



Chapter 5 Design Tools

Design Tool 5.1: STEM Lesson Specifications

Directions for teachers: Use these specifications to help analyze and select STEM lessons. Remember that each STEM lesson does not need to contain all components. Keep a separate record of each lesson you examine. In a best-case scenario, the lesson would also engage students in some sort of formative assessment during and immediately following the lesson.

Specification	No	Some what	Yes
	(0)	(1)	(2)
1 Does the lesson present a real problem (engineering challenge)?			
2 Can <i>all</i> students relate to the problem?			
3 Does the problem the lesson presents allow several different approaches and correct solutions?			
4 Does the lesson integrate and apply important science and math grade-level content?			
5 Does the lesson use the engineering design process for solving the problem?			
6 Does the lesson use a problem-based learning approach?			
7 Does the lesson lead students to plan, design, and construct a model or prototype?			
8 Is technology essential to the success of the lesson?			
9 Does the lesson engage students in purposeful teamwork?			
10 Does the lesson include testing the prototype, evaluating the results, and redesigning the solution?			
11 Does the lesson involve students in clearly communicating information about their design and results?			