Threads & Fasteners

Content Area: **21st Century Life & Careers**
Course(s): **Generic Course**
Time Period: **Marking Period 3**
Length: **Weeks**
Status: **Published**

Unit Introduction

Standards

9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC-DES.6	Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
ARCH.9-12.9.4.12.B.(1).9	Develop technical drawings drafted by hand and computer-generated plans to design structures.
ARCH.9-12.9.4.12.B.(1).10	Demonstrate understanding of principles, conventions, standards, applications, and restrictions pertaining to the manufacture and use of construction materials, components, and assemblies, and incorporate this understanding into project design.
ARCH.9-12.9.4.12.B.13	Apply active listening skills to obtain and clarify information.
ARCH.9-12.9.4.12.B.18	Employ critical thinking skills (e.g., analyze, synthesize, and evaluate) independently and in teams to solve problems and make decisions.
ARCH.9-12.9.4.12.B.61	Demonstrate skills related to seeking and applying for employment in a desired job.
ARCH.9-12.9.4.12.B.62	Maintain a career portfolio to document knowledge, skills, and experience in a career field.
ARCH.9-12.9.4.12.B.74	Read, interpret, and use technical drawings, documents, and specifications to plan a project.
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.30	Employ computer operations applications to manage tasks.
STEM.9-12.9.4.12.O.48	Employ teamwork skills to achieve collective goals and use team members' talents effectively.
STEM.9-12.9.4.12.O.51	Employ mentoring skills to assist others.

Essential Questions

1. Why is it necessary for us/engineers/product designers to learn how to identify, specify and represent/draw thread/fastener devices.

Content / Skills

Students will use CAD to draw various types of threads/fasteners and learn/understand how they are used/produced.

Textbooks:

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

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

Skills: See Below

- dimensioning
- Interpreting Orthographic views
- Layout
- math operations
- measurement
- Plotting Drawings to Scale
- teamwork
- using CAD
- visualization