Learning Journey for the Year

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

BOY

Beginning of Year assessment to help you identify learning gaps.

Bridge Course

Supports you in reteaching and recapping critical pre-requisite skills.

Biology

Term 1

- Chapter 1
- Chapter 2
- Unit ASM 1
- SE 1

The following 2 chapters of Biology are to be covered in 21 days.

- Crop Production and Management (10 days)
- Cell: Structure and Functions (11 days)
- This unit assessment will assess concepts learned in Chapters 1 and 2.
- SE 1 will be based on the concepts of Chapter 2.

Chemistry

Term 1

- Chapter 1
- Unit ASM 2
- SE 2

1 chapter of Chemistry is to be covered in 10 days.

- Substances: Metals and Non-Metals (10 days)
- This unit assessment will assess concepts learned in Chapter 1.
- SE 2 will be based on the concepts of Chapter 1.

Physics

Term 1

- Chapter 1
- Chapter 2
- Chapter 3

3 chapters of Physics are to be covered in 24 days.

- Force and Pressure (8 days)
- Friction (6 days)
- Light (10 days)

Learning Journey for the Year

Physics

- Unit ASM 3
- SE 3

- This unit assessment will assess concepts learned in Chapters 1, 2, and 3.
- SE 3 will be based on the concepts of Chapter 3.

Biology – Term 1

- Chapter 3
- Chapter 4
- Unit ASM 4
- SE 4

The following 2 chapters of Biology are to be covered in 17 days.

- Microorganisms: Friend and Foe (10 days)
- Conservation of Plants and Animals (7 days)
- This unit assessment will assess concepts learned in Chapters 3 and 4.
- SE 4 will be based on the concepts of Chapter 3.

MOY

5 days of Term 1 Revision plan, followed by Middle of Year Assessment

Biology – Term 2

- Chapter 5
- Chapter 6
- Unit ASM 5
- SE 5

2 chapters of Biology are to be covered in 20 days.

- Reproduction in Animals (12 days)
- Reaching the Age of Adolescence (10 days)
- This unit assessment will assess concepts learned in Chapters 5 and 6.
- SE 5 will be based on the concepts of Chapter 6.

Chemistry – Term 2

- Chapter 2
- Chapter 3

2 chapters of Chemistry are to be covered in 17 days.

- Chemical Reaction: Combustion (8 days)
- Fuels: Coal and Petroleum (9 days)

Learning Journey for the Year

Chemistry

- Unit ASM 6
- SE 6

This unit assessment will assess concepts learned in Chapters 2 and 3.

SE 6 will be based on the concepts of Chapter 2.

Physics

Term 2

- Chapter 4
- Chapter 5
- Chapter 6
- Unit ASM 7
- SE 7

3 chapters of Physics are to be covered in 23 days.

Electricity: Magnetic and Chemical Effects (8 days)

Introduction to Sound (9 days)

Some Natural Phenomena (10 days)

This unit assessment will assess concepts learned in Chapters 4, 5 and 6.

SE 7 will be based on the concepts of Chapter 6.

EOY

5 days of Term 2 revision plan followed by End of Year Assessment

Note: All subject enrichment (SE) activities are optional. However, It is recommended that students perform them in class in order to strengthen their conceptual understanding.

Life Skills - The important skills that students will develop this year are:

THINK

1. Solving real-world problems
2. Creating new ideas
3. Being curious
4. Reflecting on your learning
5. Learning from mistakes

COMMUNICATE

1. Communicating effectively
2. Presenting ideas
3. Using information
4. Using different media

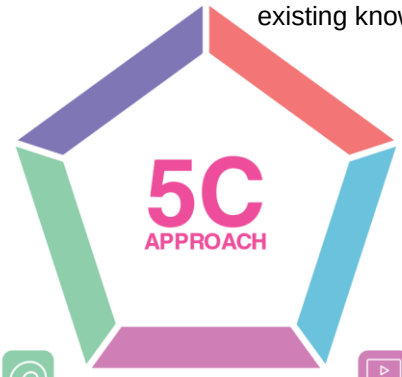
COLLABORATE

1. Working with others
2. Appreciating others' ideas
3. Resolving conflicts
4. Connecting yourself to your community
5. Connecting yourself to the nation

The LEAD Method

The LEAD Method includes unique pedagogical approaches you will use to help your students develop a deep understanding of concepts. These are integrated into the lesson plans.

1. 5Cs Approach: Every concept is taught through the 5Cs approach



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

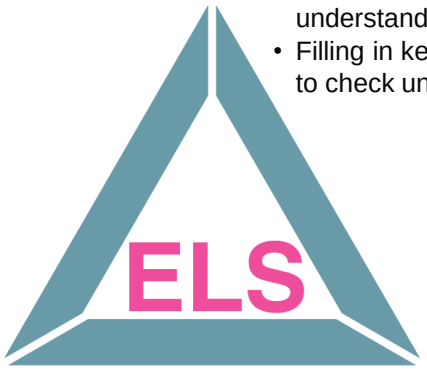
Contextual
All concepts are taught using language, pictures, and examples that are relevant to students.

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 have multiple pathways to learn all concepts — videos, activities, and projects.

2. ELS: English Language Strategies



Reading

- Annotation to read with understanding
- Filling in keywords after reading to check understanding

Writing

- Writing tips to help students organize their answers
- Filling in the blanks to help students write answers in the correct format.

Vocabulary

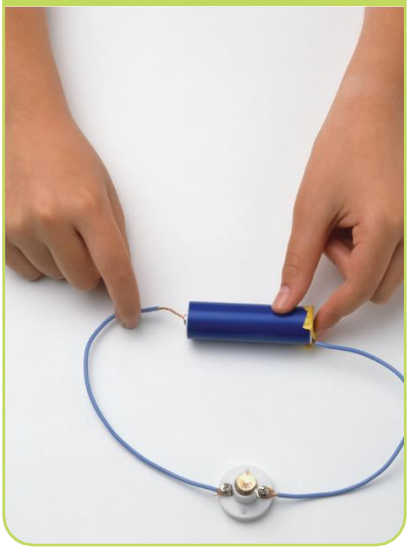
- Keywords with meanings for easy understanding
- Labelled diagrams for picture-word association
- Definitions highlighted for easy revision

The LEAD Method

LBD — Learning by Doing

Learning by Doing is followed in various ways:

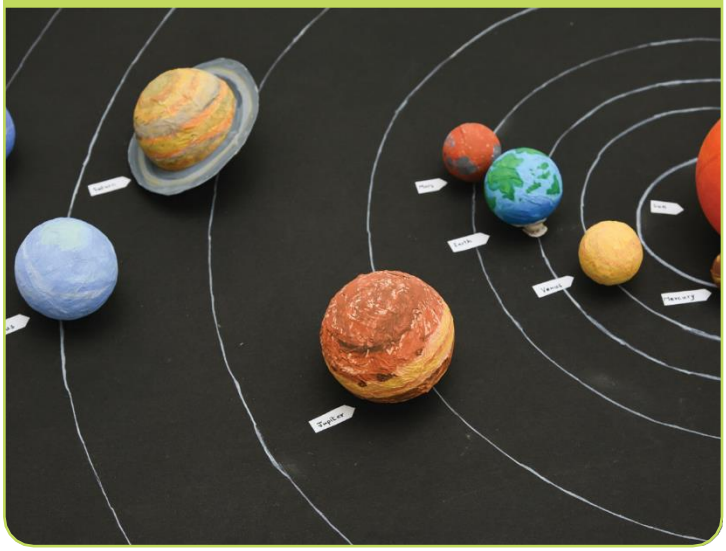
In-Class Activities



Laboratory Experiments

Videos and Demonstrations

Making Models



Community Projects

Important Icons and Features

Icons and Features of the Books

CONNECT TO LIFE
Provide activities and questions that help students apply new concepts to their life.

THINK
Provide opportunities for building thinking skills.

ACTIVITY
Help students understand concepts and apply their learnings.

COLLABORATE
Provide opportunities for building collaboration skills.

KEYWORDS
Provide meanings of difficult words as they read.

COMMUNICATE
Provide opportunities for building communication skills.

Scan here to know more.

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

Icons and Features in the Lesson Plans


Think


Observe


Read


Turn and Talk


Turn-Write-Pair-Share

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 assessments is to check if all students have understood the concept and can apply their learning. Based on assessment data, it is very important to do strong remedials using LEAD remedial recommendation before progressing forward. LEAD prescribes the following assessments:

BOY

1 written assessment
Max marks – 30 Duration – 60 minutes

Bridge Course

1 written assessment
Max marks – 20 Duration – 20 minutes

Biology
Term 1
Unit ASM 1
(Chapters 1 & 2)
SE 1

Chemistry
Term 1
Unit ASM 2
(Chapter 1)
SE 2

Physics
Term 1
Unit ASM 3
(Chapters 1, 2 & 3)
SE 3

Biology
Term 1
Unit ASM 4
(Chapters 3 & 4)
SE 4

Four unit assessments will be conducted in Term 1 for Biology, Chemistry and Physics with the following structure.

- **Each written assessment**
  Max marks – 20 Duration – 40 minutes
- **Each subject enrichment**
  Max marks – 10 Graded as per Rubric

Note: While we have provided assessment for all subject enrichment (SE) activities, we recommend that you do at least one assessment in a term.

Assessment Structure for the Year

MOY

1 written assessment
Max marks – 80 Duration – 180 minutes

Biology

Term 2

Unit ASM 5
(Chapters 5 & 6)

SE 5

Chemistry

Term 2

Unit ASM 6
(Chapters 2 & 3)

SE 6

Physics

Term 2

Unit ASM 7
(Chapters 4, 5 & 6)

SE 7

Three unit assessments will be conducted in Term 2 for Biology, Chemistry and Physics with the following structure.

- **Each written assessment**
  Max marks – 20 Duration – 40 minutes
- **Each subject enrichment**
  Max marks – 10 Graded as per Rubric

Note: While we have provided assessment for all subject enrichment (SE) activities, we recommend that you do at least one assessment in a term.

EOY

1 written assessment
Max marks – 80 Duration – 180 minutes

Assessment Framework

Unit Assessments

The written unit assessments have the following structure.

Types of Question	Marks	Questions	Total Marks
Multiple Choice Questions	1	4	4
Fill in the Blanks	4	1	4
Short Answer Questions	2	4	8
Long Answer Questions	4	1	4
		10 questions	**20 marks**

MOY & EOY Assessments

MOY and EOY assessments will have the following structure.

Types of Question	Marks	Questions	Total Marks
Multiple Choice Questions	1	16	16
Fill in the Blanks	8	2	8
Short Answer Questions	2	7	14
Short Answer Questions	3	6	18
Long Answer Questions	4	6	24
		36 questions	**80 marks**

Assessment Framework

Spiraling in Assessments

- In MOY – 100% questions will be from Term 1 Units.
- In EOY – 75% questions will be from Term 2 Units, and 25% will be from Term 1 Units.
- In Unit Assessments – For every group subject, the unit assessment will cover 85%-90% marks from that unit and 10-15% marks from the previous units. This is to help students practice concepts and be better prepared for MOY and EOY.
- The exact syllabus is provided in the Important Notes of the respective assessment day.

Difficulty level of Questions

Difficulty level of questions in the assessments are based on Board guidelines. All questions 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, analyzing situations and building on top of what was taught in class.
Bloom's Level	Remember	Understand Application (simple)	Application (complex) Evaluate Analyse Create

In line with Board guidelines, LEAD assessments follow the structure explained below

Unit ASM 1 - 50% LOTS : 40% MOTS : 10% HOTS
Unit ASM 2 - 50% LOTS : 40% MOTS : 10% HOTS
Unit ASM 3 - 40% LOTS : 50% MOTS : 10% HOTS
Unit ASM 4 - 30% LOTS : 50% MOTS : 20% HOTS
MOY - 30% LOTS : 50% MOTS : 20% HOTS
Unit ASM 5, 6, 7 - 30% LOTS : 50% MOTS : 20% HOTS
EOY – 30% LOTS : 50% MOTS : 20% HOTS

We increase the level of difficulty for students slowly in Term 1.

Materials Required

You will need the following materials for the various activities and experiments that will be conducted in Term 1.

Term 1 – List of Materials

Biology

Chapter 1: Crop Production and Management

- Pots — 3
- Bowl — 1
- Transparent vessel (tumbler, bowl, or cup) — 1
- Some cow dung
- 200 g of urea
- A fistful of seeds of cereal or pulses
- Some moong or gram seeds
- 200 g of soil

Chapter 2: Cell: Structure and Functions

- Clean glass slide — 2
- Clean toothpick — 1
- Gloves — 2
- Dropper — 1
- Methylene blue stain
- Coverslips — 2
- Tissue paper — 2
- Compound microscope — 1
- Onion — 1
- Knife — 1
- Forceps — 1
- Brush — 1
- Needle — 1
- Plain sheets of paper to make chits — 5

Chapter 3: Microorganisms: Friend and Foe

- Bread piece — 1
- Banana — 1
- Any dry fruit — 2–3 pieces
- Small jam bottle — 1
- Chips packet (with nutrition label) — 1
- Pickle sachets — 3
- Sauce sachets — 3
- Glass stirrer — 1

Continued . . .

Materials Required

You will need the following materials for the various activities and experiments that will be conducted in Term 1.

Term 1 – List of Materials

Biology	**Chapter 3: Microorganisms: Friend and Foe (Continued)** • 100 mL beaker — 1 • Dropper — 1 • Glass slide — 1 • Coverslip — 1 • Carton box or a paper bag or any open container — 1
Chemistry	**Chapter 1: Substances: Metals and Non-Metals** • Iron nail — 1 • Sulphur — 1 piece • Electric circuit board — 1 • Battery cell — 1 • Bulb — 1 • Copper wire — 1 piece • Magnesium ribbon — 1 • Sulphur powder — 10 g • Blue litmus paper strips — 2 • Red litmus paper strips — 2 • A spirit lamp or a Bunsen burner — 1 • Test tubes — 4 • Glass stirrer — 1 • Petri dish — 1 • Test tube holder — 1 • Rubber corks — 2 • Matchbox — 1 • Pair of tweezers — 1 • Sodium metal — 1 piece • Magnesium ribbon — 1 piece • Sulphur powder — 25 g • Beaker — 1 • Water — 500 mL • Scalpel — 1 • Spirit lamp — 1 • Test tube stand — 1

Continued . . .

Materials Required

You will need the following materials for the various activities and experiments that will be conducted in Term 1.

Term 1 – List of Materials

Chemistry	**Chapter 1: Substances: Metals and Non-Metals (Continued)** • Spatula — 1 • Sulphuric acid — 100 mL • Hydrochloric acid — 100 mL • Sodium hydroxide solution — 100 mL • Aluminium turnings — 10 g • Copper turnings — 10 g • Iron filings — 10 g • Graphite — 10 g • Zinc pieces — 10 g • Magnesium sulphate solution — 50 mL • Copper sulphate solution — 50 mL • Zinc sulphate solution — 50 mL • Iron sulphate solution — 50 mL
Physics	**Chapter 1: Force and Pressure** • Bar magnets — 1 • 500 mL beaker — 1 • 2 litre plastic bottle — 1 • Compass with a needle or a divider — 1 • Balloon — 1 • Tube of length 25 cm and diameter 5–7.5 cm — 1 • 30 cm ruler — 1 • Adhesive tape — 1 • Roll of thread — 1 • Small table — 1 • Bottle of food colour — 1 • Iron nails — 3
	Chapter 3: Light • White sheets — 3 • Plane mirrors — 2 • Candle — 1 • Protractor — 1

Continued . . .

Materials Required

You will need the following materials for the various activities and experiments that will be conducted in Term 2.

Term 2 – List of Materials

Biology	**Chapter 5: Reproduction in Animals** • Compound microscopes — 4 • Permanent slides showing budding in *Hydra* and binary fission in *Amoeba* — 2 sets each
Chemistry	**Chapter 2: Combustion and Flame** • Candles — 2 • A glass tube — 1 • A pair of tongs — 1 • A glass slide — 1 • 10 cm long copper wire • Paper cups — 4 • A 500 mL glass beaker — 1 • A ceramic tile — 1 • A piece of wood — 1 • A glass bangle — 1 • An iron nail — 1 • A plastic straw — 1 • A piece of charcoal • A metal or glass container — 1
Physics	**Chapter 4: Electricity: Chemical Effects** • A mini-incandescent screw bulb with a bulb holder — 5 • Connecting wires with stripped ends — 20–30 • Two-cell battery holder (for 1.5 AA cells) — 5 • 1.5 AA cells — 10 • Snap connector — 10 • 9 V battery — 10 • Crocodile clips connected to wires — 10 • Copper electrodes — 10 • A magnetic compass — 5 • A one-metre-long insulated copper wire with stripped ends — 5

Continued . . .

Materials Required

You will need the following materials for the various activities and experiments that will be conducted in Term 2.

Term 2 – List of Materials

Physics	**Chapter 4: Electricity: Chemical Effects** • Copper sulphate salt — 100 g • Copper strip (approximately 15 × 5) • Sandpaper — 1 • A brass key — 1 • A 250 mL beaker — 1 • Distilled water — 500 mL • Hydrochloric acid — 50 mL • Sodium hydroxide solution — 50 mL