

# 4 Mechanical Drawing

Content Area: **21st Century Life & Careers**  
Course(s): **Generic Course, Level 1 Engineering Drawing**  
Time Period: **Marking Period 1**  
Length: **3-4 weeks**  
Status: **Published**

## Unit Introduction

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In this unit, students will learn how to skilfully use the common tools of a draftsman/architect to produce various types of drawings.

These methods and tools are essential to the stage/set/prop designers communication of ideas.

## Standards

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TH.9-12.1.4.12prof.Cr1a	Research to construct ideas about the visual composition of devised or scripted theatre work.
CAEP.9.2.12.C	Career Preparation
STEM.9-12.9.4.12.O.(1).1	Apply the concepts, processes, guiding principles, and standards of school mathematics to solve science, technology, engineering, and mathematics problems.
STEM.9-12.9.4.12.O.(1).3	Demonstrate the ability to select, apply, and convert systems of measurement to solve problems.
STEM.9-12.9.4.12.O.2	Demonstrate mathematics knowledge and skills required to pursue the full range of postsecondary education and career opportunities.
STEM.9-12.9.4.12.O.5	Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication.
STEM.9-12.9.4.12.O.17	Employ critical thinking skills (e.g., analyze, synthesize, and evaluate) independently and in teams to solve problems and make decisions.
STEM.9-12.9.4.12.O.35	Describe and use quality control systems and practices to ensure quality products and services.
STEM.9-12.9.4.12.O.58	Maintain a career portfolio to document knowledge, skills, and experience in a career field.

## Essential Questions

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1. What is the purpose of a technical drawing/plan?
2. What are the results of inaccurate work?
3. How do you recognize a good drawing/plan?
4. Why is learning board drawing of any value in today's technologically advanced society?

## **Content/Skills**

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Students will be able to use common drafting tools to produce technical images.

Students will demonstrate knowledge/skills with Orthographic Projection.

## **Skills**

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- Converting numbers to metric
- Drawing accurately with common drafting tools .
- Lettering
- Mathematical layouts
- Measurement
- Neatness/organization
- Producing quality lineweight
- Recognizing line types/uses.
- Self assessment
- Visualization: 2D from 3D