

Advancing STEM Engineering Design Process

Ask	Description of the Ask Phase
Explore problems.	During this phase students are using questions to explore a problem or a task. Through questioning, students explore the details of a problem or task so that solutions are explored in a meaningful way. Questions to ask could be: What is the problem? What is affected because of this problem? When is this problem most apparent?
Imagine	Description of the Imagine Phase
Brainstorm solutions.	This phase provides students with an opportunity imagine what solutions to the problem might look like. Students might list ideas, share conversations, or dialog in ways to think of possible solutions to problems or tasks.
Plan	Description of the Plan Phase
Design a solution.	During this phase students determine the best approach to a solution and begin to take steps toward actualizing their approach. Students might create a drawing, list needed materials, and focus on the details needed just before creating a prototype.
Create	Description of the Create Phase
Build a prototype.	Students implement their plan. They may build a physical object, develop a presentation, or carry out a task that was planned in the previous phase.
Improve	Description of the Improve Phase
Make it better.	Students use this phase to hone their work. After they have built a prototype or implemented a solution, students are led through an assessment of their approach and provided with opportunity to improve their solution.