperative Sentences	Week 29	
		Kinds of Sentences	Week 30	
		Sentence Fragments	Week 31	
		Run-on Sentences	Week 32	
		Combining Sentences with a keyword	Week 33	
		Combining Sentences with a series of Words or Phrases	Week 34	
		Combining Sentences with Compound Subjects and Verbs	Week 35	
		Sentence combining Review	Week 36	
		Vocabulary Cluster	The Human body	
			75, 76, 80, 115	Week 1
			140, 157, 160, 191, 213, 336	Week 2
			Combustion and Temperature	
			78, 220, 376, 414	Week 3

Vocabulary Cluster	Sounds and Noises	
	84, 103	Week 4
	156, 165, 175	Week 5
	Water	
	87, 101, 102	Week 6
	127, 296	Week 7
	352, 353, 391, 90, 226, 307, 375,406	Week 8
	Parts of Dwelling	
	91, 113,	Week 9
	123, 134, 217, 284	Week 10
	Machines and Tools	
	92, 96, 118	Week 11
	119, 163, 242, 254, 275	Week 12
	276, 314, 315, 316, 419, 420	Week 13
	Vehicles and Transportation	
	93, 97, 120	Week 14
	218, 159, 234, 318, 331	Week 15
	Groups	
	98, 200, 258, 298, 401	Week 16
	Money and Goods	
	104, 109, 116, 122, 201, 214	Week 17
	Containers, Materials and Buildings	
	107, 164, 181	Week 18
	251, 268, 325, 367	Week 19
Actions that are helpful or Destructive		
110, 116, 250, 260	Week 20	
Actions involving Holding and Touching		
131, 149, 197	Week 21	
Rocks, Metal and Soil		
133, 237, 259, 337, 402	Week 22	
Seeing and Perceiving		
135, 183, 195	Week 23	
Games, Sports and Recreation		
143, 158, 209, 304, 370	Week 24	

Vocabulary Cluster	Actions involving the Face	
	151, 152, 196, 241	Week 25
	Mathematical Operations and Quantities	
	166, 340, 410	Week 25
	Locations and Places Where People Live	
	172, 180	Week 26
	Events	
	179, 412, 413	Week 26
	Cleanliness	
	185, 223, 288	Week 27
	Physical Traits of People	
	186, 187, 253, 407	Week 28
	Texture, Durability and Consistency	
	202, 323	Week 29
	Language	
	219, 238, 286	Week 29
	Danger and Difficulty	
	221, 240	Week 30
	Diseases and Death	
	230, 231, 287, 305, 371, 404,	Week 30
	Life, death and Survival	
	245, 329	Week 31
	Popularity, Familiarity and Likelihood	
	261, 289, 328	Week 32
	Complexity and Conformity	
	262, 290	Week 33
	Light and Darkness	
271, 272, 306, 372, 405	Week 34	
Chemicals and Matter		
377, 418	Week 35	

Our Language programme includes all aspects of English such as

Reading Comprehension

At Tips , the students will be going through a complete reading Programme which motivates them to read in an engaging way. The multi-sensory approach and the hands – on activities help them learn the important components of reading – Phonological awareness, decoding, vocabulary, Fluency and comprehension. This curriculum aims at laying a firm foundation of learning and create interest in reading

Spelling

Through ' All about spelling' students will learn encoding skills, reliable spelling rules and multi- sensory strategies to help them master the sounds of 26 letters and common combinations. With these tools,the students become proficient spellers for life.

Writing

In order to develop writing skills, the children write for a wide variety of purposes using many different forms. These include *writing Biography, Descriptive, Experimental report, How to, Informational Report, Informative Speech, Narrative – Fairy Tale, Personal Narrative, Realistic Fiction, Persuasive – Opinion, Persuasive – Pro-Con* at the expected grade level.

Listening & Speaking

The language of the classroom is English. Our aim is that children will become comfortable speaking English in the classroom. Pupils are provided with many opportunities to convey ideas in class discussions. Listening skills are taught as a means of articulating clear responses upon reflection of ideas expressed by others. Children are reminded of the value of good listening skills so that they develop greater competency.

Vocabulary – Clusters

Robert J. Marzano identified basic and advanced vocabulary which a speaker who wishes to communicate in the English language should know. These words are grouped into clusters. Grades 1 – 3 will be given basic vocabulary, while Grades 4 & 5 will be given advanced vocabulary. We will be sending home sets of words which will be discussed in the class. Your child will illustrate his/her understanding of the word in the space provided. We will send this home every day and children have the liberty to complete the work throughout the week rather than in one sitting. Allow your child to take time to look at the word, recall the meaning and illustrate. This will help the child identify the word in a text and use the same while writing as well.

Language Skills

Children need Grammar/Structure/Punctuation to master their writing skills. This will be accomplished through the *Language skills* book which will be dealt with, in the class. They will learn *Verbs, Adverbs, Nouns, Plural nouns, Pronouns, Possessive nouns, Comparative & superlative adjectives, Commas, Use of contractions, Compound words, Difference between past & present tense, Past tense verbs, Suffixes and Prefixes*. They will also have additional grammar practice every day. The resource used for this will be *Write Rights*.

Dramatics

Dramatics is an essential area of learning in the PYP and is built in to the curriculum. Dramatics enables the development of creative skills, Verbal and non- verbal expression, an awareness of the perspectives of others and aesthetic appreciation. Drama encourages students, to communicate in powerful ways that go beyond their spoken language ability.

Dramatics in PYP identifies 6 major expectations:

- Creative exploration and expressions
- Technical incorporation
- Performance
- Personal and Social development
- Reflection, Evaluation & Appreciation
- Drama and society

Through drama, students can begin to construct an understanding of their community, their environment and their own feelings and emotions. They will also have opportunities to work cooperatively to put together a performance.

ANNUAL CURRICULUM OVERVIEW- HINDI

DISCIPLINE	OBJECTIVES	TIME FRAME	
HINDI	<ol style="list-style-type: none"> 1. पुनरावृत्ति- स्वर, व्यंजन, बारहखड़ी 2. पाठ - संयुक्त वर्ण 3. पाठ - फ़्लोरेस नाइटिंगेल 4. गिनती 1- 10 5. मेरी हिन्दी 	SEM-I	
	<ol style="list-style-type: none"> 1. पाठ - खुशियाँ लाया प्रभात 2. पाठ - जान है तो जहान है 3. व्याकरण- संज्ञा और उसके भेद (पुनरावृत्ति), सर्वनाम (परिचय) 4. गिनती 11- 20 5. मेरी हिन्दी 		
	<ol style="list-style-type: none"> 1. पाठ - लोकमान्य तिलक 2. पाठ - बलवान कौन 3. व्याकरण- उपसर्ग, प्रत्यय (परिचय) 4. गिनती 21- 30 5. मेरी हिन्दी 		
	<ol style="list-style-type: none"> 1. पाठ - मैसूर की सैर 2. व्याकरण - काल (परिचय) 3. गिनती 31- 40 4. मेरी हिन्दी 		SEM-II
	<ol style="list-style-type: none"> 1. पाठ - कौन सिखाता 2. पाठ - नटखट बसंत 3. व्याकरण - सर्वनाम के भेद (पुरुषवाचक, निजवाचक, संबंधवाचक) 4. गिनती 41- 50 5. मेरी हिन्दी 		
	<ol style="list-style-type: none"> 1. पाठ - मूल्यवान वस्तु 2. व्याकरण - सर्वनाम के भेद (निश्चयवाचक, अनिश्चयवाचक, प्रश्नवाचक) 3. गिनती 1- 50 (पुनरावृत्ति) 4. मेरी हिन्दी 		

लेखन कौशल

केन्द्रीय शिक्षण बिन्दु :

वाचन एवं अर्थ ग्रहण की क्षमता ।

शैक्षणिक उद्देश्य :

- अर्थ समझकर वाक्य बनाना
- संयुक्ताक्षर का अभ्यास
- शब्द निर्माण
- शब्द भंडार में वृद्धि
- विषय वस्तु संबंधित रचनात्मक कार्य करना और जानकारी इकट्ठा करना

पठन /वाचन कौशल :

केन्द्रीय शिक्षण बिन्दु :

- स्पष्ट एवं शुद्ध उच्चारण

शैक्षणिक उद्देश्य :

- सही उच्चारण के साथ पढ़ने का अभ्यास
- वार्तालाप का अभ्यास
- अर्थ बोध का ज्ञान

श्रवण कौशल :

केन्द्रीय शिक्षण बिन्दु :

- बोलचाल की भाषा के प्रति आत्मविश्वास जगाना

शैक्षणिक उद्देश्य :

- विचार व्यक्त करना
- कहानी बताकर उससे सम्बंधित प्रश्न पूछना
- शीर्षक के अनुसार अपने विचार प्रकट करना

संदर्भ ग्रंथ सूची :

पंखुड़ियाँ	-	वीवा एजुकेशन
स्वाति	-	सरस्वति हाउस प्रा. लि.
गुंजन	-	मधुबन एजुकेशनल बुक्स
वितान	-	मधुबन एजुकेशनल बुक्स
ज्ञान मंजरी	-	एशिया बुक हाउस
पल्लवी	-	एलाइट पब्लिशर्स प्रा. लि.

Websites :

www.akhlesh.com ,

www.Hindiclassroom.com

www.indg.in/primary-education/Shiksha

ANNUAL CURRICULUM OVERVIEW - TAMIL

DISCIPLINE	OBJECTIVES	TIME FRAME
TAMIL	சொற்களின் அமைப்பு மற்றும் பயன்பாடுகளை அறிந்து, எளிய வாக்கியங்களில் நிறுத்தற்குறியின் பயன்பாட்டினை அறிதல்.	SEM I
	சொற்களில் வரும் எழுத்துக்களின் உச்சரிப்பு வேறுபாட்டினையும், இடங்களையும், சொல் வகைகளையும் அறிந்து கொள்ளுதல்.	
	அறம் சார்ந்து வாழ்வில் பின்பற்றி நடக்கும் வழிமுறைகளையும், வாக்கியங்களின் பொருளையும் உணர்தல்.	
	பொதுவான சூழலில், உரையாடல் சார்ந்த கருத்துக்களை புரிந்து கொள்ளுதலுடன், வாக்கியங்களில் ஒருமை - பன்மை, காலங்களின் பயன்பாட்டினை அறிதல்.	SEM II
	எளிய வாக்கியங்களைக் கொண்டு பத்திகள் அமைக்கும் முறையையும், கிரந்த எழுத்துக்களின் பயன்பாடு மற்றும் திணை, பால் வகைகளை அறிதல்.	
	செயல்வழிக் கற்றல் மூலம் மொழிப்பாடத்தின் கருத்துக்களை உணரவும், கட்டுரை அமைக்கும் முறையினையும் அறிந்து கொள்ளுதல்.	

LISTENING AND SPEAKING

LEARNING OBJECTIVES: (கற்றலின் குறிக்கோள்கள்)

- உரையாடல்களை அறிமுகமாகாத சூழலிலும் புரிந்து கொள்ளுதல்.
- ஏற்ற இறக்கங்களுடன் சரியான உச்சரிப்புடன் பேசுதல்.
- சற்று கூடுதலான பிணைவுக் கேள்விகளை கேட்டல்.
- சிறுகதைகள், நகைச்சுவைத் துணுக்குகள் சூழல் அறிந்து பேசுதல்.

READING

LEARNING OBJECTIVES: (கற்றலின் குறிக்கோள்கள்)

- சுவர் ஓட்டிகள், சாலை அடையாளங்கள், எச்சரிக்கை பலகை படிக்கும் திறன்.
- எளிய கதை புத்தகங்கள், குழந்தைகளுக்கான வெளியீடுகளை வாசித்தல்.
- உரைநடையைப் படித்தபின் அதில் எழுப்பும் வினாக்களுக்கு விடை அறிந்து கொள்ளுதல்.

WRITING

LEARNING OBJECTIVES: (கற்றலின் குறிக்கோள்கள்)

- தன் எண்ணத்தில் தோன்றும் கருத்துக்களை சேகரித்தல்.
- சேகரித்த கருத்துக்களை தகுந்த சொற்கள் கொண்டு வெளிப்படுத்துதல்.
- நிறுத்தற்குறிகளின் பயன்பாடு, ஒலி வேறுபாட்டுச் சொற்கள் அறிந்து பிழையின்றி பத்தி அமைத்தல்.

RESOURCE BOOKS : அழகு தமிழ், வண்ணத்தமிழ் இலக்கணப் பயிற்சி நூல்.

WEBSITES : www.tamilnoolagam.com , www.tamilcube.com, www.tamilvirtual.com

ANNUAL CURRICULUM OVERVIEW - MATH

Discipline	Objectives			Time frame
Math	Revisiting Previous Year Concepts			Week 1 -2
	Numbers to 10,000	Counting	Use base-ten blocks to count, read, and write numbers to 10,000.	Week 3
			Count by 1's, 10's, 100's and 1,000's to 10,000's	
		Place Value	Use base-ten blocks and place-value chart to read, write, and represent numbers to 10,000.	
			Read and write numbers to 10,000 in standard form, expanded form, and word form.	
	Comparing and Ordering numbers	Use base-ten blocks to compare and order numbers.	Week 4	
		Use place value to compare and order numbers.		
	Mental Math and Estimation	Mental Addition	Add 2 digit numbers mentally with or without regrouping.	Week 5
		Mental Subtraction	Subtract 2 digit numbers mentally with or without regrouping.	
		More Mental Addition	Use different strategies to add 2 digit numbers close to 100 mentally	Week 6
		Rounding Numbers to Estimate	Round numbers to estimate sums and differences	
	Using Front-End Estimation	Use Front-End estimation to estimate sums and differences.		
	Addition up to 10,000	Addition Without Regrouping	Add greater numbers without regrouping	Week 7
		Addition with Regrouping in Hundreds	Add greater numbers with regrouping in hundreds	
		Addition with Regrouping in Ones, Tens, and Hundreds	Add greater numbers with regrouping in ones, tens, and hundreds	
Subtraction up to 10,000	Subtraction Without Regrouping	Use base-ten blocks to subtract without regrouping.	Week 8	
	Subtraction Without Regrouping in Hundreds and Thousands	Use base-ten blocks to subtract with regrouping.		
	Subtraction with Regrouping in Ones, Tens, Hundreds, and Thousands	Use base-ten blocks to subtract with regrouping.	Week 9	
	Subtraction Across Zeros	Use base-ten blocks to subtract across zeros.		
		Write subtraction number sentences Solve subtraction word problems.		

	Using Bar Models: Addition and Subtraction	Real World Problems	Use bar models to solve 2-step real-world problems involving addition and subtraction.	Week 10-11
	Multiplication Tables of 6,7,8 and 9	Multiplication Properties	Use Multiplication properties	Week 12
		Multiply by 6	Understand multiplication by using array models	
			Practice multiplication facts of 6	
		Multiply by 7	Understand multiplication by using area models	
			Practice multiplication facts of 7	
		Multiply by 8	Understand multiplication by using number lines and area models.	
			Practice multiplication facts of 8	
		Multiply by 9	Understand multiplication by using array models and area models	
			Practice multiplication facts of 9	
		Division: Finding the Number of items in Each Group	Divide to find the number of items in each group.	
	Understand related multiplication and division facts.			
	Write division sentences for real-world problems.			
	Division: Making Equal Groups	Divide to find the number of groups		
		Understand related multiplication and division facts.		
		Express division sentences for real-world problems.		
	Multiplication	Mental Multiplication	Multiply ones, tens, and hundreds mentally	Week 14
		Multiplying Without Regrouping	Multiply ones, tens, and hundreds without regrouping	
		Multiplying Ones, Tens, and Hundreds with Regrouping	Multiply ones, tens, and hundreds with regrouping	
	Division	Mental Division	Use related multiplication facts to divide	Week 15
Use patterns to divide multiples of 10 and 100				
Quotient and Remainder		Divide a 1 digit number or a 2 digit number by a 1 digit number with or without remainder		
Odd and Even Numbers		Use different strategies to identify odd and even numbers.		
Division Without Remainder and Regrouping		Use base –ten blocks and place value to divide 2 digit numbers without regrouping or remainders		
Division with Regrouping in Tens and Ones	Use base-ten blocks and place value to divide 2 digit numbers by a 1 digit number with regrouping, with or without remainders.	Week 16		

	Using Bar Models: Multiplication and Division	Real-World Problems- Multiplication	Use bar models to solve one-step multiplication word problems	Week 17
		Real-World Problems- Multiplication	Use bar models to solve two-step word problems	
			Choose the correct operations in two- step word problems	
		Real-World Problems :Division	Use bar models to solve two-step division word problems.	
			Recognize number relationship	
		Real-World Problems : Two-step problems with Division	Use bar models to solve two-step division word problems	
	Choose the correct operations to solve two-step word problems.			
	Real World Problems: Two-step Problems			
	Money	Addition	Add money in different ways without regrouping	Week 19
			Add money in different way with regrouping.	
		Subtraction	Subtract money in different ways without regrouping	
	Subtract money in different way with regrouping.			
	Real-World Problems- Money	Solve up to two-step real-world problems involving addition and subtraction of money		
	Metric Length, Mass and Capacity	Meters and Centimeters	Use meters and centimeters as units of measurements of length	
			Estimate and measure length	
			Convert units of measurement	
		Kilometers and meters	Use meters and centimeters as units of measurements of length	
			Estimate and measure length	
Convert units of measurement				
Kilograms and Grams		Read scales in kilograms and grams	Week 21	
		Estimate and find actual masses of objects by using different scales.		
		Convert units of measurement		
Liters and Milliliters		Estimate and find volume of liquid in liters and milliliters	Week 22	
	Find volume and capacity of a container			
	Convert units of measurement.			
Real-World Problems- Measurement	Real-World Problems- One- Step Problems	Draw bar models for one-step measurement problems	Week 23	
		Choose the operation for the one-step problems.		
	Real-World Problems- Two-Step Problems	Draw bar models for two-step measurement problems	Week 24	
		Choose the operation for the two-step problems.		

	Bar Graphs and Line Plots	Making Bar Graphs with Scales	Making bar graphs with scales using data in picture graphs and tally chart.	Week 25	
		Reading and Interpreting Bar Graphs	Read and interpret data from bar graphs		
			Line Plots	Solve problems using bar graphs	Week 26
	Fractions	Understanding Fractions	Make a line plot to represent and interpret data	Week 27	
			Read, write and identify fractions from wholes with more than 4 parts.		
		Understanding Equivalent Fractions	Identify numerator and denominator		
			Use models to identify equivalent fractions		
		More Equivalent Fractions	Use a number line to identify equivalent fractions		
			Use multiplication and division to find equivalent fractions		
		Comparing Fractions	Write fractions in simplest form		Week 28
			Compare and order fractions		
			Show fractions as points and distances on a number line.		
		Adding and Subtracting Like fractions	Compare and order fractions using benchmark fractions.		
			Add two or three fractions with sums to 1		
		Subtracting Like fractions	Subtract a like fraction from another like fraction or one-whole.		Week 29
	Fraction of a Set		Read, write and identify fractions of a set.		
		Fractions	Find the number of items in a fraction of a set.		
	Express whole numbers as fractions				
	Time and Temperature	Telling Time	Recognize fractions that are equal to whole numbers.	Week 30	
			Tell Time to the minute		
		Converting Hours and Minutes	Read time on a digital clock		
			Change minutes to hours or hours to minutes		
		Adding Hours and Minutes	Add time with and without regrouping	Week 31	
Subtracting Hours and Minutes		Subtract time with and without regrouping			
Elapsed Time		Find elapsed time.	Week 32		
		Measuring Temperature		Read a Fahrenheit thermometer	
				Choose the appropriate tool and unit to measure temperature.	
Real-World Problems- Time and Temperature		Use a referent to estimate temperature			
	Solve up to two-step word problems on time.				
		Solve word problems involving temperature.			

	Angles and Lines	Understanding and Identifying Angles	Find angles in plane	Week 33	
			Shapes and real-world.		
			Compare the number of sides and angles of plane shapes.		
		Right Angles	Make a right angle		
			Compare angles to a right angle		
	Identify right angles in plane shapes.				
	Perpendicular Lines	Define and identify perpendicular lines			
	Parallel Lines	Define and identify parallel lines			
	Two-Dimensional Shapes	Classifying Polygons	Identify open and closed figures		Week 34
			Identify special polygons and quadrilaterals		
			Classify polygons by the number of sides, vertices, and angles.		
			Classify quadrilaterals by parallel sides, length of sides, and angles.		
			Combine and separate polygons to make other polygons		
		Congruent Figures	Identify a slide, flip, and turn.		
			Slide, flip, and turn shapes to make congruent figures.		
Identify congruent figures.					
Symmetry	Identify symmetric figures.				
	Use folding to find a line of symmetry.				
Area and Perimeter	Area	Understand the meaning of area	Week 35		
		Use square units to find the area of plane figures made of squares and half squares.			
		Compare areas of plane figures and make plane figures of the same area.			
	Square Units (cm ² and in. ²)	Use square centimeter and square inch to find and compare the area of figures.			
	Square Units (m ² and ft ²)	Use square meters and square feet to find and compare the area of plane figures.			
		Estimate the area of small and large surfaces.			
	Perimeter and Area	Understand the meaning of perimeter			
Find the perimeter of figures formed using small squares.					
Compare the area and perimeter of two figures.					

		Real-World Problems- Area	Multiply the side lengths of rectangles to find the area to solve real world	Week 36
			Represent whole number product as rectangular areas.	
			Find the area of figures by separating them into two rectangles and adding their	
		More Perimeter	Find the perimeter of a figure by adding up all its sides	
			Choose the appropriate tool and units of length to measure perimeter.	
			Measure the perimeter of surfaces of objects and places.	

At TIPS we follow our own curriculum for Math – the resource being *Math in focus*.

This emphasizes problem solving and positive attitudes toward mathematics, while focusing on student development of skills, concepts, processes and meta-cognition. Students are encouraged to reflect on their thinking and learn how to self-regulate so that they can apply these skills to varied problem-solving activities. Thus development is holistic in this curriculum.

Each chapter contains numerous embedded problem-solving situations so that students learn to flexibly apply their mathematical knowledge. Additionally, Put On Your Thinking Cap! Problems require students to extend the concepts they have learned to non-routine situations to demonstrate mastery.

It also emphasizes a concrete to pictorial to abstract pedagogy. Students are first introduced to concepts with concrete manipulative, which allows them to experience and understand the math they are learning. They then learn to visually represent concepts using models, including number bonds and bar models. Finally, once students have a strong understanding of the concept, they move to the abstract stage where they use symbols, such as numbers and equations, to represent mathematical situations.

Math in Focus supports mathematical instruction at a variety of levels to target all learners, from struggling to gifted. It also emphasizes deep understanding, which is demonstrated through consistent opportunities to explain why mathematical concepts work. This is modeled for students throughout *Math in Focus* with thought bubbles, which display pictures of students expressing their understanding. Students then have the opportunity to justify their own understanding through activities such as Math Journals.

Math Key Words:

- Multiples
- Product
- Division
- Divisor
- Quotient
- Remainder
- Approximate
- Round off
- Fraction
- Numerator
- Denominator
- Decimal
- Lattice method
- Grouping
- Re-grouping
- Place value
- Associative
- Commutative
- Probability
- Pattern

SCHOOL **to** HOME

Connections

Chapter 1 Numbers to 10,000

Dear Family,

In this chapter, your child will study numbers to 10,000. Some of the skills your child will practice are:

- counting, reading, and writing numbers to 10,000
- reading and writing numbers in different ways
- comparing and ordering numbers

.....

Activity

We encounter numbers every day in our lives, for example, the numbers on a clock face, telephone numbers, bus service numbers. Expose your child to numbers around him or her so that large numbers will not be intimidating.

- Have your child keep a lookout for the license plates of the vehicles parked near your home. Then challenge your child to say the license plate numbers (excluding the letters) in word form. For example, '1,234 is one thousand, two-hundred thirty-four.'
- As an extension activity, have your child say the number in expanded form. For example, '1,234 is the sum of, 1,000, 200, 30, and 4.'

Vocabulary to Practice

Word form: Two thousand, four hundred seventy-eight

Standard form: 2,478

Digit: In 2,478, the digits are 2, 4, 7, and 8.

Expanded form: $2,000 + 400 + 70 + 8$

2,000	1,000	2
-------	-------	---

2,000 is **greater than** 1,000.

1,000 is **less than** 2,000.

2,000 is the **greatest** number.

2 is the **least** number.

SCHOOL **to** HOME

Connections

Chapter 2 Mental Math and Estimation

Dear Family,

In this chapter, your child will learn about mental addition and subtraction, as well as estimation.

Some of the skills your child will practice are:

- adding and subtracting 2-digit numbers mentally, with or without regrouping
- rounding numbers to estimate sums and differences
- using front-end estimation to estimate sums and differences

.....

Activity

The ability to estimate sums has numerous applications in everyday life. For example, have your child estimate the cost of your next shopping trip.

- Help him or her draw up a short family grocery shopping list.
- Then have your child write the prices of each item (wherever possible) by looking at advertised prices in the newspapers. Ensure the prices are in whole dollars as your child has not learned to estimate cost in compound units.
- Finally, have him or her estimate the total cost of the groceries.



Vocabulary to Practice

Rounded is a term used in estimating numbers to the nearest ten, hundred, and so on.

2,436 is 2,400 when rounded to the nearest hundred.

An **estimate** is a number close to the exact number.

396 is 400 when rounded to the nearest hundred. 400 is an estimate.

$$1,245 + 2,534 = 3,779$$

1,245 rounded to the nearest thousand is 1,000.

2,534 rounded to the nearest thousand is 3,000.

The estimated sum is 4,000.

3,779 is close to 4,000 so the answer is **reasonable**.

The **leading digit** in a number is the digit with the greatest place value. The leading digit for 2,475 is 2.

Front-end estimation uses leading digits to estimate sums and differences.

SCHOOL **to** HOME

Connections

Chapter 3 Addition up to 10,000

Dear Family,

In this chapter, your child will learn to add numbers up to 10,000. Some of the skills your child will practice are:

- adding without regrouping
- adding with regrouping in ones, tens, and hundreds

.....

Activity

Addition is an important math skill. Knowledge of this skill allows your child to participate in solving many real-world problems.

- Have your child imagine that he or she has \$10,000 with which to buy as many computers and electronic appliances as possible for a charity.
- Brainstorm with your child which items the charity may need before checking the newspapers or fliers to come up with a best-value-for-the-money shopping list.
- Finally, have your child add up the costs to make sure that the available money is fully utilized.

Vocabulary to Practice

The **sum** is the answer to an addition problem.

$$123 + 45 = 168$$

168 is the sum of 123 and 45.

To **regroup** is to change 10 ones to 1 ten or 1 ten to 10 ones; 10 tens to 1 hundred or 1 hundred to 10 tens; 10 hundreds to 1 thousand or 1 thousand to 10 hundreds.



SCHOOL **to** HOME

Connections

Chapter 4 Subtraction up to 10,000

Dear Family,

In this chapter, your child will learn to subtract numbers within 10,000.

Some of the skills your child will practice are:

- subtraction without regrouping
- subtraction with regrouping in ones, tens, hundreds, and thousands

.....

Activity

Like addition, subtraction is another important math skill. Subtraction is the opposite of addition. There are many situations that allow your child to practice this skill. For example, have your child help to plan your family's next vacation (real or imaginary).

- Draw up a list of costs with your child, such as air tickets, accommodation, vehicle rental, and insurance.
- You may search the Internet with your child for the costs of these items.
- Next have your child compare the prices of these items from other travel agencies or websites. Have your child calculate how much could be saved by choosing one particular airline over another, and so on.
- Finally, have your child add up the costs. If the cost of the trip is more than what you have budgeted for, discuss how he or she can cut down on expenses. For example, cut short the vacation, fly with a cheaper airline, or book the hotel earlier to enjoy a discount.

Vocabulary to Practice

The **difference** is the answer to a subtraction problem.

$$1,047 - 23 = 1,024$$

1,024 is the difference between 1,047 and 23.

To **regroup** is to change 10 ones to 1 ten or 1 ten to 10 ones; 10 tens to 1 hundred or 1 hundred to 10 tens; 10 hundreds to 1 thousand or 1 thousand to 10 hundreds.

SCHOOL **to** HOME

Connections

Chapter 5 Using Bar Models: Addition and Subtraction

Dear Family,

In this chapter, your child will learn to solve real-world problems involving addition and subtraction.

Some of the skills your child will practice are:

- using bar models to solve 2-step real-world problems on addition and on subtraction

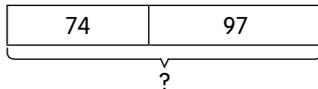


Activity

The information in a real-world problem is presented as text rather than in mathematical notation. Children often have difficulty translating the English words into mathematical language. However, once they figure out the actual math equation, finding the solution is fairly simple. Here's an example of a real-world problem your child can solve using adding-on bar models:

John collected 74 big leaves and 97 small leaves one autumn day. How many leaves did he collect in all?

- Have your child read the text and pick out the important information: 74 big leaves and 97 small leaves. Then draw the models. (The bars do not have to be drawn exactly to scale.)



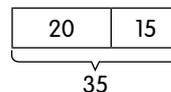
- Next have your child read the question and say what the question is asking.
- Finally, have your child perform the operation: $74 + 97 = 171$.

Vocabulary to Practice

The **sum** is the answer to an addition problem.

The **difference** is the answer to a subtraction problem.

A **bar model** helps to solve word problems. Bars are drawn, labeled with all the relevant information, and divided according to the situation in the word problem.



SCHOOL to HOME

Connections

Chapter 6 Multiplication Tables of 6, 7, 8, and 9

Dear Family,

In this chapter, your child will learn to understand multiplication using the array model and the area model, and see how multiplication and division are related.

Some of the skills your child will practice are:

- practicing multiplication facts of 6, 7, 8, and 9
- dividing to find the number of items in each group
- dividing to make equal groups

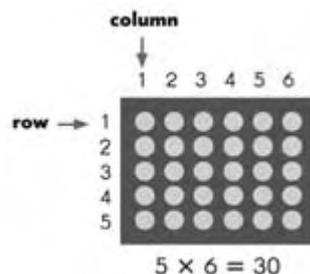
Activity

Show your child that multiplication can be fun. Play this multiplication game with your child to reinforce the facts that he or she is learning. This game can be played by two or more people.

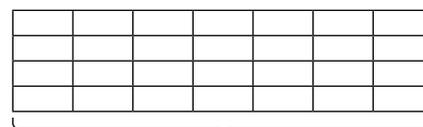
- First decide on a multiplication fact, for example, 6. Then start counting from one. Players take turns to say the next number in the series.
- At each multiple of 6, the player replaces the multiple of 6 by saying 'Up!' instead. Example: 1, 2, 3, 4, 5, *Up!*, 7, 8, 9, 10, 11, *Up!*, 13, 14, 15, 16, 17, *Up!*, ... If the player is stumped or says the number instead of 'Up!', he or she drops out of the game. The game continues until only one player remains in the game.
- When your child is proficient with the multiplication facts of 6, repeat the game using multiplication facts of 7, 8, or 9.

Vocabulary to Practice

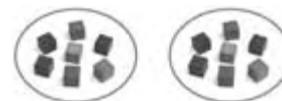
An **array model** is an arrangement in rows and columns.



Area model of multiplication:



$4 \times 7 = 28$



These are **equal groups**. Both have the same number of items.

SCHOOL to HOME

Connections

Chapter 7 Multiplication

Dear Family,

In this chapter, your child will learn multiplication without and with regrouping.

Some of the skills your child will practice are:

- multiplying ones, tens, and hundreds mentally
- multiplying ones, tens, and hundreds without and with regrouping

Vocabulary to Practice

A **product** is the answer in a multiplication problem.

$$5 \times 70 = 350$$

350 is the product of 5 and 70.

.....

Activity

Multiplication is an important concept in everyday life that we use all the time. Encourage your child to use math in his or her everyday life more often.

For example,

- Choose something in your house that your child can count or estimate. It could be the number of books on a shelf, or the estimated number of cookies in a jar.
- Point (for example) to a shelf of books. Have your child count the number of books on the shelf. Ask how many books there would be on 5 shelves if all the shelves had the same number of books. Provide your child with pen and paper to work out the answer.
- This practical activity gives your child computational practice around the house.

SCHOOL **to** HOME

Connections

Chapter 8 Division

Dear Family,

In this chapter, your child will learn mental division, finding quotients, and finding remainders.

Some of the skills your child will practice are:

- using related multiplication facts to divide
- dividing a 1-digit or a 2-digit number by a 1-digit number, with or without a remainder
- identifying odd and even numbers

Activity

Division is the opposite of multiplication. Children often find it difficult to understand division and the relationship between multiplication and division. Encourage your child to use different multiplication and division concepts in his or her everyday experiences and real-life situations. Children love solving problems involving food. Division would mean helping each person get a fair share.

- Tell your child that the host at a party serves 72 chicken wings. If the host places an equal number of chicken wings on 6 tables, how many chicken wings are placed on each table? What if there are 9 tables instead of 6?
- Reverse roles. Invite your child to make up a story for you and then have him or her check your answer.



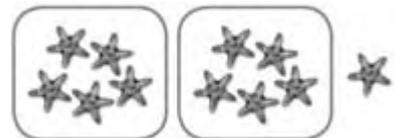
Vocabulary to Practice

A **quotient** is the answer to a division problem.

$$8 \div 2 = 4$$

4 is the quotient.

A **remainder** is the number left over from a division problem.



$$11 \div 2 = 5 \text{ R } 1$$

When 11 is divided by 2, the remainder is 1.

Any number that has the digit 0, 2, 4, 6, or 8 in its ones place is an **even number**. 9,354 and 4,956 are even numbers.

Any number that has the digit 1, 3, 5, 7, or 9 in its ones place is an **odd number**. 8,203 and 1,245 are odd numbers.

SCHOOL **to** HOME

Connections

Chapter 9 Using Bar Models: Multiplication and Division

Dear Family,

In this chapter, your child will learn to solve real-world problems involving multiplication and division.

Some of the skills your child will practice are:

- using bar models to solve one-step and two-step multiplication word problems
- using bar models to solve one-step and two-step division word problems

Vocabulary to Practice

Twice means two times.

Double also means two times.

.....

Activity

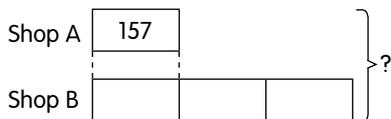
Your child is learning that using bar models is an effective way of translating information in a word problem into component parts. Your child will soon find solving math problems a breeze. Here's an example of a real-world problem you can try with your child at home.

On Monday, Shop A sold 157 rolls of paper towel.

On the same day, Shop B sold 3 times as many rolls of paper towel as Shop A.

How many rolls of paper towel did they sell in all?

- Have your child read the text and pick out the important information: Shop A sold 157 rolls and Shop B sold 3 times as many rolls as Shop A. Then draw the models.



- Next have your child read the question and say what the question is asking.
- Finally, have your child perform the operation: $157 \times 4 = 628$.

SCHOOL **to** HOME

Connections

Chapter 10 Money

Dear Family,

In this chapter, your child will learn to add and subtract money. Some of the skills your child will practice are:

- adding dollars and cents, with and without regrouping
- subtracting dollars and cents in different ways, with and without regrouping
- solving up to two-step real-world problems involving addition and subtraction of money

.....

Activity

Learning about money allows your child to understand the practical applications of money. A simple yet practical activity to teach your child the value of money is to have him or her pay for purchases with real money on one of your shopping trips. Then have your child estimate how much change he or she should get. The next activity introduces your child to budgeting.

- Have your child imagine that he or she is given a budget of \$50 to spend.
- Ask your child: ‘What would you spend it on?’
- Have your child make a list of items he or she would like to have and then find out how much they cost from advertisements in the newspapers or magazines.
- Then have your child add up the costs of the items to find out if the budget is met.
- Ask your child: ‘If your budget is now \$30, what items would you remove from your list?’

Vocabulary to Practice

The **difference** is the answer to a subtraction problem.

$$\$1.40 - \$0.20 = \$1.20$$

An **estimate** is a number close to the exact number.

396 is 400 when rounded to the nearest hundred. 400 is an estimate.

To **regroup** is to change \$1 to 100 cents or 100 cents to \$1.

The **sum** is the answer to an addition problem.

$$\$12 + \$45 = \$57$$



SCHOOL to HOME

Connections

Chapter 11 Metric Length, Mass, and Volume

Dear Family,

In this chapter, your child will learn to measure length, mass, and volume using metric units of measurement.

Some of the skills your child will practice are:

- using meters and centimeters as units of measurement of length
- reading scales in kilograms and grams
- finding the volume and capacity of a container in liters and milliliters
- converting units of measurement

.....

Activity

Measurement is not a new concept. Your child applies his or her knowledge of measurement when he or she measures out the ingredients for a recipe or when he or she says how much taller he or she has grown in a year.

- Have your child use a measuring tape to measure objects in the house. These objects should be longer than 1 meter. For example, height of doors, length of the bed and tables.
- Have your child record the lengths in centimeters. Then have him or her convert the lengths into compound units. For example, $135\text{ cm} = 1\text{ m } 35\text{ cm}$.
- Finally have your child arrange the lengths from the longest to the shortest.

Vocabulary to Practice

Centimeter (cm), meter (m), and kilometer (km) are metric units of length. $100\text{ cm} = 1\text{ m}$, $1,000\text{ m} = 1\text{ km}$

Kilogram (kg) and gram (g) are metric units of mass. $1\text{ kg} = 1,000\text{ g}$

Liter (L) and milliliter (mL) are metric units of volume and capacity. $1\text{ L} = 1,000\text{ mL}$

Volume is the amount of liquid in a container.

Capacity is the amount of liquid a container can hold.

SCHOOL **to** HOME

Connections

Chapter 12 Real-World Problems: Measurement

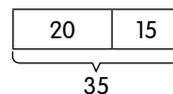
Dear Family,

In this chapter, your child will learn to solve up to two-step problems on metric measurements of length, mass and volume. Some of the skills your child will practice are:

- drawing bar models to solve one-step and two-step measurement problems
- choosing the operation to solve one-step problems
- writing and solving two-step measurement problems

Vocabulary to Practice

A **bar model** helps to solve word problems. Bars are drawn, divided according to the situation in the word problem, and labeled with all the relevant information.



Activity

This chapter enables your child to develop his or her ability to solve mathematical problems involving measurement.

- Think of a place around the state that you would like to visit on a road trip. Identify one or two interesting stopovers along the way.
- With the use of a map, find out the distances, in kilometers, between your home, the intended stopovers, and the destination. Ask your child to find the total distance (in kilometers) from your home to the destination.
- Ask your child: 'If you bought snacks and 500 mL of lemonade for each person in the family, how many liters of lemonade would you buy?'



SCHOOL to HOME Connections

Chapter 13 Bar Graphs and Line Plots

Dear Family,

In this chapter, your child will learn how to use bar graphs and line plots to organize data.

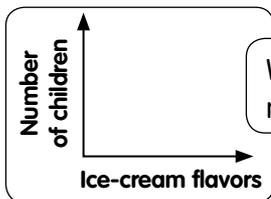
Some of the skills your child will practice are:

- making bar graphs with scales
- reading and interpreting data from bar graphs
- making a line plot to represent data

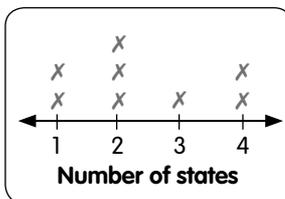
Activity

Surveys are everywhere! You can find survey results when you turn on the television, or flip open a newspaper or magazine. Conduct a survey with your child and help him or her to present the results using a bar graph or a line plot.

- Have your child say what he or she would like to do a survey on. Possibilities include a survey on your child's friends' favorite ice-cream flavor or the number of states they have visited.
- Then have your child conduct the survey and tally all the responses.
- Finally, help your child present the results in a bar graph or line plot.



What should my title be?



Vocabulary to Practice

In drawings, a **vertical** line is one that goes in the top to bottom direction of the page.

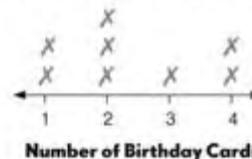
In drawings, a **horizontal** line is one that goes across the page.

An **axis** is a grid line that can be either vertical or horizontal.

The **scale** is the numbers that run along the vertical or horizontal axis of a graph.

A **line plot** is a diagram that uses a number line to show how often an event happens.

Number of Birthday Cards Received



A **survey** is a method of collecting information or data.

SCHOOL to HOME Connections

Chapter 14 Fractions

Dear Family,

In this chapter, your child will learn about fractions as parts of a region or parts of a set.

Some of the skills your child will practice are:

- reading, writing, and identifying fractions of wholes
- identifying equivalent fractions
- writing fractions in simplest form
- comparing and ordering fractions
- adding and subtracting like fractions

Activity

An understanding of fractions is important for various real-life situations such as in cooking. Help your child connect fractions to division and build wholes from fractional parts.

- Have your child record what he or she does in a particular day. For example, the amount of time he or she spends in school, playing, watching television, reading, sleeping. Help your child to round the amount of time to the nearest hour.
- Then have him or her write the amount of time each activity takes as a fraction of the total number of hours in a day. For example, if he or she spent 2 hours playing basketball, the fraction is $\frac{2}{24}$.
- Finally, have your child add up all the fractions to make sure they equal one whole. You may want to work with smaller denominators first as a warm up to this activity.

For example, $\frac{2}{24} + \frac{3}{24} + \frac{1}{24} + \frac{4}{24} + \frac{4}{24} + \frac{10}{24} = \frac{24}{24}$.

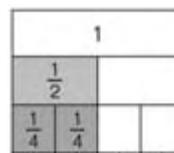
Vocabulary to Practice

A fraction is a part of a **whole**.

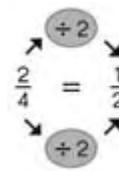
A **numerator** is the number above the line in a fraction. It shows the number of required parts of a whole.

A **denominator** is the number below the line in a fraction. It shows the number of equal parts into which the whole is divided.

$\frac{1}{2}$ and $\frac{2}{4}$ name the same parts of a whole. They are **equivalent fractions**.



$\frac{1}{2}$ is a fraction in its **simplest form**.



Fractions with the same denominators are **like fractions**.

Fractions with different denominators are **unlike fractions**.

SCHOOL **to** HOME

Connections

Chapter 15 Customary Length, Weight, and Capacity

Dear Family,

In this chapter, your child will learn to measure length, weight, and capacity in customary units.

Some of the skills your child will practice are:

- using inch, foot, and mile as units of length
- using ounce, pound, and ton as units of weight
- reading scales in ounces and pounds
- measuring capacity with cup, pint, quart, and gallon
- estimating lengths, weights, and capacity

.....

Activity

Finding measures is a practical skill in our everyday lives. For example, when we want to buy a new sofa set, we measure the length of the sofa to check if it fits into the living room.

- Have your child measure his height and weight and that of a sibling or cousin in customary units and record them in a notebook.
- At the end of the year, have your child repeat the measurement and compare the difference in their heights and weights.
- Ask your child:
‘Who is growing more quickly?’
‘What is the difference in your weights?’

Vocabulary to Practice

Inch (in.), **foot (ft)**, **yard (yd)**, and **mile (mi)** are customary units of length. $12 \text{ in.} = 1 \text{ ft}$, $3 \text{ ft} = 1 \text{ yd}$, $5,280 \text{ ft} = 1 \text{ mi}$

Ounce (oz), **pound (lb)**, and **ton (T)** are customary units of weight. $16 \text{ oz} = 1 \text{ lb}$

Cup (c), **pint (pt)**, **quart (qt)**, and **gallon (gal)** are customary units of capacity. $2 \text{ c} = 1 \text{ pt}$, $2 \text{ pt} = 1 \text{ qt}$, $4 \text{ qt} = 1 \text{ gal}$



SCHOOL **to** HOME

Connections

Chapter 16 Time and Temperature

Dear Family,

In this chapter, your child will study measurements of time and temperature.

Some of the skills your child will practice are:

- telling time to the minute
- changing minutes to hours or hours to minutes
- adding and subtracting time, with and without regrouping
- finding elapsed time
- reading a Fahrenheit thermometer

.....

Activity

Finding elapsed time is a great way to practice mental math skills. Try the following activity.

- Have your child write down the time his or her favorite television program starts.
- Then have your child calculate how many hours it is until the program begins. For example, if it is 9:15 A.M. now and his favorite program starts at 4:30 P.M., it is 7 h 15 min until the program begins.
- Have your child find out the actual duration of the show by writing down the start and end times of each commercial break. Then subtract the total time for commercials from the show's overall length.

Vocabulary to Practice

Hour (h) and **minute (min)** are unit measurements of time.

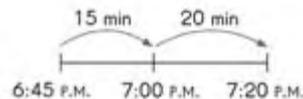
$$1 \text{ h} = 60 \text{ min}$$

9:20 A.M. is 20 minutes **past** 9.

9:45 A.M. is 15 minutes **to** 10 or 15 minutes **before** 10.

Elapsed time is the amount of time that has passed between the start and the end of an activity.

A **time line** is used to find elapsed time.



Degrees Fahrenheit is the customary unit of measurement for temperature.

SCHOOL to HOME Connections

Chapter 17 Angles and Lines

Dear Family,

In this chapter, your child will learn to identify angles and lines. Some of the skills your child will practice are:

- finding angles in plane shapes and real-world objects
- comparing the number of sides and angles of plane shapes
- making a right angle
- comparing angles to a right angle
- identifying perpendicular and parallel lines

Activity

We are surrounded by angles and lines. Take time to show your child the parallel or perpendicular lines around the house. For example, in window frames, or silverware as it lies on the table. Then try this activity. Using a rectangular piece of paper, fold a simple paper airplane.

- Have your child find the number of each type of angle (right angle, less than a right angle, or more than a right angle) that can be found on the plane.
- Explain that a plane has many angles. Have your child experiment with folding different planes and flying them. Encourage your child to use descriptions of angles to discuss which ones fly better.

Vocabulary to Practice

When two line segments share the same endpoint, they form an **angle**.

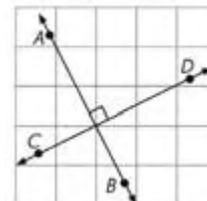
Angle P is a **right angle**.



45° is **greater than** 20° .
 20° is **less than** 45° .

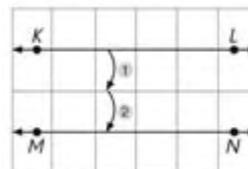
Perpendicular lines are two lines that meet at right angles.

Line AB is perpendicular to line CD .



Parallel lines are lines that will not meet no matter how long they are drawn.

Line KL is parallel to line MN .



SCHOOL to HOME

Connections

Chapter 18 Two-Dimensional Shapes

Dear Family,

In this chapter, your child will study polygons. Some of the skills your child will practice are:

- classifying polygons and quadrilaterals
- combining and separating polygons to make other polygons
- sliding, flipping, and turning shapes
- identifying congruent and symmetric figures
- using folding to find a line of symmetry

.....

Activity

If we take a closer look at the things around us, we will see that symmetry exists in nature as well as in man-made objects. Have your child look for symmetry in the home or outside to gain a further appreciation of the beauty of geometric shapes.

- Together with your child, look for and make a list of symmetrical shapes around the house. For example, the pattern on the tablecloth.
- Help your child do a search on the Internet for symmetry in architecture, such as the Taj Mahal of India and the Eiffel Tower in Paris, France.
- Ask your child: 'What buildings can you think of in our town that employ the use of symmetry in their architecture?'

Vocabulary to Practice

A **polygon** is a closed plane figure formed by three or more line segments.

A **vertex** is a point where two sides of a polygon meet.

Identical figures are **congruent**. They have the same shape and size.

Symmetry occurs when two halves of a figure fit each other exactly when folded along a line.

A **line of symmetry** divides a figure into two equal halves. The halves fit exactly over each other when folded along this line.

SCHOOL to HOME

Connections

Chapter 19 Area and Perimeter

Dear Family,

In this chapter, your child will learn to find the area and perimeter of rectangular figures.

Some of the skills your child will practice are:

- understanding the meaning of area and perimeter
- using square units to find and compare the areas of plane figures
- estimating the area of small and large surfaces
- measuring or finding perimeter

.....

Activity

Children sometimes confuse area with perimeter. Carry out this simple yet fun activity at home to help reinforce the concepts of area and perimeter.

- Have your child imagine that both of you are about to do a complete makeover of a bedroom.
- Ask your child what you must know before starting. Lead your child to see that you first find the measurements of the room.
- Using a measuring tape, help your child find the length, width, and height of the room. Then with the information, discuss how to find the floor area, for example, to decide on the amount of flooring or the perimeter of the room in order to decide what length of wallpaper border to purchase.

Vocabulary to Practice

Area is the number of square units needed to cover the surface of each figure.

Square units are units such as square centimeter, square inch, square foot, or square meter that are used to measure area.

Square centimeter (cm²) and **square meter (m²)** are metric units of measure for area.

Square inch (in.²) and **square foot (ft²)** are customary units of measure for area.

Perimeter is the distance around a figure. Perimeter is measured in linear units such as centimeters, inches, meters, and feet.

DEPARTMENT OF APPLIED SCIENCE

STEM

STEM inculcates **Science, Technology, Engineering and Mathematics**, which connects the current and future authentic world. It is an interdisciplinary and applied approach that is coupled with hands on and problem based learning. STEM education can link scientific inquiry, by formulating questions answered through investigation to inform the student before they engage in the engineering design process to solve problems. Problem-based learning is an effective and valuable method that can guide students towards a better understanding of STEM programs.

Enhanced Curriculum:

The STEM activities are enhanced to integrate traditional subject mapping as well as the most recent technical activities conducted by ICT, Artificial intelligence and Machine learning. The students learn the principles of programming and artificial intelligence in ICT, and the STEM activities cover a wide range of AI and coding applications such as robots, automation, and the internet of things.

Artificial Intelligence: AI (Artificial Intelligence) has its own role to play in this STEM education. Students will explore how programs can be developed to categorise images by training, developing and testing a program to identify the characteristics of different objects.

Highlights: -

- In the fourth industrial revolution we move from ‘just’ the Internet and the client-server model to additional accelerators such as advanced robotics and AI/cognitive which enable Industry 4.0 with automation and optimization.
- Highly upgraded technical activities were introduced in STEM curriculum to prepare our students to meet the current skill set requirement.
- The technical learning in ICT, STEM and Spark labs are properly integrated to bring out the real technical skill sets required to survive in industry 4.0 revolution.

STEM in/through ROBOTICS:

We use robotics as a way to teach interdisciplinary STEM abilities. Robotics is a profession that involves four engineering areas (Electronics, Electrical, Mechanical and Computer science) for its process. STEM Robotics involves engineering, and computer science incorporated with design, construction, operation, application, and computer systems to produce something called robots.

Futuristic Skills

The transferable skills developed through STEM education will help students develop future skills that will empower and foster:

- Critical thinking
- Innovative thinking
- Problemsolving
- Design thinking
- Social responsibility
- Productivity
- Leadership
- Collaboration
- Teamwork
- Communication
- Engineering skills
- Inquiry skills

These skills are in high demand in today's globally connected world, with its unprecedented advancements in technology.

Importance of STEM:

- The focus on logical thought processes and problem-solving allows students to develop mental habits that will help them succeed in any field.
- STEM activities challenges students to think critically and come up with their own solutions. As a result, students who receive a quality STEM education are primed to become the next generation of innovators.
- STEM Classes Provide Unique Opportunities for Teamwork, which is one of the most underrated and important drivers of success. Living & working in the modern world usually requires some degree of collaboration, often with a large and diverse group of people.
- ASTEM Curriculum Helps Students Develop Project Management Skills
- Recent Events Have Only Made Technology Skills More Important and Building a strong STEM foundation now will set students up for success in 2022 and beyond.

ANNUAL CURRICULUM OVERVIEW - STEM			
Discipline	Deep Drives	Learning Outcome	Time Frame
Fundamentals of LEGO Robotics	Components Name, Logical Connection, SPA Concept	Understanding the basic principles of robotics, Laws of Robotics, Component name and its applications	SEM-I
Simple Machine : Sweeper	Measuring Distance, Friction, Scientific investigation	Investigating pushing cart with the cleaning path using gear mechanism.	
Simple Machine : Fishing Rod	Pulleys , Levers, Load , Force	Understanding mechanism of pulley and lever.	
Simple Machine : Beam Balance	Effort, Fulcrum, Lever, Load	Investigate how its function is influenced by change in weight and position.	
Powered Machine: Power Car	Friction, Counter weight, Gear Mechanism, Grip	Applying the gear concept to make a car climb the hill.	SEM-II
Simple Machine : Trundle Wheel	Calibrating Scales, Gears, Accuracy	Understanding if you could invent a measuring machine that could measure a long jump.	
Problem Solving Activity : Beater	Gears and pulley , Energy Efficiency , Evaluating Efficiency	Applying knowledge of gears and pulleys for the problem statement.	
LEGO Challenge Ballon Car	Engineering , Friction , Force , Pressure	Experimenting and building a LEGO car for the balloon car challenge.	

WORKSHEET: As they come in for each session, students will do worksheet for the modules practiced in the lab. All these worksheets will be recorded and maintained in the form of log book which will be evaluated.

SPACE SCIENCE & ROCKETRY PROGRAM

Introduction

In the Space Science & Rocketry program provides an opportunity for all students from grade 1 to 5 to learn about aerospace technology, scientific experiments, and space launches with a single aim to promote practical learning and effective application of theory by real world examples. This is exactly how we have designed our teaching module keeping in mind the curiosity, the subject of physics, the application and technical hobby in model rocketry. They will also learn about the history and the future of rockets as we know them here at ISRO, NASA, SpaceX, etc..

Engineering Design Process

The **Engineering Design Process (EDP)** is a series of steps engineers use to guide them in problem solving. Engineers must ask a question, imagine a solution, plan a design, create that model, experiment and test that model, then take time to improve the original – all steps that are crucial to mission success. What makes this guide different from others is?

- There are no specific instructions or “recipes” for building the items;
- There are no given drawings. The emphasis is for students to understand that engineers must “imagine and plan” before they begin to build and experiment.

To successfully complete the **BEST (Beginning Engineering Science & Technology)** Activities, students must draw their ideas first before constructing.

Many of the activities have been adapted from others, and then aligned with the theme of efforts to return to the Moon with a focus on using the Engineering Design Process. Each activity features objectives, a list of materials, educator information, procedures, and student worksheets. When appropriate, the guide provides images, charts, and graphics for the activities. All activities are intended for students to work in teams.

Student success criteria:

- **ASK:** Students identify the problem, requirements that must be met, and constraints that must be considered.
- **IMAGINE:** Students brainstorm solutions and research ideas. They also identify what others have done.
- **PLAN:** Students choose two to three of the best ideas from their brainstormed list and sketch possible designs, ultimately choosing a single design to prototype.
- **CREATE:** Students build a working model, or prototype, that aligns with design requirements and that is within design constraints.
- **TEST:** Students evaluate the solution through testing; they collect and analyze data; they summarize strengths and weaknesses of their design that were revealed during testing.
- **IMPROVE:** Based on the results of their tests, students make improvements on their design. They also identify changes they will make and justify their revisions.

Implementation Process:

Bottle-rocket Engine Thrust Acquisition (BETA) System - Student teams will collect both theoretical and experimental data for their rockets. The theoretical data will be collected using our uniquely designed BETA system. The BETA System uses a force sensor coupled with signal conditioning and sophisticated programming to collect data from the rocket's engine. This is very similar to how ISRO, NASA & SpaceX performs rocket engine testing. The real-time data is collected using a flight computer on board the rocket during experimental launches.

The project is completed in three stages:

1. Design Process
2. Launching
3. Landing

Annual Curriculum Plan			
Module	Unit	Learning Outcomes	Time Frame
1	a) Introduction to Model Rocketry & Engineering	Students will be able to be introduced to statics and dynamics, free-body diagrams, combustion and thermodynamics to gain an understanding of the forces needed to lift rockets off the ground.	SEM – I
	b) Launch It	Students will be able to design an air-powered rocket that can hit a distant target.	
	c) Touchdown	Students will be able to create a platform that can safely cushion “astronauts” when they land on a table near you.	
	d) Shoot for the Moon	Students will be able to act as an engineer a model rover to explore a moon or planet.	
2	e) Roving on the moon	Students will be able to design and build a rubber band-powered rover that can scramble across the floor.	SEM– II
	f) Design Squad Challenge: Aqua-Rocketry (Single Stage)	Students will be able to design and build a water bottle rocket that flies straight and in the desired direction.	
	g) Countdown: Improve a Rocket	Students will be able to step in the design process as they created their rockets, suggesting further improvements in pre-testing.	
	h) Engineering Showcase: Liftoff!	Students will be able to share their findings and offering advice to other groups, just as real engineers do, can be helpful. Engineers have to improve a design many times before it is complete.	

ANNUAL CURRICULUM OVERVIEW – ICT

Mission:

Our Mission is to combine Education and Technology to provide children with the core computing skills that will best prepare them for the future.

Technology Integration:

Technology provides students with easy-to-access information, accelerated learning, and fun opportunities to practice what they learn. It enables students to explore subjects and deepen their understanding of difficult concepts. Through the use of technology inside and outside the classroom, students can gain technical skills necessary for future occupations.

ICT skills: Block based coding, Word processing, Internet, Animation, Presentation and Graphics Designing skills.

Learning Outcome:

Students should be able to:

- Create animations using block-based coding
- edit, format and navigate between pages in MS word
- create a presentation with hyperlink in MS PowerPoint
- Create graphics designing and animation, and to understand how systems are trained, used and some of the real-world implications of AI applications

Application of Skills:

Project Based Learning is a unique approach to teaching technology skills. With project-based learning students complete technology projects that focus around problem solving tasks. Students learn technology skills gradually as they complete activities such as formatting documents, presentations, Graphic designing and Animations.

Module	Objective	Focus	Integration	Software Applications	Technical skills	Time Frame
Editor	Students use word Processing software to format text with watermark and create header, footer and hyperlinks between the documents.	Watermark	Language, Social Studies	Microsoft office word	Word Processing	SEM 1
		Thesaurus & spellcheck				
		Header & Footer				
		Hyperlink				
		Formatting				
Animation & Graphics	Students use various tools to create animated figures in pivot animator, learning basic elements in Canva and creating posters.	Creating figures	Language, Arts	Pivot Animator	Graphics Designing	
		Animating figures				
		Basics of Canva				
		Poster creation				
Building Blocks	Students able make simple animations and games with objects and characters that interact with each other and to Train a computer to recognize images, sounds, & poses.	Introduction	Language, Arts	Sprite Lab / Teachable Machine	AI & Block Based Programming	SEM 2
		Background & Sprites				
		Events & Directions				
		Behaviors & Loops, Text				
		Image & Face Recognition				
Presenter	Students create a Presentation using various resources and they gather facts and organize the facts in table format. create an interesting and informative Presentation with hyperlinks between slides.	Power Point Presentation	Science, Language	Microsoft Office PowerPoint	Graphics Presentation	SEM 2
		Internet skills				
		Slide Creation				
		Table creation				
		Hyperlink				
		Animation, Transitions and Slide Show				

Physical Education (PE)

PE involves human movement in relation to the physical environment. It is concerned with learning about physical activity and through physical activity. PE offers students the opportunity to discover the capabilities of their bodies and the variety of ways in which they are able to use their bodies to solve problems, address physical challenges, function as part of a group, manipulate equipment or apparatus and express themselves in a range of situations. Through movement, students develop personally, socially and emotionally as well as physically. They learn to understand and accept their own strengths and weaknesses in Physical Education.

Students will be exposed to a number of activities that will develop motor skills, which may later be applied in various physical activities within and beyond the school setting. They will become aware of a number of positive leisure-time pursuits. In PE, students are exposed to a wide variety of physical and health-related activities and experiences so that they can make informed choices throughout their lives.

Students are encouraged to participate in an active lifestyle and recognize the ways exercise affects their bodies and their overall fitness or well-being, developing an understanding of the role of physical activity in a healthy lifestyle. Students also come to recognize that PE takes place within a cultural context that should be appreciated. PE offers students the opportunity to set themselves physical objectives, gaining pleasure or satisfaction from accomplishing these physical tasks or challenges and reflecting on their performance.

The PE component of the curriculum also provides opportunities for students to :

- learn about body control and spatial awareness
- master new skills and techniques in a variety of physical activities
- manipulate equipment or apparatus
- recognize the importance of fair play
- understand how strategies can assist when participating in physical activities
- use cooperative behaviours in order to function as part of a group or team
- use proper safety precautions when engaging in physical activities

ANNUAL CURRICULUM OVERVIEW- PHYSICAL EDUCATION		
Discipline	Game	Basic skills
Physical Education	Soccer	Receiving
		Ball control (controlling the ball at speed)
		Heading
		Dribbling (drills, basic dribbling, intermediate moves and advanced)
		Throw-in
		Passing
	Swimming	Freestyle
		Backstroke - Leg beat
		Backstroke - Hand Movement
		Breaststroke
	Track and Field	Sprint
		Hurdles
		Relay
	Badminton	Straight line Footwork, Forehand serves, Clears
		Forehand serves, Service returns and drives
Drops and net lifts		

Performing Arts

Arts are viewed by the PYP as a form of expression that is inherent in all cultures. They are a powerful means to assist in the development of the whole child, and are important for interpreting and understanding the world. Arts in the PYP promote imagination, communication, creativity, social development and original thinking.

Learners of the arts are both active and reflective. As well as being actively involved in creating and performing, students reflect on their work and on the work of others. Collaborative activities with other students in their own classes or other classes are essential; inquiring, working and reflecting with other students (older or younger) in a two-way learning process.

The arts component of the curriculum also provides opportunities for students to:

- develop proficiency as musicians, actors and visual artists
- acquire audience skills such as listening and viewing responsively
- interpret and present their own or others works to a range of audiences
- evaluate the different roles of artists in society such as to entertain, provoked debate or challenge views and perceptions
- create and critique plays, compositions and artwork using a selection of tools and techniques
- express feeling, ideas, experiences and beliefs in a variety of ways
- improve coordination, flexibility, agility, strength and fine motor skills.

Drama perspective

Drama includes the development of creative skills, verbal and non-verbal expression, an awareness of the perspectives of others, and aesthetic appreciation. Drama enables all students to communicate in powerful ways that go beyond their spoken language ability. Through drama, students can begin to construct an understanding of their community, their environment and their own feelings and emotions. They will also have opportunities to work cooperatively to put together a performance and to experience situations from different viewpoints. Indian drama has rich variety of various forms. With TIPS, students explore elements of drama as the very part of their unit of inquiry.

Music perspective

Music includes the study and exploration of sound and the expressive use of musical elements. Students will join together in musical activities using their voices, bodies and simple instruments to develop concepts about sound and musical awareness. Students will be exposed to and work on, a wide range of musical stimuli. They will participate both individually and in groups. Students will read, develop and record musical ideas in composition. They will develop an awareness and appreciation of music from a range of times, places and cultures. The development of listening skills will be constantly reinforced through live and recorded performances. Students will have opportunities for practice and consistent exposure to music in order to produce mastery and lifelong appreciation.

Dance perspective

Dancing is the act of moving the body in rhythm, usually in time to music. It seems natural for people to express themselves through rhythmic movement. Young children jump up and down when they are excited and sway gently when content or at rest. Dancing is both an art form and a form of recreation. Dance as art may tell a story, set a mood, or express an emotion. Some dances consist of symbolic gestures that tell a story completely through movement. As recreation, dancing has long been a people's source of fun, relaxation, and companionship.

Health benefits

Dancing can be a way to stay fit for people of all ages, shapes and sizes. It has a wide range of physical and mental benefits including:

- Improved condition of the heart and lungs
- Increased muscular strength, endurance and motor fitness
- Weight management
- Stronger bones and reduced risk of osteoporosis
- Better coordination, agility and flexibility
- Improved balance and spatial awareness
- Greater self-confidence and self-esteem
- Better social skills.

ANNUAL CURRICULUM OVERVIEW - PERFORMING ARTS

Discipline	Music	Classical Dance		Western Dance
		Theory	Practical	
PERFORMING ARTS	<ul style="list-style-type: none"> • Introduction to music • Classical basic notes • Forms of songs • Practicing different tempos/ thalams 	<ul style="list-style-type: none"> • Samyuktha Hasthas and Meaning 	<ul style="list-style-type: none"> • Namaskaram • Basic Postures • Hand gestures & description • Basic steps – Adavus • Facial Expressions - Bhavanas 	<ul style="list-style-type: none"> • Basic foot-work • Combination of foot-work and beat knowledge • Flexibility exercises • Free-style combination of steps • Basics of specific style • Floor steps & balancing • Body and face expression • Choreography knowledge

* The above is the plan scheduled. There may be alterations which will be informed through circulars.