



	Grade 5		Grade 6		Grade 7		Grade 8
	Number and Operations in Base Ten	Measurement and Data	Ratios and Proportional Relationships	The Number System	Expressions and Equations	Statistics and Probability	Geometry
	Fluently multiply multi-digit whole numbers using the standard algorithm.	Convert among different-sized standard measurement units within a given measurement system.	Use ratio and rate reasoning to solve real-world and mathematical problems.	Fluently divide multi-digit number using the standard algorithm.	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	Understand that a two-dimensional figure is similar to another is the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two-dimensional figures, describe a sequence that exhibits the similarity between them.
Light Bulb Challenge	x	x	x	x	x		
Going Green					x	x	
Star Power							x

NEXT GENERATION SCIENCE STANDARDS



Grade 5						
Physical Science		Earth and Space Sciences		Engineering Design		
Make observations and measurements to identify materials based on their properties.		Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of stars in the night sky.	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	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.	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.
Sink or Swim?	x			x	x	x
Light Bulb Challenge	x	x		x	x	x
Going Green	x	x		x	x	x
Star Power			x	x	x	x



NEXT GENERATION SCIENCE STANDARDS



Grades 6-8						
Earth and Space Sciences			Engineering Design			
Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's system.	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.	Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	Analyze data from tests to determine similarities and difference 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.	Develop a model to generate iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	
Sink or Swim?			X	X	X	X
Light Bulb Challenge	X	X	X	X	X	X
Going Green	X	X	X	X	X	X
Star Power	X	X	X	X	X	X