



North Polk Community Schools Pacing & Course Description Guide



Grade Level: 10-12

Content: PRINCIPLES OF CONSTRUCTION 2

Year: 2022-23

Course Description/Rationale

Prerequisite: Foundations of Construction and Principles of Construction 1

This course provides students with the knowledge of various types and grades of wood, proper and safe use of hand and power tools, and site selection and preparation. Special emphasis will be placed on theory of construction methods applicable to floor, wall, roof, and/or stair framing. Individual projects will show students enhanced skills. (1 HS credit)

Name of Unit	Time Frame	Essential Learning Target	Standard(s)
Safety	2-weeks	<p>Students will work in a shop setting with a great importance focused on safety.</p> <p>Students can and will work in a safe manner while always watching out for each other to follow all safety rules.</p>	<p>IA: CTE: Industrial Technology Grades 9-12 Construction Safety Standard I: Understand the basic safety and safety operating procedures necessary for a construction project.</p> <ol style="list-style-type: none"> 1. Comply with shop and equipment safety rules. 2. Inspect workplaces for safe working environment and report unsafe conditions. 3. Correct safety hazards. 4. Clean and maintain work area and leave in safe condition. 5. Follow tool

			<p>checkout and maintenance procedures including reporting of equipment failures.</p> <p>7. Explain the application of first aid interventions for particular situations.</p> <p>9. Implement and comply with OSHA job site safety rules.</p>
<p>Common Joints & Fasteners</p>	<p>2-3 weeks</p>	<p>Students will be able to select and install proper fasteners.</p> <p>Students will be able to apply the knowledge they have to select and install several different kinds of fasteners.</p>	<p>IA: CTE: Industrial Technology Grades 9-12 / Construction General Requirements Standard II: Understand the basic background knowledge required for entry into the construction industry.</p> <p>2. Install and remove fasteners properly (i.e., nails, screws, and anchor bolts).</p> <p>3. Measure and compute using fractions and decimals.</p> <p>Preplanning Standard III: Understand the basic sequence of procedures necessary for a</p>

			<p>construction project.</p> <p>2. Interpret a materials list.</p> <p>5. Identify parts and materials using a suppliers' and manufacturers' catalog/manual.</p>
Wood Processes Review	2-3 weeks	<p>Review commonly used wood processes and selections commonly used.</p> <p>Students will continue to grow and use woodworking skills to joint and assemble a project.</p>	<p>Standard II: Understand the basic background knowledge required for entry into the construction industry.</p> <p>1. Cut material to specified dimensions and shape.</p> <p>3. Measure and compute using fractions and decimals.</p> <p>5. Explain the importance of estimating to the construction trade.</p> <p>7. Identify basic materials for a particular trade or process.</p> <p>Preplanning /Standard III: Understand the basic sequence of procedures necessary for a construction project.</p> <p>2. Interpret a materials list.</p> <p>4. Compute the quantity of commonly used materials</p>

			needed for a job (i.e., area, cubic area, and linear measurement).
Lab Project Work	8-12 weeks	<p>Students will show common wood working skills and understanding of how they achieved the end results.</p> <p>Projects will enhance learned skills to further challenge students.</p>	<p>A: CTE: Industrial Technology (2013) Construction/Carpentry Fundamentals – Level One Standard 1: Demonstrate Knowledge Regarding the Construction Trade and Industry 7. Identify the aptitudes, behaviors, and skills needed to be a successful carpenter. 8. Identify the training opportunities within the carpentry trade. 10. Identify the responsibilities of a person working in the construction industry. 12. Explain the importance of safety in the construction industry. Standard 2: Demonstrate Knowledge of Building Materials, Fasteners, and Adhesives 2. State the uses of various types</p>

			<p>of hardwoods and softwoods.</p> <p>4. Identify the safety precautions associated with building materials.</p> <p>. Describe the proper method of storing and handling building materials.</p> <p>8. Describe the fasteners, anchors, and adhesives used in construction work and explain their uses.</p> <p>Standard 3: Use Hand and Power Tools Properly and Safely</p> <p>1. Identify the hand tools commonly used by carpenters and describe their uses.</p> <p>2. Use hand tools in a safe and appropriate manner.</p> <p>4. State the general rules for properly maintaining all power tools, regardless of type.</p> <p>6. Use portable power tools in a safe and appropriate manner.</p> <p>Standard 4: Read Plans and Elevations</p> <p>1. Describe the types of drawings usually</p>
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			<p>included in a set of plans and list the information found on each type.</p> <p>5. Identify selected abbreviations commonly used on plans.</p> <p>Standard 16: Demonstrate Knowledge and Ability to install Drywall Nails Drywall screws Adhesives</p>