



CONSTRUCTION SCIENCE

Thursdays, January 27-April 28 (no class Feb 24, Apr 7; 12 weeks)

11:15am-12:45pm

Ages 11+

During this hands-on course, students learn the science involved in the construction of structures as they design and build bridges, practice woodworking to build larger structures, explore electricity and plumbing science, learn the chemistry of concrete and more. All lab costs are included in registration fee.

Instructor: Christina St Martin, MSc

Location: STEM Lab (suite 21)

Course fee: \$275 OR \$25/lab

10% sibling discount

Register for full semester or individual labs.

LAB SCHEDULE:

Construction Basics and Safety - Thursday, January 27

We review how to take proper measurements, learn how to safely use tools and begin preparing for our garden box project.

Wood Working Build - Thursday, February 3

Students learn to design and build a stable structure that can withstand the outdoor environment.

Wood Prep and Staining - Thursday, February 10

This week, we learn the science involved in staining wood as we sand and stain our garden boxes.

Bridge Design and Building - Thursday, February 17

Kids learn about stable structure design as they create a blueprint for a bridge that can hold weight and begin construction.

Bridge Challenge - Thursday, March 3

Today, we test our bridges to determine how much weight each design can safely hold.



Science of Concrete - Thursday, March 10

Students learn about the chemical reaction of concrete as they mix and pour concrete to create stepping stones and lay bricks.

Insulation and Roofing - Thursday, March 17

We investigate the importance of proper roof installation and how homes can be energy efficient with appropriate insulation.

Science of Electricity - Thursday, March 24

Students learn how electricity flows through circuits as they, experiment with conductors and insulators to light up LEDs.

Plumbing Science - Thursday, March 31

Students learn the physics and chemistry of plumbing, and use PVC to make a functional drainage system.

Dry Wall - Thursday, April 14

This week, we explore the considerations required when installing drywall and learn how to repair damage to an existing wall.

Laying Tile - Thursday, April 21

Today, students work with tile and tiling tools including membranes, thinset, spacers, and grout, to create a mosaic art pieces.

Garden Design - Thursday, April 28

Kids learn how to plan a garden based on landscape characteristics and needs of specific plants, then properly plant flowers in garden boxes.

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