Learning Journey for the Year

Dear teachers, the table below summarises the learning journey you will cover with your students this year.

Term 1

Term 1 consists of 4 units of 30 days in total.

Unit	Topic
Unit 1	Creating Your Own Apps (8 days)
Unit 2	Camping in the Wilderness (8 days)
Unit 3	The Pythagorean Triple (6 days)
Unit 4	Language of Computers (8 days)

MOY — Middle of the Year Assessment

Term 2

Term 2 consists of 3 units of 22 days in total.

Unit	Topic
Unit 5	Tic-Tac-Toe (8 days)
Unit 6	Tic-Tac-Toe with AI (6 days)
Unit 7	Tech Trivia (8 days)

EOY — End of the Year Assessment

Detailed Syllabus for the Year

The roadmap given below lists the units covered in each term. Term 2 units will be visible on the tab after the completion of MOY.

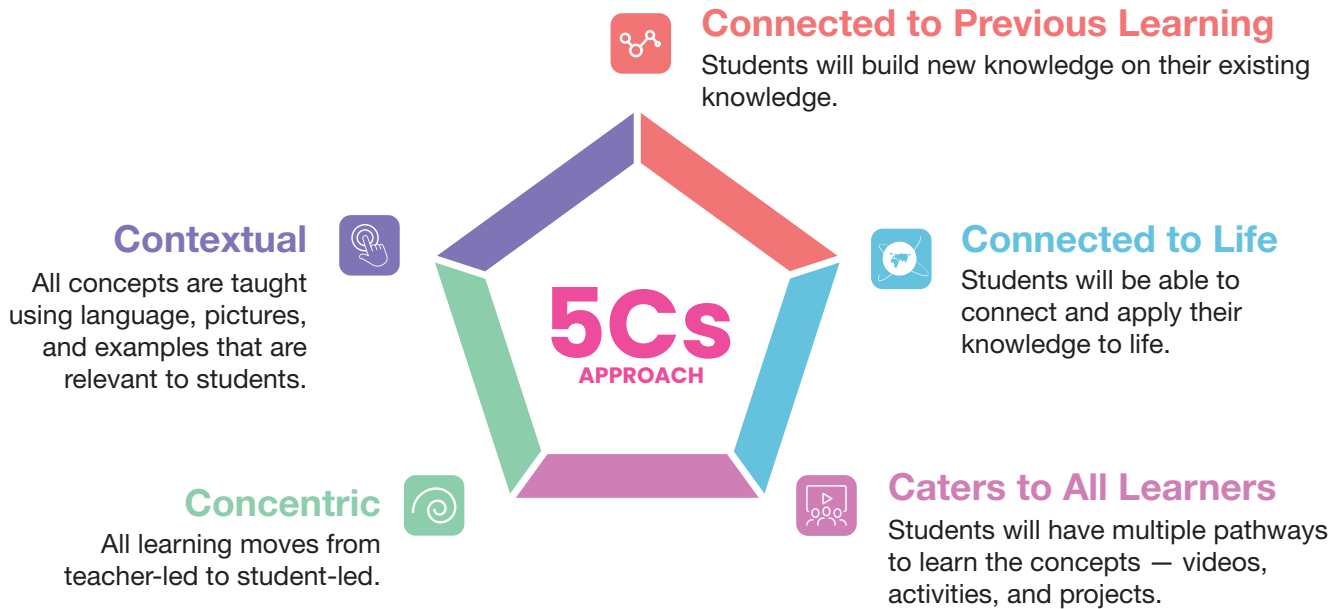| PART 1	Unit Name	USE Software/ Programming language	THINK Skills	BUILD Project
	1. Creating Your Own Apps	MIT App Inventor with emulator/AI2 companion	Creativity Decomposition Problem-solving Coding	Create the AudioNotes, AroundTheWorld and MyTranslator apps using App Inventor.
	2. Camping in the Wilderness	MIT App Inventor with emulator/AI2 companion	Decomposition Abstraction Problem-solving Coding	Create the VoiceClock and MyCompass apps using App Inventor.
	3. The Pythagorean Triple	Python (Introduction)	Critical thinking Mathematical thinking Algorithms Coding	Create a Pythagorean Triple simulator using operators and conditions in Python.
	4. Language of Computers	Python (Intermediate)	Logical thinking Coding Decision-making Abstraction	Create a binary to decimal and decimal to binary converter using Python.

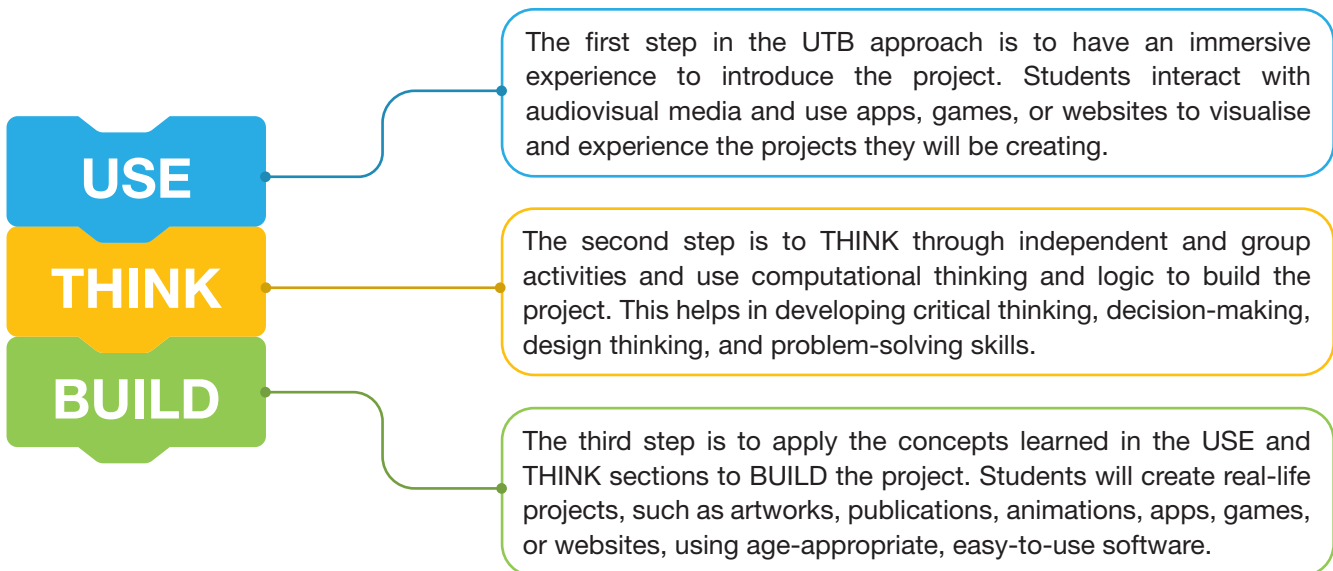| PART 2	Unit Name	USE Software/ Programming language	THINK Skills	BUILD Project
	5. Tic-Tac-Toe	Python (Advance)	Creativity Coding Problem-solving	Create a single player Tic-Tac-Toe game using Python.
	6. Tic-Tac-Toe with AI	Python (Artificial Intelligence)	Creativity Coding Problem-solving Analysis	Create an AI based Tic-Tac-Toe game using Python.
	7. Tech Trivia	HTML and CSS	Visualisation Creativity Critical thinking Coding	Create a tech quiz website using HTML and CSS.

The LEAD Method

The tables below show the LEAD Method that you will be following with your students.

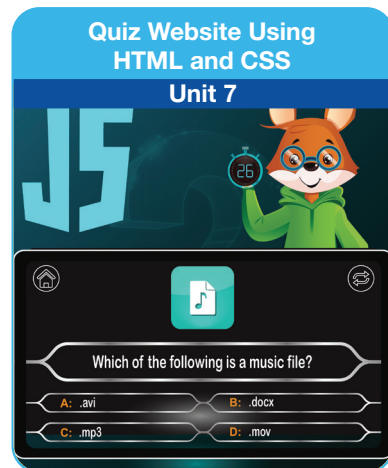## 1. The 5 Cs : Every concept is taught using the 5 Cs approach.

Connected to Previous Learning
Students will build new knowledge on their existing knowledge.

Contextual
All concepts are taught using language, pictures, and examples that are relevant to students.

5Cs APPROACH

Connected to Life
Students will be able to connect and apply their knowledge to life.

Concentric
All learning moves from teacher-led to student-led.

Caters to All Learners
Students will have multiple pathways to learn the concepts — videos, activities, and projects.

2. Use-Think-Build (UTB): Every unit follows the UTB pedagogical approach.

USE

The first step in the UTB approach is to have an immersive experience to introduce the project. Students interact with audiovisual media and use apps, games, or websites to visualise and experience the projects they will be creating.

THINK

The second step is to THINK through independent and group activities and use computational thinking and logic to build the project. This helps in developing critical thinking, decision-making, design thinking, and problem-solving skills.

BUILD

The third step is to apply the concepts learned in the USE and THINK sections to BUILD the project. Students will create real-life projects, such as artworks, publications, animations, apps, games, or websites, using age-appropriate, easy-to-use software.

LEAD

Class 7 — CCS   ALP

The LEAD Method

3. Project—Based Learning: Students demonstrate skills such as abstraction, decomposition, visualisation, creativity, and problem-solving by building projects at the end of every unit.

MyTranslator App Using MIT App Inventor
Unit 1

MyCompass App Using MIT App Inventor
Unit 2

Pythagorean Triple Simulator Using Python
Unit 3

Decimal to Binary converter Using Python
Unit 4

Tic-Tac-Toe Using Python
Unit 5

Tic-Tac-Toe Using Python AI
Unit 6

Quiz Website Using HTML and CSS
Unit 7
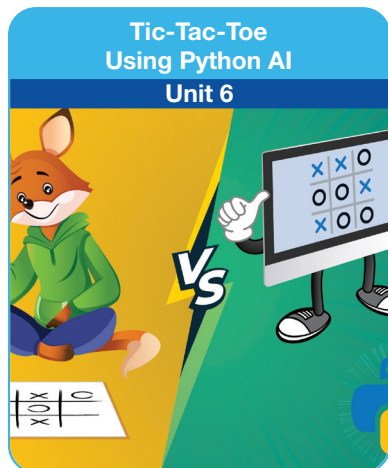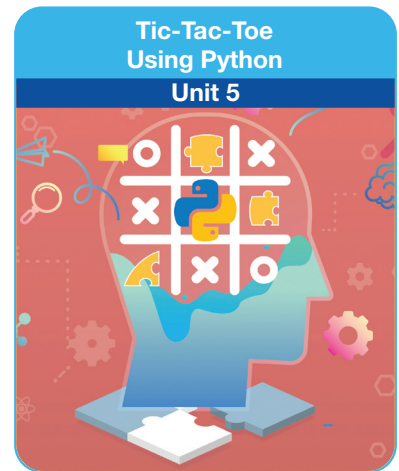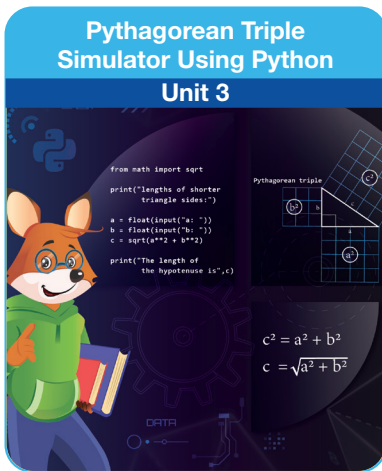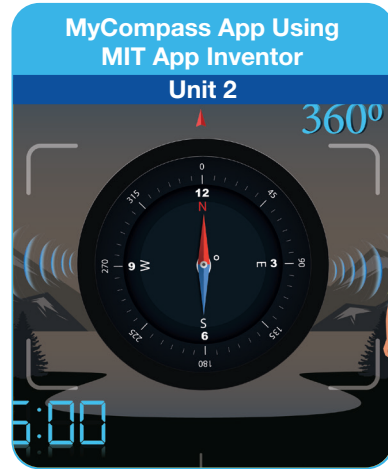
Important Icons

Icons and Features of the Book

Introduction
Provides a brief idea of the concepts.

Activity
Helps students understand concepts and apply their learnings.

Skill Time
Provides USE-THINK-BUILD approach to create real-life projects.

Project
Helps students to integrate all the skills.

Checkpoint
Helps students to earn badges or certificates.

Keywords
Provide meanings of difficult words as they read.

Scan here
to watch the unit introduction.

Scan here
to view a document on MIT App inventor.

Scan here
to download your badge.

Students can access important resources at home by scanning these codes using the LEAD Student App.

Red: to watch videos on various topics
Blue: to read documents and learn concepts
Green: to download badges and certificates

Icons and Features used in the Lesson Plans

Turn and Talk

Turn-Write-Pair-Share

Stop and Jot

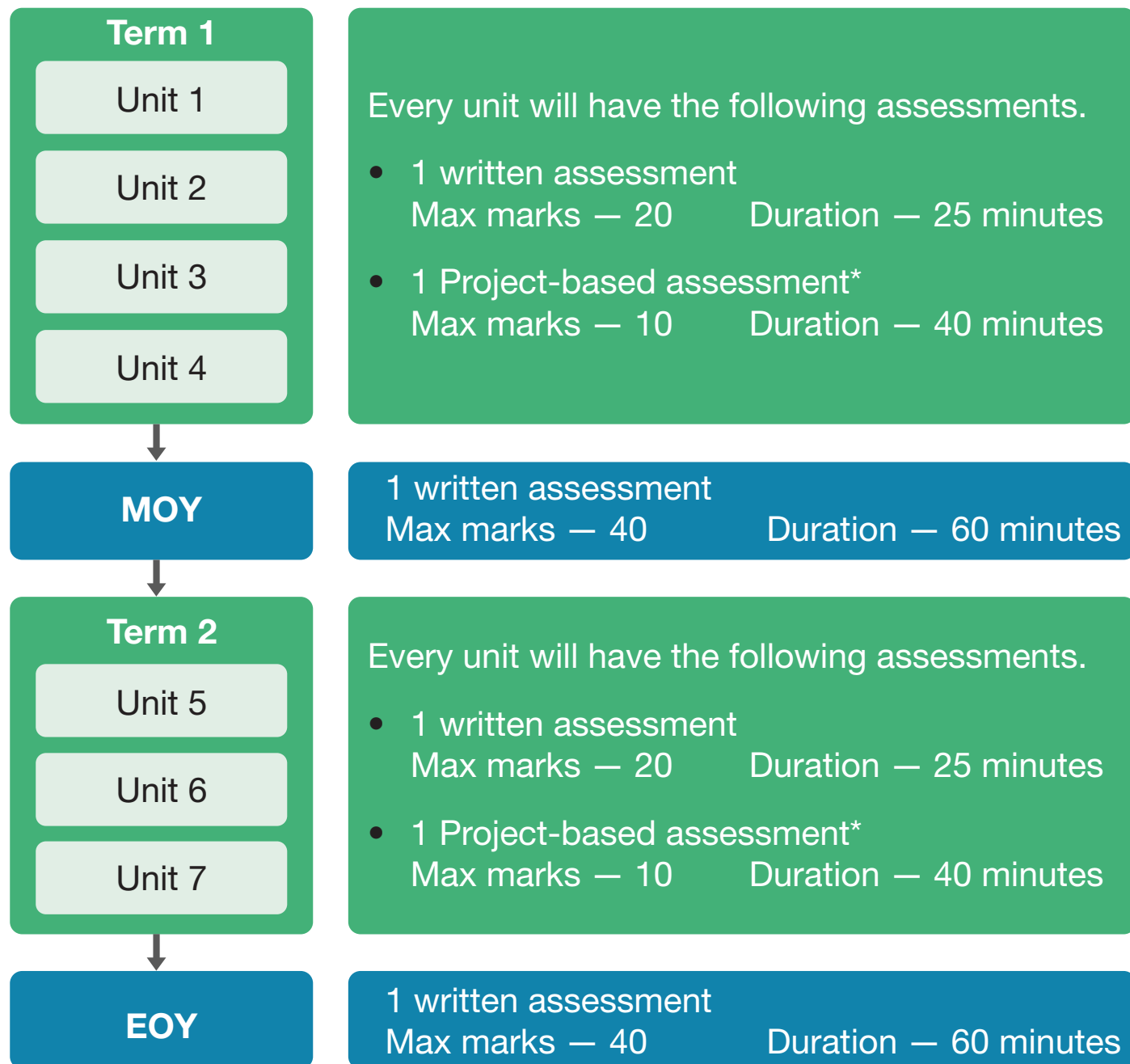Ensure that you use the routines and structures as mentioned in the plans to achieve excellence in each unit.

Resources called LCRs will help you understand these in detail. The LCR for each routine or structure will be mentioned under 'Preparation Needed' the first few times that routine is used.

Assessment Structure for the Year

The objective of the assessments is to check if all students have understood the concepts and can apply their learning. Based on the assessment data, it is very important to do strong remedial before progressing forward. The CCS curriculum prescribes and provides the following assessments.

Term 1

- Unit 1
- Unit 2
- Unit 3
- Unit 4

Every unit will have the following assessments.

- 1 written assessment
  Max marks — 20   Duration — 25 minutes

- 1 Project-based assessment*
  Max marks — 10   Duration — 40 minutes

MOY

1 written assessment
Max marks — 40   Duration — 60 minutes

Term 2

- Unit 5
- Unit 6
- Unit 7

Every unit will have the following assessments.

- 1 written assessment
  Max marks — 20   Duration — 25 minutes

- 1 Project-based assessment*
  Max marks — 10   Duration — 40 minutes

EOY

1 written assessment
Max marks — 40   Duration — 60 minutes

Note: *This is in line with NEP 2020's recommendations to include computational thinking and project-based assessments from early years.

Assessment Framework

Unit Assessments

The written unit assessments will have the following structure.

Type of Question	Marks	Questions	Total Marks
Multiple choice questions	1	4	4
Very short answer questions — Fill in the blanks	1	4	4
Short answer questions	2	1	2
Short answer questions — Debug	2	1	2
Long answer questions — Coding	4	2	8
		12 questions	**20 marks**

MOY & EOY Assessments

MOY and EOY assessments will have the following structure.

Type of Question	Marks	Questions	Total Marks
Multiple choice questions	1	4	4
Fill in the blanks	1	4	4
Match the following	1	4	4
Short answer questions — Fill Go	1	4	4
Very short answer questions — Coding	1	2	2
Short answer questions	1	4	4
Short answer questions — Debug	2	2	4
Short answer questions — Coding	3	2	6
Long answer questions — Debug	4	2	8
		28 questions	**40 marks**

Note:
- In MOY - 100% questions will be from Term 1 Units.
- In EOY - 100% questions will be from Term 2 Units.

Assessment Framework

Project Evaluation Rubric

Duration: 40 minutes   **Total marks: 10**

Strand/Score	2 - Excellent	1.5 - Needs Improvement	1- Unsatisfactory
Understanding	Student was able to understand the objectives of the project	Student partially understood the objectives and what needs to be created.	Student did not understand most of what was expected from the project.
Design	Student was able to visualise and design elements of the project very well.	Student was able to visualise and design elements of the project to satisfactory levels.	Student was not able to design some of the elements of the project.
Logic	Student was able to apply logical thinking to be able to solve the problem or steps required to create the project.	Student was partially able to solve the problem or apply the steps required to create the project.	Student was unable to think logically or apply the steps required to create the project.
Output	The output was as per prescribed project description.	The output was partially achieved as per project description.	The output achieved was not as per project description.
Completion and Time Management	Student was able to complete the project in the assigned time	Student was able to complete 75% of the project in the assigned time	Student was able to complete 50% or lesser of the project in the assigned time.

Difficulty level of Questions

Difficulty level of questions in the assessments are categorised as per the table below:

	LOTS (Lower Order Thinking Skills)	MOTS (Middle Order Thinking Skills)	HOTS (Higher Order Thinking Skills)
Definition	Questions based on recalling knowledge	Questions based on applying skills in familiar scenarios	Questions based on applying skills in unfamiliar scenarios, analysing situations and building on top of what was taught in class.
Bloom's Level	• Remember	• Understand • Apply	Application (complex) • Evaluate • Analyse • Create

Note: ASMs (Term 1 / Term 2)   • 30 (LOTS) • 50 (MOTS) • 20 (HOTS)
MOY / EOY   • 30 (LOTS) • 50 (MOTS) • 20 (HOTS)