COURSE: Basic Woodworking
Grade Level: 9-12

TIME:	STANDARDS:	TOPICS:	ESSENTIAL QUESTIONS:	CONTENT AND SKILLS (WHAT THE STUDENT WILL KNOW AND BE ALBLE TO DO):	SPECIFIC ASSESSMENTS:	RESOURCES:
1 DAY	**Standard 1**: Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.	CHAPTER 1: THE WOODWORKING INDUSTRY	What are the wood and forest product manufacturing processing techniques in use today?	Develop problem solving skills relating to materials and processes.	Discussion & Study sheet	WOOD TECHNOLOGY & PROCESSES TEXTBOOK
1 DAY	**Standard 1**: Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.	CHAPTER 1: THE WOODWORKING INDUSTRY	What are the characteristics of wood and wood products?	Develop the ability to identify softwoods, hardwoods, plywood, and wood products. Develop problem solving skills relating to materials.	Discussion & Study sheet	WOOD TECHNOLOGY & PROCESSES TEXTBOOK

1 DAY	**Standard 1**: Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. **Standard 2**: Information Systems: Students will access, generate, process, and transfer information using appropriate technologies. **Standard 5**: Technology: Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs. **Standard 7**: Interdisciplinary Problem Solving Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.	READING DESIGN PLANS & MATERIALS LIST	How do you read the basic plan, design and bill of materials list?	Develop the necessary skills which will enable him/her to communicate and express drafting ideas in an understandable, efficient, and accurate manner. Develop the ability to read a drawing and be able to construct it in the wood shop. Thoughtfully plan out the work by developing a pictorial view, orthographic projection, bill of materials list, cutting diagram and list, estimating cost using board and square foot formula's and a plan of procedure list.	Adirondack Chair Project Wooden Toy Service Learning Project Rubric	Adirondack Chair design plan & material list

5 Days	**Standard 3**: Mathematics: Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.	Chapter 4: Measuring & Cutting	How do you read a ruler? What is a proper fraction? What is an improper fraction? What is a mixed number? How do you convert an improper fraction into a mixed number? How do you convert a mixed number into an improper fraction? How do you add a fraction? How do you subtract a fraction?	Measure and compute using fractions.	Handout, practice exercise, quiz	WOOD TECHNOLOGY & PROCESSES TEXTBOOK
2 Days	**Standard 3**: Mathematics: Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.	Chapter 4: Measuring & Cutting	What is an angle? What is an acute angle? What is an obtuse angle? What is a right angle? What is a complementary angle? What is a supplementary angle?	Compute Basic Geometry	Handout, practice exercise, quiz	WOOD TECHNOLOGY & PROCESSES TEXTBOOK

2 Days	**Standard 3**: Mathematics: Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.	Chapter 4: Measuring & Cutting	What is a rectangle? How do you find an angle within a rectangle? How do you calculate the perimeter of a rectangle? How do you calculate the area of a rectangle? How do you find the Hypotenuse of a Right Triangle?	Compute Basic Geometry	Handout, practice exercise, quiz	WOOD TECHNOLOGY & PROCESSES TEXTBOOK
2 Days	**Standard 3**: Mathematics: Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.	Chapter 4: Measuring & Cutting	How do you determine board feet? How do you determine lineal feet? How do you convert board feet to lineal feet? How do you calculate lumber cost per board feet? How do you calculate lumber cost per lineal feet?	Measure and compute.	Handout, practice exercise, quiz	WOOD TECHNOLOGY & PROCESSES TEXTBOOK

16 Days	**Standard 3**: Mathematics: Students will understand the concepts of and become proficient with the skills of mathematics; communicate and reason mathematically; become problem solvers by using appropriate tools and strategies; through the integrated study of number sense and operations, algebra, geometry, measurement, and statistics and probability. **Standard 5**: Technology: Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.	Chapter 8, 9, 10, 11, 12, 13 & 14 Joinery and Assembly	What are the different types of joinery used in woodworking how are they constructed: Butt joint, biscuit joint, dowel joint, rabbet joint, dado joint, miter joint, mortise-and-tenon joint, dovetail joint?	Develop the ability to construct various wood joints assigned by the instructor	Discussion Self-evaluations Peer-evaluations Instructor-Observation Rubric	WOOD TECHNOLOGY & PROCESSES TEXTBOOK

5 DAYS	**Standard 1**: Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. **Standard 5**: Technology: Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.	CHAPTER 15, 16, & 17 JOINERY & ASSEMBLY	What are the different types of abrasives, glues, hardware, stains and finishes used in the woodworking industry?	Develop the ability and skill to fastened wood together using various adhesives, hardware, and techniques of the trade. Develop the skill in preparing a wood surface for a finish. Demonstrate the proper way to apply various fillers and wood stains. Demonstrate the proper way to apply a finish on a project.	Discussion Study sheets Adirondack Chair Project Rubrics Teacher Observation	WOOD TECHNOLOGY & PROCESSES TEXTBOOK
9 Days (safety) & 50 Days (projects)	**Standard 1**: Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. **Standard 2**: Information Systems: Students will access, generate, process, and transfer information using appropriate technologies. **Standard 5**: Technology: Students will apply	Chapter 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, & 30 – Using Machines	What is the safe care and use of hand and machine tools used in the woodworking industry? What is the importance of integrity, craftsmanship, and work habits and ethic in the classroom and shop?	Demonstrate and explain the correct use of tools and machines in order to prevent personal injury to you and your classmates as well as preventive damage of the equipment. Demonstrate proper techniques and safety requirements for all portable and power machines. Develop the proper usage of all equipment used in the woodworking	Discussion Safety worksheets Safety Quizzes Projects: Shaker Oval box , Wooden Toy Service Learning , turned pen & pencil, Adirondack chair	WOOD TECHNOLOGY & PROCESSES TEXTBOOK

	technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.			area. Planer, jointer, table saw, radial-arm saw, band saw, scroll saw, drill press, sander & lathe.	Rubrics	