

Indiana Academic Standards Alignment

Engineering



•	The standard is clearly addressed by program activities.
-	This standard potentially could be addressed as part of FIRST® LEGO® League either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

	Indicator	Indicator Statement	Addressed
Grades K-2	K-2.E.1	Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.	•
	K-2.E.2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	•
	K-2.E.3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	
Grade 3-5	3-5.E.1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	•
	3-5.E.2	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	•
	3-5.E.3	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	-
Grade 6-8	6-8.E.1	Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	-
	6-8.E.2	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	-
	6-8.E.3	Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	-
	6-8.E.4	Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	-