

# 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.

**Launchpad**

Supports you in understanding the examination pattern and syllabus and the approach to teach the subject.

**Term 1**

10 chapters comprising of 123 lesson plans( LPs) to be covered in 90 days.

Chapter 1

Chemical Reactions and Equations (11 LPs)

Chapter 2

Acids, Bases, and Salts (14 LPs)

**UASM 1**

This unit assessment will assess concepts learned in Chapters 1 and 2.

Chapter 6

Life Processes (18 LPs)

**UASM 2**

This unit assessment will assess concepts learned in Chapter 6.

Chapter 10

Light – Reflection and Refraction (20 LPs)

**Periodic Test I**

This periodic assessment will assess concepts learned in Chapters 1, 2, 6 and 10.

# Learning Journey for the Year

Chapter  
11

UASM 3

Chapter 3

Chapter 7

Chapter 15

UASM 4

Chapter  
14

Chapter 16

The Human Eye and the Colourful World (10 LPs)

This unit assessment will assess concepts learned in Chapters 10 and 11.

Metals and Non - Metals (15 LPs)

Control and Co-ordination (12 LPs)

Our Environment (5 LPs)

This unit assessment will assess concepts learned in Chapters 3, 7, and 15.

Sources of Energy (8 LPs)

\* Chapter dropped as per the rationalized syllabus of AY 2022-23

Sustainable Management of Natural Resources (10 LPs)

MOY / Periodic  
Test II

Middle of Year Assessment

Term 2

Chapter 4

UASM 5

6 chapters comprising of 103 Lesson Plans ( LPs) to be covered in 70 days.

Carbon and its Compounds (15 LPs)

This unit assessment will assess concepts learned in Chapter 4.

Chapter 12

Chapter 13

UASM 6

Periodic  
Test III

Chapter 8

Chapter 9

UASM 7

Chapter 5

Electricity (20 LPs)

Magnetic Effects of Electric Current (16 LPs)

This unit assessment will assess concepts learned in Chapters 12 and 13.

This periodic assessment will assess concepts learned in Chapters 4, 12, 13, 6, 7, and 3.

How do Organisms Reproduce? (14 LPs)

Heredity and Evolution (15 LPs)

This unit assessment will assess concepts learned in Chapters 8 and 9.

**Periodic Classification of Elements(10 LPs)**

\* Chapter dropped as per the rationalized syllabus of AY 2022-23.

Mocks

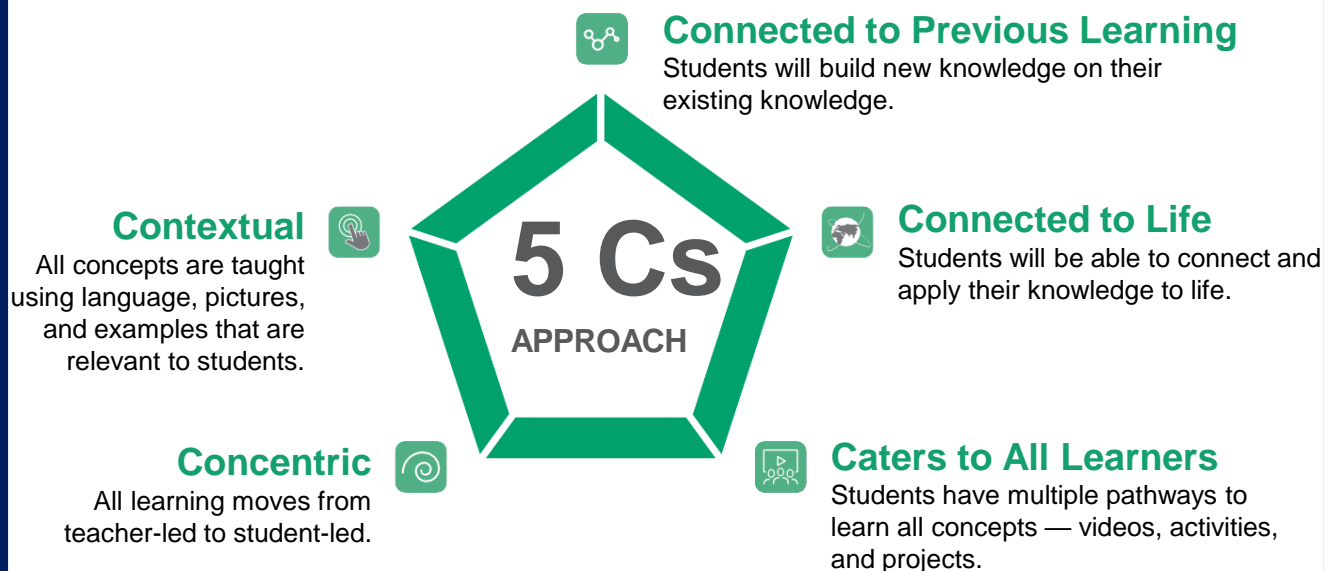
3 Mocks to familiarize students with the Board Pattern

Board Exam

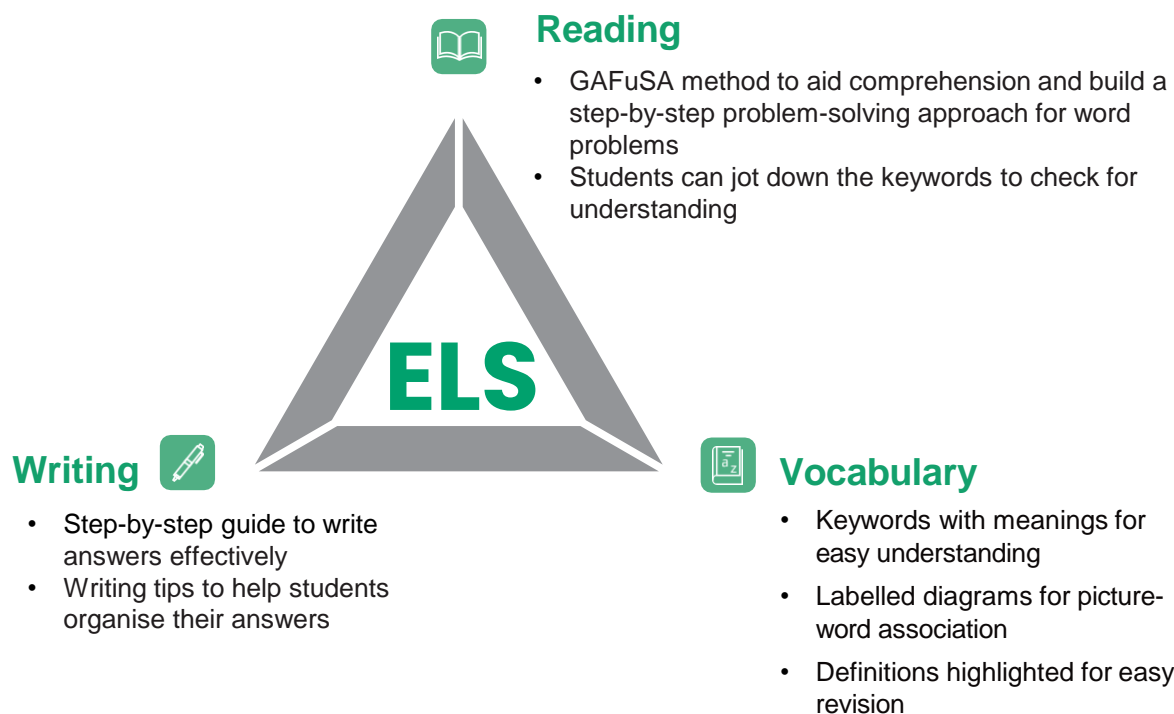
# The LEAD Method

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



## 2. ELS: English Language Strategies



# The LEAD Method

## 3. LBD: Learning by Doing



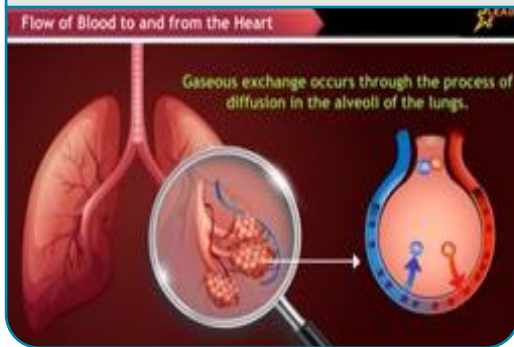
Learning by Doing method helps you build:

Deeper understanding of Science concepts

Better connection of Science topics to life

Better reasoning skills

### Videos



### Demonstrations



### Laboratory Experiments



### In class Activities



# Important Icons

## Icons and Features of the Book

### Let's Recall

Summarizes the previously taught concepts in order to learn the new concepts in the chapter

### Concept Time

Simplifies, explains, and summarizes select concepts for ease of understanding and revision

### Study Tip!

Provides with useful tips that help prepare for the Board Exam

### Watch Out!

Highlights the common misconceptions or mistakes that students may make

### Did you Know?

Shares interesting facts that help broaden student's understanding of a topic or concept

### Solved Examples

Provides model solutions to questions of various types

### Writing Good Answers

Explains the structures and steps that students must follow to answer different types of questions that appear frequently in exams

### Revision Guide

Provides a checklist to help students revise a chapter

### Practice Questions

Provides the students with a wide range of questions for practice and the development of higher order thinking skills

# Important Icons

## Icons and Features of the Book



**Think**

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



**Observe**



**Read**

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



**Turn and Talk**



**Turn-Write-Pair-Share**



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

# 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 – 40      Duration – 90 minutes

**Bridge Course**

1 written assessment  
Max marks – 20      Duration – 20 minutes

**Term 1**

**UASM 1**  
(Chapters 1 & 2)

**UASM 2**  
(Chapter 6)

**Periodic Test I**  
(Chapters 1,2,6  
& 10)

**UASM 3**  
(Chapters 10 &  
11)

**UASM 4**  
(Chapters 3,7 &  
15)

Four unit assessments will be conducted in Term 1 with the following structure.

- **1 written assessment**  
Max marks – 20      Duration – 40 minutes

One periodic test will be conducted in Term 1 with the following structure.

**Periodic Test I**  
Max marks – 40      Duration – 90 minutes

**MOY/Periodic Test II**

Multiple Assessments

Subject Enrichment

Portfolio

- **MOY / Periodic Test II**  
**1 written assessment**  
Max marks – 80      Duration – 180 minutes
- **Multiple Assessments, Subject Enrichment, Portfolio**  
To be assessed regularly  
Max marks – 05



# 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:

## Term 2

UASM 5  
(Chapter 4)

UASM 6  
(Chapters 12 &  
13)

Periodic Test III  
(Chapters 3,  
4,,6,7, 12 & 13)

UASM 7  
(Chapters 8 & 9)

Three unit assessments will be conducted in Term 2 with the following structure.

- **1 written assessment**  
Max marks – 20      Duration – 40 minutes

One periodic test will be conducted in Term 2 with the following structure.

**Periodic Test III**  
Max marks – 40      Duration – 90 minutes

## Mocks

Three Mock examinations will be based on the pattern, structure, and syllabus prescribed by CBSE and according to the Sample Question Paper released for AY 2023-24

Structure of the Mock Exam  
Max marks – 80      Duration – 180 minutes

## Board Exam

Structure of the Board Paper  
1 written assessment  
Max. marks – 80      Duration – 180 minutes

# Assessment Structure for the Year

Internal Assessment – In addition to the Board Examination conducted by CBSE, the Board suggests an Internal Assessment for 20 marks. The structure of the Internal assessment is as follows.

## Internal Assessment

Periodic Tests  
( 5 marks)

Three periodic assessments will be conducted during the year.

Periodic Multiple Assessments  
(5 marks)

In-class Quizzes, Oral Tests, Concept Maps, Exit Cards, and Visual Expressions to be conducted by the teacher. Graded as per the rubric provided. Assessed once per term.

Portfolio  
(5 marks)

A portfolio is a collection of intentionally chosen student work. Assembled over time, it represents the learner's efforts, progress, growth, and achievements with respect to learning outcomes. Assessed once per term

Subject Enrichment Activities  
(5 marks)

It is essential to assess at least one subject enrichment activity per term. For science, the Board suggests Lab Days as Subject Enrichment

# Assessment Framework

## Unit Assessments

The written unit assessments will have the following structure.

Types of Questions	Marks	Questions	Total Marks
Multiple Choice Questions	1	4	4
Assertion-Reason Questions	1	2	2
Very Short Answer Questions	2	1	2
Short Answer Questions	3	1	3
Long Answer Questions	5	1	5
Case based Questions	4	1	4
		<b>10 questions</b>	<b>20 marks</b>

## Periodic Assessments

Periodic assessments will have the following structure.

Types of Questions	Marks	Questions	Total marks
Multiple Choice Questions	1	8	8
Assertion-Reason Questions	1	2	2
Very Short Answer Questions	2	3	6
Short Answer Questions	3	2	6
Long Answer Questions	5	2	10
Case based Questions	4	2	8
		<b>19 questions</b>	<b>40 marks</b>

# Assessment Framework

## MOY Assessments

The MOY assessments will have the following structure.

Types of Questions	Marks	Questions	Total Marks
Multiple Choice Questions	1	16	16
Assertion-Reason Questions	1	4	4
Very Short Answer Questions	2	6	12
Short Answer Questions	3	7	21
Long Answer Questions	5	3	15
Case based Questions	4	3	12
		<b>39 questions</b>	<b>80 marks</b>

*Note: The **Mock Assessments** structure will be as per the sample question paper released by the board for the academic year 2023-24.*

# Assessment Framework

## Spiraling in Assessments

- In Unit Assessments – Syllabus for UASM can be seen in the Important notes section.
- In MOY – All the questions will be from Term 1 chapters.
- In Periodic Test: III – 70-80% question from Term 2 chapters and remaining from Term 1 chapters.
- In Mocks, all chapters as per the Board Syllabus will be covered.

## 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:

	<b>LOTS</b> (Lower Order Thinking Skills)	<b>MOTS</b> (Middle Order Thinking Skills)	<b>HOTS</b> (Higher Order Thinking Skills)
<b>Definition</b>	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.
<b>Bloom's Level</b>	Remember	Understand Application (simple)	Application (complex) Evaluate Analyse Create

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

**Unit Assessments- 46% LOTS : 22% MOTS : 32% HOTS**

**Periodic and MOY Assessments- 46% LOTS : 22% MOTS : 32% HOTS**

# Materials Required

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

## List of Materials Required

### To Be Bought Locally

#### Chemistry

#### Chapter 1: Chemical Reactions and Equations

- Lead nitrate crystals
- Potassium iodide solution
- Zinc granules
- Dilute sulphuric acid
- Calcium oxide / quick lime
- Matchbox
- A 9V battery
- Copper wires
- Iron fillings
- Copper sulphate crystals
- Sodium sulphate crystals
- Barium chloride salt
- Ferrous sulphate crystals

#### Chapter 2: Acids, Bases, and Salts

- Dilute hydrochloric acid
- Sodium hydroxide
- Red litmus paper
- Blue litmus paper
- Phenolphthalein
- Methyl orange
- Zinc granules
- Solid sodium bicarbonate
- Solid sodium carbonate
- Dilute sulphuric acid
- Lime water
- Copper oxide
- Glucose
- Alcohol
- Dilute acetic acid
- U – shaped glass rod
- Onion – 1

# Materials Required

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

## List of Materials Required

### To Be Bought Locally

#### Chemistry

#### Chapter 2: Acids, Bases and Salts (contd..)

- Pieces of cloth
- Milk
- Water

#### Chapter 3: Metals and Non – metals

- Copper turnings
- Iron nail
- Iron filings
- Sulphur
- Aluminium foil
- Aluminium metal
- Spoon
- Magnesium ribbon
- Matchbox
- Blue litmus paper
- Red litmus paper
- Sodium
- Cotton
- Hydrochloric acid
- Zinc granules
- Zinc sulphate
- Copper sulphate
- Iron sulphate
- Aluminium sulphate
- Sodium chloride
- Potassium iodide
- Oil
- Calcium chloride

# Materials Required

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

## List of Materials Required

### To Be Bought Locally

Biology

#### Chapter 6: Life Processes

- A mounting needle
- A brush
- A razor blade
- Safranin
- Glycerine
- 1% starch solution
- Dilute iodine solution
- Potassium hydroxide powder
- Calcium hydroxide powder
- Delivery (bent) tubes
- 5 mL test tubes

#### Chapter 7: Control and Co-ordination

NA

#### Chapter 14: Sources of Energy

NA

#### Chapter 15: Our Environment

NA

#### Chapter 16: Sustainable Management of Natural Resources

NA



## Materials Required

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

### List of Materials Required

#### To Be Bought Locally

#### Physics

##### Chapter 10: Light

- A 1 m rule
- A 30 cm ruler
- A marker
- A set of ink pens or sketch pens
- A protractor
- Drawing boards (can be arranged from the school science laboratory)
- A cardboard
- Sheets of white paper
- An adhesive tape
- Scissors
- Glue
- Pins
- A match box
- Candles
- Water
- A 10 rupee coin
- A shallow bowl

##### Chapter 11: The Human Eye and the Colourful World

- White sheets of paper (6)
- Adhesive tape (6)
- Drawing pins (50)
- Sewing pins (50)
- Pencil (1)
- Milk (100 mL)
- Water (200 mL)

## Materials Required

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

### List of Materials Required

#### To Be Bought Locally

#### Chemistry

##### Chapter 4: Carbon and its Compounds

- 16 ml of ethanol
- 5 g of potassium permanganate crystals
- 10 g sodium hydroxide pellets
- Two metallic plates
- A matchbox
- A block of sodium metal dipped in kerosene
- A scalpel
- 15 ml of acetic acid
- 2 g of sodium carbonate
- 1 ml of concentrated sulphuric acid
- 1 g of sodium hydrogen carbonate
- A spatula
- A piece of camphor

##### Chapter 5: Periodic Classification of Elements

NA

## Materials Required

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

### List of Materials Required

#### To Be Bought Locally

<b>Biology</b>	<b>Chapter 8: How do Organisms Reproduce?</b> NA
	<b>Chapter 9: Heredity and Evolution</b> NA

#### To Be Bought Locally

<b>Physics</b>	<b>Chapter 12: Electricity</b> NA
	<b>Chapter 13: Magnetic Effects of Electric Current</b> <ul style="list-style-type: none"><li>Four 1.5 V AA cells</li></ul>