Unit 2: Personal Safety in Construction Technology Laboratory

Content Area: **Industrial Technology**
Course(s): **Construction Technology II**
Time Period: **1 week**
Length: **Weeks**
Status: **Published**

Unit Overview

Students will be able to Safely Work in the Construction Technology Laboratory without being hurt or creating an accident.

Transfer

Students will be able to independently use their learning to...

Students will be able to identify how they could possible be injured in a shop or jobsite by not following the important safety rules that are taught in this lesson.

For more information, read the following article by Grant Wiggins.

http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=60

Meaning

Students will be able to work safely in the Construction Technology Lab.

Understandings

Students will understand that...

-They are responsible for thier own safety when working in the Construction Technology Laboratory or on a Job Site.

-They can prevent injury or accidents tha could harm them, or other students or co workers if they don't follow the instructions taught in this lesson.

Essential Questions

Students will keep considering...

How can I prevent myself from being injured in the Construction Technology Laboratory?

How can I prevent injury to another student in the Construction Technology Laboratory?

Application of Knowledge and Skill

Students will be able to safely work in the Construction Technology Laboratory without being injured.

Students will know...

Students will know..

How to properly dress in the Construction Technology Laboratory to prevent injury.

To keep their fingers, hands and body out of the line of cut to prevent injury.

To maintain a clean and uncluttered work area to avoid injury.

How to properly lift any object to avoid a back injury.

To always wear Safety Glasses when any type of work is going on in the Construction Technology Lab.

To wear proper Personal Protective Equioment when performing different tasks in the Consruction

Technology Lab ie: Hearing Protection, Gloves for appling finishes, dust masks, aprons.

What causes attribute to accidents in the Construction Laboratory.

Students will be skilled at...

Students will be skilled at...

Wearing Personal Protective Equipment at all times when hands on work is taking place in the Construction Technology Laboratory.

To come dressed appropriately to work safely in the Construction Technology Laboratory.

Preventing accidents in the Construction Technology Laboratory by recognizing unsafe areas or potential unsafe work practices.

Academic Vocabulary

Safety Hazards, Machine hazards, Point of operation, Rotary and reciprocating movements, In-running nip points (pinch points), Kickbacks, Flying chips, material, Tool projection, Fire and explosion hazards, Electrical hazards. Health Hazards, Noise Vibration, Wood dust,carcinogens, Chemical hazards—from exposure to coatings,,finishings, adhesives, solvent vapors.

Learning Goal 1

SWBAT wear proper clothing and PPE in the Construction Technology Lab to avoid injury.

9.3.12.AC.5	Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC-CST.5	Apply practices and procedures required to maintain jobsite safety.
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.2	Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.
9.3.12.AC-MO.1	Recognize and employ universal construction signs and symbols to function safely in the workplace.

Target 1

SWBAT identify the proper personal dress including footwear to avoid an accident ot injury.

Target 2

SWBAT identify the proper Personal Protective Equipment that must be worn at all times or when working with certain equipment or materials. ie: Safety Glasses or Safety Googles at all times, Hearing Protection, Dust Masks. Nitrile Gloves for Staining or Finishes, Aprons, Face Shields.

Learning Goal 2

Students will identify the Governmental Groups that are responsible for Safety in Public Agency and Construction Worksites.

9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.3	Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.5	Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.
9.3.12.AC.7	Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways.
9.3.12.AC-CST.5	Apply practices and procedures required to maintain jobsite safety.
9.3.12.AC-CST.9	Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.

Target 1

SWBAT identify the Governmental and Private Groups that are responsible for safety factors in the work place. OSHA, NIOSHA, PEOSHA, NJDOH.

Target 2

SWBAT identify the role of the New Jersey Right to Know program and its policies, along with proper storage of Hazardous Chemicals in School and at a Work Place.

Formative Assessment and Performance Opportunities

Students are responsible follow safety procedures in the classroom. Failure to follow these rules will penalize their grades or discipline actions will be followed if the student is unsafe.

Summative Assessment

Safety Test on Personal Safety in the Construction Technology Laboratory.

Accommodations/Modifications

Students with accomodations or modification can retest or take the test with their special needs teacher if requested.

Unit Resources

You Tube videos. Textbook. Internet Access to Safety Organizations.

21st Century Life and Careers

CAEP.9.2.12.C.1	Review career goals and determine steps necessary for attainment.
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.
CAEP.9.2.12.C.7	Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
CAEP.9.2.12.C.8	Assess the impact of litigation and court decisions on employment laws and practices.

Interdisciplinary Connections

SCI.HS-ETS1-1	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
SCI.HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

SCI.HS-ETS1-4	Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.
SCI.HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
SCI.HS-ETS1	Engineering Design
TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.CS1	Understand and use technology systems.
TECH.8.1.12.B.CS1	Apply existing knowledge to generate new ideas, products, or processes.
TECH.8.1.12.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
TECH.8.1.12.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
TECH.8.1.12.E	Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.
TECH.8.2.12	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.