



EXCEL
INTERNATIONAL

Course Name: Scientific Thinking for Young Minds

1. Course Module Structure

This course is divided into 10 structured modules designed to develop scientific curiosity, critical thinking, and problem-solving skills in young learners. Each module focuses on understanding scientific concepts through observation, experimentation, and logical reasoning. The course encourages students to ask questions, explore ideas, and apply scientific thinking to everyday life situations.

2. Module, 3. Topic & 4. Module for 10

Module 1: Introduction to Scientific Thinking

Topics:

- What is science and scientific thinking
 - Observation and curiosity
 - Asking questions
 - Real-life examples of science
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Module 2: Observation & Experimentation

Topics:

- Importance of observation
 - Basic experiments
 - Recording results
 - Drawing conclusions
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Module 3: Scientific Tools & Measurement

Topics:

- Introduction to scientific tools
- Units of measurement

- Using simple instruments
 - Accuracy and estimation
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Module 4: Understanding Cause and Effect

Topics:

- Cause and effect relationships
 - Identifying variables
 - Simple scientific reasoning
 - Everyday examples
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Module 5: States of Matter

Topics:

- Solids, liquids, and gases
 - Properties of matter
 - Changes in states
 - Real-life applications
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Module 6: Energy and Forces

Topics:

- Types of energy
 - Push and pull forces
 - Motion basics
 - Practical examples
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Module 7: Environment and Nature

Topics:

- Natural surroundings
 - Plants and animals
 - Importance of environment
 - Conservation basics
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Module 8: Problem-Solving in Science

Topics:

- Identifying problems
- Forming hypotheses

- Testing ideas
 - Logical conclusions
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Module 9: Scientific Thinking in Daily Life

Topics:

- Everyday science applications
 - Decision-making using facts
 - Simple innovations
 - Critical thinking activities
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Module 10: Practice & Final Assessment

Topics:

- Activity-based learning
- Simple experiments
- Review exercises
- Final evaluation