

Did you enjoy this kit? We'd love to see how you used it! Tag us on social media and let us know! #APLstem

Twitter: @anchlibrary

Facebook & Instagram: @anchoragelibrary

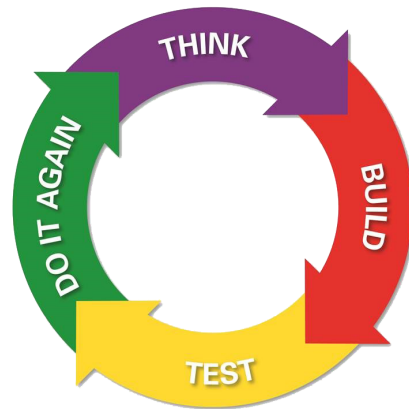


## Engineering Design Process

### 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:



This material is based upon work supported by the National Science Foundation under Grant Number DRL-1657593. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

# Tangrams

**Scientific Concept:** Spatial Relationships, Geometry

**Recommended Ages:** 4 to 10

**Scientific Practice:** Engineering

## What to know about this kit:

With this kit kids can explore shapes and the designs you can make with them. Younger kids can start by identifying the shapes and colors and use them to create simple pictures. Older kids can be challenged to recreate the pictured designs as well as creating their own designs. Those ready for the ultimate challenge can use the included book of shape outlines and work out how to fit the pieces together to match them. Kids will develop geometric, visual-spatial, and artistic skills.

*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	Wooden Pattern Block Set (155 pieces)	\$15
Book	<i>Shapes in Math, Science and Nature: Squares, Triangles and Circles</i>	\$18
Book	<i>Tangrams: 330 Puzzles</i>	\$9
Packaging & Processing Fee:		\$25
<b>Total Kit Replacement Cost:</b>		<b>\$67</b>



Please verify all parts are present before returning.