



North Polk Community Schools Pacing & Course Description Guide



Grade Level: 10-12

Content: MANUFACTURING

Year: 2022-23

Course Description/Rationale

This is a one-semester course exposing the students to the fast paced environment of manufacturing. Students will be introduced to key aspects in the manufacturing industry (wood based) like advertisement, prototype construction, factory line layouts and product production and final products. (1 HS credit)

Name of Unit	Time Frame	Essential Learning Target	Standard(s)
Introduction	2-3 weeks	<p>Students will be able to share ideas, work product selection options, pick product and assign tasks to manufacture a product, along with problem solving issues as they pop up.</p> <p>Students will be able to share ideas, agree on a product, and work as a team to produce the product.</p>	<p>. Demonstrate basic employability skills</p> <p>3. Demonstrate critical thinking skills and the ability to solve problems using those skills.</p> <p>5. Define effective relationship skills.</p> <p>8. Demonstrate integrity and ethical behavior.</p> <p>10. Assess one's own mastery of skills</p> <p>2. Demonstrate basic communication skills</p> <p>5. Effectively work in as a participating team member.</p> <p>6. Use different perspectives to increase innovation and</p>

			<p>the quality of work</p> <p>5. Understand the basic safety and safety operating procedures necessary for a construction project.</p> <p>13. Inspect workplaces for safe working environment and report unsafe conditions.</p> <p>15. Clean and maintain work area and leave in safe condition.</p>
Research	3-4 weeks	<p>Students will be able to relate the importance of practical use and function to determine the product.</p> <p>Students can communicate and work together for the outcome of the group.</p> <p>Rotating of job task to match strength.</p>	<p>. Demonstrate basic employability skills</p> <p>1. Explain the role of an employee in the construction industry.</p> <p>2. Identify methods for productive workplace relations in a multi-cultural environment.</p> <p>3. Demonstrate critical thinking skills and the ability to solve problems using those skills.</p> <p>5. Define effective relationship skills.</p> <p>7. Use interpersonal skills to</p>

			<p>influence and guide others toward a goal</p> <p>8. Demonstrate integrity and ethical behavior.</p> <p>9. Use time efficiently to manage workload.</p> <p>10. Assess one's own mastery of skills</p> <p>11. Demonstrate accountability for individual performance.</p> <p>2. Demonstrate basic communication skills</p> <p>2. Communicate effectively in on-the-job situations using verbal and written skills.</p> <p>5. Effectively work in as a participating team member.</p> <p>6. Use different perspectives to increase innovation and the quality of work</p> <p>3. Demonstrate knowledge regarding the interpretation of information from plans, specifications, environment and site location that affects safety processes and procedures.</p> <p>2. Identify and describe the pre-construction and construction</p>
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			processes that relate to the function of safety systems.
Materials and Processes	2-3 weeks	<p>Students will be able to select materials and the processes to manufacture the selected project/s</p> <p>Students can share ideas, agree, disagree, and eventually mass produce an item/s.</p>	<p>Demonstrate basic employability skills</p> <p>8. Demonstrate integrity and ethical behavior.</p> <p>10. Assess one's own mastery of skills</p> <p>2. Demonstrate basic communication skills</p> <p>2. Communicate effectively in on-the-job situations using verbal and written skills.</p> <p>5. Effectively work in as a participating team member.</p> <p>6. Use different perspectives to increase innovation and the quality of work</p> <p>5. Understand the basic safety and safety operating procedures necessary for a construction project.</p> <p>15. Clean and maintain work area and leave in safe condition.</p> <p>8. Recognize and identify some of the basic hand tools</p>

			<p>and their proper uses in the construction trade.</p> <p>2. Visually inspect hand tools to determine if they are safe to use.</p> <p>3. Safely use hand tools.</p> <p>9. Recognize and identify some of the basic power tools and their proper uses in the construction trade.</p> <p>1. Demonstrate the ability to use the proper power tool for the application/process.</p> <p>2. Visually inspect hand tools to determine if they are safe to use.</p> <p>3. Safely use hand tools.</p>
<p>Building, Processes & Finishing</p>	<p>Up to 13 weeks</p>	<p>Students will recognize what a properly completed product looks like and what it takes to reject a build.</p> <p>Students will work together to complete a product from start to finish - research and development to sales.</p>	<p>Demonstrate basic employability skills</p> <p>4. Demonstrate knowledge of computer systems and explain common uses for computers in the construction industry.</p> <p>7. Use interpersonal skills to influence and guide others</p>

			<p>toward a goal</p> <p>8. Demonstrate integrity and ethical behavior.</p> <p>11. Demonstrate accountability for individual performance.</p> <p>2. Demonstrate basic communication skills</p> <p>4. Communicate effectively on the job using electronic communication devices.</p> <p>5. Effectively work in as a participating team member.</p> <p>7. Use digital media and environments to communicate and work collaboratively.</p> <p>4. Demonstrate knowledge regarding the essential components of sustainable design and construction</p> <p>6. Incorporate and identify Universal Design Standards into the design and construction.</p> <p>9. Describe the basic physical principles that apply to the built environment</p> <p>5. Understand the basic safety and safety operating procedures</p>
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			<p>necessary for a construction project.</p> <p>1. Explain the idea of a safety culture and its importance in the construction crafts.</p> <p>15. Clean and maintain work area and leave in safe condition.</p> <p>8. Recognize and identify some of the basic hand tools and their proper uses in the construction trade.</p> <p>1. Demonstrate the ability to use the proper hand tool for the application/process.</p> <p>9. Recognize and identify some of the basic power tools and their proper uses in the construction trade.</p> <p>1. Demonstrate the ability to use the proper power tool for the application/process.</p> <p>10. Read and interpret construction drawings.</p> <p>1. Recognize and identify basic construction drawing terms,</p>
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			components, and symbols. 4. Interpret and use drawing dimensions.