

Design Tool 14.8: Project Impact on Students

Directions for teachers: After initiating the project, check how well it is meeting STEM criteria. Place a check in the box that best describes where the project is at this point with regard to the criteria and impact on students. Use what you learn to improve their performance in some areas. (Don't try to improve every area at once.)

STEM Project Benefits	Totally There	Getting There	Needs Work
Students understand the problem.			
Students show interest in solving the problem.			
Students are able to generate multiple different ideas for solving the problem.			
Student teamwork behaviors are productive.			
Students demonstrate interest, curiosity, innovation, and creativity.			
Students can identify the part of the engineering design process they are working on.			
Students understand the criteria for success and strive to build prototypes that meet these.			
Different teams use different approaches and/or solutions.			
Teams are able to create devices or systems for solving the problem.			
Teams make decisions for redesign based on results from testing their prototypes.			
Students regard failure as okay and as an important step toward improving the solution.			
Students show persistence as they develop and improve solutions.			
Students use a variety of communication approaches to describe their challenge, results, and recommendations.			
Students have new information about STEM careers and/or life applications.			

Copyright material from Anne Jolly (2025), STEM by Design, Second Edition, Routledge

From STEM by Design, Second Edition by Anne Jolly. Copyright © 2025 Taylor & Francis.