

6 Machine/Tool Safety

Content Area: **21st Century Life & Careers**
Course(s): **Generic Course, Level 1 Engineering Drawing**
Time Period: **Marking Period 1**
Length: **2-3 Weeks (ongoing)**
Status: **Published**

Unit Introduction

In this unit, students will learn fundamental safety and habits of mind necessary to use/operate tools and machinery.

Standards

9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.6	Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC-CST.9	Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.
ARCH.9-12.9.4.12.B.(1).1	Demonstrate communication skills and strategies that are used to work effectively with potential clients and others.
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.2	Demonstrate mathematics knowledge and skills required to pursue the full range of postsecondary education and career opportunities.
ARCH.9-12.9.4.12.B.13	Apply active listening skills to obtain and clarify information.
ARCH.9-12.9.4.12.B.17	Use vocabulary and visual cues commonly used in design and construction to communicate successfully.
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.
CAEP.9.2.12.C	Career Preparation
MANU.9-12.9.4.12.M.33	Demonstrate knowledge of personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments.
MANU.9-12.9.4.12.M.35	Identify emergency procedures that are necessary to provide aid in workplace accidents.
MANU.9-12.9.4.12.M.39	Maintain safe and healthful working conditions and environments to ensure employee safety.
MANU.9-12.9.4.12.M.41	Assess types and sources of workplace hazards common to manufacturing business environments in order to maintain safe working conditions.
MANU.9-12.9.4.12.M.52	Identify and demonstrate positive work behaviors and personal qualities needed to succeed in the classroom and/or to be employable.

STEM.9-12.9.4.12.O.(1).9	Employ concepts and processes for the application of technology to engineering.
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.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. What does a safe working environment look like?
2. How should someone think or act before, during and after using any tool/machine?
3. Explain "Murphy's Law" ...and how do you prevent it from occurring?
4. How can a pandemic such as COVID19 impact what need to learn about how to use tools/machinery?

Content / Skills

Students will learn general safety practices and habits of mind needed to be able to operate handtools and machinery safely/skillfully.

Skills (See Below):

Using handtools = utility knife, chisel, screwdrivers, hammers, pry-bars, squares, levels, wrenches, sockets...

Using a circular saw - change and set blade depth, cutting angles/straight lines with a fence and freehand

Using a jig saw - same as above

Using different types of drills and drilling operations

Using sanders/grinders/routers

Painting and finishing tools/techniques

other: table saw, panel saw, jointer, planer,

- craftsmanship
- Layout
- measurement
- safety
- teamwork

