

# CLASS 7

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Division: \_\_\_\_\_



# EXPERT BOOK

## PART 1

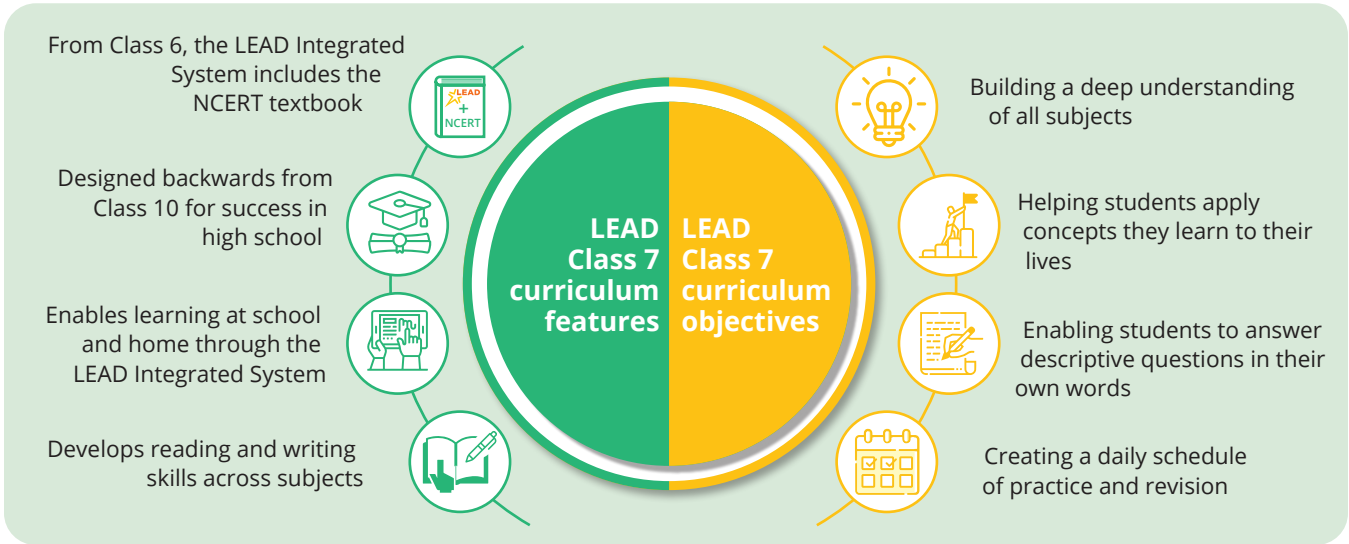


**Head Office**

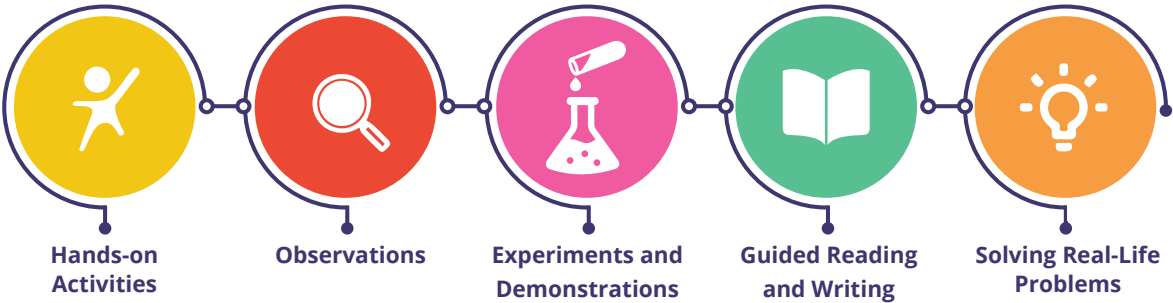
Unit #401, B Wing, Business Square,  
Andheri Kurla Road, Chakala,  
Andheri East, Mumbai - 400093, India



# NOTE TO PARENTS

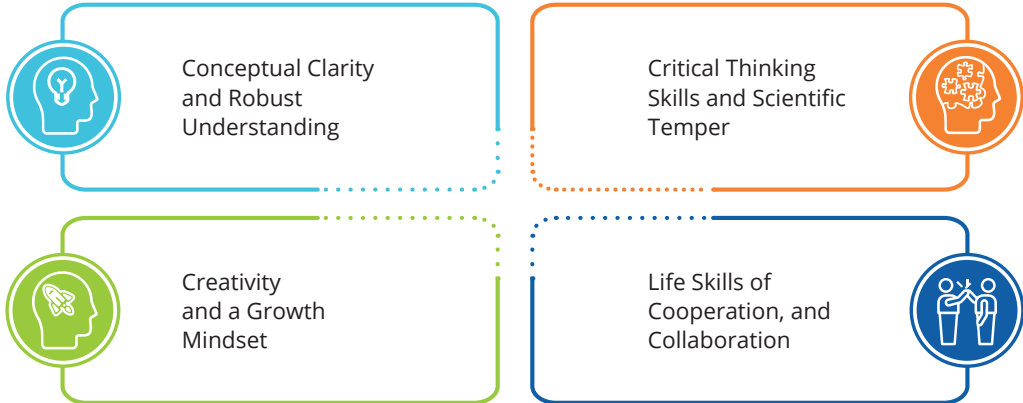


Children learn best when they can explore on their own and interact with everything around them. Keeping this in mind, LEAD Science Curriculum is designed to provide students with learning opportunities that will enable them to actively engage with the learning materials and connect the learning to life. Some of the ways in which students will learn science are:










These classroom learning methods help students not only participate in the learning process actively but also achieve in-depth understanding of the concepts by doing or experiencing the lessons. This approach to learning is called Learning by Doing (LBD). Learning science through the LBD approach helps students develop strong subject knowledge and skills that they need to succeed in school as well as in life.







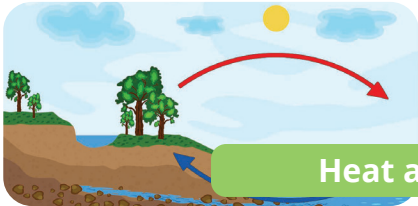
LBD Approach helps students develop the following skills




# ANNUAL LEARNING PLAN

PART 1	Unit Name	Content Strand	NCERT Chapter
	<b>Nutrition and Respiration</b> Teaches students about the life processes - nutrition and respiration in plants and animals.	Biology Unit 1	1, 2, 10
	<b>Fabrics, Chemicals, and Changes</b> Introduces students to types of fabrics, chemical substances, and changes through investigations	Biology Unit 2	7, 8, 9
	<b>Sorting, Separation, and Changes</b> Teaches students about mixtures, their methods of separation, and the different types of changes.	Chemistry Unit 1	3, 5, 6
	<b>Heat and Light</b> Covers the concepts of heat transfer, reflection of light, and their application in real-life.	Physics Unit 1	4, 15
PART 2	Unit Name	Content Strand	NCERT Chapter
	<b>Transportation and Reproduction</b> Teaches students about the life processes - reproduction and transportation in plants and animals.	Biology Unit 3	11, 12
	<b>Natural Resources and Waste Management</b> Covers the impact of human activities on natural resources and measures to protect them.	Biology Unit 4	16, 17, 18
	<b>Motion and Electricity</b> Introduces students to the concept of motion, electric current, and their applications in life.	Physics Unit 2	13, 14

# SCIENCE — PART 1

Contents		Page No.
	<b>Annual Learning Plan</b>	<b>04</b>
 Biology	<b>Unit 1</b>  Nutrition and Respiration	<b>06</b>
	<b>Unit 2</b>  Weather, Winds, and Soil	<b>36</b>
 Chemistry	<b>Unit 1</b>  Fabrics, Chemicals, and Changes	<b>64</b>
 Physics	<b>Unit 1</b>  Heat and Light	<b>95</b>

This **EXPERT BOOK** should be used in addition to the NCERT textbook. It is designed to achieve the following three objectives:

1. To help students learn the concepts of the NCERT textbook by presenting them in an easy-to-understand form.
2. To provide students with additional information to aid conceptual understanding.
3. To ensure students get adequate practice through additional questions and enhance their learning through Higher Order questions. The  icon is used to indicate the Higher Order Thinking Skills (HOTS) questions.

The **EXPERT BOOK** must be used as advised by the teacher in class or for home practice.

Whenever students find the NCERT textbook difficult to understand, they can refer to the **EXPERT BOOK**. Students should also refer to it while preparing for assessments.