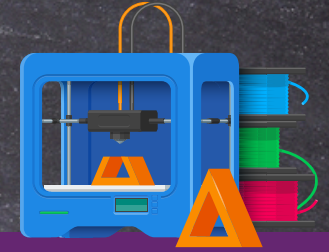


Create & Construct: Early Engineering Adventures

Designed for learners in Grades K-2



Course Description:

This course introduces young learners to the fundamentals of engineering through hands-on activities that explore 3D shapes, materials, size and scale, art, and prototyping. Students will develop spatial reasoning and problem-solving skills as they engage in creative building projects using various materials.

Equipment, Curriculum, and Training Available:

- 15 hands-on lessons
- 2D craft materials and tools
- 3D 2D craft materials and tools



Lesson	Learning Target Examples
Introduction to 3D Shapes	Understand and identify basic 3D shapes.
Exploring Materials	Learn about different materials that can be used for 3D crafting.
Basic Prototyping with Playdough	Develop initial skills in molding and creating prototypes with playdough.
Introduction to Scale and Size	Understand scaling by replicating a simple object in multiple sizes.
Building with Cardboard	Use cardboard to construct basic structures.
Creating Parachutes	Learn about air resistance and controlled landing by building parachutes.
Introduction to Tools	Learn to use simple tools like scissors, glue guns, and tape safely.
Working with Templates	Use templates to create more complex shapes.
Moving Parts	Create a simple mechanism.
Prototyping for Function	Design a simple item for a specific function.
Introduction to Measurements	Begin to use measuring tools to plan and execute designs.
Improving Designs	Understand the iterative process of design improvement.
Collaborative Projects	Work in groups to tackle a design challenge.
Presentation Skills	Develop skills to present and describe their projects.
Course Showcase	Display and discuss individual and group projects.