

Advancing STEM

The 5 E Model

Engage	Description of the Engage Phase
<p>Activities capture the students' attention, connect their thinking to the situation, and help them access current knowledge.</p>	<p>This lesson initiates the learning tasks. The activities (1) activate prior knowledge and make connections between past and present learning experiences, and (2) anticipate activities and focus students' thinking on the learning outcomes of current activities. The learner should become mentally engaged in the concepts, practices, abilities, and skills of the curriculum unit.</p>
Explore	Description of the Explore Phase
<p>Students investigate initial ideas and solutions in meaningful contexts.</p>	<p>This phase provides students with a common base of experiences within which they identify and begin developing concepts, practices, abilities, and skills. Students actively explore the contextual situation through investigations, reading, web searches, and discourse with peers.</p>
Explain	Description of the Explain Phase
<p>Based on an analysis of the exploration, students develop an explanation for the concept and practices. Their understanding is clarified and modified through the teacher's descriptions and definitions.</p>	<p>This phase focuses on developing an explanation for the activities and situations students have been exploring. They verbalize their understanding of the concepts and practices. The teacher introduces formal labels, definitions, and explanations for concepts, practices, skills, and abilities.</p>
Elaborate	Description of the Elaborate Phase
<p>Students have opportunities to expand and apply their understanding of the concepts within new contexts and situations.</p>	<p>These lessons extend students' conceptual understanding through opportunities for students to apply knowledge, skills, and abilities. Through new experiences, the learners transfer what they have learned and develop broader and deeper understanding of concepts about the contextual situation and refine their skills and abilities.</p>
Evaluate	Description of the Evaluate Phase
<p>Students assess their understanding of the concepts and practices, and teachers have the opportunity to assess student learning.</p>	<p>This phase emphasizes students assessing their understanding and abilities and provides opportunities for teachers to evaluate students' understanding of concepts and development of goals identified in learning outcomes.</p>