## 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.
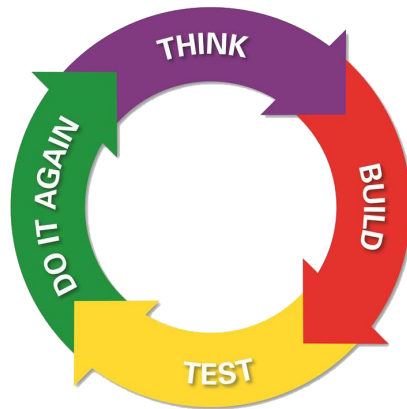
It Takes a Lot of Back and Forth

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:

J-KIT STEM

Circuits 2
(Squishy Circuits)

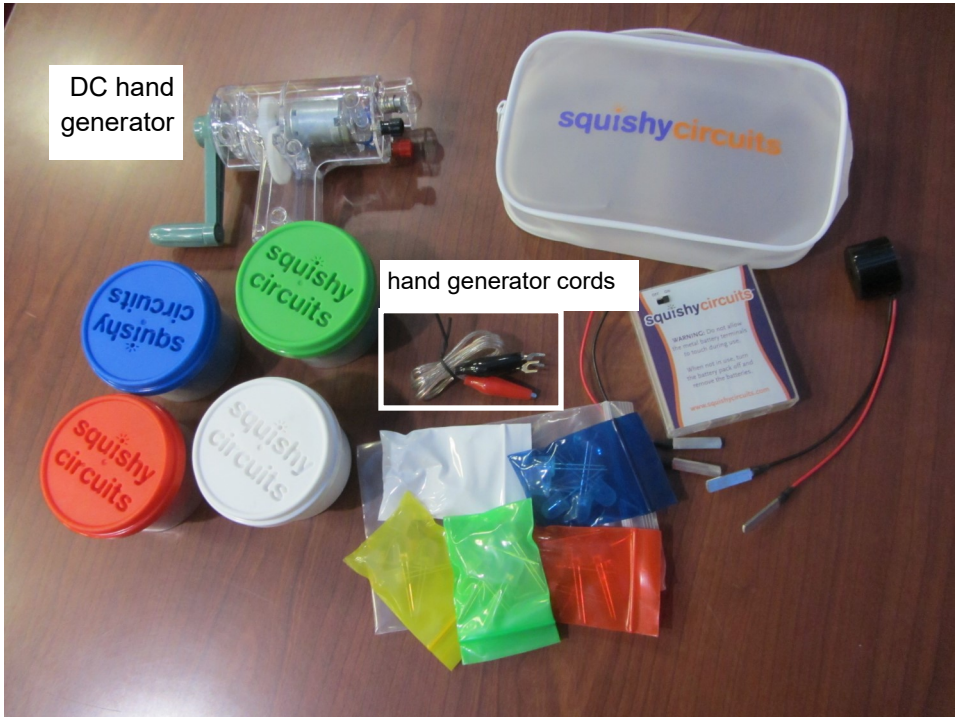|	
Scientific Concept:	Energy, circuits
Recommended Ages:	8 to 12
Scientific Practice:	Engineering design

What to know about this kit:

Squishy Circuits use conductive dough (the colored dough) to help you see how energy travels and makes circuits. The white dough is insulating which means it will not conduct energy. Use it to separate out parts of your circuits that shouldn't touch. You can use the battery pack or create your own electricity with the handcrank generator. Can you make something beautiful that is a working circuit?

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

ANCHORAGE PUBLIC LIBRARY

Kit Contents & Replacement Costs

Item Type	Description	Cost
Object	Squishy Circuits Kit: (Dough, LED lights, buzzer, battery holder)	$35
Leaflet	Squishy Circuits quick start guide	n/a
Object	Hand Crank Generator (with cords)	$15
Leaflet	DC generator instructions	n/a
Book	*Building Squishy Circuits*	$13
Book	*Electricity*	$10
Packaging & Processing Fee:		$25
Total Kit Replacement Cost:		$98

DC hand generator

hand generator cords

STANDARD KIT

BATTERY HOLDER

LED LIGHTS
5 of each color

PIEZOELECTRIC BUZZER

Also includes a carrying pouch!

INSULATING DOUGH
3.5 oz (100g) of white

CONDUCTIVE DOUGH
3.5 oz (100g) of each color

Please verify all parts are present before returning.

Please close the lids of the dough tightly so it does not dry out.