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# 5Es Model Template for Students–Teach– Students Initiative



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# 5E INQUIRY MODEL

## Teaching Framework Presentation





# INQUIRY-BASED LEARNING

Any good STEAM lesson is grounded in inquiry, problem-solving and process-based learning. Thus, paying close attention to the essential question and the process surrounding its exploration is crucial. Some of the important components to a STEAM classroom or lesson include:

- What problems are being investigated and solved?
- How are both contents being used to explore the problems?
- Why is the process important to the question posed?

## 5E MODEL

The 5E model provides a carefully planned sequence of instruction that places students at the centre of learning. It encourages all students to explore, construct understanding of scientific concepts, and relate those understandings to phenomena or engineering problems.

Educators use the 5E Model of Instruction to sequence lessons and activities which provide best first instruction for all students. Through this process they emphasise opportunities to personalise learning. In each phase of the 5E Model of Instruction, teachers carefully consider how the evidence collected or information obtained builds student understanding of a phenomenon or a solution to the designed problem.

The optimal use of the 5E Model is a learning sequence of two to three weeks where each phase is used as the basis for one or more lessons. According to research, the 5E Model is more effective, if individual phases are spread over a number of lessons to provide student with the opportunities for meaningful and deep learning across a learning sequence.

However, depending on the subject and/or topic taught, the 5E Model of Instruction can also be used for a single lesson. Phases can be repeated or looped as needed to create time or experiences to learn a concept or develop an ability for example: Engage, Explore, Explain, Explore, Explain, Elaborate, and Evaluate.

Activities in a 5E learning sequence should be designed to integrate the Science and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas.



# LESSON PLAN TEMPLATE

**Lesson Title:** e.g., "Introduction to Nutrition"

**Grade Level:** e.g., "Grade 10"

**Subject:** e.g., "Science" or "Mathematics"

## 1. Engage

**Objective:** Capture attention, connect with prior knowledge and identify any knowledge gaps. Introduce the concept to students for the first time.

**Activity/Strategy:** Start with a fun question, interesting fact, video clip, or demonstration.

**Example:** Show a quick experiment or a compelling image related to the topic.

**Materials Needed:**

- Video link or image.
- Props or materials for a demonstration.

## 2. Explore

**Objective:** Allow students to investigate and discover. You may ask students to go through the scientific method and communicate with their peers to make observations. This phase allows students to learn in a hands-on way.

**Activity/Strategy:** Provide a hands-on activity, simulation, or problem-solving task.

**Example:** Have students build a simple model, analyse data, or brainstorm ideas.

**Materials Needed:**

- Worksheets or activity guides.
- Any necessary supplies (e.g., paper, markers, or digital tools).

## 3. Explain

**Objective:** Teach the core content and clarify misconceptions. In this phase students also share what they learned during the "Explore" phase before introducing technical information in a more direct manner. After the sharing of findings, utilise video, computer software, or other aids to boost understanding.



# LESSON PLAN TEMPLATE

## 3. Explain

**Activity/Strategy:** Present a short explanation using slides, videos, or diagrams.

**Example:** Use a diagram to explain how a process works or break down a concept step by step.

**Materials Needed:**

- Presentation slides, whiteboard, or visuals.
- Notes or a script for explanation.

## 4. Elaborate

**Objective:** Extend learning and apply concepts. This phase helps students to develop a deeper understanding and reinforce their knowledge before evaluation. Educators may ask students to create presentations or conduct additional investigations to reinforce new skills.

**Activity/Strategy:** Assign a task that allows students to apply what they've learned in a new context.

**Example:** Ask students to solve a real-world problem, create a project, or answer higher-order questions.

**Materials Needed:**

- Project instructions or application tasks.
- Access to resources for research or tools for creating.

## 5. Evaluate

**Objective:** Assess understanding and receive feedback, the 5E Model allows for both formal and informal assessment, e.g. presentations, self-assessment, peer assessment, peer discussions, quizzes, writing assignments, and exams.

**Activity/Strategy:** Use quizzes, peer discussions, or reflections to evaluate learning.

**Example:** Conduct a short quiz, group discussion, or ask students to present their findings.

**Materials Needed:**

Quiz questions, rubric for presentations, or a reflection sheet.