Unit 3 Portable Power Tool and Hand Tool Safety

Content Area: **Industrial Technology**
Course(s):
Time Period: **1 marking period**
Length: **Weeks**
Status: **Published**

Unit Overview

Students have already operated Hand Tools and Portable Power Tools Safely. Students will be able to continue this skill with the knowledge they have acquired from the Previous Class.

Transfer

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

-Select the proper Hand Tool or Power Tool for any task they select to do in the Construction Technology Lab, at home or in the work place.

Operate the proper Hand Tool or Power Tool safely in the Construction Technology Lab, at home or in the work place.

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

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

Meaning

Students can work safely and apply skills when working with Hand Tools and Power Tools.

Understandings

Students will understand that...

They may injure themselves or others if they incorrectly work with Power Tools and Hand Tools.

What Safety Hazards exist when working with Hand Tools and Power Tools.

They must select the correct tool or portable power tool when performing a task they have selected to work on.

Essential Questions

Students will keep considering...

-Will I injure myself or others if I perform this hands on task in the Construction Technology Laboratory uorking with a specific Hand Tool or Portable Power Tool?

Application of Knowledge and Skill

SWBAT identify and select the proper Hand Tool or Power Tool for the task they will work on Hands on.

SWBAT safely operate the Hand Tool or Power Tool they will be working with.

Students will know...

Students will know...

How to Identify the Hand Tool or Portable Power Tool and make sure it is the correct Tool for the task they are performing.

How to safely operate the Hand Tool or Portavle Power tool they have selected to work with.

How to look for possible safety hazards when selecting Materials and Fasteners.

Students will be skilled at...

The selection, operation and safety when working with Hand Tools and Portable Power Tools.

Academic Vocabulary

Torque, Slippage, Kickback, Kerf, Hardness, Line of Cut.

Learning Goal 1

Identification of Hand Tools and Safe Correct Operation of Hand Tools.

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.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.8	Demonstrate the construction crafts required for each phase of a construction project.
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 and select the proper Hand Tool for the task they are working on.

Target 2

SWBAT safely operate Hand Tools for the task they are working on.

Learning Goal 2

Identification of Portable Power Tools and Safe Correct Operation of Portable Power Tools

9.3.12.AC.3	Comply with regulations and applicable codes to establish and manage a legal and safe workplace.
9.3.12.AC.4	Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy.
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.3	Implement testing and inspection procedures to ensure successful completion of a construction project.
9.3.12.AC-CST.4	Apply scheduling practices to ensure the successful completion of a construction project.
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 and select the proper Portable Power Tool for the task they are working on.

Target 2

SWBAT safely operate Portable Power Tools for the task they are working on.

Learning Goal 3

Select all applicable standards from the Standards tab.
Be sure to include the Anchor Standards for ELA, the Practice Standards for Math, the English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects, and the applicable Technology standards.

Target 1

Target 2

Target 3

Formative Assessment and Performance Opportunities

Students will be graded on skills by the instructor while students are working on Individual Projects or tasks in the Construction Technology Lab.

Students will be graded on accuracy and safety aesthetics of Individual Project with Industrial Technology Rubric and Weekly Work Grade.

Summative Assessment

Students will be graded by Safety Tests on Hand and Portable Power Tools.

Accommodations/Modifications

 Students with Accommodations/Modifications may retake tests or quizzes they have failed. They may select to retake them with the aid of a Special Needa Teachers.

Students with Accommodations/Modifications may be assisted by students that have already past the task successfully.

Unit Resources

You Tube videos on Safety when operating Hand Tools or Portable Power Tools.

On line safety tests and Safety Sheets in Google Classroom.

21st Century Life and Careers

Select all applicable standards from the applicable standards

CAEP.9.2.12.C	Career Preparation
CAEP.9.2.12.C.1	Review career goals and determine steps necessary for attainment.
CAEP.9.2.12.C.2	Modify Personalized Student Learning Plans to support declared career goals.
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.
CAEP.9.2.12.C.4	Analyze how economic conditions and societal changes influence employment trends and future education.
CAEP.9.2.12.C.5	Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.
CAEP.9.2.12.C.6	Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.
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

MA.K-12.1	Make sense of problems and persevere in solving them.
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-ETS1-1	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	Engineering Design
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.
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.3	Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

TECH.8.1.12.A.CS1	Understand and use technology systems.
TECH.8.1.12.A.CS2	Select and use applications effectively and productively.
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.