

# Elementary Engineering Pathways Curriculum



1

## See It! Think It! Write It! Draw It!\*\*

Students are introduced to the art of scientific observation and record keeping.

2

## Animal Enrichment\*\*

Students engineer animal habitats based on their observations of an animal's environment.

3

## Messy Desk Cardboard Challenge\*\*

Students engineer a solution to a problem many people have - messy work spaces!

4

## Space Suit Design

Youth will learn how to work together to develop the best possible design for a space suit for Mars.

5

## When Glaciers Were Cool

Youth engineer solutions to protect coastal areas from rising seawater.

**\*\*Required Core Lessons** - specific lessons created to build engineering identity, learn about STEM, and raise awareness of engineering careers

6

## Dino Dig\*\*

Youth will learn about fossil rocks and will try out excavating models of dinosaurs fossils.

7

## Train Your Brain

While learning how our brains remember things, youth develop methods to help their peers remember new things.

8

## Bridge Engineering

Youth will design and test model bridges, moving through the stages of the engineering design process.

9

## Fibonacci Puzzle

Youth learn to recognize the Fibonacci sequence, a naturally occurring sequence in nature and use biomimicry design processes - engineering that mimics nature.

10

## Terrarium - Biodome

Youth learn about Biological Systems Engineering, and design and build a self-contained terrarium system to model a BioDome on a Mars Colony.

