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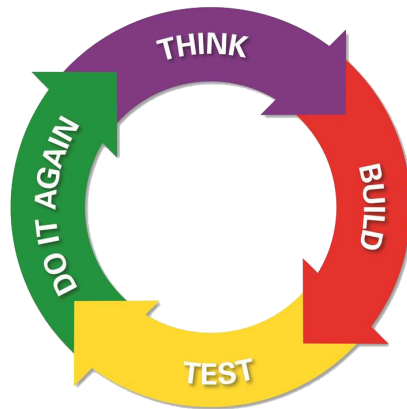


## Engineering Design Process

### 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

# Coding 2: Botley Coding Robot

Scientific Concept: Computer Coding

Recommended Ages: 5 to 10

Scientific Practice: Computational thinking

## What to know about this kit:

Coding at its most basic is giving instructions in order. Without ever touching a computer, early elementary students can teach a robot to perform a series of tasks using the same logic and problem solving skills that computer programmers use.

*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	Learning Resources Botley the Coding Robot (77 piece set)	\$80
Leaflet	Botley the coding robot activity guide	n/a
Book	<i>Code Your Own Adventure</i>	\$20
Book	<i>Hello Ruby: Adventures in Coding</i>	\$17
Packaging & Processing Fee:		\$25
Total Kit Replacement Cost:		\$142



Item	Description	Quantity
Botley Robot	Blue	1
Remote programmer	Blue with buttons	1
Robot Arms	Green, detachable	1
Boards	Square puzzle pieces in blue, orange, green	6
Sticks	Blue & Green	8
Cubes	Blue, green, orange	12
Cones	Blue and green	2
Flags	Multicolored triangles	2
Balls	Blue and orange	2
Goal	Orange circle	1
Coding Cards	Double sided small square cards	40

Please verify all parts are present before returning.