Structures & Construction

Content Area: **Technology**
Course(s): **Tech and Eng Design Lab 1, 2**
Time Period: **October**
Length: **5 Weeks**
Status: **Published**

Transfer

Structures & Construction

Enduring Understandings

Materials can be used for multiple purposes; choosing the optimal supply is important.

Construction takes time & effort.

Measurement is in the world around us.

Essential Questions

What is the design process and how is it applied to problem solving?

How is the design process like the scientific method?

Why are materials chosen for specific tasks and jobs?

What is the relationship between effort and success in terms of construction?

How do materials and construction interact?

How are objects measured?

Content

Vocabulary

materials, hot glue gun, trigger, nozzle, feed, heating element, kickstand, power cord, cardboard, cardstock, wooden dowel, prismatic cells, structures, construction, build, aesthetics tape measure, ruler, inch, measurement.

Learning Objectives

Justify the use of the design process and correlate it to problem solving.

Compare and contrast the scientific method and the design process.

Generate a list of materials and justify their use for a task.

Recognize the correlation between successful completion of a project and the effort required to finish.

Support how construction and building relies on materials.

Recognize the markings on a measuring device.

Appraise the lengths and sizes of objects to practice using a measuring device

Resources

Standards

TECH.8.1.8	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.8.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.8.A.1	Demonstrate knowledge of a real world problem using digital tools.
TECH.8.2.8	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.8.A.2	Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.
TECH.8.2.8.D.6	Identify and explain how the resources and processes used in the production of a current technological product can be modified to have a more positive impact on the environment.
TECH.8.2.8.D.CS2	Use and maintain technological products and systems.
TECH.8.2.8.E.1	Identify ways computers are used that have had an impact across the range of human activity and within different careers where they are used.