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

Communication with teachers

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

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

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

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

Enhanced PYP

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

Agency and the learning community

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

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

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

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

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

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

PYP Curriculum Model

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

Transdisciplinary Themes

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

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

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

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

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

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

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

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

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

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

Concepts:

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

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

Key Concepts

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

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

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

Thinking skills

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

Research skills:

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

Communication skills

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

Social skills

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

Self-management skills

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

IB Learner Profile Attributes:

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

IB learners strive to be:

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

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

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

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

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

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

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

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

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

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

SLC Overview

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

Schedule of SLCs & PTMs:

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

SLC Format:

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

SLC Overview – (1 & 2):

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

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

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

Essential conditions for SLC:

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

Expectations from the Parents:

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

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

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

Both parents and teachers are integral in ensuring student success.

Project-based learning

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

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

Based on the PBL units,

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

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

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

Parent Teacher Meeting

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

Management Review Meetings:

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

5 Initiatives 2022-23

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

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

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

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

a) The ICT-AI-Coding curriculum has been updated to include coding, app development, web development, and machine learning principles. The key advantages of this curriculum are that it successfully and practically teaches elementary students complex modern-day technologies through hands-on activities.

b) The STEM curriculum based Rocket laboratory to include all the components necessary to design and build model rocket including nose cones, body tubes, adapter cones and rocket motors. The lab will be equipped with remote ignition system and launcher apparatus. The best feature of the lab is the Propulsion Test Stand. This test lets the students measure various metrics of the rocket motor like total impulse and burn time, which is captured on a computer rig to receive data. This data is further used by the students to design rockets with predictable performance along with designing and launching Satellites.

c) 75 Student Satellite Mission- In the 75th year of Indian Independence, the nation is embarking on the launch of 75 student developed satellites. TIPS takes immense pride in being the first school to take part in this incredible project. This unique collaboration platform will provide our learners the distinctive opportunity to design and structure Cubesats under the guidance of the eminent scientists from ITCA and ISRO. The students who enroll for the 75 Students' Satellite Mission will be able to leverage the end-to-end lifecycle expertise including design, development, manufacture, integration, testing, launch services facilitation and satellite operation, thereby using a high-performance Space-Tech ecosystem at TIPS.

2. **Enhancements of offerings for AY 2022-23:**

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

a. **Online Third Language Learning :** In addition to meeting the needs of future students, **Mother Tongue and Foreign - language learning and acquisition** will be introduced from Grade I-V for AY 2022-23. Children can choose to learn the language of their choice for basic speaking, reading and writing every Saturday from the comfort of home in online classes. The language offered are as follows:

   National Languages: Tamil/ Kannada/ Telugu/ Malayalam/ Hindi

   Foreign Language: French/ Spanish/ German

b. **Virtual PTMs:** Parent teacher meetings are a prominent and notable feature of the school curriculum. Post COVID digital interaction is the need of the hour. The PTMs will be available from KG to 12 in both the modes (Physical meeting / Online Meeting) for all the parents as per their availability throughout the year.

c. **More to Extended School Program (ESP):** The ESP **program** will strive to provide Creative Arts along with various areas of Performing Arts & Sports already offered by us. This is offered to meet the needs of children and further enhance their skills in creative areas too.

d. **IXCEED Program:** IXCEED Program is being introduced from Grade I-VIII, to make children independent and confident in basic and core mathematical concepts and topics by giving level based additional practice worksheets. Children will be

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

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

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

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

4. **Moral and Social Responsibility**

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

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

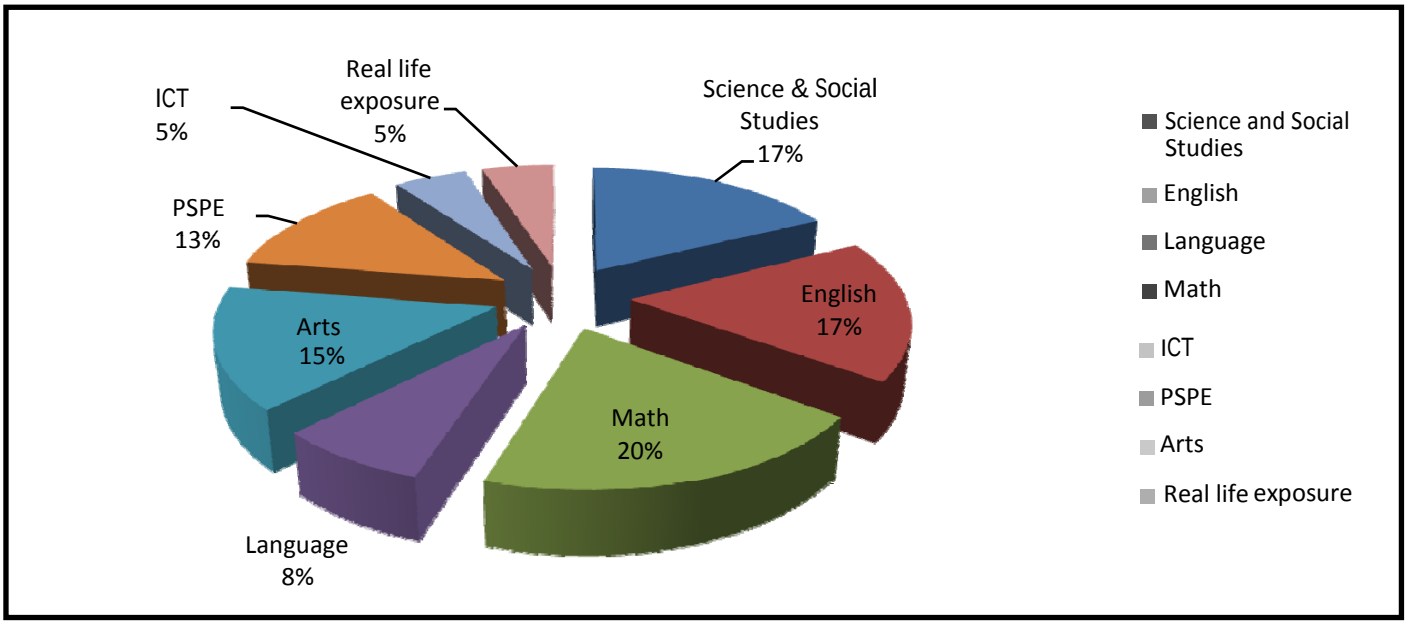
5. **TIPS Media Centre – An Initiative by the TIPS Students**

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

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

Grade – II

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 II children will be inquiring into the following Transdisciplinary themes

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

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

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

Central idea

People can make choices to support the sustainability of earth's resources

Key Concepts

- Change
- Perspective
- Responsibility

Related Concepts

- Lifestyle
- Resource
- Sustainability

Lines of inquiry

- Limited nature of Earth's resources
- Using different ways to reduce waste (3 R's of waste management)
- Responsible use of Earth's resources

Subject focus –Social Studies, Science, Math, PSPE and Language

Strands

- Social Studies : Resources and Environment
- Science : Earth and Space
- Math : Data Handling
- PSPE : Interactions
- Language : Written Language - Writing

The learning outcomes – After the inquiry the students will be able to:

- understand that certain resources are limited.
- raise awareness about litter and waste and its effect on the local environment.
- promote and improve waste management in schools and homes.
- acquire skills for identifying environmental problems and implement actions to save environment.

Expected Trans-disciplinary skills while inquiring into this theme

- Social skills
- Self-management skills
- Research skills

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

- Principled
- Risk taker
- Caring

Students have an access to the following resources during this inquiry

- Recycling Earth resources - Barbara Webb
- The water cycle - Maddie Spalding
- Our Renewable Earth - Andrea Rivera
- Our Resources - William B .Rice
- Our Natural Resources - Jennifer Prior
- How I Reduce, Reuse and Recycle - Robin Nelson
- Caring for our World - Lousie Spilsbury

Key Vocabulary

- earth
- natural
- environment
- conservation
- limited
- reduce
- recycle
- resources
- sustain
- fossil fuel
- choice
- reuse
- process
- renewable
- waste management

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

People use various ways to navigate and explore the world

Key Concepts

- Function
- Connection
- Perspective

Related Concepts

- Structure
- Communication
- Network

Lines of inquiry

- Various maps for various purposes
- Essential navigation skills
- Ways to explore the world

Subject focus –Social Studies, Science, Math and Language

Strands

- Social Studies : Human Systems and Economic Activities
- Math : Shape and Space
- Language : Visual Language – Viewing and Presenting

The learning outcomes – After the inquiry the students will be able to:

- describe different types of maps and its uses.
- understand the elements of a map (Keys and symbols, cardinal direction, latitude, longitude etc.)which help them to create a map that include navigation skills.
- demonstrate the use of modern technology(GPS, Satellite etc.) in everyday life.

Expected Trans-disciplinary skills while inquiring into this theme

- Thinking skills
- Communication skills
- Research skills

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

- Communicator
- Inquirer
- Thinker

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

- Map Search - Daniel Shepard
- Mapping your Community - Marta Segal Block &Daniel R. Block
- Map and Mapping - Deborah Chancellor
- Drawing Maps - Kate Torpie
- Map Parts - Kate Torpie
- Map Types - Crabtree Publishing company
- How to Read a map - Lisa M Bolt Simons

Key Vocabulary

- navigate
- location
- satellite
- latitudes
- direction
- longitudes
- equator
- discover
- continents
- legend
- political
- resources
- countries
- grid
- physical

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

Exploring the solar system gives us a sense of wonder and perspective

Key Concepts

- Form
- Causation
- Connection

Related Concepts

- Structure
- Consequences
- Interdependence

Lines of inquiry

- Structure of solar system
- Exploration of solar system
- Relationship and uniqueness of earth from other planets

Subject focus –Science, Math and Language

Strands

- Science : Earth and Space
- Math : Measurement
- Language : Written Language - Writing

The learning outcomes – After the inquiry the students will be able to:

- understand the structure and components of solar system.
- identify the position of planets.
- appreciate the uniqueness of earth.

Expected Trans-disciplinary skills while inquiring into this theme

- Thinking skills
- Research skills
- Communication skills

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

- Knowledgeable
- Reflective
- Caring

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

- The Solar System - David Dreir
- Mission to Mars - Rhonda Lucas Donald
- Comets - Rhonda Lucas Donald
- The Asteroid Belt - Rhonda Lucas Donald
- Galileo's Moons - Rhonda Lucas Donald
- The Outer Solar System - Rhonda Lucas Donald

Possible Hands on activities

- Experiment- Orbital Path

Key Vocabulary

- Solar system
- Mars
- Neptune
- Galaxy
- Venus
- planets
- rotation
- Uranus
- Mercury
- Jupiter
- evolves
- revolution
- Star
- Universe
- Saturn

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

Sound as a kind of energy to understand the world around us

Key Concepts

- Function
- Form
- Responsibility

Related Concepts

- Pattern
- Properties
- Initiative

Lines of inquiry

- Sounds around us
- Characteristics of sound
- Impact of noise pollution on environment

Subject focus –Science, Arts and Language

Strands

- Science : Force and Energy
- Arts : Responding, Creating
- Language : Oral Language – Listening and Speaking, Written Language - Reading

The learning outcomes – After the inquiry the students will be able to:

- understand that sound is a form of energy that travels in waves.
- understand the properties of sound.
- investigate how our ears convert sound into signals that are sent to the brain.
- propose possible solution to the problem of noise pollution.

Expected Trans-disciplinary skills while inquiring into this theme

- Thinking skills
- Research skills
- Self Management skills

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

- Knowledgeable
- Inquirer
- Caring

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

- Sound - Robert N. Knight
- Making Music - Cynthia Kennedy Henzel
- Animal Sounds - Cynthia Kennedy Henzel
- Shhh! - Cynthia Kennedy Henzel
- Animal Ears - Cynthia Kennedy Henzel
- Seeing Sound - Cynthia Kennedy Henzel
- Drums - Edward Zrudlo

Possible Hands on activities

- Project-Identify Objects by sound
- Experiment – String Telephones
- Exploration – Water Music with Soda Bottles

Key Vocabulary

- cochlea
- compress
- decibel
- eardrum
- frequency
- particle
- echolocation
- sonic boom
- vibrate
- crest
- communicate
- volume
- nerve
- pitch
- trough

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

Homes reflect personal identity and local culture

Key Concepts

- Function
- Connection
- Causation

Related Concepts

- Role
- Identity
- Dependence

Lines of inquiry

- Importance of home
- Different types of homes
- Circumstances that determine where people live

Subject focus –Social Studies, Math, Arts and PSPE

Strands

- Social Studies : Social Organization and culture
- Math : Shape and Space
- Arts : Creating
- PSPE : Identity

The learning outcomes – After the inquiry the students will be able to:

- understand and express the importance of home.
- research and compare homes in different cultures.
- identify factors that influence where people live.
- present the type of home that reflects who he or she is.

Expected Trans-disciplinary skills while inquiring into this theme

- Social skills
- Research skills
- Communication skills

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

- Balanced
- Open minded
- Principled

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

- Homes around the world - Margaret Hall
- My House - Edward Zrudlo
- My Home - Rukmini Banerji
- Skyscrapers - Chris Oxlade
- The Story of House - Benita Sen
- Home Sweet Home - Shoo Rayner
- Homes on Wheels - Heather Hammonds

Key Vocabulary

- family
- responsibility
- comfortable
- shelter
- identity
- health
- igloo
- climate
- safely
- freedom
- protection
- apartment
- materials
- tradition
- impact

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

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

Central idea

Imagination allows people to create, express and explore

Key Concepts

- Change
- Perspective
- Causation

Related Concepts

- Communication
- Opinion
- Impact

Lines of inquiry

- Different ways we use our imagination
- Imagination helps us to consider other perspectives and solve problems
- Value of imagination

Subject focus –Science, Language and Arts

Strands

- Science : Living things, Earth and Space
- Language : Visual Language – Viewing and Presenting
- Arts : Creating, Responding

The learning outcomes – After the inquiry the students will be able to:

- express imagination in a creative way.
- analyze the problem and give possible solutions through imagination.
- express and understand how imagination help in creative invention of thoughts.

Expected Trans-disciplinary skills while inquiring into this theme

- Self-management skills
- Thinking skills
- Research skills

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

- Open minded
- Risk taker
- Reflective

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

- Inventions and Inventors - Darren Sechrist
- Weird at True facts about Inventions - Arnold Ringstad
- The little match girl - Hans Christian Andersen
- The Perfect Present - Marcia Vaughan
- Monster Machines Spacecraft - David Jefferis

Key Vocabulary

- express
- creativity
- imagination
- invention
- discovery
- perspective
- emotions
- fantasy
- character
- recognize
- explore
- reality
- problem
- consequences
- scientific

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

ANNUAL CURRICULUM OVERVIEW- ENGLISH			
Discipline	**Objectives**		**Time Frame**
ENGLISH	**Reading Comprehension**	Reading Readiness	Week 1- 2
		Analyze Character	Week 3 - 5
		Author's Purpose (Entertain)	Week 6 - 8
		Author's Purpose (Inform)	Week 9 - 11
		Author's Point of View	Week 12 - 14
		Cause and Effect	Week 15 - 16
		Identify Character Point of View	Week 17 - 19
		Compare and Contrast	Week 20 - 22
		Fact or Opinion	Week 23 - 24
		Main Idea and Details	Week 25 - 27
		Problem and Solution	Week 28 - 30
		Reality and Fantasy	Week 31 - 33
		Sequence Events	Week 34 - 36
	Spelling	Warming up	Week 1 - 2
		Let's Review	Week 3 - 5
		Blends at the Beginning and End	Week 6 - 7
		Y Can Say / ī /	Week 8
		Two Closed Syllables	Week 9 -10
		Syllable Division Rules 1 and 2	Week 11
		Combining Open and Closed Syllables	Week 12 -13
		Introduce Silent E	Week 14 - 15
		Vowel Consonant - E	Week 16
		C or K for the Sound of /k/	Week 17 - 18
		Spelling the Sounds of / ū / and /z/	Week 19
		Blends with Vowel – Consonant - E	Week 20 - 21
		Plural Vowel – Consonant – E Words	Week 22
		Vowel Team ee	Week 23
		I or O Followed by Two Consonants	Week 24
		The /er/ of Her	Week 25
		The Sound of /ar/	Week 26
		The Sound of /or/	Week 27
		Common Words and the Third Sound of U	Week 28
		Soft C	Week 29
		Soft G	Week 30
		Words Ending in the Sounds of /v/ and / ū /	Week 31 - 32
		The Third Sound of A	Week 33
		Vowel Teams OY and OI	Week 34

ENGLISH	Spelling	Vowel Teams AW and AU	Week 35
		Vowel Teams OW and OU	Week 36
	Writing	Writing Readiness	Week 1 - 2
		How to	Week 3 - 7
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Personal narrative	Week 8 - 12
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Informational Report	Week 13 - 17
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Persuasive pro-con	Week 18 - 20
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Persuasive opinion	Week 21 - 23
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Biography	Week 24 - 26
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Descriptive writing	Week 27 - 30
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Fairy Tale	Week 31 - 33
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	
		Realistic fiction	Week 34 - 36
		Introduction, focused grammar, sample discussion	
		Independent practice	
		Assessment	

ENGLISH	**Language Skills**	Warming up	Week 1 - 2
		Nouns	Week 3
		Common and Proper Nouns	Week 4
		Singular and Plural Nouns	Week 5
		Possessive Nouns	Week 6 - 7
		Pronouns 1	Week 8
		Pronouns 2	Week 9
		Pronouns 3	Week 10
		Action Verbs	Week 11
		Action and Linking Verbs	Week 12 - 13
		Verbs: Present and Past Tense	Week 14
		Adjectives 1	Week 15 - 16
		Adjectives 2	Week 17
		Articles	Week 18 - 19
		Adjectives that Compare	Week 20 - 21
		Prepositions	Week 22 - 23
		Conjunctions	Week 24 -25
		Interjections	Week 26 -27
		Parts of Speech Review-1	Week 28
		Parts of Speech Review-2	Week 29
		Understanding Sentences	Week 30 -31
		Parts of a Sentence1	Week 32
		Parts of a Sentence 2	Week 33
		Kinds of Sentences 1	Week 34
		Kinds of Sentences 2	Week 35
		Sentence Review	Week 36
	Vocabulary Cluster	**Acquisition and Ownership**	
		41, 89	Week 1
		148,171,184	Week 2
		Contractions	
		42,81,85 ,150	Week 3
		235, 274	Week 4
		Emotions and attitudes	
		43,45,55	Week 5
		291,292, 293,311	Week 6
		312,313, 378,379,380,381,416,417	Week 7
		Reasoning and Mental Actions	
		46,67,132,137	Week 8
		154,225,249	Week 9
		277,347,348,349,384	Week 10

ENGLISH	Vocabulary Cluster	**Clothing**	
		47,62,125	Week 11
		129,145,178,212	Week 12
		224, 263, 354	Week 13
		Food and Eating	
		48,51	Week 14
		74,86	Week 15
		124	Week 16
		136, 153	Week 17
		162,174	Week 18
		176,208	Week 19
		222,232,246	Week 20
		Places , land, and Terrain	
		50,114,139	Week 21
		168,267,362,363,398	Week 22
		Literature, Composition, and Writing	
		53,71	Week 23
		112, 138	Week 24
		248,256,279	Week 25
		319, 320	Week 26
		Arts and entertainment	
		54,77,239,244	Week 27
		Categories of People	
		56,94	Week 28
		111,203,204,205	Week 29
		206,227,317,330,343,000,000	Week 30 -31
		Color	
		57,415	Week 32
		Importance and Goodness	
		58,72,243,368	Week 33 - 34
		60,106,121,190,210	Week 35 – 36

Our language programme includes all aspects of English such as:

Reading Comprehension

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

Children will be introduced to a variety of writing formats that can be used for different purposes. These include Biography, Descriptive writing, How to, Informational Report, Narrative – Fairy Tale, Personal Narrative, Realistic Fiction, Persuasive – Opinion, Persuasive – Pro Con. The aim is for pupils to develop confidence as they gain writing and basic spelling skills which encourage independent writing. This ensures that:

- they write for meaning and not just construct their writing around known spellings - writing is therefore more creative and realistic
- that they are actively involved in spelling each new word by using their phonic skills and visual memory, rather than simply memorizing spellings before they have grasped the process involved.

Listening & Speaking

The language of the classroom is English. Our aim is that children will become comfortable speaking English in the classroom and respect all contributions to class discussions by listening appropriately to the other children and adults around them. Developing listening skills is an important feature of our English work. This can be reinforced at home as well.

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 then in one sitting. Allow your child to take time to look at the word, recall the meaning and illustrate. This will help the child identify the word in a text and use the same while writing as well.

Language Skills

Children need Grammar / Structure / Punctuation to master their writing skills. This will be accomplished through the Language skills book which will be dealt with, in the class. They will learn Verb endings, Verbs, *Adjectives, Commas (punctuations), Plural nouns, Pronouns, Adjectives, Synonyms, Subject & predicate, Comparative / superlative similes, Direct / indirect speech, Suffixes and Proper nouns.* They will also have additional grammar practice every day. The resource used for this will be Write Rights. Children will be able to reflect their learning and use it in all areas of the curriculum.

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. वर्णमाला (क्रम से) 2. दो, तीन, चार अक्षर वाले शब्द 3. आ की मात्रा के शब्द 4. पाठ- वाह वानर कविता-नाना आए 5. गिनती 1- 10 (लिखित) 6. मेरी हिन्दी	
	1. इ- ई की मात्रा के शब्द 2. पाठ- चिड़ियाघर, मीना की शादी कविता - रिमझिम जल बरसा, तितली रानी 3. लिंग 4. गिनती 11- 20 (लिखित) 5. मेरी हिन्दी	**SEM-I**
	1. उ, ऊ की मात्रा के शब्द 2. पाठ- बुलबुल, चूहा फूलदान बन गया कविता - चुहिया रानी, भालू आया 3. में, पर का प्रयोग 4. गिनती 1- 20 (पुनरावृति) 5. वचन, दिनों के नाम 6. संज्ञा (परिचय) 7. मेरी हिन्दी	
	1. ऋ, ए, ऐ की मात्रा के शब्द 2. पाठ- ऋचा का बगीचा, मेला, नटखट नैना, कविता - रेलगाड़ी, बैल 3. यह, वह, इस, उस का प्रयोग 4. मेरी हिन्दी 5. गिनती 21- 30 (लिखित) 6. संज्ञा के भेद (व्यक्तिवाचक संज्ञा)	**SEM - II**

	1. ओ, औ की मात्रा के शब्द 2. पाठ- राजा का तोता, चौधरी का घर, कविता - मोर, गौरव और सौरभ 3. संयुक्त व्यंजन 4. मैं, हम का प्रयोग 5. मेरी हिन्दी 6. गिनती 31- 40 (लिखित) 7.संज्ञा के भेद (जातिवाचक संज्ञा)	**SEM-II**
	1. अं, अ: की मात्रा के शब्द 2. चंद्रबिंदु 3. पाठ- उमंग- तरंग, चूहा, गिलहरी और शेर कविता - चंदू की पतंग 4. संयुक्ताक्षर 5. मेरी हिन्दी 6. गिनती 21- 40 (पुनरावृति) 7. संज्ञा के भेद (भाववाचक संज्ञा) 8. वाक्य लेखन	

<u>लेखन कौशल</u>

<u>केन्द्रीय शिक्षण बिन्दु :</u> मात्राओं की सही पहचान और कल्पना शक्ति का विकास ।

<u>शैक्षणिक उद्देश्य</u> :

- वर्णमाला को दोहराना
- संयुक्ताक्षर का परिचय
- वाक्य लेखन का परिचय
- शब्द भंडार में वृध्दि

<u>पठन /वाचन कौशल</u>

<u>केन्द्रीय शिक्षण बिन्दु</u> :

- मात्रा जोड़कर पढ़ने का अभ्यास ।
- शब्दों के शुद्ध उच्चारण पर विशेष ध्यान देना ।

<u>शैक्षणिक उद्देश्य</u> :

- प्रतिदिन उपयोग में आनेवाले क्रियात्मक शब्दों के प्रयोग का अभ्यास ।
- चित्र द्वारा मात्रा का सही उच्चारण ।

- संयुक्ताक्षर का परिचय ।
- छोटी कहानी एवं कविता का प्रस्तुतीकरण
- स्तर के अनुरूप कविताएँ और चित्र कथाएँ । (Videos and Rhymes in Hindi)

श्रवण कौशल

केन्द्रीय शिक्षण बिन्दु :

- बोलचाल की भाषा का अभ्यास ।

शैक्षणिक उद्देश्य :

- ताल भाव के साथ कविता का प्रस्तुतीकरण
- कहानी बताकर उससे सम्बंधित प्रश्न पूछना
- बोलचाल की भाषा का प्रयोग

संदर्भ ग्रंथ सूची :

पंखुड़ियाँ	-	वीवा एजुकेशन
रिमझिम	-	एनभ सीभ इभ आरभ टीम
गुंजन	-	मधुबन एजुकेशनल बुक्स
वितान	-	मधुबन एजुकेशनल बुक्स
हिन्दी भाषा ज्ञान	-	एरो पब्लिकेशन्स
सबरी ज्ञान वर्धीनी	-	सबरी पब्लिकेशन्स

Websites "

www.akhlesh.com , www.Hindiclassroom.com

www.indg.in/primary-education/Shiksha

ANNUAL CURRICULUM OVERVIEW - TAMIL

DISCIPLINE	OBJECTIVES	TIME FRAME
TAMIL	தமிழ் எழுத்துக்களின் வரிசைகளையும், சொற்களையும் அறிந்து எளிய வாக்கிய அமைப்பினை தெரிந்துகொள்ளுதல்	SEM 1
	எளிய வாக்கிய அமைப்பில் இருந்து சொல் வகைகளை அறிந்து, பிற வாக்கியங்களில் பயன்படுத்தும் முறையை அறிதல்	
	கதைப்பகுதிகளின் கருத்துக்களை கலந்துரையாடுதல் மற்றும் எளிய வாக்கிய அமைப்பில் உள்ள ஒருமை - பன்மை பகுதிகளை அறிதல்	
	பொதுவான சூழலின் கருத்துக்களை அறிதலோடு , காலங்களின் வகைகள் மற்றும் பயன்பாட்டினை தெரிந்துகொள்ளுதல்	SEM 2
	தமிழ் எழுத்துக்கள் அல்லாது வேறு வகையான எழுத்துக்களின் பயன்பாட்டினையும், இலக்கணம் சார்ந்த சொற்றொடர்களையும் அறியச் செய்தல்	
	பொது இடங்களில் காணும் பலகைகள், படங்கள், வாக்கியங்களை வாசிக்கவும், நடந்துகொள்ளும் முறைகளையும் அறிதல்	

LISTENING AND SPEAKING

LEARNING OBJECTIVES : (கற்றலின் குறிக்கோள்கள்)

- வாய்மொழி அறிவுரைகளையும், கதைகளையும் கேட்டு புரிந்து கொள்ளுதல்.
- அறிமுகமானவை பற்றிய புதிய விவரங்களை சேகரித்துப் பேசுதல்.
- எளிய வினாக்களுக்கு முழு வாக்கியங்களில் விடை அளித்தல்.

READING

LEARNING OBJECTIVES : : (கற்றலின் குறிக்கோள்கள்)

- சிறிய, பெரிய அச்சு எழுத்துக்களை படித்து அறியும் திறன்.
- எளிய பாடல்களையும் வாக்கியங்களையும் உரத்த குரலில் படித்தல்.

WRITING

LEARNING OBJECTIVES : : (கற்றலின் குறிக்கோள்கள்)

- 5 - 10 எழுத்து சொற்கள் அமைத்தல்.
- எளிய வாக்கிய அமைப்பு முறையை அறிதல்.
- சொற்கள் மற்றும் சூழல் உணர்ந்து 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	Numbers to 1,000	Revisiting Previous Year Concepts		Week 1 - 2
		Counting	Use base –ten blocks to recognize, read, and write numbers to 1,000	Week 3
		Place Value	Count on by 1s,10s and 100s to 1000	Week 4
			Use base-ten blocks and a place-value chart to read, write, and represent numbers to 1000	
			Read and write numbers to 1,000 in standard form, expanded form, and word form	
		Comparing Numbers	Use base-ten blocks to compare numbers	
			Compare numbers using the terms greater than and less than	
		Order and Pattern	Compare numbers using symbols >and <	Week 5
			Order three-digit numbers	
			Identify the greatest number and the least number	
			Identify number patterns	
	Addition up to 1,000	Addition Without Regrouping	Use base-ten blocks to add numbers without regrouping	Week 6
			Add up to three-digit numbers without regrouping	
			Solve real-world addition problems	
		Addition with Regrouping in Ones	Use base-ten blocks to add numbers with regrouping	
			Add up to three-digit numbers with regrouping	
			Solve real-world addition problems	
		Addition with Regrouping in Tens	Use base-ten blocks to add numbers with regrouping	
			Add up to three-digit numbers with regrouping	
			Solve real-world addition problems	
		Addition with Regrouping in Ones and Tens	Use base-ten blocks to add numbers with regrouping	Week 7
			Add three-digit numbers with regrouping	
			Solve real-world addition problems	
	Subtraction up to 1,000	Subtraction Without Regrouping	Use base-ten blocks to subtract numbers without regrouping	Week 8
			Subtract from three-digit numbers without regrouping	
			Apply the inverse operations of addition and subtraction	
			Solve real-world subtraction problems	
		Subtraction with Regrouping in Tens and Ones	Use base-ten blocks to subtract with regrouping	
			Subtract from three-digit numbers with regrouping	
			Apply the inverse operations of addition and subtraction	
			Solve real-world subtraction problems	
		Subtraction with Regrouping in Hundreds and Tens	Use base-ten blocks to subtract with regrouping	
			Subtract from a three-digit number with regrouping	
			Apply the inverse operations of addition and subtraction	

			Solve real-world subtraction problems	
		Subtraction Across Zeros	Use base-ten blocks to subtract with regrouping	Week 9
			Subtract from a three-digit number with regrouping	
			Apply the inverse operations of addition and subtraction	
			Solve real-world subtraction problems	
	Using Bar Models: Addition and Subtraction	Using Part-Part Whole in Addition and Subtraction	Use bar models to solve addition and subtraction problems	Week 10
			Apply the inverse operations of addition and subtraction	
		Adding On and Taking Away Sets	Model addition as joining sets	
			Model subtraction as taking away	
			Apply the inverse operations of addition and subtraction	
		Comparing Two Sets	Model addition and subtraction as comparing sets	Week 11
			Apply the inverse operations of addition and subtraction	
		Real-World Problems: Two-Step Problems	Use bar models to solve two-step addition and subtraction problems	Week 12
			Apply the inverse operations of addition and subtraction	
	Multiplication and Division	How to Multiply	Use equal groups and repeated addition to multiply	Week 13
			Make multiplication stories about pictures	
			Make multiplication sentences	
		How to Divide	Divide to share equally	
			Divide by repeated subtraction of equal groups	
		Odd and Even Numbers	Make groups of 2 to find odd and even numbers	Week 14
			Understand that an even number is the sum of two equal numbers	
		Real- World Problems: Multiplication and Division	Solve multiplication word problems	
			Solve division word problems	
	Multiplication Tables of 2, 5, and 10	Multiplying 2: Skip-counting	Use base –ten blocks to recognize, read, and write numbers to 1,000	Week 15
			Count on by 1s,10s and 100s to 1000	
		Multiplying 2: Using Dot Paper	Use base-ten blocks and a place-value chart to read, write, and represent numbers to 1000	
			Read and write numbers to 1,000 in standard form, expanded form, and word form	
		Multiplying 5: Skip-Counting	Skip-count by 5s	Week 16
			Solve multiplication word problems	
		Multiplying 5: Using Dot Paper	Use dot paper to multiply by 5	
			Use known multiplication facts to find new multiplication facts	
			Identify related multiplication facts	
			Solve multiplication word problems	

		Multiplying 10: Skip-Counting and Using Dot Paper	Skip-count and use dot paper to multiply by 10	
			Use known multiplication facts to find new multiplication facts	
			Identify related multiplication facts	
			Solve multiplication word problems	
		Divide Using Related Multiplication Facts	Use related multiplication facts to find related division facts	
			Write a multiplication sentence and a related division sentence	Week 17
			Solve division word problems	
	Metric Measurement of Length	Measuring in Meters	Use a meter stick to estimate and measure length	
		Comparing Lengths in Meters	Compare lengths	
			Find the difference in lengths of objects	
		Centimeters	Use a centimeter ruler to measure length	
			Draw a line of given length	Week 18
		Comparing Lengths in Centimeters	Use a centimeter ruler to measure and compare lengths of objects	
			Find the difference in centimeters in lengths of objects	
		Real-world Problems: Metric Length	Solve one-step and two-step problems involving length	
			Draw models to solve real world problems	
	Mass	Measuring in Kilograms	Use a measuring scale to measure mass in kilograms	
		Comparing Masses in Kilograms	Compare and order masses	
		Measuring in Grams	Use a measuring scale to measure mass in grams	Week 19
		Comparing Masses in Grams	Compare and order masses in grams	
		Real-World Problems: Mass	Use bar models to solve problems about mass	
	Volume	Getting to Know Volume	Explore and compare volume	
		Measuring in Liters	Use liters to estimate, measure, and compare volume	Week 20
		Real-World Problems: Volume	Use bar models, addition, and subtraction to solve real-world problems about volume	
	Mental Math and Estimation	Meaning of sum	Relate 'sum' to the addition operation	
		Meaning of difference	Relate 'difference' to the subtraction operation	
		Rounding Numbers to Estimate	Use number line to round numbers to the nearest 10	Week 21
			Use rounding to estimate sums and differences	
			Estimate to check reasonableness of answers	
	Money	Coins and Bills	Recognize $1, $5 ,$10 and $20 bills	
			Show and count money using coins and bills to $20	Week 22

			Write money amounts using dollars and cents	
			Write dollars as cents and cents as dollars	
		Comparing Amounts of Money	Compare amounts of money using tables	Week 23
		Real- world Problems: Money	Use real world problems involving addition and subtraction of money	
		Real- world Problems: Money	Solve real-world problems using $ and ¢ symbols	
	Fractions	Understanding Fractions	Identify whether a shape is divided into equal fractional parts	Week 24
			Read, write, and identify units fractions for halves, thirds ,and fourths	
			Show fractions and a whole using model drawings	
		Comparing Fractions	Compare two or more unit fractions using models of the same size	Week 25
			Order two or more unit fractions with or without the use of models of the same size	
		Adding and subtracting like Fractions	Identify fractions that name more than one equal part of a whole	
			Use models to add and subtract fractions	
			Add or subtract like fractions	
	Time	The Minute Hand	Use the minute hand to show and tell the number for every five minutes after the hour	Week 26
		Reading and Writing Time	Show and tell time in hours and minutes	
		Using A.M &P.M	Use A.M and P.M to show morning, afternoon, or night	Week 27
			Order events by time	
	Multiplication Tables of 3 and 4	Multiplying 3 : skip-counting	Skip-count by 3s	Week 28
			Solve multiplication word problems	
		Multiplying 3: Using Dot Paper	Use dot paper to multiply by 3	
			Use known multiplication facts to find new multiplication facts	
			Identify related multiplication facts	
			Solve multiplication word problems	
		Multiplying 4: skip-counting	Skip-count by 4s	
			Solve multiplication word problems	
		Multiplying 4:Using Dot Paper	Use dot paper to multiply by 4	
			Use known multiplication facts to find new multiplication facts	
			Identify related multiplication facts	
			Solve multiplication word problems	
		Divide Using Related Multiplication facts	Find division facts using related multiplication facts	Week 29
			Write a multiplication sentence and a related division sentence	
			Solve division word problems	
	Using Bar Models: Multiplication	Real- World Problems: Multiplication	Use bar models to solve real-world multiplication problems	Week 30
			Write multiplication sentences to solve real - world problems	

	and Division	Real- World Problems: Division	Use bar models to solve division word problems	
			Write division sentences to solve word problems	Week 31
		Real- world problems: Measurement and Money	Use bar models to solve real-world problems on measurement and money	
	Picture Graphs	Reading Picture Graphs with Scales	Read, analyze, and interpret picture graphs	Week 32
			Complete picture graphs	
		Making Picture Graphs	Make picture graphs	
			Read and interpret picture graphs	
		Line plots	Make a line plot to show data	Week 33
		Real- World Problems: Picture Graphs	Solve real-world problems using picture graphs	
	Lines and Surfaces	Parts of Lines and Curves	Recognize, identify, and describe parts of lines and curves	Week 34
			Draw parts of lines and curves	
		Flat and Curved Surfaces	Identify, classify, and count flat and curved surfaces	
			Identify solids that can stack, slide, and/or roll	
	Shapes and Patterns	Plane Shapes	Recognize and identify plane shapes	Week 35
			Combine smaller plane shapes to make larger plane shapes	
			Separate larger plane shapes into smaller plane shapes	
			Combine and separate plane shapes in figures	
			Draw plane shapes and figures on dot paper and square grid paper	
		Quadrilaterals and Pentagons	Identify quadrilaterals and pentagons	
			Recognize and draw shapes having a given number of angles	
		Solid Shapes	Recognize and identify solid shapes	Week 36
			Build models using solid shapes	
			Combine and separate solid shapes	
		Faces of a Cube	Identify and count the equal faces on a cube	
		Making Patterns	Identify ,describe, extend, and create patterns using different sizes, shapes, colors, and positions(turning)	

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 various 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

- splitting
- Standard method
- multiplication
- division
- estimation
- product
- factor
- dividend
- divisor
- place value
- fewer
- total
- sum
- altogether
- take away
- left
- quotient
- shared
- equals
- subtract
- remains
- minus
- combined
- reduce
- lost
- difference
- whole numbers
- comparing and ordering numbers
- reminder

Math in Focus

SCHOOL to HOME Connections

Chapter 1 Numbers to 1,000

Dear Family,

In this chapter, your child will learn numbers to 1,000.
Some of the skills your child will practice are:

- using place-value charts to read, write, compare, and order numbers to 1,000
- counting on by 10s and 100s to 1,000
- identifying number patterns

Activity Compare and Order

Understanding the place value structure of numbers makes it easier for children to deal with greater numbers. In this activity, your child will use the concept of place value to compare and order numbers through 999. Write the numbers 0 to 9 on index cards. Draw a place-value chart on a sheet of paper like the one shown in the Vocabulary box.

- Encourage your child to pick three cards from the stack and make three different 3-digit numbers using these cards.
- Have your child write each number in the place-value chart, placing each digit in the correct column.
- Now, ask your child to order the numbers from least to greatest. Have your child use the terms *greater than* and *less than* to compare the numbers.
- Repeat the activity with different numbers.

Vocabulary to Practice

This **place-value chart** shows the number 326.

Number	Hundreds	Tens	Ones
326	3	2	6

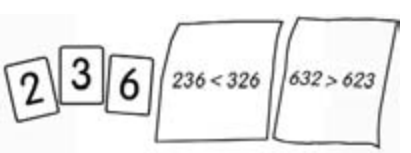
326 236 623

623 is the **greatest** number.
236 is the **least** number.
326 is **less than** 623. This can be written as

$326 < 623$

326 is **greater than** 236. This can be written as

$326 > 236$



Math in Focus

SCHOOL to HOME Connections

Chapter 2 Addition up to 1,000

Dear Family,

In this chapter, your child will learn to add numbers up to 1,000. Some of the skills your child will practice are:

- using place-value charts to add numbers with and without regrouping
- solving real-world addition problems

Activity Use Grids to Add

As children start working with greater numbers, they must be able to use the vertical form correctly to add.
Write the numbers 278 to 281 on a sheet of paper.
On another sheet of paper, draw a grid like the one shown.

	2	7	8
+	2	7	9
	5	*5*	*7*

- Ask your child to use the grid to add two numbers at a time, for example, 278 + 279, or 278 + 280, and so on.
- Ask your child to find the two numbers which give the greatest number and the least number when added.
  (Adding the two greatest numbers, 280 and 281, gives the greatest sum and adding the two least numbers, 278 and 279, gives the least sum.)

Vocabulary to Practice

This **place-value chart** shows the number 326.

Number	Hundreds	Tens	Ones
326	3	2	6

To **regroup** numbers when adding, you change:
- 10 ones to 1 ten
- 10 tens to 1 hundred

For example,

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 277 \\ +\ 354 \\ \hline 631 \end{array}$$

Math in Focus

SCHOOL to HOME Connections

Chapter 3 Subtraction up to 1,000

Dear Family,

In this chapter, your child will learn to subtract numbers within 1,000. Some of the skills your child will practice are:

- using place-value charts to subtract numbers with and without regrouping
- solving real-world subtraction problems
- applying the inverse operations of addition and subtraction

Activity Subtract and Check

This activity will help your child practice the skill of subtracting numbers using the vertical form and also checking answers using addition. On a sheet of paper write the numbers 912, 813, 714, and 615. On another sheet of paper draw a grid like the one shown.

	9	1	2
–	6	1	5
	2	*9*	*7*

- Ask your child to use the grid to subtract two numbers at a time, for example, 912 – 813, or 912 – 615, and so on.
- Have your child check his or her answer using addition. (Hint: If 912 – 615 = 297, then 297 + 615 should equal 912.)

Vocabulary to Practice

This **place-value chart** shows the number 326.

Number	Hundreds	Tens	Ones
326	3	2	6

To **regroup** numbers when subtracting, you change:
- 1 ten to 10 ones
- 1 hundred to 10 tens

For example,

$$\begin{array}{r} {}^{4}\not{5}\,{}^{1}3\,7 \\ -\ 2\ 7\ 2 \\ \hline 2\ 6\ 5 \end{array}$$

Math in Focus

SCHOOL to HOME Connections

Chapter 4 Using Bar Models: Addition and Subtraction

Dear Family,

In this chapter, your child will learn to use bar models to solve addition and subtraction problems.
Some of the models they will use are:

- addition models for joining sets
- subtraction models for taking away sets
- comparison models for comparing sets

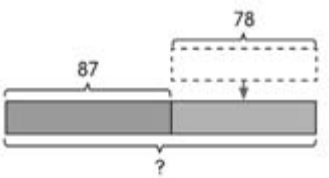
Activity Solve Using Bar Models

Drawing bar models is an important math skill that makes it easier for children to visualize and solve complicated problems. Help your child practice by asking him or her to draw bar models for the following addition and subtraction stories and explain each model to you.

- Joe's mother makes 12 pancakes. Joe eats 4 pancakes. How many pancakes are left?
- Rachel's mother makes 12 pancakes. If Rachel eats some pancakes and 7 pancakes are left, how many pancakes did Rachel eat?
- Anna makes 20 pancakes. Carol makes 12 pancakes. Who makes more pancakes? How many more?
- Karen makes 9 fewer pancakes than Tony. Karen makes 15 pancakes. How many pancakes does Tony make?

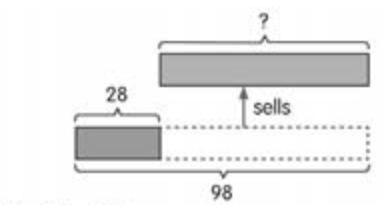
Vocabulary to Practice

Addition Model:



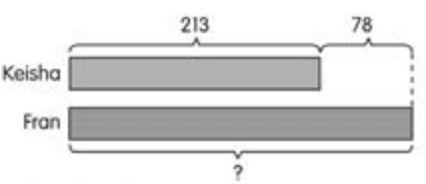
87 + 78 = 165

Subtraction Model:



98 – 28 = 70

Comparison Model:



213 + 78 = 291

Math in Focus

SCHOOL to HOME Connections

Chapter 5 Multiplication and Division

Dear Family,

In this chapter, your child will learn about multiplication and division. Some of the skills your child will practice are:

- using repeated addition of equal groups to multiply
- using repeated subtraction of equal groups to divide
- relating the concept of division to sharing equally
- making multiplication sentences and stories

Activity Multiply

Understanding that multiplication and division deal with equal groups is important for children before they learn more about these operations at higher levels. Show your child equal groups of an object, for example, 3 groups of 5 beans.

- Have your child count the number of groups and the number of beans in each group.
- Have your child write the relevant addition and multiplication sentences. For example,
  $5 + 5 + 5 = 15$
  3 groups of 5 = 15
  $3 \times 5 = 15$

Vocabulary to Practice

You can use **repeated addition** or **multiplication** to find the total number.
Repeated addition:
$4 + 4 = 8$
Multiplication:
$2 \times 4 = 8$

To **divide** 6 by 2, you can use **repeated subtraction**.
Division: $6 \div 2 = 3$
Repeated subtraction:
$6 - 2 - 2 - 2 = 0$
(groups of 2 are subtracted 3 times)

Math in Focus

SCHOOL to HOME Connections

Chapter 6 Multiplication Tables of 2, 5, and 10

Dear Family,

In this chapter, your child will learn to multiply by 2, 5, and 10. Some of the skills your child will practice are:

- multiplying using dot paper and by skip-counting
- using known multiplication facts to find new multiplication facts
- dividing using related multiplication facts

Activity Fun with Groups

A thorough understanding of basic multiplication facts and the relation between multiplication and division will help children multiply and divide numbers easily, especially when they work with greater numbers. Give your child 10 buttons (do not tell them the total number) and 2 plates.

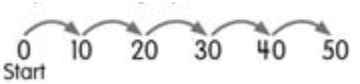
- Ask your child to place 5 buttons on each plate.
- Now, have your child write a multiplication sentence to find the total number of buttons. (There are 2 groups of 5. $2 \times 5 = 10$)
- Ask your child to write a related division sentence. ($10 \div 2 = 5$)
- Give your child a few more plates. Ask your child to group the 10 buttons in another way to make equal groups. (10 groups of 1 button each, or 5 groups of 2 buttons each.)
- Have your child write the multiplication sentence and the related division sentence for the groups he or she has made.

Vocabulary to Practice

Skip-Counting:
Skip-counting by 2s:

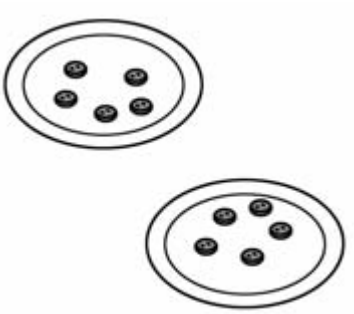
Skip-counting by 5s:

Skip-counting by 10s:



Related Multiplication Facts:
$5 \times 2 = 10$ and
$2 \times 5 = 10$
are related multiplication facts.

Related division sentences
for these multiplication facts are
$10 \div 2 = 5$ and
$10 \div 5 = 2$.



Math in Focus

SCHOOL to HOME Connections

Chapter 7 Metric Measurement of Length

Dear Family,

In this chapter, your child will learn to measure lengths in meters and centimeters.
Some of the skills your child will practice are:

- using a meterstick or a centimeter ruler to measure length
- comparing the lengths of objects and finding the difference in their lengths

Activity Measure the Length

The metric system of measurement is a commonly used international system of measuring units, making it important for children to understand lengths measured in metric units. Show your child the centimeter ruler at the bottom of this page and help him or her get a sense of how much one centimeter is.

- Give your child a few small objects such as a pen, an eraser, a paper clip, a calculator, and so on.
- For each object, ask your child to guess if its length is more than or less than 5 cm.
- Then ask your child to measure the object by placing it against the centimeter ruler given here. (Guide your child to measure to the nearest centimeter.)
- Repeat with different objects until your child has a good sense of how much a centimeter is.

Vocabulary to Practice

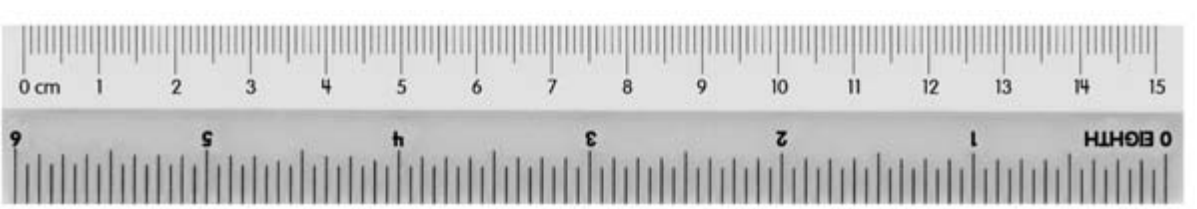
A **meterstick** is a tool used to measure the length of objects.

The **meter** is a unit of length. It is a little longer than 3 feet.

The **centimeter** is also a unit of length, which can be used to measure smaller lengths.

Comparing lengths:
If A is 1 meter tall, B is 2 meters tall, and C is 3 meters tall, then
B is **taller** than A.
C is the **tallest**.
A is the **shortest**.

If D is 1 meter long, E is 2 meters long, and F is 3 meters long, then
E is **longer** than D.
F is the **longest**.
D is the **shortest**.



Math in Focus

SCHOOL to HOME Connections

Chapter 8 Mass

Dear Family,

In this chapter, your child will learn to measure mass in kilograms and grams. Work in this chapter will include:

- using a measuring scale to measure mass in kilograms and grams
- comparing and ordering masses
- using bar models to solve problems about mass

Activity Heavier or Lighter?

In the metric system, mass is measured in kilograms and grams. It is important for your child to be familiar with these standard units for measuring mass, as they are widely used throughout the world. Use this activity to help your child get a sense of how much a few hundred grams is.
Gather several items of packaged food, for example, a box of pasta, a can of beans, and so on.

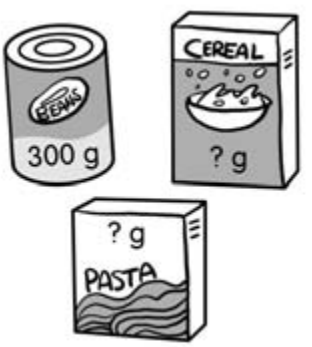
- Ask your child to read the label on one of the items to see how much it weighs in grams.
- Then have your child heft each of the other items, and guess whether it weighs more or less than the first item. For example, if the can of beans is 300 g, the box of pasta feels like a little more, maybe 400 g.
- Ask your child to order the items from lightest to heaviest based on his or her estimation of each of their masses.
- Then have your child read the labels on each item to check if his or her estimation and ordering is correct.

Vocabulary to Practice

The **kilogram (kg)** is a unit of mass, used for measuring the mass of heavier objects.

The **gram (g)** is a unit of mass, used for measuring the mass of lighter objects.

Comparing mass:
If Bag A has a mass of 1 kg,
Bag B has a mass of 2 kg, and
Bag C has a mass of 3 kg, then
Bag B is **heavier than** Bag A.
Bag C is the **heaviest**.
Bag A is **lighter than** Bag B.
Bag A is the **lightest**.



Math in Focus

SCHOOL to HOME Connections

Chapter 9 Volume

Dear Family,

In this chapter, your child will explore the concept of volume. Some of the skills your child will practice are:

- measuring and comparing volume in liters
- using bar models to solve problems involving volume

Vocabulary to Practice

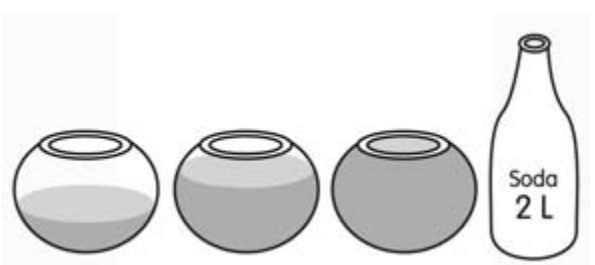
The amount of liquid a container has is called the **volume**. It is measured in **liters**.

Activity Find Volume

In the metric system, the volume of a liquid is measured in liters. Help your child explore the concept of volume and use the correct vocabulary to compare volumes by doing this activity with him or her. You will need three containers of the same size.

- Fill the containers with 2, 4, and 6 liters of water. (You can use a 2-liter juice or soda bottle to measure.)
- Ask your child to estimate and compare the volume of water in each container using the vocabulary shown above.
- Now, give your child the 2-liter soda bottle.

Ask your child how he or she will find the volume of water in each container using the bottle.



Math in Focus

SCHOOL to HOME Connections

Chapter 10 Mental Math and Estimation

Dear Family,

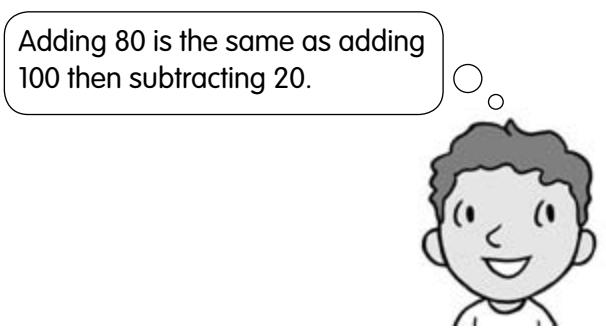
In this chapter, your child will learn to add and subtract up to 3-digit numbers mentally and study estimation.
Some of the mental math strategies your child will use are:

- adding 10 then subtracting the extra ones
- adding 100 then subtracting the extra tens
- subtracting 10 then adding the extra ones
- subtracting 100 then adding the extra tens

Activity Estimate Sums and Differences

Computing mentally and estimating are key skills for your child to master. They will help your child quickly check the reasonableness of his or her answers to questions involving greater numbers. Use this activity to help your child practice mental math and estimation skills.

- Call out a 3-digit number and a multiple of ten and ask your child to find their sum or difference by computing mentally. For example, What is 247 plus 80? (327)



- Have your child round the 3-digit number to the nearest ten and then find the estimated sum or difference mentally to check the reasonableness of the answer.
  In this example, 250 plus 80 is 330, which is close to 327.

Vocabulary to Practice

`Add 100 then subtract the extra tens´ strategy:
To find 345 + 80,
Step 1: Add 100 to 345.
Step 2: Subtract 20 from the result (since 80 = 100 – 20).

`Subtract 100 then add the extra tens´ strategy:
To find 529 – 70,
Step 1: Subtract 100 from 529.
Step 2: Add 30 to the result (since subtracting 70 is the same as subtracting 100 then adding 30).

Rounding is approximating a number to the nearest ten, hundred, and so on. To round a 3-digit number to the nearest ten:
863 is between 860 and 870, but it is nearer to 860.
So, 863 rounded to the nearest ten is 860.

Math in Focus

SCHOOL to HOME Connections

Chapter 11 Money

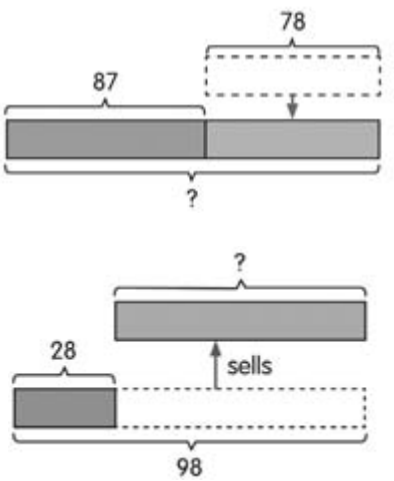
Dear Family,

In this chapter, your child will learn to show and count money amounts. Some of the skills your child will practice are:

- showing and counting money using coins and bills to $20
- writing money amounts using $ and ¢
- writing dollars as cents and cents as dollars
- comparing amounts of money using tables
- using bar models to solve real-world problems involving addition and subtraction of money

Vocabulary to Practice

Bar models for addition and subtraction:



Activity Putting Together Bills and Coins

Recognizing and counting bills and coins is a basic skill that children must learn as they will perform various transactions with money in everyday life. Show your child two sets of change less than $20, each with a bill and some coins.

- For each set, ask your child to say the amount in words and write it in numbers. For example, if you show a $5 bill and two pennies, your child will say `five dollars and two cents´ and write `$5.02´.
- Have your child compare the two amounts of money and say which amount is greater.
- Now, ask your child to exchange a bill for bills or coins of a smaller denomination. For example, say `Exchange the $5 bill for $1 bills. How many $1 bills will you need?´

Five dollars and two cents

Math in Focus

SCHOOL to HOME Connections

Chapter 12 Fractions

Dear Family,

In this chapter, your child will be introduced to the concept of fractions. Some of the skills your child will practice are:

- reading, writing, and identifying unit fractions for halves, thirds, and fourths
- drawing models to show fractions and a whole
- comparing and ordering unit fractions
- adding and subtracting like fractions

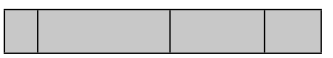
Activity Making Equal Parts

As children go to higher grades, they will see that many scenarios require them to express numbers as parts of a whole. Help your child grasp the abstract concept of fractions and understand that fractional parts of a whole are always made from equal parts by doing this activity. From a sheet of paper, cut out three circles of the same size.

- Divide the first circle into two equal halves. Have your child color one part and write a fraction to show what part of the whole is colored. ($\frac{1}{2}$)
- Now, have your child color the other part a different color and write a number sentence to show how many halves make a whole. ($\frac{1}{2} + \frac{1}{2} = 1$)
- Repeat by dividing the other two circles into three and four equal parts, respectively.
- Now, ask your child to order the fractions $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ from least to greatest.

Vocabulary to Practice

These parts are **unequal**.



This **whole** is made up of 2 **equal** parts.

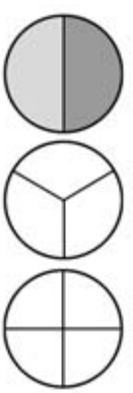
A **fraction** is a number that names equal parts of a whole. $\frac{1}{2}$ is a fraction, it is one-half.

One-third is **greater than** one-fourth.

$\frac{1}{3} > \frac{1}{4}$

A **unit fraction** names one of the equal parts of a whole.

$\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ are unit fractions.
$\frac{2}{3}$ and $\frac{3}{4}$ are not unit fractions.



Math in Focus

SCHOOL to HOME Connections

Chapter 13 Customary Measurement of Length

Dear Family,

In this chapter, your child will learn to measure in customary units of length. Some of the skills your child will practice are:

- using a ruler to estimate and measure length in feet and inches
- comparing lengths of objects
- finding the difference in length of objects
- using bar models to solve real-world problems involving length

Vocabulary to Practice

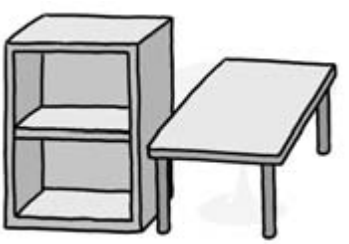
The **foot** is a unit of length.
The **inch** is another unit of length and it is used to measure the lengths of shorter objects.

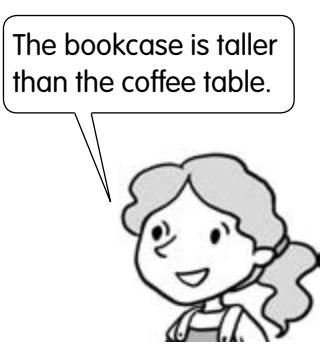
If A is 1 foot long, B is 2 feet long, and C is 3 feet long, then:
C is the **longest**.
A is the **shortest**.
B is 1 foot **longer than** A.

Activity Measure and Compare

Being able to compare the lengths of objects helps children make many logical deductions about everyday things. For example, your child should be able to compare the heights of a bookcase and a room, and decide if the bookcase will fit in the room. In this activity your child will learn to estimate, measure, and compare lengths and heights of objects using standard units such as an inch ruler or a foot ruler.

- Have your child first choose the correct unit of measurement, (inches for shorter objects, feet for longer objects) then estimate, measure, and record the length of some pieces of furniture in your house. For example, a bookcase, a coffee table, and so on.
- Choose any two objects. Ask your child to compare their lengths and say which is longer or taller, and find how much longer it is.





Math in Focus

SCHOOL to HOME Connections

Chapter 14 Time

Dear Family,

In this chapter, your child will learn more about reading clocks and telling time. Some of the skills your child will practice are:

- showing and telling time in hours and minutes
- using A.M. and P.M. to show morning, afternoon, or night
- ordering events by time
- determining how much time has elapsed

Activity How Much Time Has Passed

Telling time in hours and minutes is a basic skill required for children to be able to make sense of time and a sequence of events. Use this activity to help your child practice telling time and finding the amount of time that has passed.

- At different times on a weekend day, have your child read a clock and tell the time using A.M. and P.M. Have your child record the time and what he or she was doing at that time. For example, I started lunch at 12:30 P.M.
- At the beginning of any activity, have your child read the time on an analog clock. At the end of the activity, have your child do the same. Ask how much time has passed. Ensure time elapsed is to the nearest hour or half hour.

Vocabulary to Practice

Johnny wakes up at 7:20 in the morning or at 7:20 A.M.

Johnny watches television at 8:15 in the evening or at 8:15 P.M.

Math in Focus

SCHOOL to HOME Connections

Chapter 15 Multiplication Tables of 3 and 4

Dear Family,

In this chapter, your child will learn to multiply by 3 and 4. Some of the skills your child will practice are:

- multiplying using dot paper and by skip-counting
- using known multiplication facts to find new multiplication facts
- dividing using related multiplication facts

Activity Make Equal Groups

Help your child relate the idea of equal groups to multiplication by working with concrete objects. You will need 50 beans, an egg carton, and index cards. Make two sets of index, one with the numbers 1 to 10, and the other with the numbers 3 and 4.

- Ask your child to pick one card from each set and write a multiplication sentence using these numbers. Your child should leave a blank for the answer.
- Now, have your child make the required number of equal groups of beans to find the answer to the multiplication sentence. Have your child count the total number and find the answer.
- Ask your child to write a related division sentence.
- Repeat the activity with different numbers.
- Once your child has grasped the idea of multiplication, have him or her say the multiplication tables of 3 and 4 by skip-counting.

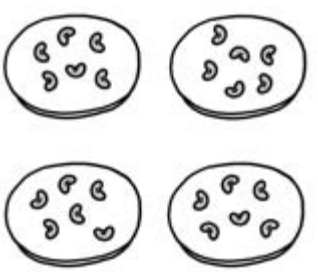
Vocabulary to Practice

Skip-Counting:
Skip-counting by 3s:

Skip-counting by 4s:

Related Multiplication Facts:
$5 \times 3 = 15$ and
$3 \times 5 = 15$
are related multiplication facts.

Related division sentences
for these multiplication facts are
$15 \div 3 = 5$ and
$15 \div 5 = 3$.



$6 \times 4 = 24$
$24 \div 4 = 6$

Math in Focus

SCHOOL to HOME Connections

Chapter 16 Using Bar Models: Multiplication and Division

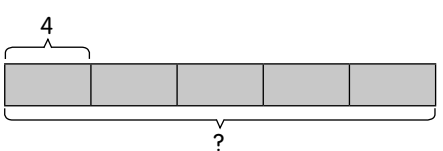
Dear Family,

In this chapter, your child will learn to draw bar models to solve problems involving multiplication, division, measurement, and money.

Activity Draw Bar Models

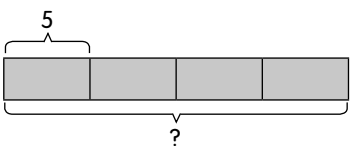
Drawing bar models is an important skill that makes it easier for children to understand and solve real-world problems.
Use strips of paper to make bar models. As needed, cut each strip into 2, 3, 4, 5, or 10 parts of equal length.

- Give a word problem to your child. For example, A sheep has 4 legs. How many legs do 5 sheep have?
- Ask him or her to represent the problem with the help of the strips representing bar models.
- Your child pastes 5 strips of the same length in a row on a sheet of paper. He or she draws a bracket with `4´ above the first strip.
- Then he or she draws a bracket with a question mark below the 5 strips, which means that he or she has to find the total number of legs 5 sheep have.
- Pose other similar multiplication and division word problems and let your child show a related bar model.



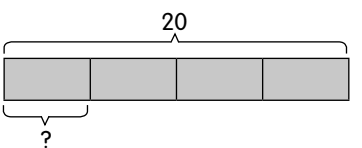
Vocabulary to Practice

Bar model for multiplication:
Peggy has 4 potted plants.
There are 5 roses in each potted plant.
How many roses are there in all?



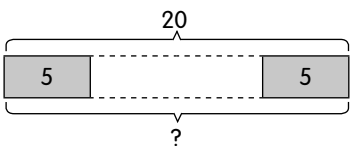
$5 \times 4 = 20$
There are 20 roses in all.

Bar models for division:
Peggy has 4 plant pots. She has 20 seeds. She puts an equal number of seeds in each pot.
How many seeds does she put in each pot?



$20 \div 4 = 5$
She puts 5 seeds in each pot.

Peggy has 20 seeds. She puts 5 seeds in each plant pot. How many plant pots does she have?



$20 \div 5 = 4$
She has 4 plant pots.

Math in Focus

SCHOOL to HOME Connections

Chapter 17 Picture Graphs

Dear Family,

In this chapter, your child will study picture graphs.
Work in this chapter will include:

- reading and interpreting picture graphs
- making picture graphs
- solving real-world problems using picture graphs

Activity Make Picture Graphs

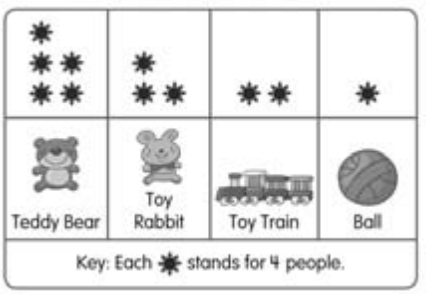
Representing data in the form of picture graphs makes it easier to read and interpret the data. In this activity your child will learn to display data with the help of picture graphs.
Get some nuts. (4 hazelnuts, 8 cashew nuts, 12 pecans, and 16 peanuts.)

- Have your child count the number of each kind of nut and draw a picture graph using symbols representing a scale of 2. Ensure your child indicates in the key how much each symbol stands for.
- Ask:
  How many of each nut are there?
  How many nuts are there in all?
  How many more pecans are there than hazelnuts?
  How many fewer hazelnuts are there than cashew nuts?
  How many peanuts and hazelnuts are there in all?
- Now, have your child draw the same picture graph using a different key and ask how much each symbol stands for.

Vocabulary to Practice

A **picture graph** shows data using pictures or symbols.

The **key** of a picture graph shows what each picture or symbol stands for.



Math in Focus

SCHOOL to HOME Connections

Chapter 18 Lines and Surfaces

Dear Family,

In this chapter, your child will learn about lines and surfaces. Some of the skills your child will practice are:

- identifying, describing, and drawing parts of lines and curves
- classifying and counting flat and curved surfaces
- identifying solids that can stack, slide, and/or roll

Activity Guess the Object

Identifying lines, curves, flat surfaces, and curved surfaces is an important skill that lays the foundation for geometry. Use this activity to check your child's understanding of some of the new ideas learned in this chapter. Put some items in a pillow case or a cloth bag – a tennis ball, a small box, a water bottle, an orange, a CD case, a party hat and so forth.

- Have your child reach into the cloth bag, feel an item, and then describe its attributes using the terms *flat surface*, *curved surface*, and *flat and curved surfaces*.
- Ask your child if the item can be stacked, slid, or rolled.
- Have your child guess what the item is.

Vocabulary to Practice

Part of a line:

Curve:

A ruler has a **flat surface**. A ball does not have a flat surface, it has a **curved surface**.

You can **slide** objects that have a flat surface.

You can **stack** some objects that have more than one flat surface.

Math in Focus

SCHOOL to HOME Connections

Chapter 19 Shapes and Patterns

Dear Family,

In this chapter, your child will study plane shapes, solid shapes, and patterns. Work in this chapter will include:

- combining and separating plane shapes or solid shapes drawing plane shapes and figures
- making patterns using different sizes, shapes, colors, and positions

Activity Separate Shapes and Make Patterns

Identifying plane and solid shapes is an important skill children will need to master before they study geometry further. Trace this figure onto another sheet of paper.

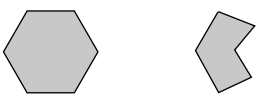
- Have your child show you how to separate this figure into smaller plane shapes by cutting out each shape.
- Ask your child to name each of the smaller plane shapes.
- Now, ask your child to use two of these plane shapes and create a pattern. For example, your child may use the circle and the triangle to form a pattern like this.

Vocabulary to Practice

A **plane shape** is a two-dimensional flat shape that has length and width but no thickness.

Trapezoid

Hexagon



A **pattern** is something that changes in a regular way. You can make repeating patterns using different **sizes**, **shapes**, **colors**, and by **turning** shapes.

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:

Student are given space to explores the basic physics, engineering, technology and mathematics around Rocket Ships. The unit plan was built with Boeing who are a leading manufacturer in aircrafts and work on rockets. Students work collaboratively to learn, design and build their own model rocket ships. The Aim of this project is to create a holistic, engaging project that develops students integrated knowledge and skills of multiple subjects and increase aspiration in Space Tech & Rocketry fields.

The project is completed in three stages:

1. Design Process
2. Launching
3. Landing

The design process focuses the structure, materials and methods used to build their very own model rocket ship. Their rocket ship designs need to incorporate how it can take off, space for a 'passenger' and consider its weight for landing. Students will produce blueprints using measurement and what materials they wish to use and a rationale for their reasonings. Once the blueprints are cleared the students will present their ideas to the class, allowing for students to refine and improve their designs. At the end of the process students are given time to build their rocket ships ready for the experiments.

Annual Curriculum Plan			
Module	**Unit**	**Learning Outcomes**	**Time Frame**
1	a) Introduction in Engineering	Students will be able to engineer an index card tower that will support a stuffed animal.	SEM – I
	b) Introduction to Technology Detectives	Students will be able to examine some technologies and brainstorm ways to improve them	
	c) Move It! (Balloon direction)	Students will be able to learn how an airplane, rocket or shuttle moves forward.	
	d) Shuttle Drag Parachute	Students will be able to test the effects of a drag parachute on a shuttle model and to calculate the speed variances.	
2	e) Paper Rockets Ver 2.0	Students will be able to construct small flying rockets out of paper and propel them by blowing air through a straw.	SEM - II
	f) Straw Rocket	Students will be able to construct straw rockets and determine the greatest height and distance that can be reached.	
	g) Rocket Transportation	Students will be able to construct a rocket out of a balloon and use it to carry a payload vertically.	

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: Word processing, Desktop Publishing, Internet, Animation and Presentation skills, Block based coding.

Learning Outcome:

Students should be able to:

- understand the Computer Fundamentals & Various Memory Storage Devices
- creating simple projects in scratch programming
- type, edit, format in MS word
- create a simple presentation in MS PowerPoint
- create posters using online platform

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 publishing a poster, creating a storyboard, documents and presentations.

Module	Objective	Focus	Integration	Software Applications	Technical skills	Time Frame
PC & Ribbon	Students able to understand Internet & Computer Safety and various memory storage devices and use word processing software to format text and create Illustrations.	Computer & Internet Safety	Language, Social Studies	Microsoft office word	Word Processing	SEM 1
		Memory Storage Devices				
		Page Design				
		Internet skills				
		Formatting				
		Word Art & Shapes				
		Document Creation				
Block Programming	Students able to use scratch programming to create simple projects, stories and games	Music & Backdrops, Drawing tool	Language, Arts	Scratch Programming	Animations	
		Sprite interaction, Game Design				
		Touch & Color Sensing				
		Animated Story				
Slide Deck	Students create a Presentation using various resources and they gather facts and organize the same. Animation and transitions are applied to the slide show to create an interesting and informative Presentation.	Power Point Presentation	Science, Language	Microsoft Office PowerPoint	Multimedia Presentation	SEM 2
		Internet skills				
		Slide Creation, Layouts				
		Picture insertion				
		Formatting				
		Animation, Transitions and Slide Show				
Catalog	Students create object making flyers, posters and social media graphics by using online platform	Introduction	Language, Arts	Postermywall	Desktop Publishing	
		Page Orientation				
		Design				
		Pictures				

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	Basic skills
Physical Education	Cycling	Balancing
		Stopping
		Riding
		Looking
	Swimming	Bobbing
		Leg beat – without holding the wall
		Floating – holding the wall
		Floating - without holding the wall with eyes open
		Arm action for free style
		Floating with leg beat
		Floating with leg beat and arm action
	Track and Field	Sprint
		Hurdles
		Relay
	Soccer	Dribbling
		Passing
		Receiving
		Throw - in

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 student s 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 TIPSC, students explore elements of drama as the very part of their unit of inquiry.

Music perspective

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

Dance perspective

Dancing is the act of moving the body in rhythm, usually in time to music. It seems natural for people to express themselves through rhythmic movement. Young children jump up and down when they are excited and sway gently when content or at rest. Dancing is both an art form and a form of recreation. Dance as 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
		Practical	Theory	
Performing Arts	• Introduction to music (aadhra sruthi) • Introduction to basic swaras • Types of songs (folk,western & melody) • Lyrical pronunciation (meanings and expression) • Voice modulation	• Basic postures (mandalam) • Namaskaram • Basics of adavu with hand movements • Basic adavu with anga sutham and thalam	• Asamyuta Hasthas & Meaning	• Basic warm up & flexibility exercises • Basic footworks • Combination of basic movements • 4 & 8 count movements • Body language & face expression

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