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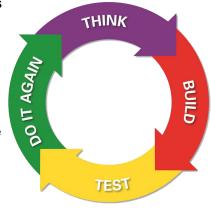
#### **Engineering Design Process**

#### Think, Build, Test, Do It Again

That's the process engineers use when they tackle a problem.

Engineers don't have official rules telling them to follow this set of steps. But, over time they've learned that they get the best results this way.

They **think** and brainstorm about a problem and factors they have to consider to solve it. They come up with an idea and **build** a prototype. They **test** the prototype. And, then they **repeat** the process to improve their results.



#### It Takes a Lot of Back and Forth

Engineers often **move back and forth within the loop**, repeating two steps over and over again before moving forward. It's a key to engineering success. Sometimes, engineers will focus on one specific step, and when complete, pass the project off to another team with a different skill set.

#### **Engineers are creative problem solvers!**

#### This kit generously sponsored by:



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## J-KIT STEM

# **Chain Reactions**

Scientific Concept: Physics, Cause & Effect

Recommended Ages: 4 to 8

Scientific Practice: Engineering

### What to know about this kit:

Learn about chain reactions and cause and effect by setting up and knocking down dominos. Once kids have mastered the included set, challenge them to create their own Rube Goldberg machine using household objects.

<u>Please note</u>: This kit must be returned to a **staff member** at an **Anchorage**<u>Public Library</u> location.



Kit Contents & Replacement Costs		
Item Type	Description	Cost
Object	Robot Factory Domino Set	\$43
Book	Forces Make Things Move	\$6
Book	Build Your Own Chain Reaction Machines	\$15
Packaging & Processing Fee:		\$25
Total Kit Replacement Cost:		\$89

