

Mechanical Drawing

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

Unit Introduction

Standards

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

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?

Content/Skills

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

Students will demonstrate knowledge/skills with Orthographic Projection.

Textbooks:

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

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

Skills:

Skills (delete)

- 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