

INTRODUCTION TO WOODWORKING & SKILLED TRADES

Grade(s) 9–12



Unit #1

Basic Safety

Essential Question

How do workplace safety practices impact individuals and the broader industry?

Unit Summary

Students will explore the importance of safety in industrial settings, including accident prevention, OSHA regulations, and emergency response protocols. They will learn and practice proper safety procedures to create a secure working environment.

Guiding Questions

Content

- What is basic personal protective equipment (PPE)?
- What are safety practices specific to each tool or machine?

Process

- How do you properly inspect and use PPE?
- What are the steps to safely lift and transport heavy materials?
- How do safety procedures differ between various tools and equipment?

Reflective

- Why do workplace safety practices matter in an industrialized society?
- What consequences can result from neglecting safety protocols?
- How can safety training benefit career growth in skilled trades?

Priority Standards

- 1.1 – Demonstrate the use, care and inspection of appropriate personal protective equipment (PPE).
- 1.2 – Follow safety procedures required for lifting heavy objects.
- 1.3 – Demonstrate ability to load and unload materials properly and safely.
- 1.4 – Recognize hazards and follow safety procedures required for materials handling.
- 1.5 – Demonstrate a working knowledge of safety education, environment, and enforcement for life and work.
- 1.6 – Apply safe practices while using tools and equipment.
- 1.7 – Explain the purpose of OSHA and how it promotes safety on the job.

Supporting Standards

- 1.1 – Act as a responsible and contributing citizen and employee.
- 1.3 – Attend to personal health and financial well-being.
- 1.5 – Consider the environmental, social, and economic impact of decisions.
- 1.9 – Model integrity, ethical leadership and effective management.
- 2.1 – Use vocabulary, symbols, and formulas commonly used in design and construction.
- 2.3 – Comply with regulations and applicable codes to establish and manage a legal and safe workplace / jobsite.

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Unit #2

Basic Woodworking and Trade Skills

Essential Question

How do fundamental trade skills contribute to craftsmanship and efficiency in skilled trades?

Unit Summary

This unit covers the identification and proper use of hand and power tools, measurement techniques using standard and metric units, and basic calculations required for trade work.

Guiding Questions

Content

- What are the key differences between hand tools and power tools?
- How do measuring tools ensure precision in trade work?
- What basic calculations are necessary for skilled trades?

Process

- How do you properly maintain and store tools for longevity?
- What are the best practices for using measuring tools accurately?
- How do mathematical calculations apply to real-world construction and manufacturing tasks?

Reflective

- How does tool proficiency impact job efficiency and safety?
- Why is precision critical in woodworking and construction?
- What are the long-term benefits of mastering trade skills early in a career?

Priority Standards

- 2.1 – Recognize and identify some of the basic hand and power tools and their proper uses in industrial trades.
- 2.2 – Demonstrate knowledge and use of measuring tools (Measuring Tape, Ruler, Etc.) for standard and metric measurements.
- 2.3 – Demonstrate the safe use of common hand and power tools.
- 2.4 – Recognize and perform calculations using metric units of length, weight, volume and temperature.

Supporting Standards

- 1.1 – Act as a responsible and contributing citizen and employee.
- 1.3 – Attend to personal health and financial well-being.
- 1.5 – Consider the environmental, social, and economic impact of decisions.
- 1.9 – Model integrity, ethical leadership and effective management.
- 1.11 – Use technology to enhance productivity.
- 2.1 – Use vocabulary, symbols, and formulas commonly used in design and construction.
- 2.2 – Use architecture and construction skills to create and manage a project.
- 2.3 – Comply with regulations and applicable codes to establish and manage a legal and safe workplace / jobsite.

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Unit #3

Planning and Construction of Woodworking Projects

Essential Question

How do planning and execution influence the success of a woodworking project?

Unit Summary

This unit introduces blueprint reading, material selection, project planning, and hands-on construction techniques. Students will develop a project from concept to completion while applying safety and precision skills.

Guiding Questions

Content

- What are the key components of a blueprint?
- How does material selection affect the quality of a project?
- What steps are involved in constructing a woodworking project?

Process

- How do you interpret and follow a project blueprint?
- What factors influence material choice for different projects?
- How can you troubleshoot common issues during project construction?

Reflective

- What skills from this unit will be most useful in real-world trade applications?
- How does planning impact the success of a construction project?
- What lessons can be learned from project mistakes and challenges?

Priority Standards

- 3.1 – Identify basic symbols used in prints, schematics, and diagrams.
- 3.2 – Identify various types of blueprint views used in Architecture and Construction, Engineering, Manufacturing, and Transportation.
- 3.3 – Demonstrate the ability to understand various types of print views including elevation, plan, perspective, etc.

Supporting Standards

- 1.1 – Act as a responsible and contributing citizen and employee.
- 1.2 – Apply appropriate academic and technical skills.
- 1.3 – Attend to personal health and financial well-being.
- 1.5 – Consider the environmental, social, and economic impact of decisions.
- 1.6 – Demonstrate creativity and innovation.
- 1.8 – Utilize critical thinking to make sense of problems and persevere in solving them.
- 1.9 – Model integrity, ethical leadership and effective management.
- 1.11 – Use technology to enhance productivity.
- 2.1 – Use vocabulary, symbols, and formulas commonly used in design and construction.
- 2.2 – Use architecture and construction skills to create and manage a project.
- 2.3 – Comply with regulations and applicable codes to establish and manage a legal and safe workplace / jobsite.
- 2.5 – Understand the roles and responsibilities among trades and professions, including labor / management relationships.
- 2.6 – Read, interpret, and use technical drawings, documents, and specifications to plan a project.

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Unit #4

Communication and Employability Skills

Essential Question

How do effective communication and employability skills contribute to success in the skilled trades?

Unit Summary

This unit focuses on job-related communication, teamwork, resume building, job-seeking strategies, and interview techniques. Emphasis is placed on the importance of professionalism and collaboration in workplace environments.

Guiding Questions

Content

- What are the key components of effective workplace communication?
- How do resumes and portfolios support job applications?
- What skills are essential for successful job interviews?

Process

- How do you tailor a resume and cover letter for a trade position?
- What strategies help in effective verbal and written workplace communication?
- How can teamwork impact productivity and workplace success?

Reflective

- Why is communication critical in trade professions?
- How do employability skills contribute to long-term career growth?
- What strategies can be used to continuously improve professional skills?

Priority Standards

- 4.1 – Communicate effectively in on-the-job situations using verbal and written skills in various delivery modes (face-to-face, virtual, etc.)
- 4.2 – Demonstrate knowledge and use of computer systems and word processing software in effective communication.
- 4.3 – Create and utilize employment documents including a resume and portfolio.
- 4.4 – Demonstrate job seeking and interview skills.
- 4.5 – Demonstrate the ability to achieve common goals through teamwork.

Supporting Standards

- 1.1 – Act as a responsible and contributing citizen and employee.
- 1.2 – Apply appropriate academic and technical skills.
- 1.3 – Attend to personal health and financial well-being.
- 1.9 – Model integrity, ethical leadership and effective management.
- 1.10 – Plan education and career path aligned to personal goals.
- 2.4 – Understand the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction play in society and the economy.
- 2.7 – Evaluate a wide range of career pathway opportunities for success in architecture and construction careers.