



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 conversations/ 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 enables **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
- Self-Management skills
- Clarity
- Team work
- Subject content

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.

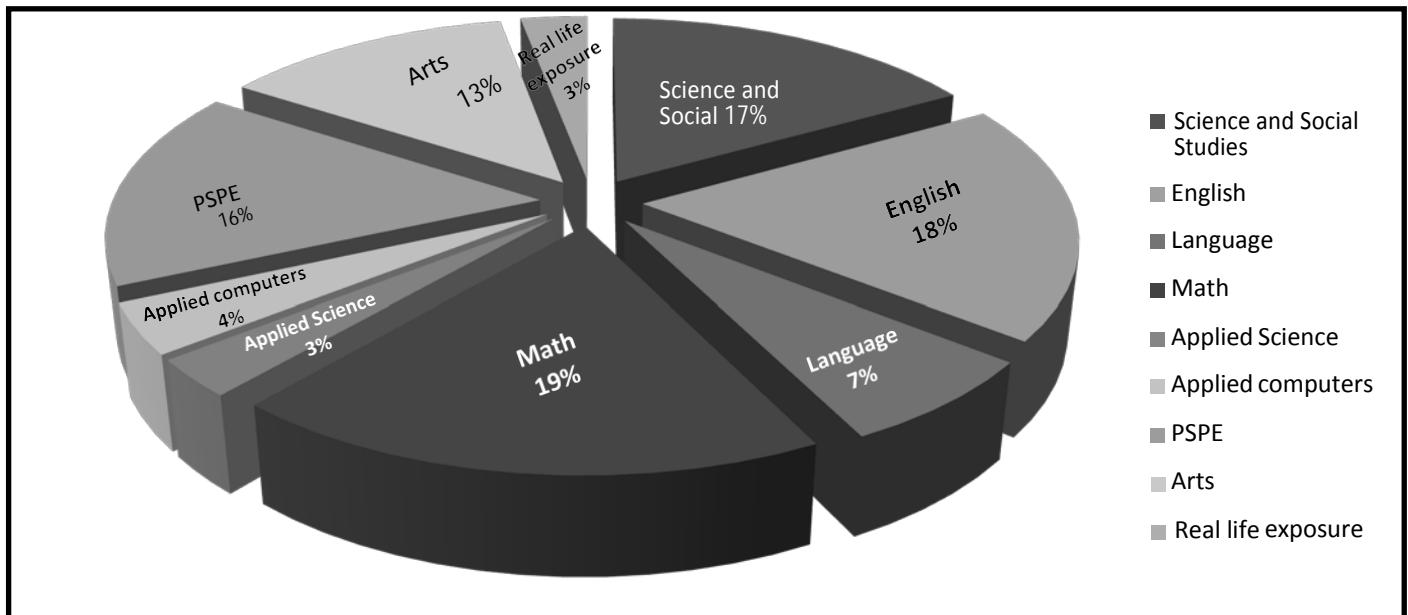
- a. **Farming: Introduction of Farming as a part of Indian social and cultural fabric:** Agriculture plays a critical role in the entire life and is a backbone of the economic system of a given country. This is especially true of India. TIPS has planned to offer Farming as part of the regular curriculum 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 V children will be inquiring into the following Transdisciplinary themes

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

Our grade V children will be inquiring into trans-disciplinary theme

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

Media in today's world shapes our thinking and decision making

Key Concepts

- Function
- Perspective
- Responsibility

Related concepts

- Communication
- Influence
- Values

Lines of inquiry

- Different types of media created to meet the needs of society
- Influence of media on society/individuals
- Responsible utilization of media

Subject focus – Social studies, Language, Art

Strands

- Social Studies : Social Organization and Culture
- Language : Visual Language - Viewing and Presenting
- Arts : Creating

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

- Explore the different types of media (print media, digital media, broadcast media etc.)and their functions
- Research and analyze the positive and negative impacts of media on society
- Understand the responsible uses of media and explore the purpose of digital literacy and digital citizenship

Expected transdisciplinary skills while inquiring into this theme

- Communication skills
- Social Skills

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

- Principled
- Communicators
- Open minded

Students have an access to the following resources during this inquiry. Books

- The world-wide web - Linda Bullock
- Communications - Jane Shuter
- Inventing the printing press - Liza Mullins
- Is television a Bad Influence
- Going Digital - Raintree Steck Vaughan
- Newspapers - Chris Oxlade

Key Vocabulary

- | | | | |
|--------------|-----------------|-------------|--------------|
| • plagiarism | • communication | • broadcast | • expression |
| • periodical | • journalism | • billboard | • podcast |
| • editing | • cyber crime | • browsing | • perception |
| • blog | • credibility | • surfing | • magazine |

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

Forces produce motions that are integral part of our daily life

Key Concepts

- Form
- Causation
- Change

Related concepts

- Force
- Motion
- Transformation

Lines of inquiry

- Types of forces around us
- How forces affect the motion of objects
- Forms of energy and energy transformation

Subject focus – Science, Language, PSPE

Strands

- Science : Forces and Energy
- Language : Written Language
- PSPE : Active Living

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

- identify the difference between contact forces & non contact forces and their effects
- associate various forces available in everyday life experiences and make connections about force, motion, and energy
- Understand the Newton's laws of motion and their real life application
- identify various forms of energy and investigate energy transformation in everyday lives

Expected trans-disciplinary skills while inquiring into this theme

- Thinking skills
- Research skills

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

- Reflective
- Inquirers
- Thinkers

Students have an access to the following resources during this inquiry.

Non-fiction Book

- Force & Motion

Focus Books

- Soccer
- Gravity in the Solar System
- Race cars
- Roller Coasters
- Perpetual Motion: Fact or Fiction?

Possible Hands on Activities

Exploration – Rubber Band Forces: Energy and Mass

Project-Based Learning

- Design Your Own Amusement Park Ride

Key Vocabulary

- | | | | |
|--------------------|------------|---------------------|------------------|
| • Potential energy | • Mass | • Centripetal force | • Friction |
| • Acceleration | • Momentum | • Perpetual motion | • Magnus effect |
| • Weight | • Motion | • Electromagnetism | • Inertia |
| • Velocity | • Gravity | • Horse power | • Kinetic Energy |

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 humankind and the environment.

Central idea

Economic activity relies on systems of production, exchange and consumption of goods and services

Key Concepts

- Connection
- Perspective
- Responsibility

Related concepts

- Systems
- Opinion
- Fair trade

Lines of inquiry

- The role of supply and demand in the economy and the distribution of goods and services
- How marketing strategies influence the consumer
- Rights and responsibilities of producer and consumer

Subject focus – Social studies, Math, Language

Strands

- Social Studies : Human System and Economic Activities
- Math : Number
- Language : Oral Language - Listening and Speaking

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

- identify the difference between goods and service
- recognize how supply determines the demand in the economy and look into the ideas of production, distribution and consumption
- explore the various marketing strategies and analyze how they influences the consumer
- understand the rights and responsibilities of the producer & consumer for the upliftment of the economy

Expected Trans-disciplinary skills while inquiring into this theme

- Social skills
- Communication skills

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

- Communicators
- Principled
- Risk takers

Students have an access to the following resources during this inquiry.

- Advertising - Catherine Chambers
- Reduce and Reuse - Sally Hewitt
- Advertising and Marketing - Clive Gifford
- Economics – Scot Fetzer comp
- Supply and demand
- Banking

Key Vocabulary

- | | | | |
|---------------|----------------|----------------|----------------|
| • Economy | • Taxation | • Commodity | • Scarcity |
| • Inflation | • Manufacturer | • Franchise | • Retail |
| • Trade | • Barter | • Disbursement | • Wholesale |
| • Consumption | • Distribution | • Entrepreneur | • Satisfaction |

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

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

Different body system function together to support the well being of living organisms

Key Concepts

- Form
- Connection
- Function

Related concepts

- Structure
- Independence
- Wellbeing

Lines of inquiry

- Levels of organization in living organism
- Interdependence of body systems
- Ability to resist and fight against diseases

Subject focus – Science, Language, PSPE

Strands

- Science : Living Things
- Language : Written Language, Reading and Writing
- PSPE : Identity

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

- Understand the different levels of organization (cells, tissues, organs, system etc) in living things
- Locate the cell organelles within the cell and describe their functions
- explain how body systems interact with each other for the smooth functioning of the living organism
- realize the role and importance of healthy lifestyle for better living

Expected transdisciplinary skills while inquiring into this theme

- Thinking skills
- Self-management skills

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

- Balanced
- Reflective
- Caring

Students have an access to the following resources during this inquiry.

Nonfiction Book

- Inside Living Things

Focus Books

- Incredible Eyes
- Transport Systems in Plants
- Parasites
- You've Got a Lot of Nerve!
- Fighting Infection!

Possible Hands on Activities

Project – Cell model

Experiment – Lung capacity

Exploration – Changing pulse rates

Key Vocabulary

- | | | | |
|-----------------|-----------------|-------------|---------------|
| • Antibodies | • Cell wall | • Pathogens | • Tissue |
| • Arteries | • Cytoplasm | • Veins | • Unicellular |
| • Capillaries | • Mitochondria | • Plasma | • Vacuoles |
| • Cell membrane | • Multicellular | • Pores | • Nucleus |

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; communities and the relationship within and between them; access to equal opportunities; peace and conflict resolution.

Central idea

Access to medical care around the world varies and can influence how diseases are spread

Key Concepts

- Causation
- Function
- Responsibility

Related concepts

- Consequences
- Interdependence
- Equality

Lines of inquiry

- Factors leading to communicable and non-communicable diseases
- Availability and access to medical care, water, sanitation and hygiene (WASH) services
- Role of global organizations in providing medical care

Subject focus – Science, Social Studies

Strands

- Science : Living Things
- Social Studies : Resources and the Environment

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

- Identify reasons for the communicable and non-communicable diseases
- Explore the importance of health care facility worldwide
- Understand the importance of WASH (water, sanitation and hygiene) in the present world
- Research the functions of global organizations like WHO, UNICEF, Red cross etc.

Expected transdisciplinary skills while inquiring into this theme

- Communication skills
- Self-management skills

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

- Open minded
- Caring
- Balanced

Students have an access to the following resources during this inquiry

- Planet under pressure - Health and disease - Claire Wallerstein
- Pandemics - World Book
- Medical Ethics - Robert Snedden

Key Vocabulary

- | | | | |
|--------------|----------------|-----------------|----------------|
| • vaccine | • eradication | • diagnosis | • communicable |
| • hygiene | • immunization | • heredity | • influenza |
| • sanitation | • disease | • accessibility | • infection |
| • pandemic | • endemic | • organization | • ethics |

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

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

Past civilizations shape present day systems and technologies

Key Concepts

- Connection
- Perspective
- Change

Related concepts

- Relationship
- Opinion
- Evidence

Lines of inquiry

- Aspects of past civilizations that have survived
- Reasons for the rise and fall of various civilizations
- Role of the past discoveries and inventions in today's world

Subject focus – Social Studies, Arts

Strands

- Social Studies : Continuity and change through time
- Art : Responding

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

- analyze the aspects of various civilizations.
- investigate the factors that lead to the rise and fall of civilization.
- explore the discoveries and inventions of the past and make connections to the modern world.

Expected Transdisciplinary skills while inquiring into this theme

- Social skills
- Research skills

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

- Inquirers
- Knowledgeable
- Thinkers

Students have an access to the following resources during this inquiry.

- Great Ancient Civilizations Hello friend
- Time travel guide Ancient Egypt - Liz Goge
- Time travel guide Ancient Rome - John Malam
- Time travel guide Ancient Greece - Anna Claybourne
- 100 Amazing facts Discoveries and inventions - Hello friend

Key Vocabulary

- | | | | |
|----------------|--------------|---------------|---------------|
| • Civilization | • Currency | • Ancient | • Nomad |
| • Culture | • Provenance | • Archaeology | • Inventions |
| • History | • Dockyard | • Empire | • Society |
| • Excavation | • Settlement | • Urban | • Discoveries |

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

PYP EXHIBITION

The Primary Years Programme exhibition represents a significant event in the life of a student, synthesizing the Knowledge, Concepts, Skills, Attitudes, & Action and sharing them with the whole school community. As a culminating experience it is an opportunity for students to exhibit the attributes of IB learner profile that have been developing throughout their learning engagement with the PYP.

The exhibition unit will take place under all the six themes. Students are required to engage in a collaborative, trans-disciplinary inquiry process that involves them in identifying, investigating and offering solutions to real-life issues or problems.

The central idea for the exhibition will be formed by our 5th graders and a detailed investigation will be done by them. They will present their findings to the school community and parents during the last SLC of the academic year.

ANNUAL CURRICULUM OVERVIEW- ENGLISH			
Discipline	Objectives	Time frame	
English	Reading and Comprehension	Analyze character	Week 1-3
		Analyze Plot	Week 4-6
		Analyze Setting	Week 7-9
		Author's point of view	Week 10-12
		Author's Purpose (Entertain)	Week 13-14
		Author's Purpose (Inform)	Week 15-16
		Author's Purpose (Persuade)	Week 17-18
		Cause & Effect	Week 19-20
		Compare & Contrast	Week 21-22
		Fact or Opinion	Week 23-24
		Identify character point of view	Week 25-26
		Main idea and details	Week 27-28
		Make inferences & Draw conclusions	Week 29-30
		Problem & Solution	Week 31-32
		Reality & Fantasy	Week 33-34
		Sequence events	Week 35-36
English	Spelling	Revisiting concepts taught in previous levels	Week 1 - 3
		/kt/ Spelled CT	Week – 4
		Clues for /shǔn/ Words, Part 1	Week – 5
		Words Ending in SS	Week – 6
		Clues for /shu̇ n/ Words, Part 2	Week – 7
		Ways to Spell / shǔn /	Week – 8
		/eks/ and /egz/ Spelled EX	Week 9 - 10
		The Sound of /u̇ ff/ Spelled OUGH	Week – 11
		OR in Unaccented Syllables	Week – 12
		Ways to Spell /er/	Week – 13
		I-Before-E Generalization, Part 1	Week – 14
		I-Before-E Generalization, Part 2	Week 15 -16
		Ways to Spell /ė /	Week – 17
		More Words with Silent E	Week – 18
		More Words with /z/ Spelled S	Week – 19
		Make It Plural Book	Week – 20
		Plurals of Words Ending in F and FE	Week 21 - 22
		Plurals of Words Ending in O	Week – 23

English	Spelling	Words Ending in /ijj/	Week – 24
		The Sound of /o-o / Spelled UI	Week – 25
		The Sound of /n/ Spelled GN	Week – 26
		The Doubling Rule	Week – 27-28
		AR in Unaccented Syllables	Week – 29
		/awt/ Spelled OUGHT and A Followed by L	Week 30 - 31
		More Words with Long E Spelled EA	Week – 32
		The Sound of /uˇ / Spelled OU	Week – 33
		The /er/ of Journey	Week – 34
		Ways to Spell /er/	Week 35 - 36
	Writing		
		Warming up	Week 1
		Persuasive Pro and Con	Week 2 - 4
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Informational report	
		Introduction, Focused Grammar, Sample discussion	Week 5 - 8
		Independent Practice	
		Assessment	
		Informational speech	
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Biography	Week 9 -12
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		How to	Week 13 -15
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Experimental Report	Week 16 - 18
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
			Week 19 - 21

English	Writing	Persuasive Opinion	Week 22-24
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Descriptive writing	Week 25 - 27
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Personal Narrative	Week 28 - 30
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Realistic Fiction	Week 31 - 33
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
		Fairy tale	Week 34 - 36
		Introduction, Focused Grammar, Sample discussion	
		Independent Practice	
		Assessment	
Language Skills	Language Skills	Nouns, Common nouns and Proper nouns	Week 1
		Concrete & Abstract nouns, Singular and plural nouns, Gender of nouns	Week 2
		Uses of nouns, Nouns as objects	Week 3
		Person of a pronoun & Number of pronouns	Week 4
		Subject and object pronouns	Week 5
		Possessive pronouns and Indefinite pronouns	Week 6
		Relative and Demonstrative pronouns	Week 7
		Pronoun-Antecedent Agreement	Week 8
		Types of verbs, Linking verbs and Helping verbs	Week 9
		Simple Verb Tenses, Perfect Tenses	Week 10
		Active and Passive Verbs, Irregular Verbs	Week 11
		Irregular Verbs Review	Week 12
		Proper and Common Adjectives, Predicate Adjectives	Week 13
		Indefinite Adjectives, Forms of Adjectives	Week 14
		Types of Adverbs	Week 15

English	Language Skills	Forms of Adverbs	Week 16
		Prepositional phrases	Week 17
		Coordinating conjunctions and Subordinating conjunctions	Week 18
		Conjunctions Review	Week 19
		Interjections, Parts of Speech Review	Week 20
		Simple subjects and Predicates	Week 21
		Compound Subjects and Predicates	Week 22
		Clauses	Week 23
		Prepositional phrases, Sentence Fragments	Week 24
		Run-On sentences	Week 25
		Rambling Sentences	
		Double Negatives	Week 26
		Sentence Errors Review	
		Subject- Verb Agreement	Week 27
		Subject- Verb Agreement Review	Week 28
		Combining sentences using key words	Week 29
		Combining Sentences with a series of Words or Phrases	
		Combining Sentences with Phrases	Week 30
		Sentence combining with compound subjects and predicates	
		Kinds of Sentences	Week 31
		Types of Sentences	Week 32
		Simple and Compound Sentences	Week 33
		Compound Sentences	
		Complex Sentences	Week 34
		Expanding Sentences with Prepositional Phrases	Week 35
		Sentence -Variety Review	Week 36
	Vocabulary Cluster	Categories of people	
		56, 94, 111, 203, 204	Week – 1
		205, 206	Week – 2
		227, 317, 330, 343, 344	Week – 3
		Color	
		382, 432, 444, 57	Week – 4
		58	Week – 5
		415, 72	Week – 6
		243, 368, 60, 106	Week – 7
		121, 190, 210 ,321, 324, 335	Week – 8

English	Vocabulary Cluster	Shapes	
		364, 365, 366, 399, 400, 69, 99	Week – 9
		142, 193, 218, 270, 303, 326	Week – 10
		Occupations	
		68, 88, 146, 167, 173	Week – 11
		229, 236, 257, 264	Week – 12
		265, 266, 297, 333	Week – 13
		355, 357, 358, 359, 360, 361, 392, 393	Week – 14
		The Human body	
		394, 395, 396, 397, 436, 75, 76, 80, 115, 140	Week – 15
		157, 160, 191	Week – 16
		Combustion and Temperature	
		213, 336, 437, 78, 220	Week – 17
		376, 414, 442, 84, 103	Week – 18
		156	Week – 19
		165, 175	Week – 20
		Water	
		87, 101, 102	Week – 21
		127, 296	Week – 22
		Weather and Nature	
		352, 353, 391, 424, 90, 226, 307, 375, 406	Week – 23
		Parts of dwellings	
		91, 113, 123	Week – 24
		Machines and Tools	
		134, 217, 284, 92	Week – 25
		96, 118, 119, 163	Week – 26
		242, 254	Week – 27
		275, 276, 314 ,315, 316, 419	Week – 28
		Vehicles and transportation	
		420, 93 ,97, 120, 128	Week – 29
		159, 234, 318	Week – 30
		Groups	
		98	Week – 31
		200, 258	Week – 32
		Money/goods	
		298,401,104,109	Week – 33
		116,122,201	Week – 34
		Containers, Materials and buildings	
		214,107	Week – 35
		164,181	Week – 36

Our language programme includes all aspects of English such as:

Reading and 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 for a lifetime.

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

Pupils learn to write in a range of genres or styles, organizing and developing their ideas logically, using appropriate vocabulary and a variety of sentence structures. By the end of the academic year children would have progressed in their writing skills and will be able to write *Biography, Descriptive, Experimental report, How to, Informational Report, Informative Speech, Narrative FairyTale, Personal Narrative, Realistic Fiction, Persuasive – Opinion and Persuasive – Pro-Con*.

Listening & Speaking

The language of the classroom is English. Our aim is that children will become comfortable speaking English in the classroom. Children will be given the opportunity to express their opinions and ideas on a range of issues. They will be expected to listen appreciatively to the viewpoints of others.

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 word in a text and use the same while writing as well.

Language Skills

Children will learn grammar using the *Language skills* book. The topics which will be dealt with are *Parenthesis, Pronouns, Possessive nouns, Conjunctions, Future tense verbs, Simple, compound & complex sentences and Adjectives*. In addition, they will also be given grammar practice every day for which *Write Rights* resource book will be used.

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 expression

Technical incorporation

Performance

Personal and social development

Reflection, Evaluation & Appreciation

Drama in 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	1. पुनरावृति- स्वर, व्यंजन, बारहखड़ी 2. पाठ - मैं इंटरनेट हूँ 3. व्याकरण - विराम चिह्न, क्रिया 4. गिनती 1- 20 5. मेरी हिन्दी	
	1. पाठ - हम दुनिया बदल देंगे 2. पाठ - मैं सबसे छोटी होऊँ 3. व्याकरण - संज्ञा, विशेषण- विशेष्य 4. गिनती 21-40 5. मेरी हिन्दी	SEM-I
	1. पाठ - सिंदबाद के चमत्कार 2. पाठ - दोहे 3. व्याकरण - कारक, योजक, क्रिया विशेषण 4. गिनती 41- 50 5. मेरी हिन्दी	
	1. पाठ- हम होंगे कामयाब 2. पाठ- फूलों की घाटी की सैर 3. व्याकरण- संबंधबोधक, समुच्चयबोधक (परिचय) 4. गिनती 51- 60 5. मेरी हिन्दी	
	1. पाठ - मैं तुम्हारी शक्ति हूँ 2. पाठ - जीना सीखो 3. व्याकरण - संज्ञा, सर्वनाम, विशेषण (पुनरावृति) 4. गिनती 61- 80 5. मेरी हिन्दी	SEM-II
	1. पाठ - त्योहार 2. पाठ - मनुष्य ही महान 3. व्याकरण - काल, उपसर्ग, प्रत्यय 4. गिनती 80- 100 5. मेरी हिन्दी	

लेखन कौशल

केन्द्रीय शिक्षण बिन्दु :

भाषा प्रयोग क्षमता का विकास

उच्च स्तर की बौद्धिक क्षमताओं का विकास

शैक्षणिक उद्देश्य :

- भाषा ज्ञान
- अर्जित ज्ञान का सही उपयोग करना
- शब्द भंडार में वृद्धि
- भाव प्रकट करने की क्षमता
- कल्पना शक्ति का विकास

पठन /वाचन कौशल :

केन्द्रीय शिक्षण बिन्दु :

- स्पष्ट एवं शुद्ध उच्चारण और अर्थ बोध का ज्ञान

शैक्षणिक उद्देश्य :

- भाषा प्रस्तुतीकरण का अभ्यास
- अभियनात्मक पठन
- वार्तालाप की क्षमता का अभ्यास
- सामान्य बोलचाल की भाषा के प्रयोग का अभ्यास

श्रवण कौशल :

केन्द्रीय शिक्षण बिन्दु :

- मौखिक अभिव्यक्ति का विकास

शैक्षणिक उद्देश्य :

- कहानी सुनना और सुनाना
- वार्तालाप और संवाद
- चित्रकथा, कविता, व्याकरणिक प्रयोग

संदर्भ ग्रंथ सूची :

पंखुड़ियाँ	-	वीवा एजुकेशन
स्वाति	-	सरस्वति हाउस प्रा. लि.
गुंजन	-	मधुबन एजुकेशनल बुक्स
वितान	-	मधुबन एजुकेशनल बुक्स
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	எழுத்துக்களின் வகைகளோடு எனிய, கடினச் சொற்களின் பொருள், சொல் வகைகளை சான்றுகளுடன் அறிந்து கொள்ளுதல். வாக்கிய அமைப்பில் இனவெழுத்துக்களின் பயன்பாடு. எச்சத்தொடர்களை பொருளைப்பாட்டுத்துறை முடித்தல் போன்றவற்றை அறிந்து கொள்ளுதல்.	SEM 1
	வாக்கிய அமைப்பில் அதன் வகைகள், பகுப்பு மற்றும் கடினச் சொற்களின் பொருள் உணர்தல் போன்றவைகளை அறிதல்.	
	வாக்கியங்களில் எழுவாய், பயனிலை, செயப்படுபொருள் ஆகியவற்றை உணர்ந்து, கருத்துக்களை புரிந்து கொள்ளுதல். பத்திகளில் நிறுத்தற்குறியீடின் பயன்பாட்டினையும், பல சொற்களைக் கொண்டு ஒரு பொருள் உணர்த்தும் முறையையும் அறிதல்.	SEM 2
	வாக்கியங்களில் தகுந்த இடத்தில் மரபுச் சொற்களை கையாஞும் விதத்தையும், அதனுடைய பொருள் மற்றும் விளாக்கங்களையும் தெரிந்து கொள்ளுதல்.	

LISTENING AND SPEAKING

LEARNING OBJECTIVES: (கற்றலின் குறிக் கோள்கள்)

- முன்னரிமுகமில்லாத சூழலில் கலந்துரையாடல்கள் மற்றும் வசனங்களைப் புரிந்து கொள்ளுதல்.
- சூழ்நிலைகளையும் நிகழ்வுகளையும் விவரிக்கும் திறன்.
- இயல்பாகவும் சரளாமாகவும் பேசுதல், தெரிந்த தலைப்புகளில் பேசுதல்.
- செய்தித்தாள்கள், கதைகள், நகைச்சுவைத் துணுக்குகள் போன்றவற்றின் மூலம் செய்திகளை உணர்தல்.

READING

LEARNING OBJECTIVES: (கற்றலின் குறிக் கோள்கள்)

- அச்ச எழுத்துக்களையும் கையெழுத்துப் பிரதிகளையும் சுலபமாக வாசித்து அறிதல்.
- செய்தித்தாள்களையும் மற்ற அச்சிட்ட செய்திகளையும் வாசித்தல்.
- கலந்துரையாடல் மூலம் விளாக்களைப் புரிந்து விடையளிக்கும் திறன்.

WRITING

LEARNING OBJECTIVES: (கற்றலின் குறிக் கோள்கள்)

- எண்ணத்தின் வெளிப்பாடுகளை நல்ல கருத்துடைய சொற்களைக் கொண்டு வெளிப்படுத்துதல்.
- தலைப்பு சார்ந்தும், சூழ்நிலை நிகழ்வுகளையும் பத்தி, கடிதம், கட்டுரை வடிவில் வெளிப்படுத்துதல்.
- அனைத்து ஒலி வேறுபாட்டுச் சொற்கள், நிறுத்தற்குறியீடுகளைப் பயன்படுத்தி வாக்கியம் 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
	Whole numbers	Numbers up to 10,000,000	Count by ten thousands and hundred thousands to 10,000,000
			Use place-value charts to show numbers to 10,000,000
			Read and write numbers to 10,000,000 in standard form and word form
	Place value	Identify the place value of any digit in numbers to 10,000,000	Identify the place value of any digit in numbers to 10,000,000
			Read and write numbers to 10,000,000 in expanded form
		Comparing numbers to 10,000,000	Compare and order numbers to 10,000,000
	Rounding and estimating	Identify and complete a number pattern	Identify and complete a number pattern
			Find a rule for a number
			Round numbers to the nearest thousand
			Locate numbers on a number line
Math	Whole number Multiplication and division	Using a calculator	Use rounding to estimate or check sums, differences and products
			Use related multiplication facts to estimate quotients
		Multiplying by Tens, Hundreds or Thousands	Use your calculator to add, subtract, multiply and divide whole numbers
		Multiplying by 2-digit numbers	Multiply numbers by 10, 100, or 1,000 using patterns
			Multiply numbers up to 4 digits by multiples of 10, 100, or 1,000
			Use rounding to estimate products
	Dividing by tens, hundreds or thousands	Multiplying by 2-, 3-, Or 4 -digit number by a 2-digit number	Multiply a 2-, 3-, Or 4 -digit number by a 2-digit number
			Divide numbers by 10, 100, or 1000 using patterns
		Dividing by 2-digit numbers	Divide numbers up to 4 digits by multiples of 10, 100, or 1000
			Use rounding and related multiplication facts to estimate quotients
	Order of operations	Dividing by a 2-, 3-, or 4-digit number by a 2-digit number	Divide a 2-, 3-, or 4-digit number by a 2-digit number
		Order of operations	Use order of operations to simplify a numeric expression
			Evaluate numerical expressions with parentheses, brackets and braces
	Real -world problems: Multiplication	Use efficient strategies to solve multi-step problems involving multiplication and division	Week 10

	division	Express and interpret the product or quotient appropriately	Week 11
Fraction and mixed numbers	Adding unlike fractions	Add two unlike fractions where one denominator is not a multiple of the other	Week 12
		Estimate sums of fractions	
	Subtracting unlike fractions	Subtract two unlike fractions where one denominator is not a multiple of the other	
		Estimate differences between fractions	
	Fractions, Mixed numbers & division expressions	Understand and apply the relationships between fractions, mixed numbers, and division expressions	Week 13
	Expressing fractions, division expressions and mixed numbers as decimals	Express fractions, division expressions, and mixed numbers as decimals	
	Adding mixed numbers	Add mixed numbers without renaming	
		Estimate sums of mixed numbers	
	Subtracting mixed numbers	Subtract mixed numbers with or without renaming	Week 14
		Estimate differences between mixed numbers	
	Real-world problems: Fractions and mixed numbers	Solve real-world problems involving fractions and mixed numbers	
Multiplying and dividing fractions and mixed numbers	Multiplying proper fractions	Multiply proper fractions	Week 15
	Real-world problems: multiplying with common fractions	Solve real-world problems involving multiplication of proper fractions	
	Multiplying improper fractions by fractions	Multiply improper fractions by proper or improper fractions	Week 16
	Multiplying mixed numbers and whole numbers	Multiply mixed numbers and whole numbers	Week 17
		Solve real-world problems involving multiplication of whole numbers and mixed numbers	
	Dividing a fraction by a whole number	Divide a fraction by a whole number	Week 18
		Divide a whole number by a unit fraction	
	Real-world	Solve real-world problems involving	Week 19

		problems: Multiplying and dividing with fractions	multiplication and division in fractions Solve real-world problems involving division of a whole number by a unit fraction	
		Using letters as numbers	Recognize , write and evaluate simple algebraic expressions in one variable	Week 20
Algebra	Simplifying algebraic expressions	Simplify algebraic expressions in one variable		Week 21
	Inequalities and equations	Write and evaluate inequalities Solve simple equations		Week 22
	Real world problem: Algebra	Solve real-world problems involving algebraic expressions		
Area of a Triangle	Base and Height of a triangle	Identify the base given the height of a triangle Identify the height given the base of a triangle		Week 23
		Find the area of a triangle given its base and its height		
	Finding the area of a triangle			
Ratio	Finding ratio	Read and write ratios		Week 24
	Equivalent ratios	Find equivalent ratios		
	Real-world problems: Ratios	Solve real-world problems involving ratios		
	Ratio in fraction form	Interpret ratios given in fraction form		Week 25
	Real-world problems: more ratios	Solve real-world problems involving ratios and fractions		
	Comparing three quantities	Use ratios to compare three quantities		Week 26
Decimals	Understanding Thousandths	Read and write thousandths in decimal and fractional forms Represent and interpret thousandths in models or in place-value charts		Week 27
		Write a fraction with denominator 1,000 as a decimal		
	Comparing and rounding decimals	Compare and order decimals to 3 decimal places Round decimals to the nearest hundredth		Week 28
	Rewriting	Rewrite decimals as fractions and		

		decimals as fractions and mixed numbers	mixed numbers in simplest form	
Multiplying and Dividing decimals	Multiplying decimals	Multiply tenths and hundredths by a 1-digit whole number		Week 29
		Multiply tenths and hundredths by 10, 100, and 1,000		
	Dividing decimals	Multiply tenths and hundredths by multiples of 10, 100, and 1,000		
		Divide tenths and hundredths by a 1-digit whole number		
	Dividing by tens, hundreds and thousands	Round quotients to the nearest tenth or hundredth		
		Divide tenths and hundredths by 10, 100, 1,000		
	Estimating decimals	Divide tenths and hundredths by multiples of 10, 100, and 1,000	Estimate decimal sums, differences, products, and quotients	
Percent	Real-world problems: Decimals	Solve real-world problems involving decimals		Week 30
	Percent	Relate and compare percents, decimals and fractions		
	Expressing fractions as percents	Express fractions as percents		
Graphs and probability	Making and interpreting double bar graphs	Make and interpret a double bar graph		Week 31
	Making and interpreting Line plots	Make a line plot to represent data given in fractions of a unit		
		Use operations on fractions to solve problems from the information presented		
		Read points on a coordinate grid		
	Graphing an equation	Plot points on a coordinate grid		
	Combinations	Graph an equation		
		List and count all possible combinations		
		Draw a tree diagram to show all possible combinations		
		Use multiplication to find the number		

	Angles	Angles on a line	Understand and apply the property that the sum of angle measures on a line is 180°	Week 33
		Angles at a Point	Understand and apply the property that the sum of angle measures on a line is 360°	
		Vertical angles	Understand and apply the property that vertical angles have equal measures	
		Vertical angles	Understand and apply the property that vertical angles have equal measures	
	Properties of triangles and four sided figures	Measures of angles of a triangle	Understand and apply the property that the sum of the angle measures of a triangle is 180°	Week 34
		Right, isosceles and equilateral triangles	Understand and apply the properties of right, isosceles, and equilateral triangles	
		Triangle inequalities	Understand that the sum of the length of any two sides of a triangle is greater than the length of the third side	
		Parallelogram, Rhombus and Trapezoid	Understand and apply the properties of parallelogram, rhombus, and trapezoid	
	Three-dimensional shapes	Prisms and pyramids	Identify and classify prisms and pyramids	Week 35
			Identify the solid figure that can be formed from a net	
		Cylinder, sphere and cone	Identify and classify cylinders, spheres, and cones	
	Surface area and volume	Building solids using unit cubes	Build solids using unit cubes	Week 36
			Determine the number of unit cubes in an irregular solid	
		Drawing cubes and rectangular prisms	Draw a cube and a rectangular prism on dot paper	
			Complete a partially drawn cube and rectangular prism on dot paper	
		Nets and surface area	Find the surface area of a prism by adding the area of each face	
		Understanding and measuring volume	Find the volumes of cubes and rectangular prisms	
			Find the volume of a solid constructed from unit cubes	
			Compare volumes of cubes, rectangular prisms, and other objects	

At TIPS we follow a structured curriculum based on “*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:

- Numbers
- Place values
- Sign
- Positive
- Negative
- Multiplication
- Division
- Vertex
- Line
- Point
- Sides
- Vertical
- Acute angle
- Obtuse angle
- Complementary
- Supplementary
- Decimals
- Fractions
- Numerator
- Denominator
- Round off
- Quotient
- remainder
- Sides
- Dimensions
- Axis
- Area
- Volume
- Probability
- Frequency
- Cost price
- Selling Price
- Profit & loss
- Interest rate
- Equation
- Inequalities

SCHOOL HOME Connections

Chapter Whole Numbers

Dear Family,

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

- comparing and ordering numbers using place-value charts
 - rounding numbers to the nearest thousand
 - estimating sums, differences, products, and quotients
-

Activity

Estimation is a powerful tool for mental math and has many practical uses in everyday life as well. Be alert for opportunities for your child to practice estimating after finishing this chapter. For example, encourage your child to find 7-digit numbers from the newspaper.

- Ask your child to order these numbers from least to greatest.
- Have your child choose any two of these numbers and estimate their difference. Discuss with him or her why estimation may be useful when dealing with large numbers. (Hint: You can tell if your answer is close to the right quantity, it allows you to make calculations very quickly, you're less likely to make mistakes and so on).

Vocabulary to Practice

1 million = 1,000,000

Rounding is approximating a number to the nearest ten, hundred, thousand, and so on.

7,499 → 7,000

7,500 → 8,000

For **front-end estimation with adjustment**, use the values of the leading digits.

$$3,815 + 2,398 \rightarrow 3,000 + 2,000 \\ = 5,000$$

Estimate what is left over.

$$815 + 398 \rightarrow 800 + 300 = 1,100 \\ 1,100 \rightarrow 1,000 \text{ (to the nearest thousand)}$$

Adjust the estimate.

$$5,000 + 1,000 = 6,000$$

Compatible numbers are pairs of numbers close to the original number pairs that are easy to compute with.



SCHOOL HOME Connections

Chapter Whole Number Multiplication and Division

Dear Family,

In this chapter, your child will study multiplication and division of 2-digit numbers. Some of the skills your child will practice are:

- using a calculator
 - using patterns to multiply and divide by multiples of 10, 100 and 1,000
 - estimating products and quotients
 - using order of operations
 - solving real-world problems
- •

Activity

Understanding how to estimate a product is an important mental math skill. A stack of playing cards provides endless opportunities for practice. For example, invite your child to pick four number cards from a stack of cards.

- Ask your child to use these numbers to form two 2-digit numbers and write a multiplication problem with the greatest product.
- Now have your child check his or her answer using a calculator.

Vocabulary to Practice

$$12 \times 30 = 360$$

360 is the **product**.

12 and 30 are **factors** of 360.

$$129 \div 8 = 16 \text{ R } 1$$

The **dividend** is 128.

The **divisor** is 8.

The **quotient** is 16.

The **remainder** is 1.

Order of operations is a set of rules stating the order to perform the four operations, when simplifying an expression involving two or more operations.

4	2
×	8
1	

Why do you think 8 and 4 should be in the tens place?

SCHOOL to HOME

Connections

Chapter 3 Fractions and Mixed Numbers

Dear Family,

In this chapter, your child will learn more about fractions and mixed numbers. The work will include:

- adding and subtracting unlike fractions and mixed numbers
 - understanding the relationships between fractions and division expressions
 - expressing fractions, division expressions, and mixed numbers as decimals
 - solving real-world problems involving fractions and mixed numbers
-

Activity

This activity will give your child a chance to verbalize what he or she has learned about fractions. Show your child any two fractions, for example, $\frac{3}{4}$ and $\frac{4}{5}$.

- Ask your child to compare the two fractions to find which one is greater.
- Explore with your child whether it is easier to compare fractions by:
 - making their denominators equal and then comparing their numerators ($\frac{3}{4} = \frac{15}{20}$ and $\frac{4}{5} = \frac{16}{20}$), or
 - rewriting each fraction as a decimal, and then comparing the decimals ($\frac{3}{4} = 0.75$ and $\frac{4}{5} = 0.80$).

Vocabulary to Practice

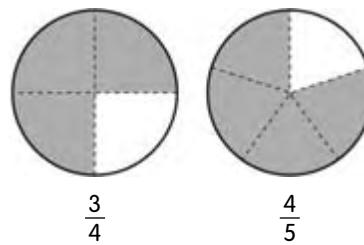
The **least common multiple** is the least number among all the multiples two or more numbers have in common.

The **least common denominator** is the least common multiple of two or more denominators.

Equivalent fractions are fractions that have the same value.

A **division expression**: $6 \div 3$ or $3\overline{)6}$

A **mixed number** is made up of a whole number and a fraction, for example $3\frac{1}{2}$.



Which is greater?

SCHOOL to HOME

Connections

Chapter 4 Multiplying and Dividing Fractions and Mixed Numbers

Dear Family,

In this chapter, your child will learn to multiply and divide fractions and mixed numbers. The work will include:

- multiplying with proper and improper fractions and mixed numbers
- dividing fractions by whole numbers

Here is how we find $\frac{3}{4} \times \frac{8}{9}$.

Step 1: Multiply the numerators, then multiply the denominators.

$$\frac{3}{4} \times \frac{8}{9} = \frac{24}{36}$$

Step 2: Simplify the product.

$$\frac{24}{36} = \frac{2}{3}$$

Vocabulary to Practice

A **common factor** is a number that is a factor of two or more numbers.

A **proper fraction** has a numerator less than its denominator. Its value is less than 1.

An **improper fraction** has a numerator greater than or equal to its denominator.

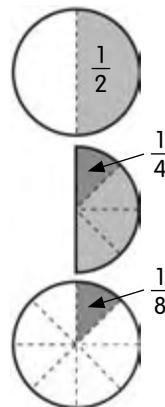
A **mixed number** is made up of a whole number and a fraction.

$\frac{1}{5}$ is the **reciprocal** of $\frac{5}{1}$ or 5.

Activity

The following activity will encourage your child to express the concept behind multiplying fractions in his or her own words. Give your child a circular piece of paper and markers.

- Ask him or her to shade half the circle yellow. Then ask your child to shade $\frac{1}{4}$ of the yellow part in red.
- Now, ask your child to find the product of $\frac{1}{2}$ and $\frac{1}{4}$.
- Help your child see that the portion shaded red on the circular piece of paper is $\frac{1}{8}$ of the total circle because it is $\frac{1}{2} \times \frac{1}{4}$ of the circle.



SCHOOL HOME Connections

Chapter 5 Algebra

Dear Family,

In this chapter, your child will be introduced to algebra.

Some of the skills your child will practice are:

- recognizing, writing, evaluating, and simplifying algebraic expressions
 - solving simple equations
 - solving real-world problems involving algebraic expressions

Activity

Algebra uses symbols to make statements about things rather than using words.

In algebra, we often use letters to represent numbers.

Here, a will represent the number of apples and b will represent the number of bananas.

Show your child the following statement.

Walt buys a apples at 20 cents each, and b bananas at 30 cents each.

- Ask your child to study the statement carefully and explain what each of these expressions represent:

(g) $a + b$

(b) 20g

(c) 30b

(d) $20a + 30b$

Answers:

- (a) total number of apples and bananas
 - (b) cost of apples
 - (c) cost of bananas
 - (d) total cost of apples and bananas

Vocabulary to Practice

A **numeric expression** is an expression that contains only numbers and symbols.

An **algebraic expression** is an expression that contains at least one variable.

A **variable** is a symbol, such as a letter, representing an unknown number in an algebraic expression.

To **solve** an equation means to find the value of the variable.



SCHOOL to HOME Connections

Chapter 6 Area of a Triangle

Dear Family,

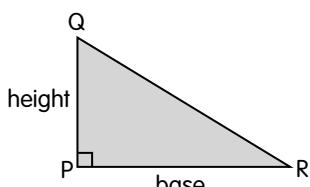
In this chapter, your child will learn to calculate the area of a triangle from its base and height.

Activity

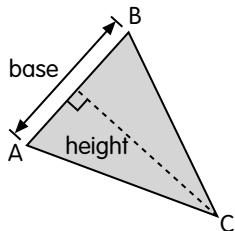
Triangles are fundamental to the study of geometry. One key aspect of studying triangles involves understanding the relationship between the base and the height. Cut out triangles of different shapes and sizes from a sheet of paper.

- Ask your child to identify examples of acute triangles, right triangles, and obtuse triangles.
- For each example, have your child point out the vertices, sides, base, and height of the triangle.

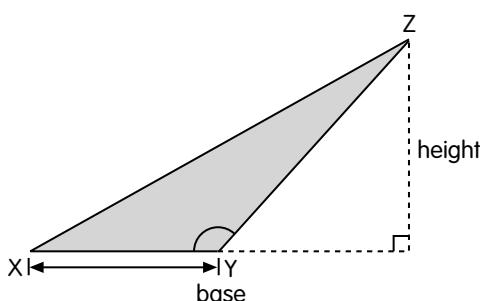
Right triangle:



Acute triangle:



Obtuse triangle:



Vocabulary to Practice

An **angle** is formed by two rays with the same endpoint.

The **vertex of a triangle** is a point on the triangle where two sides meet to form an angle.

The **base** of a triangle is the face on which it lies.

Perpendicular lines are lines that form right angles.

The **height** of a triangle is the perpendicular distance from the base to the opposite vertex.

Area is the amount of surface covered.

A **right triangle** has a right angle.

An **acute triangle** is a triangle with every angle measuring less than 90°.

An **obtuse triangle** is one with one angle measuring greater than 90°.

SCHOOL HOME Connections

Chapter 7 Ratio

Dear Family,

In this chapter, your child will learn to compare numbers using ratios. Some of the skills your child will practice are:

- reading and writing ratios, and using part-whole models to show ratios
 - finding equivalent ratios
 - writing ratios in fraction form
 - solving real-world problems involving ratios and fractions

Activity

Ratios have many everyday applications. For example, you might find that in a class, there is 1 teacher for every 30 students. This can be expressed as, 'The ratio of teachers to students in a class is 1 : 30.' A ratio might be printed on a map to show the scale of the map. Search with your child for a map on which the scale is expressed in ratio form, for example, 1 in. : 100 mi.

- Discuss with your child what the ratio represents.
(Hint: 1 inch on the map represents 100 miles in actual distance.)
 - Work with him or her to calculate the actual distance between two points on the map.

Vocabulary to Practice

Ratio is a comparison of two numbers or quantities by division.

A **term** of a ratio is any of the numbers that make up the ratio.

Equivalent ratios show the same comparisons of numbers or quantities.

Greatest common factor is the greatest number among all the common factors of a set of two or more numbers.

The **simplest form of a fraction** is the form where the numerator and denominator have only 1 as a common factor.

The **simplest form of a ratio** is the form where its terms have only 1 as a common factor.



SCHOOL HOME

Connections

Chapter Decimals

Dear Family,

In this chapter, your child will learn more about decimals.

Some of the skills your child will practice are:

- representing and interpreting thousandths in models or in place-value charts
 - comparing and ordering decimals to 3 decimal places
 - rounding decimals to the nearest hundredth
 - rewriting decimals as fractions and mixed numbers
-

Activity

Decimals with three or more digits after the decimal point are generally used in scientific contexts, especially when there is a need for high levels of accuracy. Use this activity to help your child strengthen his or her fundamental understanding of decimal concepts.

Show your child these number lines.

- Ask your child to write the correct decimals in the boxes for each number line. (1st number line: 2.31, 2.32, 2.33, 2.34, 2.35, 2.36, 2.37, 2.38, 2.39; 2nd number line: 2.301, 2.302, 2.303, 2.304, 2.305, 2.306, 2.307, 2.308, 2.309)
- Have your child use a place-value chart to explain which decimal is greater, 2.302 or 2.34. Now, have your child use the two number lines above to explain to you why 2.34 is greater than 2.302. (2.34 is greater because it lies to the right of 2.302.)

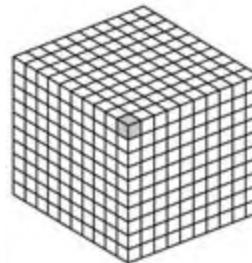
Vocabulary to Practice

0.05 is a **decimal**.

↑
decimal point

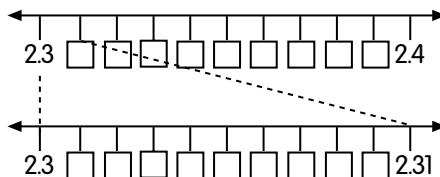
1 **thousandth** = 0.001

0.001 is **equivalent** to $\frac{1}{1000}$.



4.56 is **greater than** 4.132.

7.851 is **less than** 7.962.



SCHOOL HOME

Connections

Chapter 9 Multiplying and Dividing Decimals

Dear Family,

In this chapter, your child will learn to multiply and divide decimals. The work will include:

- multiplying and dividing decimals by 1-digit whole numbers
 - using patterns to multiply and divide decimals by multiples of 10, 100, and 1,000
 - estimating decimal sums, differences, products, and quotients
-

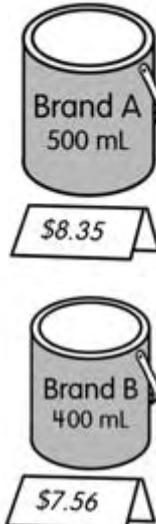
Vocabulary to Practice

Price **per unit** of an item means the price of one unit of the item.

Activity

Multiplying and dividing decimals is a skill that applies to everyday situations. For example, ask your child to imagine that you want to paint his or her room. Brand A of paint costs \$8.35 per can of 500 mL and Brand B costs \$7.56 per can of 400 mL.

- Ask your child which brand of paint is cheaper. (Answer: Find the cost per 100 ml of each brand. Brand A: $8.35 \div 5 = 1.67$, Brand B: $7.56 \div 4 = 1.89$. Brand A is cheaper.)
- Now, ask your child to calculate the cost of buying 4.5 liters of the cheaper brand. (Answer: $4.5 \text{ L} = 4,500 \text{ mL}$, $4500 \div 500 = 9$. To buy 4.5 liters of paint, you have to buy 9 cans. Cost of 9 cans of Brand A = $8.35 \times 9 = \$75.15$)
- Have your child check the answer using estimation. (Answer: Round 8.35 to 8. $8 \times 9 = 72$. So, the answer is reasonable.)



SCHOOL HOME

Connections

Chapter Percent

Dear Family,

In this chapter, your child will learn about percent.

Some of the skills your child will practice are:

- relating and comparing percents, decimals, and fractions
 - expressing fractions as percents
 - finding the number represented by a fraction
 - solving real-world problems
-

Activity

Percent is a way of expressing a part of a whole, and is commonly used to express interest rates, sales tax, discount rates, and so on. Encourage your child to look out for these instances. Help him or her to appreciate the importance of calculating with percents using real-world scenarios. For example,

- Your family has a meal for \$35 at a pizza restaurant and you want to tip 15% of the bill. Let your child calculate the amount to tip.
- Show your child a few receipts from your shopping trips and let him or her calculate how much you would have saved if all the items were tax-free.
- If the regular price of a book is \$15, and there is a 10% discount on it, what would you pay for the book?

Vocabulary to Practice

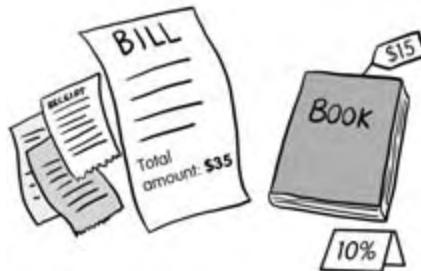
Percent means ‘out of 100’. The symbol for percent is %.

$$75\% = \frac{75}{100} = 0.75$$

Sales tax is the tax to pay upon buying a product.

A **discount** is the difference between the regular price and the reduced selling price. It is the amount you save.

Interest is the amount that a bank pays you for depositing your money with them.



SCHOOL HOME

Connections

Chapter Graphs and Probability

Dear Family,

During this chapter, your child will learn about graphs and probability. The work will include:

- making and interpreting double bar graphs
 - graphing equations
 - drawing tree diagrams to show all possible combinations
 - using multiplication to find the number of combinations
 - comparing the experimental probability and theoretical probability of events
-

Activity

Children use the idea of combinations and probability in everyday situations long before they formally learn these concepts.

Encourage your child to look out for instances where combinations are used. Work out this problem with your child to practice skills learned in combination and probability.

- Jack and Karen play a game in which each of them first rolls a regular die and then picks a marble from a bag. The bag has 1 red marble and 1 blue marble.
- Find the total number of combinations of outcomes in this game. ($6 \times 2 = 12$)
- Draw a tree diagram to show all the possible combinations.
- The person who rolls the number 6 and picks a red marble is the winner. What is the probability of winning the game on any given turn. ($\frac{1}{12}$)

Vocabulary to Practice

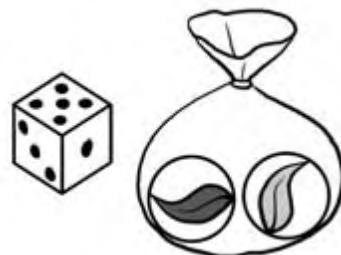
Combinations refer to the grouping of items or events. Placing these items or events in a different order does not create a new combination.

A **tree diagram** shows all possible combinations of outcomes of an event.

A **favorable outcome** is a desired result.

Probability

$$= \frac{\text{Number of favorable outcomes}}{\text{Number of possible outcomes}}$$



SCHOOL Connections

Chapter 12 Angles

Dear Family,

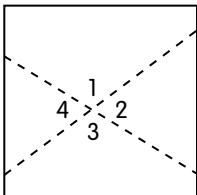
In this chapter, your child will learn to find unknown angle measures using fundamental angle properties such as:

- the sum of angle measures on a line is 180°
 - the sum of angle measures around a point is 360°
 - vertical angles have equal measures
-

Activity

It is important for children to understand and apply various properties to find unknown angle measures as they will use these extensively in their study of geometry and trigonometry. Use this activity to explore some angle properties. You will need a sheet of paper without any folds and a protractor.

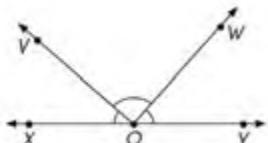
- Fold the sheet of paper into two. Unfold it, and fold a second time to cross over the first fold.



- Ask your child what the sum of angles 1 and 4 is and to explain his or her reasoning. (180° , since they are angles on a line).
- Have your child verify this by measuring each angle with a protractor.
- Have your child list all the pairs of angles whose sum is 180° . (Angles 1 and 4, 4 and 3, 3 and 2, 2 and 1)
- Now, cut the paper to see if angle 1 can be made to fit over angle 3.
- Challenge your child to repeat and try to find vertical angles that do not fit over each other. (He or she will find that vertical angles always have equal measures.)

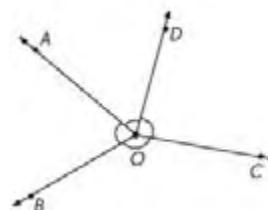
Vocabulary to Practice

Angles on a line: The sum of angle measures on a line is 180° .



$$m\angle XOV + m\angle VOW + m\angle WOY = 180^\circ$$

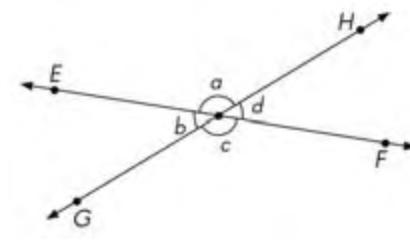
Angles at a point: The sum of angle measures at a point is 360° .



$$m\angle AOD + m\angle DOC + m\angle COB + m\angle AOB = 360^\circ$$

Intersecting lines are lines that meet or cross.

Vertical angles are the congruent angles formed when two lines intersect.



SCHOOL HOME

Connections

Chapter Properties of Triangles and Four-Sided Figures

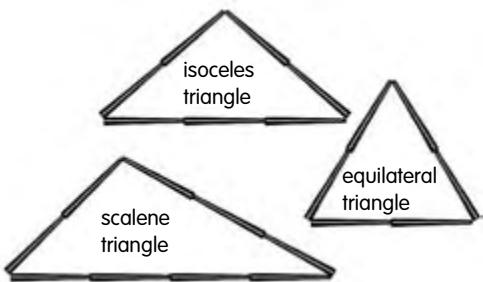
Dear Family,

In this chapter, your child will learn some basic properties of triangles and four-sided figures and use them to find the measures of unknown angles and side lengths.

Activity

Classifying triangles according to the length of their sides and applying the properties of these triangles is fundamental to the study of geometry. For this activity, give your child a set of toothpicks.

- Ask your child to make a triangle by arranging any number of toothpicks end-to-end.
(Answer: Sides may be made from 3, 3, and 4 toothpicks or 1, 1, and 2 toothpicks, and so on.)
- Have your child make 5 such triangles. Ask your child to identify each triangle as scalene, isosceles, or equilateral. For example, a triangle with sides made of 3, 4, and 5 toothpicks is scalene, while a triangle with sides made of 3, 3, and 3 toothpicks is equilateral.
- Check with your child that each triangle made satisfies the property that the sum of the lengths of any two sides of a triangle is always greater than the length of the third side.



Vocabulary to Practice

An **equilateral triangle** is one in which all the sides are of equal length.

An **isosceles triangle** is one in which two sides are of equal length.

A **scalene triangle** is one in which all the sides have different lengths.

Some properties of triangles:
The sum of the three angle measures in any triangle is 180° .

In an isosceles triangle, the measures of the angles opposite the equal sides are equal.

Each angle in an equilateral triangle measures 60° .

The sum of the lengths of any two sides of a triangle is always greater than the length of the third side.

SCHOOL to HOME

Connections

Chapter 14 Three-Dimensional Shapes

Dear Family,

In this chapter, your child will study three-dimensional shapes. Some of the skills your child will practice are:

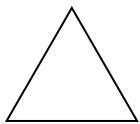
- identifying and classifying prisms, pyramids, cylinders, spheres, and cones
 - identifying the solid figure that can be formed from a net
-

Activity

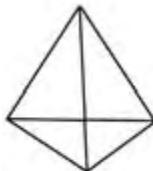
Understanding three-dimensional geometry and the properties of various solid shapes helps make sense of the three-dimensional world we live in. Do the following activity to enhance your child's visualization skills and understanding of three-dimensional shapes.

- Trace base shapes such as triangles, squares, and rectangles on a sheet of paper.
- For each shape, ask your child to draw the corresponding prisms and pyramids.

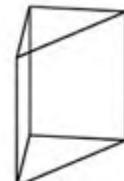
Example: Base shape



Triangular Pyramid



Triangular Prism



Vocabulary to Practice

A **prism** is a solid figure with two parallel congruent bases joined by rectangular faces.

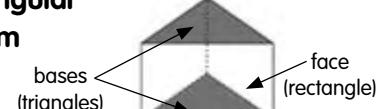
A **pyramid** has one base that can be any polygon. All the other faces are triangles arising from each side of the base, and the triangles share a common vertex.

Prisms and pyramids are named according to the shape of their base.

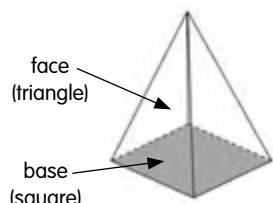
Rectangular prism



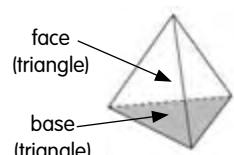
Triangular prism



Square pyramid



Triangular pyramid



SCHOOL HOME

Connections

Chapter 15 Surface Area and Volume

Dear Family,

In this chapter, your child will explore cubes and rectangular prisms and find their volume and surface area.

Some of the skills your child will practice are:

- drawing cubes and rectangular prisms on dot paper
 - finding the surface area of a prism by adding the area of each face
 - finding and comparing volumes of cubes, rectangular prisms and other solids constructed from unit cubes
 - using a formula to find the volume of a rectangular prism
-

Activity

Finding the surface area and volume of three-dimensional shapes is useful in many everyday situations. For example, finding the volume of water needed to fill an aquarium, or calculating the minimum amount of paper needed to wrap a gift.

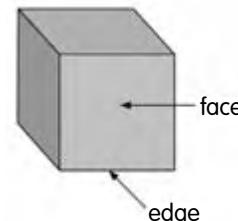
Use this activity to strengthen your child's understanding of fundamental concepts relating to surface area and volume. Use two erasers or blocks of cheese of the same size.

Cut one of them into 4 sections of equal size. Ask your child:

- Is the sum of the volumes of the 4 pieces equal to the volume of the big one? (Yes)
- Is the sum of the surface areas of the 4 pieces equal to the surface area of the big one? (No, the sum of the surface areas of the small pieces is greater than the surface area of the big one because there are extra end sections.)

Vocabulary to Practice

Cube

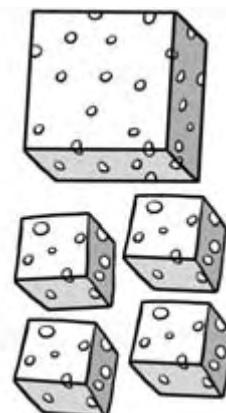


Rectangular prism



Surface area is the total area of the faces (including bases) and curved surfaces of a solid figure.

The **volume** of an object is the amount of space it occupies.



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:

- | | | |
|---|---|--|
| <ul style="list-style-type: none">• Critical thinking• Innovative thinking• Problem solving• Design thinking | <ul style="list-style-type: none">• Social responsibility• Productivity• Leadership• Collaboration | <ul style="list-style-type: none">• 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			
Topics	Deep Drives	Objectives	Time Frame
LEGO NXT Basics - Movements & turns	Components Names, Logical Connections, SPA	Understanding the basic fundamentals of LEGO components and programming	SEM-I
Finding the way out	Threshold value, Sonar, reflected wave, time to speed conversion	Creating a new robot to find a way in simple wall maze created by Lego boxes. Students will understand how program a robot based on calibrated value of ultrasonic sensor.	
Be loud enough	Sound Sensor, Vibration, Frequency, Amplitude	Creation of sound operated robot helps the students to understand how the various sounds are sensed by the sensor and based on that value how to control the robot movement.	
Maze Solver	Light Sensor, Light intensity, Threshold, Calibration	Creating a new robot to solve a line maze with the help of Light sensor.	
Getting Starting with Arduino	pin configuration, Compiler, Syntax and basic programming, Motor Driver and power Supply.	Introduction to the Arduino based robotics platform.	SEM-II
ARDUINO Basic movements	DC motor, Polarity, Types of Turns	Build the first robot in Arduino platform and Write a program to perform the basic movements in Arduino Robot	
Speed control using PWM	Pulse, Width of the Pulse, Modulation Techniques, Speed variation	Control the robot speed using Pulse width modulation algorithm and the pwm Programming block	
Obstacle Avoider using IR	IR Light, Light intensity, Threshold, Calibration, Object Detection	Build an obstacle avoider robot using IR sensor to understand how the object is getting detected by the real world motion sensor.	

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.

APPLIED SCIENCE -SPARK

Traditional spark lab activities employ sensors and interfaces to collect and display real-time data in order to understand an idea or phenomenon, such as a technological inquiry process. The upgraded spark activities for the academic year allows the students to build sensor devices using microcontrollers to understand how digital sensors can measure physical data like as sound, light, and temperature. Students can learn about calibration and how physical data can be measured in terms of current or voltage while writing the program to represent the data.

The students engaged in inquiry based learning are taken through a series of stages so that target knowledge and skills are assimilated by the students gradually but systematically:

- Establishing the foundation by Cooperative learning.
- Forming students' team with assigned roles for each member.
- Fostering inquiry skills to plan , organize , self assess learning and presentation strategies.

Importance of SPARK:-

- Students acquire procedure-oriented critical thinking by preparing apparatus and calibrating sensors to measure a physical parameter.
- Experiment with technology to better understand major academic concepts by recording data for further research.
- The ability to record physical parameter data aids the function of technology and automation in everyday life.
- Students develop logical thinking and decision-making skills by controlling actuators based on sensor data.
- Provides students with many opportunities to engage with equipment, analyze data, communicate, and discuss conclusions.
- The sensors and equipment utilized in the spark lab provide students with real-time experience with technology that is widespread in our daily lives.
- The sensors and equipment utilized in the spark lab provide students with real-time experience with technology that is widespread in our daily lives.

Learning Outcomes:

- Students will be able to use OR and AND concept in digital circuits to demonstrate the concept of NOR and NAND circuits.
- Students will be able to control a LED with the help of a circuit that detects sound
- Students will be able to learn the basics of Arduino and implement speed control techniques in Arduino using Pulse Width Modulation.
- Students will be able to understand how the digital devices reads the physical data and convert it into electrical signals.
- Students will be able to design and build a circuit in Arduino to understand the working of manual voltage regulator.
- Students will be able to build a security system using IR sensor
- Students will be able to develop critical thinking skills- posing good questions, developing experimental strategies, finding and fixing operational errors.
- Students will be able to develop analytical skills-graphing modeling statics.

Exp. No	Topics	Deep Drives	Objectives	Time Frame
1	Logic Gates	AND, OR, NAND, NOR, NOT, Truth Table	To introduce OR concept of electronic wiring, AND concept in digital circuit and to demonstrate the concept of a NOR circuit and NAND circuit.	SEM -I
2	Sound Detector - Voice Controlled Diode	Sound, Vibrations, Amplitude, Frequency, Intensity	To build a circuit that uses your voice to control a light emitting diode	
3	Get Set Go Arduino - LED Blink	Arduino hardware, Pin Configuration, IDE, Embedded C	To learn the basics of Arduino and to create their first program in Arduino IDE and learn	
4	Pulse Width Modulation - LED Brightness Control	Pulse, Width & Amplitude, Average Power, Analog Applications	About compiling, transferring the program to board.	
5	Reading Environment - Light (Automatic Street Light)	Light, Light Intensity, Light Dependent Resistor, Analog Read	Write the code to implement speed control techniques in Arduino using Pulse Width Modulation.	SEM -II
6	Reading Environment - Sound (LED ON on Clapping)	Microphone, Vibrations, Electromagnetic Induction, Sound to Electrical Signals.	To understand how the digital devices reads the physical data and convert it into electrical signals.	
7	Voltage Regulator using Arduino (LED / Motor)	Resistance, Variable Resistor, Potentiometer, Wiper, Analog Read.	Design and build a circuit in Arduino to understand the working of manual voltage regulator.	
8	Security System - Buzzer with IR	Piezo, Inverse Piezo Electric Effect, Electrical Signal to Sound, IR Sensor, Object Detection.	Design and build a circuit in Arduino to understand the working of manual voltage regulator.	

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 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) Parachute Area Versus Drop Time	Students will be able to study parachute area and its relationship to drop time.	
	c) Newton Car version 2.0	Students will be able to test a sling shot like device that throws a mass causing the car to move in the opposite direction.	
	d) Design a Landing Pod	Students will be able to design and build a Landing Pod for the model payload that was built in the previous session.	
2	e) Design Squad Challenge: Aqua-Rocketry (three Stage) with safe landing system	Students will be able to design and build a water bottle rocket that flies straight and in the desired direction.	SEM – II
	f) Testing: Aqua-Rocketry (three 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: Graphic Designing skills, Database Management, Block - based Coding, Programming skills.

Learning Outcome:

Students should be able to:

- understand the Graphic Designing Tools to design on their own
- understand and work with Database Management System
- build apps in block-based coding, understand how ML systems are trained, used and some of the real-world implications of AI applications
- Design a web page

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 creating graphic designs, working with database, building apps and designing a web page.

Module	Objective	Focus	Integration	Software Applications	Technical skills	Time Frame
Web Designing	Students learn more about Internet, create a web page using basic HTML programming, expression web and use formatting Techniques to design a web page	Introduction to HTML	Science	Web Browser, Notepad Expression Web	Programming	SEM 1
		Tags				
		Table				
		Formatting				
		Lists				
		Frames				
Building Apps	Students design and build various applications by using blocks/text with their computational thinking.	Introduction	Arts, Social Studies	AppLab	Block-Based Coding	
		Design Mode				
		Elements - its properties & Events				
		Code Toolbox				
		The Project				
		About MS Access				
Database	Students design a Table, add fields and Records, create queries and modify using Formatting Tools and sort the Data	Navigation Keys	Math, Science	Microsoft Access	Database Management System	
		Formatting techniques				
		Tables				
		Queries				
		Text / Face recognition	Science, Arts	Machine Learning for Kids / Canva	AI & Block Based Programming / Graphic Design	SEM 2
		Sound recognition				
Machine Learning & Creative Designing	Students will learn to train the computer to recognize face, text and voice using the Machine Learning for kids' and some of the real world implications of AI applications and also use a design tool for practicing their design thinking to create graphic designs.	Image classification				
		Number detection				
		Poster Making				
		Video Editing & Presentation				

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 body and the variety of ways in which they are able to use their body 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, emotionally as well as physically. They learn to understand and accept their own strengths and weaknesses in Physical fitness sessions.

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 range 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 in which exercise affects their body 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 them when participating in physical activities
- use cooperative behaviours in order to function as part of a group or team
- use proper safety precautions while engaged in physical activities

Annual Curriculum Overview – PHYSICAL EDUCATION		
Discipline	Game	Skills
Physical Education	Cricket	Batting
		Bowling
		Fielding
	Swimming	Breaststroke
		Backstroke
		Butterfly
		Freestyle
	Track	Sprint
		Hurdles
		Relay
	Basketball	Dribbling
		Passing
		Shooting

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, provoke 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 inquiry, through the 'Reader's Theatre'.

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 an art form 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	Including different ragas	Neck, Eye, Eyebrows, Head movements with description	Basic postures	Basic warm ups
	Pitches		Step along with the body movement	Basic foot works
	Practicing different tempos		Navarasam (Basics)	Combination of foot work and beat knowledge
	Different types of thalam		Different types of classical dance	Basic flexibility exercises
	Short songs		Advanced combination of steps (Korvai adavu)	Free style combination of steps

* The above is the planned schedule. There may be alterations which will be informed through circulars.