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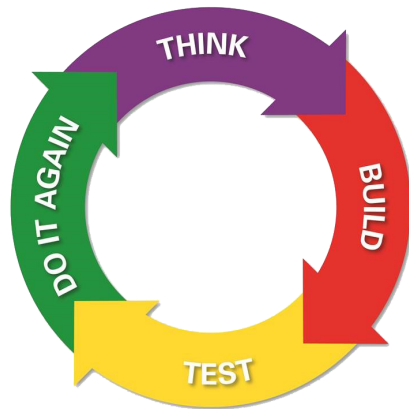


## Engineering Design Process

### 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!

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## J-KIT STEM

# Circuits 1 (Snap Circuits)

Scientific Concept: Energy, circuits

Recommended Ages: 8 to 12

Scientific Practice: Engineering design

### What to know about this kit:

Snap circuits use interchangeable parts connected with snaps to build working circuits. The included project books will guide you through the basics of circuit design as you build projects without any additional tools. Can you finish an experiment? Build a buzzer or a fan? Or design your own circuits?

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



Kit Contents & Replacement Costs		
Item Type	Description	Cost
Object	Snap Circuits SC-300	\$95
Leaflet	Student Guide for Electronic Snap Circuits	n/a
Leaflet	Experiments 1-101	n/a
Leaflet	Projects 102-305	n/a
Object	Snap Circuits Battery Eliminator	\$20
Book	<i>Electronics For Kids</i>	\$25
Book	<i>Electricity (DK Eyewitness Books)</i>	\$17
Packaging & Processing Fee:		\$25
<b>Total Kit Replacement Cost:</b>		<b>\$182</b>



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