

WOODWORKING	
CURRICULUM/CONTENT AREA	COURSE LENGTH
ATE	45 days
GRADE LEVEL	DATE LAST REVIEWED
7-8	2022
PREREQUISITE(s) if applicable	BOARD APPROVAL DATE
	11/15/2022
PRIMARY RESOURCE if applicable	
DESIRED RESULTS	
COURSE DESCRIPTION AND PURPOSE	
Come join a class that will prepare you to design and construct a variety of woodworking projects. Learn the basics of woodworking from hand tools to power tools and take home some cool projects that you can say you made! We will show you how projects go from being an idea all the way through a completed piece of work. Discover things like how to layout and square a board. Then, learn how to join boards together to form your projects. Finally, learn about different finishing techniques commonly used in the industry.	
	ESSENTIAL QUESTIONS
	<i>Students will keep considering...</i>
Creativity, innovation, and critical thinking are essential for success in a technologically advanced world.	Why is creativity and innovation important? How is creativity and innovation used in Architecture & Construction Career Pathways?
	How do teams efficiently and effectively solve problems in an increasingly complex world?
	What strategies and processes can I use to become a more effective creator, thinker and problem solver?
The ability to communicate and collaborate with people with diverse backgrounds and perspectives is key to participation in a global economic society.	Why is communication and collaboration important? How do positive work behaviors and personal qualities impact communication and collaboration?

	What is effective teamwork? What strategies can I use/teams use to work better together? How can perspectives and experiences of a diverse group develop innovative solutions to a given problem?
Career and technical education provides pathways to high-demand, high-wage career opportunities, and personal fulfillment.	Why is career and life readiness important? What jobs and careers are available to meet individual and societal needs locally, regionally, and nationally?
	How might technical knowledge and skills influence one's employability and advancement opportunities within various work settings?
	What are employability skills? How do I prepare myself for a career that is in demand now and in 5, 10, or 20 years from now?

PRIORITY CAREER & TECHNICAL STANDARDS

Students will be skilled at...

Creativity, Critical Thinking, Communication and Collaboration

4C2: Students will formulate and defend judgments and decisions by employing critical thinking skills.

- a: I develop effective resolutions for a given problem, decision or opportunity using available information.
- b: I develop and implement a resolution for a new situation using personal knowledge and experience.

Career Development

CD4: Students will identify and apply employability skills.

- a: I identify and demonstrate positive work behaviors and personal qualities needed to be employable.
- b: I demonstrate skills related to seeking and applying for employment to find and obtain a desired job.
- c: I identify and exhibit traits for retaining employment.
- d: I develop positive relationships with others.

Information, Media, Technology

IMT1: Students will access, interpret and evaluate information from a variety of sources in order to inform and support premises, arguments, decisions, ideas and initiatives.

- a: I choose appropriate sources of data and information for a given purpose.
- b: I determine the relevance, validity and timeliness of data and information.
- c: I select relevant information necessary for making decisions and solving problems
- d: I apply data and information to communicate ideas and create new opportunities.

PRIORITY CONTENT STANDARDS

Students will know...

Standard: BB1: Students will analyze the core concepts of technology.

Standard: ENG1: Students will analyze and demonstrate the attributes of design.

Standard: ENG3: Students will demonstrate and analyze the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.

Standard: ICT1: Students will analyze, select and use information and communication technologies.

Standard: MNF1: Students will be able to select and use manufacturing technologies.

Safety in the Wood Shop		
STAGE 1: Desired Unit Results What will students understand as a result of the unit?		STAGE 2: Assessment Evidence By what criteria will performances of understanding be assessed? Through what authentic performance tasks will students demonstrate the desired unit results?
ESSENTIAL QUESTION (s) What thought-provoking questions will foster inquiry, understanding, and transfer of learning?		Success Criteria with Standards The criteria for evaluating performance on standards is constant.
What are employability skills? How do I prepare myself for a career that is in demand now and in 5, 10, or 20 years from now?		CTE standards-based Rubric: Throughout the course, students and teachers use the rubric for communication of success criteria, reflection, goal setting, and feedback.
How might technical knowledge and skills influence one's employability and advancement opportunities within various work settings?		In their portfolio/evidence journal, students will reflect on the essential questions through a quick write, constructed response.
PRIORITY CAREER & TECHNICAL STANDARDS & Learning Targets		Performance Tasks Options/ Assessment Strategies by Standard Students may be given options to show their learning in varied ways.
Creativity, Critical Thinking, Communication and Collaboration 4C2: Students will formulate and defend judgments and decisions by employing critical thinking skills.		
a: I develop effective resolutions for a given problem, decision or opportunity using available information.	4C2.a.5.m: I can analyze symptoms to identify the root cause of a problem. 4C2.a.7.m: I can identify problems that became worse due to poorly thought out or poorly informed solutions C2.a.8.m: I can explain how implementation of a solution or action may affect one or more corresponding systems. C2.a.9.m: I can explain how different resolutions may be appropriate under different circumstances. 4C2.a.10.m: I can explain the process for choosing an action or making a decision.	Class discussions about safe and proper use of tools, equipment and machines. Demonstrations of safe and proper use of tools, equipment and machines. Written safety tests to demonstrate knowledge and understanding of safe procedures.
b: I develop and implement a resolution for a new situation using personal knowledge and experience.	4C2.b.3.m: I can analyze problems to determine what past experiences might be related and relevant. 4C2.b.4.m: I can analyze a problem to determine how it relates to existing knowledge.	
Career Development CD4: Students will identify and apply employability skills.		
a: I identify and demonstrate positive work behaviors and personal qualities needed to be employable.	CD4.a.3.m: I can demonstrate selfdiscipline, self-worth, positive attitude and integrity. CD4.a.4.m: I can demonstrate flexibility and willingness to learn new knowledge and skills.	Class discussions about safe and proper use of tools, equipment and machines. Demonstrations of safe and proper use of tools, equipment and machines. Written safety tests to demonstrate knowledge and understanding of safe procedures.
c: I identify and exhibit traits for retaining employment.	CD4.c.2.m: I can demonstrate the behavior and etiquette appropriate to interactions with adults.	

	CD4.c.3.m: I can distinguish between appropriate behaviors in a social vs. professional setting.	
d: I develop positive relationships with others.	CD4.d.3.m: I can interact with others in a respectful and non-judgmental manner.	
	CD4.d.4.m: I can use cooperative behavior in helping peers accomplish goals and tasks.	
PRIORITY CONTENT STANDARDS & Learning Targets		Performance Tasks Options/ Assessment Strategies by Standard
Standard: MNF1: Students will be able to select and use manufacturing technologies.	MNF1.a.4.m: I can discuss health and safety procedures in the workplace that keep workers safe.	Class discussions about safe and proper use of tools, equipment and machines. Demonstrations of safe and proper use of tools, equipment and machines. Written safety tests to demonstrate knowledge and understanding of safe procedures.
	MNF1.a.5.m: I can use tools, materials and machines safely to diagnose, adjust and repair systems.	Sample Safety Tests linked below: General Shop Safety Test 6th Grade Machine Safety Test Bandsaw Safety Test Surface Planer Safety Test Disc Sander Safety Test Disc / Belt Sander Safety Test Jointer Safety Test Drill Press Safety Test Wood Lathe Safety Test
Stage 3: Learning Activities		
A brief summary of the key learning activities- How will students build knowledge & develop skills? How will learning be relevant, accessible, and engaging? How will the learning unfold in a natural flow?		
GUIDING UNIT QUESTIONS	STRATEGIES/ACTIVITIES	RESOURCES/MATERIALS
Using Costas Level of Thinking, what questions will hook and hold students so that they develop a deep understanding of the desired results? The guiding questions are more topic-specific to the particular unit. They guide the exploration of the essential questions and rigor of the standards. This may include questions that guide project based/ problem based learning	What learning strategies and experiences will authentically engage students so that they gain understanding the desired results? This includes strategies and activities that help learners acquire targeted knowledge and skills, make meaning of important ideas, and transfer their learning to new situations. Consider how the learning will be tailored and flexible to address the interests and learning styles of all students.	This includes an applicable textbooks, software, industry recognized certification software/tools, subscriptions (such asPLTW), etc.
1.Why is the safe use of tools and machines important?		

Manufacturing in the Wood Shop		
STAGE 1: Desired Unit Results What will students understand as a result of the unit?		STAGE 2: Assessment Evidence By what criteria will performances of understanding be assessed? Through what authentic performance tasks will students demonstrate the desired unit results?
ESSENTIAL QUESTION (s) What thought-provoking questions will foster inquiry, understanding, and transfer of learning?		Success Criteria with Standards The criteria for evaluating performance on standards is constant.
What strategies and processes can I use to become a more effective creator, thinker and problem solver?		<p>Students will complete a variety of projects that will involve layout, planning, manufacturing and finishing. Students will complete journal entries documenting their progress along with the processes they completed. Students will engage in measurement activities to produce finished projects. Upon completion of projects students will reflect on the processes that were necessary to complete their work. Sample rubrics are attached below:</p> <p>First project rubric Additional projects rubric</p>
Why is communication and collaboration important? How do positive work behaviors and personal qualities impact communication and collaboration?		
How might technical knowledge and skills influence one's employability and advancement opportunities within various work settings?		
What are employability skills? How do I prepare myself for a career that is in demand now and in 5, 10, or 20 years from now?		
PRIORITY CAREER & TECHNICAL STANDARDS & Learning Targets		Performance Tasks Options/ Assessment Strategies by Standard Students may be given options to show their learning in varied ways.
Creativity, Critical Thinking, Communication and Collaboration 4C2: Students will formulate and defend judgments and decisions by employing critical thinking skills.		
a: I develop effective resolutions for a given problem, decision or opportunity using available information.	4C2.a.5.m: I can analyze symptoms to identify the root cause of a problem. 4C2.a.7.m: I can identify problems that became worse due to poorly thought out or poorly informed solutions C2.a.8.m: I can explain how implementation of a solution or action may affect one or more corresponding systems. C2.a.9.m: I can explain how different resolutions may be appropriate under different circumstances. 4C2.a.10.m: I can explain the process for choosing an action or making a decision.	Students will create journals to document progress on their projects. The journals will also have students identify and address any problems they ran into and how those problems got resolved. Class discussions will occur about common mistakes and how to prevent them from happening in the first place. Upon completion of projects, students will also reflect on what they did and how they completed those processes to manufacture a finished product.
b: I develop and implement a resolution for a new situation using personal knowledge and experience.	4C2.b.3.m: I can analyze problems to determine what past experiences might be related and relevant. 4C2.b.4.m: I can analyze a problem to determine how it relates to existing knowledge.	
Career Development CD4: Students will identify and apply employability skills.		
a: I identify and demonstrate positive work behaviors and personal qualities needed to be employable.	CD4.a.3.m: I can demonstrate selfdiscipline, self-worth, positive attitude and integrity.	Students will create journals to document progress on their projects. The journals will also have students identify and address any problems they ran into and how those problems got resolved. Students' journals will

	CD4.a.4.m: I can demonstrate flexibility and willingness to learn new knowledge and skills.	reflect their daily progress which will provide evidence of their work ethic, problem solving abilities and the strategies they used to address those problems. Students will collaborate with each other as well as their instructor to work in a supportive and cooperative setting that engages all learners.
c: I identify and exhibit traits for retaining employment.	CD4.c.2.m: I can demonstrate the behavior and etiquette appropriate to interactions with adults. CD4.c.3.m: I can distinguish between appropriate behaviors in a social vs. professional setting.	
d: I develop positive relationships with others.	CD4.d.3.m: I can interact with others in a respectful and non-judgmental manner.	
	CD4.d.4.m: I can use cooperative behavior in helping peers accomplish goals and tasks.	
PRIORITY CONTENT STANDARDS & Learning Targets		Performance Tasks Options/ Assessment Strategies by Standard
Standard: BB1: Students will analyze the core concepts of technology.	I can use appropriate tools to measure and layout a piece of material (e.g., length, width, thickness, angles, etc.) within tolerances.	Students will use tools, machines and equipment properly and safely to complete a variety of woodworking projects. Projects will be constructed within certain tolerances. When students encounter problems, they will communicate with others to develop the best possible solution and then implement that solution.
Standard: ENG1: Students will analyze and demonstrate the attributes of design.	I can stay within the requirements for a design that are made up of criteria and constraints.	
Standard: ENG3: Students will demonstrate and analyze the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	I can identify a problem then communicate with others to develop the best solution. Then, implement that solution.	
Standard: ICT1: Students will analyze, select and use information and communication technologies.	I can comprehend and engage in communication methods to convey ideas, concepts and requirements to other individuals and teams.	
Standard: MNF1: Students will be able to select and use manufacturing technologies.	MNF1.a.5.m: I can use tools, materials and machines safely to diagnose, adjust and repair systems. MNF1.a.6.m: I can explore both customary and metric systems of measurement and conversions. MNF1.b.3.m: I can practice appropriate problem-solving approaches and critical thinking skills to on-the-job issues and tasks. MNF1.b.4.m: I can comprehend and engage in communication methods to convey ideas, concepts and requirements to other individuals and teams. MNF1.e.3.m: I can identify that manufacturing systems use mechanical processes that change the form of materials through the processes of separating, forming, combining and conditioning.	
Stage 3: Learning Activities		
A brief summary of the key learning activities- How will students build knowledge & develop skills? How will learning be relevant, accessible, and engaging? How will the learning unfold in a natural flow?		

<p>GUIDING UNIT QUESTIONS</p> <p>Using Costas' Level of Thinking, what questions will hook and hold students so that they develop a deep understanding of the desired results? The guiding questions are more topic-specific to the particular unit. They guide the exploration of the essential questions and rigor of the standards. This may include questions that guide project based/ problem based learning</p>	<p>STRATEGIES/ACTIVITIES</p> <p>What learning strategies and experiences will authentically engage students so that they gain understanding the desired results? This includes strategies and activities that help learners acquire targeted knowledge and skills, make meaning of important ideas, and transfer their learning to new situations. Consider how the learning will be tailored and flexible to address the interests and learning styles of all students.</p>	<p>RESOURCES/MATERIALS</p> <p>This includes an applicable textbooks, software, industry recognized certification software/tools, subscriptions (such as PLTW), etc.</p>
1. Why is the safe use of tools and machines important?		
2. How do measurement tools assist you in analyzing real world problems?		
3. Why are technical skills important in communicating ideas?		
4. How are woodworking projects designed and constructed?		
5. How are materials selected and prepared for a woodworking project?		

Priority Standards	Unit 1	Unit 2
Creativity, Critical Thinking, Communication and Collaboration 4C2: Students will formulate and defend judgments and decisions by employing critical thinking skills. a: I develop effective resolutions for a given problem, decision or opportunity using available information. b: I develop and implement a resolution for a new situation using personal knowledge and experience.	X	X
Career Development CD4: Students will identify and apply employability skills. a: I identify and demonstrate positive work behaviors and personal qualities needed to be employable. b: I demonstrate skills related to seeking and applying for employment to find and obtain a desired job. c: I identify and exhibit traits for retaining employment. d: I develop positive relationships with others.	X	X
Information, Media, Technology IMT1: Students will access, interpret and evaluate information from a variety of sources in order to inform and support premises, arguments, decisions, ideas and initiatives. a: I choose appropriate sources of data and information for a given purpose. b: I determine the relevance, validity and timeliness of data and information. c: I select relevant information necessary for making decisions and solving problems d: I apply data and information to communicate ideas and create new opportunities.		
Standard: BB1: Students will analyze the core concepts of technology.	X	X
Standard: ENG1: Students will analyze and demonstrate the attributes of design.	X	X
Standard: ENG3: Students will demonstrate and analyze the role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	X	X

Standard: ICT1: Students will analyze, select and use information and communication technologies.	X	X
Standard: MNF1: Students will be able to select and use manufacturing technologies.	X	X