

G: Models

Content Area: **Generic Content Area**
Course(s): **Generic Course, Level 1 Engineering Drawing**
Time Period: **Generic Time Period**
Length: **3 weeks**
Status: **Published**

Unit Introduction

In this unit, students will explore various Model Building techniques used by Architects to illustrate the form and function of a structure.... Students will use drawings to build models that convey how space is used as well as materials and construction methods.

Standards

9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.2	Use architecture and construction skills to create and manage a project.
9.3.12.AC.6	Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC-CST.2	Describe the approval procedures required for successful completion of a construction project.
9.3.12.AC-CST.7	Compare and contrast the building systems and components required for a construction project.
9.3.12.AC-CST.9	Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.
9.3.12.AC-DES.4	Apply building codes, laws and rules in the project design.
9.3.12.AC-DES.6	Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
9.3.12.AC-DES.8	Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.
9.3.12.AC-MO.4	Determine work required to repair or renovate an existing building.
12.9.3.ST.6	Demonstrate technical skills needed in a chosen STEM field.
12.9.3.ST-ET.3	Apply processes and concepts for the use of technological tools in STEM.
12.9.3.ST-ET.4	Apply the elements of the design process.
12.9.3.ST-SM.2	Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.

Essential Questions

1. How does the world/societies/cultures/environments impact/influence Architecture past, present and future?
2. What is the role the "Design Process" in good Architecture?

3. What can we learn by building or studying an Architectural model?

Content / Skills

Textbooks:

Basic Technical Drawing - Spencer, Dygdon, Novak, 8th edition, 2004

Engineering Drawing & Design - D.A. Madsen, D.P. Madsen, 6th edition, 2017

Architectural Drafting & Design – A. Jefferis, D.A. Madsen, D.P. Madsen, 7th edition, 2017

Skills: See Below

• Layout	.
• Plotting Drawings to Scale	.
• math operations	.
• measurement	.
• mechanical drawing	.
• safety	.
• sketching	.
• teamwork	.
• using CAD	.
• visualization	.