Wood Technology 2
Grades 10-12

Units of Credit: One Year (Elective)

Prerequisites: Woods Technology 1 and Recommend Drafting 1

Course Description:
Wood Technology 2 emphasizes a combination of advanced machine operations and wood technology. Students are presented with various problems for which they must conceptualize the solution, then design and build the final product. Students study advanced furniture design and cabinetmaking. Research practice and advanced application of material and machine processes are conducted. Extensive and intricate projects are completed.   Current industry standards are introduced. Students develop and use a variety of skills including safe work habits, organization, problem solving, and practical application of woodworking techniques. Students engage in a variety of learning activities including lecture and note taking, research, individual projects, demonstrations, and performance tasks. Students are assessed through observation and measurement of performance on tests, quizzes, assigned tasks and projects, and by the quality of work produced.

Topics:
- Measurement Systems
- Maintenance and Use of Hand Tools and Equipment
- In-Depth Use of Portable Power Tools
- Application of Advanced Techniques to the Use of Woodworking Machines
- Personal Safety in the Woodworking Laboratory
- Introduction to Wood Joinery and Shaping
- Advanced Woodworking Terminology
- Wood Identification
- Wood Preparation for Finishing
- Advanced Techniques in Wood Finishing
- Inventory of Woods Technology Careers
- Advanced Design and Planning
- Line Production

NOTE: Throughout this document, learning target types are identified as knowledge ("K"), reasoning ("R"), skill ("S"), or product ("P").

STANDARD 1: Students experience various career opportunities and assess personal career pathways.
Benchmark 1:
Explore and identify personal interests, aptitudes, and abilities and develop strategies to achieve tentative career goals.
Learning Targets *(Type)*:

1. I can use Montana Career Information Systems (MCIS) and/or other systems or web resources to investigate and evaluate my personal interests, aptitudes and abilities. *(S)*
2. I can formulate tentative career goals. *(R)*
3. I can evaluate approaches for meeting my goals. *(R)*

Benchmark 2:
Utilize local resources to research career plans.
Learning Targets *(Type)*:
1. I can identify local resources to develop career plans. *(K)*
2. I can contact my school career counselor or teacher to pursue career pathways. *(S)*

Benchmark 3:
Recognize the interrelationships of family, community, career, and leisure roles.
Learning Targets *(Type)*:
1. I can describe the importance of balance between family and community in regards to career and leisure activities. *(K)*
2. I can compare and contrast the needs of career and leisure activities and how they relate to and/or affect family and community. *(R)*

STANDARD 2: Students demonstrate an understanding and apply principles of Resource Management (i.e., financial, time, personal management).
Benchmark 1:
Prepare a budget and keep financial records.
Learning Targets (*Type*):
1. I can research and report cost of materials and time. *(R,S)*
2. I can document financial inputs and outputs. *(S)*
3. I can identify the necessity to maintain accurate financial records. *(K)*
4. I can stay within a fixed budget. *(S,P)*

Benchmark 2:
Prioritize, allocate time, prepare and follow schedules to complete a project.
Learning Targets (*Type*):
1. I can estimate the required time to complete a project. *(R)*
2. I can prioritize resources, equipment and tasks. *(R)*
3. I can reflect upon completion. *(K)*

Benchmark 3:
Apply appropriate time to task.
Learning Targets (*Type*):
1. I can implement a time schedule for task completion. *(S)*

Benchmark 4:
Use physical resources wisely to accomplish a goal.
Learning Targets (*Type*):
1. I can identify the resources necessary to accomplish the task. *(K)*
2. I can maintain the tools of the trade. *(S)*
3. I can maximize the use of my resources. *(S)*

STANDARD 3: Students acquire and utilize personal and leadership skills to become successful, productive citizens.
Benchmark 1:

Demonstrate active leadership skills by participation in group activities and projects.
Learning Targets (*Type*):
1. I can investigate various leadership styles. *(R)*
2. I can apply leadership styles in group activities and projects. *(R)*
Benchmark 2:
Demonstrate positive personal and work ethics.
Learning Targets (*Type*):
1. I can arrive on time for class and work. *(S)*
2. I can develop personal and work related goals. *(K,P)*
3. I can describe ethical behavior in the workplace. *(K)*
Benchmark 3:
Demonstrate skills to be a productive citizen.
Learning Targets (*Type*):
1. I can develop professional relationships with community members. *(S)*
2. I can contribute to my community in a positive manner. *(S,P)*
Benchmark 4:
Apply self-esteem building practices.
Learning Targets (*Type*):
1. I can define and provide evidence of my strengths in my career interest areas. *(K,S)*
2. I can persevere through set backs and stay focused on my goals. *(S)*
Benchmark 5:
Demonstrate appreciation for diverse perspective needs and characteristics.
Learning Targets (*Type*):
1. I can develop a working relationship with diverse populations. *(K,S)*
2. I can demonstrate communication skills that contribute to positive relationships. *(S)*
3. I can work to understand diverse points of view. *(R)*
Benchmark 6:
Practice several methods of effective communication.
Learning Targets (*Type*):
1. I can demonstrate good listening skills. *(S)*
2. I can effectively communicate verbally through collaborative projects. *(S,P)*
3. I can develop quality written professional communications. *(P)*

STANDARD 4: Students acquire and demonstrate current technical skills leading to an occupation.
Benchmark 1:
Practice technical skills and procedures required for an occupation.
Learning Targets (*Type*):
1. I can set up tools, machines, and equipment to manufacture or produce solutions to problems. *(S)*
2. I can develop, read and interpret woodworking project plans. *(R,S)*
3. I can identify skills and knowledge of advanced power equipment, materials, and processes in related careers. *(K,S)*
4. I can apply teamwork and cooperative learning skills. *(S)*
5. I can select goal-relevant activities, rank them, allocate time, and prepare and follow

schedules. *(R,S)*

6. I can use or prepare budgets, make forecasts, keep records, make adjustments to meet objectives, and evaluate financial records. *(R,S)*
7. I can assess skills and distribute work accordingly; evaluate performance and provide feedback toward the accomplishment of personal and team goals. *(R,S)*
8. I can practice various roles required as a member of an effective team while recognizing individual differences and cultural diversity. *(S)*
9. I can demonstrate and teach a learned skill including performance evaluation of self and others in this process. *(R,S)*
10. I can practice and evaluate negotiating process including researching, goal setting, presenting, listening, clarifying, adjusting and compromising. *(R,S)*
11. I can gather, compile and analyze data from a variety of sources, and evaluate relevance and accuracy in making informed decisions in the workplace. *(R,S)*
12. I can listen for, receive, interpret and recall specific details and instructions in conversations and group meetings. *(R,S)*
13. I can respond appropriately during conversations, uses proper language etiquette, speaks clearly and directly, and uses correct technical vocabulary. *(K,S)*
14. I can locate and demonstrate understanding of written technical and non-technical information necessary for completion of task or project. *(S)*
15. I can use proper business or technical writing styles, take effective notes, and complete written assignments legibly, completely, and accurately. *(S)*

Benchmark 2:
Practice safe and appropriate use of technology.
Learning Targets (*Type*):
1. I can utilize correct techniques for proper handling of hazardous materials. *(K,S)*
2. I can apply advanced woodworking skills in a working environment. *(S)*
3. I can evaluate and apply knowledge of the concepts and skills related to health and safety in the workplace. *(K,S)*

Benchmark 3:
Select the appropriate tools, equipment, and procedures for the task.
Learning Targets (*Type*):
1. I can produce work of the highest quality possible. *(S)*
2. I can allocate and evaluate time, materials, facilities and resources to set and achieve goals. *(K,S)*

Benchmark 4:
Manage and maintain technological tools and follow troubleshooting protocol.
Learning Targets (*Type*):
1. I can develop and justify organizational and time management skills as part of the problem-solving process. *(R,S)*
2. I can organize, process, analyze, and maintain written and computerized records and other forms of information using systematic methods. *(R,S)*

Benchmark 5:
Apply technical information to a variety of sources.
Learning Targets (*Type*):
1. I can demonstrate application of appropriate woodworking techniques based on knowledge of modern equipment and newly developed woodworking processes. *(S)*

2. I can apply critical-thinking strategies to the analysis and evaluation of potential wood design and fabrication activities. *(R,S)*
3. I can use cross-curricular resources and knowledge to develop solutions to problems. *(R,S)*
4. I can utilize knowledge and resources to create innovative solutions and ideas. *(R,S)*
5. I can use information related to woods technologies as it applies to continuing education, vocational, avocational, and career decisions. *(S)*
6. I can observe and summarize the career opportunities for a person with woodworking skills. *(S)*
7. I can communicate ideas to justify position, persuade and convince others, and responsibly challenge existing procedures and policies. *(R,S)*
8. I can practice and evaluate positive service skills (e.g., resolving misunderstanding, consumer complaints). *(R,S)*
9. I can select, analyze, and present information using a variety of methods (e.g., oral, written, graphic, pictorial, multimedia). *(R,S)*
10. I can acquire, organize, communicate, process, analyze and evaluate information from print and electronic sources. *(R,S)*
11. I can solve linear equations. *(S)*
12. I can use basic operations with real numbers. *(S)*
13. I can use fractions, decimals, and percents. *(S)*
14. I can use ratios and proportions. *(S)*
15. I can apply coordinate geometry. *(S)*
16. I can apply vocabulary and formulas of two-dimensional geometric shapes. *(S)*
17. I can use vocabulary and formulas of three-dimensional geometric shapes. *(S)*
18. I can build upon the principles of effective group participation and leadership related to workplace hierarchy. *(S)*

STANDARD 5: Students know and demonstrate the requirements of the workplace through authentic application.
Benchmark 1:
Practice and demonstrate academic and technical skills to a workplace setting.
Learning Targets (*Type*):
1. I can practice, and demonstrate my technical workplace skills in my school lab. *(S)*
2. I can research, write and present on the technical content utilizing academic skills found in workplace settings. *(R,S,P)*
Benchmark 2:
Apply the concepts of entrepreneurship.
Learning Targets (*Type*):
1. I can explain the concepts of entrepreneurship. *(K)*
2. I can demonstrate the concepts of entrepreneurship through a unique project. *(R,S)*
3. I can present my unique project to an authentic audience. *(S,P)*
Benchmark 3:
Identify possible outcomes and consequences of decisions.
Learning Targets (*Type*):
1. I can identify possible consequences of carelessness and horseplay. *(K)*
2. I can explain potential outcomes of not following directions, (i.e. safety, guidelines,

rubrics). *(R)*

Benchmark 4:

Use acceptable industry standard equipment in a school setting.

Learning Targets (*Type*):

1. I can successfully use acceptable industry standard equipment to produce an authentic product within budget constraints. *(S,R,P)*