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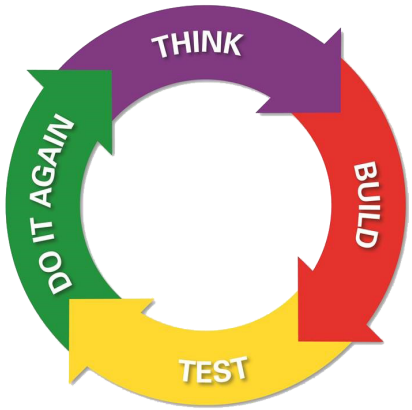
## Engineering Design Process

**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:

Ready Set Create! Design Challenges for Kids

NSF

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J-KIT STEM

# Coding for Preschoolers

**Scientific Concept:** Computer Coding

**Recommended Ages:** 3 to 6

**Scientific Practice:** Computational thinking

## What to know about this kit:

Practice the beginning blocks of coding with this Code-a-pillar. Kids will get practice with sequencing and planning as they learn how to control the direction the robot moves. Those ready for an added challenge can attempt to direct the Code-a-pillar to finish at a designated spot.

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

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| Kit Contents & Replacement Costs | | |
|---|---|---|
| **Item Type** | **Description** | **Cost** |
| Object | Code-a-pillar<br>(8 pieces) | $85 |
| Book | *How to Code a Rollercoaster* | $15 |
| Book | *Hello Ruby: Journey Inside the Computer* | $11 |
| | Packaging & Processing Fee: | $25 |
| | **Total Kit Replacement Cost:** | $136 |

**Please verify all parts are present before returning.**