MONROE TOWNSHIP PUBLIC SCHOOLS
WILLIAMSTOWN, NEW JERSEY

Williamstown High School

Construction Technology II

September 2013

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Monroe Township Public Schools
Williamstown, New Jersey

Philosophy of Education

The administration, faculty, and staff of Monroe Township Public Schools, in cooperation with parent and the community, and with active participation of the students, are committed to viewing each other as individuals, respecting each person's uniqueness, and setting high expectations for all students. The school system will assist each student to become a contributing member of our society by providing a learning environment that is responsive to the needs of the individual student, community, and changing society by providing a learning environment that nurtures values and morals. This environment will be conducive to acquisition of knowledge, as well as to the development of problem solving, critical thinking, and organizational skills. We will provide a learning environment that is responsive to the needs of the individual student, community, and changing society. We will aid our students in developing responsible behavior, a positive attitude toward themselves and others, the necessary life skills to become productive citizens and lifetime learners. We accept the challenge and responsibility of accomplishing these goals.

Revised: August, 1996

Williamstown High School
Williamstown, New Jersey

Philosophy of Education

We believe that an educated and responsible citizenry is essential to a democratic way of life. A free secondary school education should be available to all who are of secondary school age. Each individual should be helped to utilize his/her personal resources in achieving his/her potential.

We believe the program of studies should provide a general basic education for all; a vocational education for some; and a curriculum for the college-bound student. The program of studies should contain courses not only for the academically talented but also for those with learning experiences and develop an interest in creative activities which will enrich the leisure time of students throughout their lives.

We believe that education should be concerned with the whole person and provide opportunities to develop mentally, physically, emotionally, socially, and morally. We believe we should assist our students to become more fully aware of their worth as individuals and also aware of the importance of others in the community, and of their shared responsibility to that community. We believe the school and community are partners in the educational process; therefore, the school should reflect the needs of the community.

Whatever is considered educational sound should be made administratively feasible, with a flexible on-going program.

Williamstown High School
Williamstown, New Jersey

Industrial Technology Education

Philosophy

The Industrial Technology is an area of study that helps students become technologically literate. Through classroom lessons and lab activities, students learn about the technical, social and cultural impacts of technology in our world. Students acquire a new vocabulary that helps them to better express their knowledge of technology. Likewise, their hands-on experiences in technology education teach them how to use tools and equipment while applying safety principles to accomplish technical tasks. Students will use critical thinking, decision making and problem solving skills to create drawings and products. Students will be exposed to various careers and develop workplace readiness skills. The goal of the Industrial Technology Education Department is to also develop self-management skills and self-pride in each student. Students should be convinced of what they will need to know for the next century and be prepared to enter the work force directly with marketable skills or to further their education when they graduate.

Williamstown High School
Williamstown, New Jersey

Purpose Statement

Construction Technology II

Construction Technology III is our first year course in building technology, the course is offered to our most advanced woods tracking students in the 11th and 12th grades. It is intended to be the first year of the job site portion of the track. Successful completion of Construction Technology I and II is required.

Exposure and work skills are experienced in most of the construction occupations including carpentry, masonry, framing, energy conservation, interior and exterior finish.

Previous work skills are reinforced while new skills are introduced in the science of planning, cutting, fitting, and assembly of construction materials, all needed in the building of many types of construction projects.

Students can work on or off campus in the construction of residential, commercial, or public works projects, which help develop career planning and workplace readiness skills in many occupational trades. Every attempt is made to emphasize the use of information, technology, and tools critical to each student's future ability to navigate in the complex world of work.

Williamstown High School
Williamstown, New Jersey

Course Proficiency Requirements

Course: Construction Technology II
Teacher: Staff
Credits: 5
Weighted for Class Rank: No
Pursuant to the High School Graduation Standards Act (NJSA 18A:7, et. seq) successful completion of this course will require:

A. Regular attendance as mandated by Board Policy.
B. Mastery of the below content/objectives and achievement of the proficiencies required.

OVERVIEW:

Construction Technology II is a continuing course in woodworking and related construction technologies. Shop math, measurement and hand tool use continue to be reinforced while machine use is fully introduced. Individual and or group projects comprise the hands on skills needed to safely master woodworking techniques.

Every effort is made to motivate each student and clearly layout what they should know and be able to do at this level, course pride in quality work and craftsmanship are again primary goals.

Carpenters continue to play a vital role in building America and account for one third of the 25 or so different building trades. Each skill mastered in this course will directly apply to entry level skills in Construction Technology II & IV or industry.

Career planning and workplace readiness is a vital objective of the program, students use technology and tools in critical thinking, decision making, and proem solving.

Self organization and management skills are addressed by the personalized portfolio each student is required to keep throughout the course.

As in all work related areas safety is most important. Students are taught to apply safety principles that will ensure their own safety and health as well as the safety and health of others.

PROFICIENCIES: Upon Completion of this course the student will be able to:

1. Demonstrate measurement and calculation techniques related to construction technology.
2. Problem solve in areas of layout, estimating, planning and print reading.
3. Continue to demonstrate the safe use of hand tools.
4. Demonstrate the safe operation of portable and stationary power tools.
5. Describe the safe and correct procedure sin machine set-up, operation, and maintenance.
6. Competently complete the skills necessary in project construction and assembly.
7. Describe and use a variety of modern constriction materials.
8. Identify and use a variety of fasteners and fastening systems.
9. Demonstrate construction safety.
10. Continue exposure to career planning and workplace readiness.
11. Describe types of construction.
12. Explore the building trades.

CAREER/OBJECTIVES:

1. To further develop skills needed to continue in a construction technology track.
2. To explore the many trade careers as well as careers in related areas.
3. Describe the importance of personal skills and attitudes to job success.
4. To begin to develop the skills to seek, obtain, and maintain a job.

MEASUREMENT OF STUDENT ACHIEVEMENT:

Evaluations consist of tests, quizzes, class work, and classroom work performance. Test are weighted 3 times class work, quizzes 2 times class work.

In addition, each student is required to keep a personal portfolio to demonstrate.

SCOPE AND SEQUENCE

Safety

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Introduction to Safety **	**I**	**R**	**R**	**R**	**I**
Accident Prevention **	**I**	**I**	**R**	**R**	**I**
Safety Attitudes **	**I**	**R**	**R**	**R**	**I**
General Safety Rules **					
Emergency Switches **	**I**	**R**	**R**	**R**	**I**
Machine Usage **	**I**	**I**	**R**	**R**	**I**
Concentration **	**I**	**R**	**R**	**R**	**I**
Clean Work Area **	**I**	**I**	**R**	**R**	**I**
Eye Safety **	**I**	**R**	**R**	**R**	**I**
Clothing **	**I**	**R**	**R**	**R**	**I**
Hearing Protection **	**I**	**I**	**R**	**R**	**I**
Respiratory Protection **	**I**	**R**	**R**	**R**	**I**
Lifting **	**I**	**I**	**R**	**R**	**I**
Obey Rules **	**I**	**R**	**R**	**R**	**I**
Courteous & Respect **	**I**	**R**	**R**	**R**	**I**
Accident Reporting **	**I**	**R**	**R**	**R**	**I**
Right To Know (RTK) **	**I**	**R**	**R**	**R**	**I**

I = INTRODUCED
R = REINFORCED

SCOPE AND SEQUENCE

Safety

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Tool & Equipment Safety **					
Receive Proper Instruction **	**I**	**R**	**R**	**R**	**I**
Proper Intent & Use **	**I**	**R**	**R**	**R**	**I**
Handling & Care **	**I**	**R**	**R**	**R**	**I**
Carrying & Storage **	**I**	**R**	**R**	**R**	**I**
Electrical Cords **	**I**	**R**	**R**	**R**	**I**
Electrical Plugs **	**I**	**R**	**R**	**R**	**I**
Unplug for Adjustments **	**I**	**R**	**R**	**R**	**I**
Water & Electricity **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Safety

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Fire Safety **					
Prevention **	**I**	**R**	**R**	**R**	**I**
Storage Equipment **	**I**	**R**	**R**	**R**	**I**
Storage of Materials **	**I**	**R**	**R**	**R**	**I**
Flammable Materials **	**I**	**R**	**R**	**R**	**I**
Location of Fire Extinguishers **	**I**	**R**	**R**	**R**	**I**
Types of Fires **	**I**	**R**	**R**	**R**	**I**
Fire Alarms **	**I**	**R**	**R**	**R**	**I**
If Your Clothing Catches on Fire ***	**I**	**R**	**R**	**R**	**I**
First Aid **					
Who to Notify **	**I**	**R**	**R**	**R**	**I**
Types of Injuries **	**I**	**R**	**R**	**R**	**I**
Types of Actions to be Taken **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Layout & Measurement

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Measure in 1/16" scale **	**I**	**R**	**R**	**R**	**I**
Bench Rule **	**I**	**R**	**R**	**R**	**I**
Tape Measure **		**I**	**R**	**R**	**I**
Layout Centers with Tape **			**I**	**R**	**I**
Use a 100" Tape **			**I**	**R**	**I**
Use a Folding Rule **			**I**	**R**	**I**
Measuring with Squares **		**I**	**R**	**R**	**I**
Using sliding T-Bevel **		**I**	**R**	**R**	**I**
Using the Tri-Square **	**I**	**R**	**R**	**R**	**I**
Using the Combination Square **	**I**	**R**	**R**	**R**	**I**
Using the Speed Square **			**I**	**R**	**I**
Using the Carpenter Square **			**I**		
Using the For Squaring Operations **	**I**	**R**	**R**	**R**	**I**
To Layout A Rafter **			**I**	**R**	**I**
To Layout a Stair Stringer **			**I**	**R**	**I**
Using a Marking Gauge **		**I**	**R**	**R**	**I**
Using Dividers **		**I**	**R**	**R**	**I**
Using Inside/Outside Calipers **	**I**	**R**			**I**

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SCOPE AND SEQUENCE

Layout and Measurement

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Using Levels **					
2' Shop Level/For Level **		**I**	**R**	**R**	**I**
2' Shop Level/For Plumb **			**I**	**R**	**I**
Using a Line Level **			**I**	**R**	**I**
Using a Torpedo Level **			**I**	**R**	**I**
Using a 4' Level **		**I**	**R**	**R**	**I**
Using a 6' Level **			**I**	**R**	**I**
Using a Level to Slope Drain Pipes **			**I**	**R**	**I**
Using a Level to Slope Flatwork **			**I**	**R**	**I**
Marking & Cutting **					
Using tools to Mark **	**I**	**R**	**R**	**R**	**I**
Use Tools to Square **	**I**	**R**	**R**	**R**	**I**
Making Square Cuts **	**I**	**R**	**R**	**R**	**I**
Making Miter Cuts **		**I**	**R**	**R**	**I**
Making Square Corners **	**I**	**R**	**R**	**R**	**I**
Making Parallel Sides **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Computations

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Add, Subtract, Multiply and Divide Fractions **	**I**	**R**	**R**	**R**	**I**
Decimals **	**I**	**R**	**R**	**R**	**I**
Calculate Area (Square foot) **			**I**	**R**	**I**
Calculate Board Footage **	**I**	**R**	**R**	**R**	**I**
Volume Computation **			**I**	**R**	**I**
The Materials List **	**I**	**R**	**R**	**R**	**I**
Calculate Materials **					
Solo in Square (100 sq. ft.)					
Siding **			**I**	**R**	
Roofing **			**I**	**R**	
Sheet Goods *			**I**	**R**	
Estimate Quantities of **					
Framing Materials **					
Using 12', 16', 19.2' & 24' on Centers			**I**	**R**	

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SCOPE AND SEQUENCE

Wood
Nature & Characteristics

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Parts of a Tree **	**I**	**R**	**R**	**R**	**I**
Cell Structure **	**I**	**R**	**R**	**R**	**I**
Hardwoods/Softwoods **	**I**	**R**	**R**	**R**	**I**
Growth Rings **	**I**	**R**	**R**	**R**	**I**
Characteristics **	**I**	**R**	**R**	**R**	**I**
Properties **	**I**	**R**	**R**	**R**	**I**
Cutting Methods **		**I**	**R**	**R**	**I**
Decorative Features **		**I**	**R**	**R**	**I**
Seasoning **	**I**	**R**	**R**	**R**	**I**
Shrinking of Lumber **	**I**	**R**	**R**	**R**	**I**
Cell Size & Characteristics **	**I**	**R**	**R**	**R**	**I**
Lumber Defects **	**I**	**R**	**R**	**R**	**I**
Species **		**I**	**R**	**R**	**I**
Wood Grading **		**I**	**R**	**R**	**I**
Ordering Lumber **			**I**	**R**	**I**

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SCOPE AND SEQUENCE

Plans & Prints

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Blueprint Interpretation **					
6 Views of Orthographic **					
Projection **	**I**	**R**	**R**	**R**	**I**
Pictorials **	**I**	**R**	**R**	**R**	**I**
Perspective **	**I**	**I**	**R**	**R**	**I**
Isometric Drawing **		**I**	**R**	**R**	**I**
Sketching **		**I**	**R**	**R**	**I**
Working Drawing **			**I**	**R**	**I**
Introduce & Learn Construction Symbols **			**I**	**R**	
Framing Symbols **			**I**	**R**	
Using Templates **	**I**	**R**	**R**	**R**	**I**
Using Patterns **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Safe Use of Hand Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Fastening & Prying Tools **					
Hammers **	**I**	**R**	**R**	**R**	**I**
Hatchet **			**I**	**R**	**I**
Staplers **			**I**	**R**	**I**
Leather/Wood/Rubber Mallet **	**I**	**R**	**R**	**R**	**I**
Pliers **	**I**	**R**	**R**	**R**	**I**
Wrenches **	**I**	**R**	**R**	**R**	**I**
Ripping Bar **			**I**	**R**	
Hail Claw **			**I**	**R**	
Wonder/Flat Bar **			**I**	**R**	

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SCOPE AND SEQUENCE

Safe Use of Cutting Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Wood Chisels **		I	R	R	I
Saws Rip **	I	R	R	R	I
Crosscut **	I	R	R	R	I
Combination **	I	R	R	R	I
Compass **	I	R	R	R	I
Key Hole **		I	R	R	I
Back Saw **	I	R	R	R	I
Dove Tail Saw **			I	R	I
Coping Saw **	I	R	R	R	I
Hack Saw **			I	R	I

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SCOPE AND SEQUENCE

Boring & Clamping Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Brace & Bit **		**I**	**R**	**R**	**I**
Push Drills **		**I**	**R**	**R**	**I**
Hand Drills **		**I**	**R**	**R**	**I**
Twist Drills **	**I**	**R**	**R**	**R**	**I**
Auger Bits **	**I**	**R**	**R**	**R**	**I**
Foersther Bits **		**I**	**R**	**R**	**I**
Adj. Expansion Drill **			**I**	**R**	**I**
Spade Bits **			**I**	**R**	**I**
Carbide Masonry Bits **			**I**	**R**	**I**
Combination Drills **		**I**	**R**	**R**	**I**
Bead Point Wood Bit **		**I**	**R**	**R**	**I**
Hole Saws **			**I**	**R**	**I**
Clamping Tools **					
Wood/Metal Vices **	**I**	**R**	**R**	**R**	**I**
C-Clamps **	**I**	**R**	**R**	**R**	**I**
Quik-Clamps (TM) **	**I**	**R**	**R**	**R**	**I**
Hand Screw **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Clamping Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Vice Grip Clamps **		**I**	**R**	**R**	**I**
Bar Clamps **		**I**	**R**	**R**	**I**
Strap Clamps **		**I**	**R**	**R**	**I**
Spring Type Clamps **		**I**	**R**	**R**	**I**
Corner Clamps **	**I**	**R**	**R**	**R**	**I**
Use of Smoothing Tools					
Plans **	**I**	**R**	**R**	**R**	**I**
Scrapers **	**I**	**R**	**R**	**R**	**I**
Rasps **	**I**	**R**	**R**	**R**	**I**
Modern Serrated Forming tools **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Portable Powers Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Portable Circular Saw **					
Types of **		**I**	**I**	**R**	**I**
Sizes of **		**I**	**I**	**R**	**I**
Types of Cuts **		**I**	**I**	**R**	**I**
Types of Materials **		**I**	**I**	**R**	**I**
Types of Blades **		**I**	**I**	**R**	**I**
Changing the Blades **		**I**	**I**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Reciprocating Saw **					
Types of **			**I**	**R**	**I**
Sizes of **			**I**	**R**	**I**
Types of Cuts **			**I**	**R**	**I**
Types of Materials **			**I**	**R**	**I**
Types of Blades **			**I**	**R**	**I**
Changing blades **			**I**	**R**	**I**
Safe Use of **			**I**	**R**	**I**

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SCOPE AND SEQUENCE

Portable Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Saber Saw **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Cuts **		**I**	**R**	**R**	**I**
Types of Materials **		**I**	**R**	**R**	**I**
Types of Blades **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Router **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Types of Cuts **	**I**	**R**	**R**	**R**	**I**
Types of Materials **	**I**	**R**	**R**	**R**	**I**
Types and Nomenclature of cutters **	**I**	**R**	**R**	**R**	**I**
Set-up & Use **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Portable Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Biscuit Joiner **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Joints **		**I**	**R**	**R**	**I**
The Biscuit Types/Sizes **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Drills (Pistol) **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
All About Chucks **	**I**	**R**	**R**	**R**	**I**
Uses (Boring Operations) **	**I**	**R**	**R**	**R**	**I**
Uses (Other than Boring) **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Portable Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Screw Shooters **					
Types of (Include AC/DC) **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Uses **	**I**	**R**	**R**	**R**	**I**
Materials (Fasteners) **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**
Palm Sanders **					
Types of Sizes **	**I**	**R**	**R**	**R**	**I**
Changing Abrasives **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**
Belt Sanders **					
Types & Sizes **		**I**	**R**	**R**	**I**
Changing Abrasives **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Stationary Power Tools
Power Plane

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Types of Materials **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Installation of Cutters **			**I**	**R**	**I**
Jointer **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Materials **		**I**	**R**	**R**	**I**
Insulation of Cutters **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Shaper **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Materials **		**I**	**R**	**R**	**I**
Types of Cutters **		**I**	**R**	**R**	**I**
Changing Cutters **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Stationary Power Tools
Bandsaw

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Safe Use of **	**I**	**R**	**R**	**R**	
Miter Box Saw **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Cuts **		**I**	**R**	**R**	**I**
Types of Materials **		**I**	**R**	**R**	**I**
Types of Blades **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Frame & Trim Saw (Saw Buck) **					
Types of **			**I**	**R**	
Types of Cuts **			**I**	**R**	
Types of Materials **			**I**	**R**	
Set-up, Take Down, Storage **			**I**	**R**	
Changing Blades **			**I**	**R**	
Safe Use of **			**I**	**R**	
Power Plane **					
Types of **		**I**	**R**	**R**	
Sizes of **		**I**	**R**	**R**	

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SCOPE AND SEQUENCE

The Use of Stationary Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Radial Arm Saw **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Cuts **		**I**	**R**	**R**	**I**
Accessories Other Than Sawing **		**I**	**R**	**R**	**I**
Ripping (Ploughing) **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Table Saw **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Cuts **		**I**	**R**	**R**	**I**
Types of Material Cut **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Band Saw **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Types of Cuts **	**I**	**R**	**R**	**R**	**I**
Types of Materials **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Stationary Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Wood Lath **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Types of Turnings **	**I**	**R**	**R**	**R**	**I**
Types of Materials **	**I**	**R**	**R**	**R**	**I**
Duplicating **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**
Disc Sander **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Changing the Disc **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**
Belt Sander **					
Types of **	**I**	**R**	**R**	**R**	**I**
Sizes of **	**I**	**R**	**R**	**R**	**I**
Changing the Belt **	**I**	**R**	**R**	**R**	**I**
Safe Use of **	**I**	**R**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Stationary Power Tools

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Oscillating Drum Sander **					
Types of **		**I**	**R**	**R**	**I**
Sizes of **		**I**	**R**	**R**	**I**
Types of Sanding Sleeves **		**I**	**R**	**R**	**I**
Changing Sleeves **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Scroll Saw **					
Types & Sizes of **		**I**	**R**	**R**	**I**
Parts of (Nomenclature) **		**I**	**R**	**R**	**I**
Types of Cuts **		**I**	**R**	**R**	**I**
Types of Materials **		**I**	**R**	**R**	**I**
Making Identical Parts **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**
Bench/Pedestal Grinder **					
Types & Sizes of **		**I**	**R**	**R**	**I**
Parts of (Nomenclature) **		**I**	**R**	**R**	**I**
Types of Wheels **		**I**	**R**	**R**	**I**
Safe Use of **		**I**	**R**	**R**	**I**

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SCOPE AND SEQUENCE

Maintenance & Machine Set-Up

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Using Machine Set-Ups **	**I**	**R**	**R**	**R**	**I**
Making Machine Set-Ups **		**I**	**R**	**R**	
Using Fixtures **	**I**	**R**	**R**	**R**	**I**
Making Fixtures **		**I**	**R**	**R**	**I**
Using Templates **	**I**	**R**	**R**	**R**	**I**
Making Templates **		**I**	**R**	**R**	**I**
Performance/Equipment Maintenance **					**I**
Removal/Installation of Cutters **		**I**	**R**	**R**	
Sharpening **			**I**	**R**	
Abrasive Removal/Installation **	**I**	**R**	**R**	**R**	**I**
Lubrication **		**I**	**R**	**R**	
Cleaning **	**I**	**R**	**R**	**R**	**I**
Adjustments **		**I**	**R**	**R**	

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SCOPE AND SEQUENCE

Project Construction

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Building of Projects **	**I**	**R**	**R**	**R**	**I**
Selection & Handling Wood **	**I**	**R**	**R**	**R**	**I**
Design **		**I**	**R**	**R**	**I**
Work with Plans **	**I**	**R**	**R**	**R**	**I**
Following Instructions/Directions **	**I**	**R**	**R**	**R**	**I**
Shaping Components parts **	**I**	**R**	**R**	**R**	**I**
Using Set-Ups/Fixtures **	**I**	**R**	**R**	**R**	**I**
Interchangeable Parts **		**I**	**R**	**R**	**I**
Use Sequential Assembly **		**I**	**R**	**R**	**I**
Individual Projects **	**I**	**R**	**R**	**R**	**I**
Team Projects **			**I**	**R**	**I**
Group Projects **			**I**	**R**	**I**

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SCOPE AND SEQUENCE

Construction Materials

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Introduce Concrete **		**I**	**R**	**R**	
Ingredients of Concrete **		**I**	**R**	**R**	
Characteristics of Concrete **		**I**	**R**	**R**	
Uses & Applications **			**I**	**R**	
How to Apply & Finish **			**I**	**R**	
Wood **					
Types of **	**I**	**R**	**R**	**R**	**I**
Composites for Products **	**I**	**R**	**R**	**R**	**I**
Composites for Structures **			**I**	**R**	**I**
Dimension Lumber **	**I**	**R**	**R**	**R**	**I**
Fiberboard **		**I**	**R**	**R**	**I**
Hardboard **		**I**	**R**	**R**	**I**
Laminates **			**I**	**R**	**I**
Laminates Beams & Joist **			**I**	**R**	**I**
Paneling **			**I**	**R**	**I**
OSI Board **			**I**	**R**	**I**
Uses of Metal in Construction **			**I**	**R**	**I**

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SCOPE AND SEQUENCE

Construction Materials

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Adhesives **					
Kinds of Adhesives **		**I**	**R**	**R**	**I**
Selecting Adhesives **		**I**	**R**	**R**	**I**
Gluing Procedures **	**I**	**R**	**R**	**R**	**I**
Clamping Devices **	**I**	**R**	**R**	**R**	**I**
Gluing Problems **			**I**	**R**	**I**
Fasteners (Nails) **	**I**	**R**	**R**	**R**	**I**
Sizing System **	**I**	**R**	**R**	**R**	**I**
Types of **	**I**	**R**	**R**	**R**	**I**
Uses & Installation **	**I**	**R**	**R**	**R**	**I**
Fasteners (Screws)	**I**	**R**	**R**	**R**	**I**
Sizing System **	**I**	**R**	**R**	**R**	**I**
Types of **	**I**	**R**	**R**	**R**	**I**
Uses & Installation **	**I**	**R**	**R**	**R**	**I**
Fastener (Other) **		**I**	**R**	**R**	**I**
Nuts & Bolts/Size, Type **		**I**	**R**	**R**	**I**
Framing Anchors/Size, Type **			**I**	**R**	**I**
Specialty **			**I**	**R**	**I**

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SCOPE AND SEQUENCE

Career Planning

DEVELOPMENT SKILLS
***=CORE PROFICIENCY**
****=CONTENT STANDARD**

	Construction Technology I	Construction Technology II	Construction Technology III	Construction Technology IV	Woodworking Explored
Develop Workplace Readiness **	**I**	**R**	**R**	**R**	**I**
Employability/Work Habits **		**I**	**R**	**R**	**I**
Personal Skills & Attitudes **		**I**	**R**	**R**	**I**
Identify Personal Interest **		**I**	**R**	**R**	**I**
Develop Career Plans **			**I**	**R**	**I**
Identify Transferable Skills **		**I**	**R**	**R**	**I**
Selection of Appropriate Courses **	**I**	**R**	**R**	**R**	**I**
Describe Occupational Skills **		**I**	**R**	**R**	**I**
Demonstrate Occupational Skills **			**I**	**R**	**I**
Identify Job Openings **			**I**	**R**	**I**
Prepare A Resume **				**I**	**I**
Develop Interview Skills **			**I**	**R**	**I**

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Suggested Assessment

1. Teacher Observations
2. Class Discussion
3. Class Assignments
4. Question and Answer
5. Objective Test
6. Subjective Test
7. Skills Test
8. Written Test
9. Drawings
10. Student Participation
11. Projects
12. Teacher Review
13. Timing/Drills
14. Class Survey
15. Personal Assessment
16. Essays
17. Open Ended Questions
18. Other_____

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #1 Student will demonstrate knowledge of: <u>demonstrate measurement and calculation techniques related to construction technology</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	Assessment Strategies 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	Materials, Technology Resources 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.1-5	The student shall be able to measure with the following devices: 1. Rules 2. Tapes 3. Scales	1, 3, 4, 6, 7, 10, 11, 12, 15		
9.4.12. B.1-5	The student shall use the following layout tools: 1. Sliding T-Bevel 2. Carpenters square, tri-square and adjustable combination square 3. Marking gauge 4. Dividers 5. Inside and outside calipers level	1, 3, 4, 6, 7, 10, 11, 12, 15		
9.4.12. B.1-5	The student shall fully understand the measurement of stock. 1. Thickness, width, and length	1, 3, 4, 6, 7, 10, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #2 Student will demonstrate knowledge of: <u>problem solve in areas of layout estimating, planning and print reading</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12.B.(2).1, 3, 4 9.4.12.B.72-75	The student shall be able to mark and cut stock. 1. Dimensionally accurate 2. Square corners 3. Parallel sides	1, 3, 5, 6, 7, 11, 12, 15		
9.4.12.B.(2).1, 3, 4 9.4.12.B.72-75	The student will be able to perform the following computations. 1. Board footage 2. Area computations (length x width)	1, 3, 5, 6, 7, 11, 12, 15		
9.4.12.B.(2).1, 3, 4 9.4.12.B.72-75	The student will be able to select and use lumber according to the following criteria. 1. Species 2. Grade 3. Quantities (used in ordering)	1, 3, 5, 6, 7, 11, 12, 15		
9.4.12.B.(2).1, 3, 4 9.4.12.B.72-75	The student will be able to read and interpret the following types of drawings. 1. Orthographic projections (six views) 2. Pictorials 3. Perspectives 4. Isometrics	1, 3, 5, 6, 7, 11, 12, 15		
9.4.12.B.(2).1, 3, 4 9.4.12.B.72-75	The student will be encouraged to sketch as a means of communication in the shop	1, 3, 5, 6, 7, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #3 Student will demonstrate knowledge of: <u>demonstrate the safe use of hand tools</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	The following fastening and prying tools are reinforces or introduced. 1. Hammer a. Straight claw, curved claw, and frame b. Specialty hammer c. Hammering methods d. Nailing techniques 2. Hatchets a. Use of b. Types of 3. Staplers a. Types of b. Applications 4. Pliers and wrenches 5. Prying tools a. Use of b. Types of a. Ripping bar b. Nail claw	1, 2, 3, 6, 7, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #3 Student will demonstrate knowledge of: <u>demonstrate the safe use of hand tools</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	Assessment Strategies 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	Materials, Technology Resources 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	Saws and cutting tools are reinforced or introduced 1. Handsaws a. Rip, Crosscut, and combination b. Specialty saws i. Compass ii. Keyhole iii. Backsaw iv. Dovetail saw v. Coping saw c. Cutting Tools i. Wood chisels	1, 2, 3, 6, 7, 11, 12, 15		
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	Boring and clamping tools are reinforced or introduced. 1. Boring tools a. Brace and bit b. Hand powered drills 2. Clamping tools a. Vices b. Clamp types a. C-clamps b. Bar clamps c. Hand screw d. Specialty clamps	1, 2, 3, 6, 7, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #3 Student will demonstrate knowledge of: <u>demonstrate the safe use of hand tools</u>

Content Standard CPI	**Established Goals Content Objectives Measurable Skills**	**Suggested Instructional Strategies/Activities** 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	**Assessment Strategies** 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	**Materials, Technology Resources** 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	Smoothing tools are introduced or expanded upon. 1. Types of uses a. Planes b. Scrapers c. Rasps 2. Modern serrated forming tools	1, 2, 3, 6, 7, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic # 4 Student will demonstrate knowledge of: <u>safe use of the following portable power tools. Each lesson includes: type and sizes, use, care, and maintenance</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	The student is taught the: Note: Specialty lessons in power tool safety precede each use lesson. 1. Portable circular saws 2. Work drive & conventional 3. Reciprocating saw 4. Saber saw 5. Router 6. Biscuit joiner 7. Drills & screw shooters 8. Palm & belt sanders	1, 3, 5, 6, 7, 10, 11, 12, 14, 15		
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	The student is taught the safe use of the following stationary power tools. Each lesson includes type, size of, uses of, care and maintenance. Note: Specialty safety lessons precede each lesson. 1. Radial arm saw 2. Table saw 3. Band saw 4. Miter box saw 5. Frame & trim saw 6. Power planes 7. Jointer 8. Shaper 9. Lath 10. Disc, belt & drum sanders 11. Scroll saw 12. Grinder	1, 3, 5, 6, 7, 10, 11, 12, 14, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic # 5 Student will demonstrate knowledge of: <u>demonstrate the safe and correct procedures in machine set-up, operation and maintenance</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	Assessment Strategies 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	Materials, Technology Resources 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	The student will be able to use the following tools and techniques to manufacture component parts. a. Fixtures b. Templates	1, 2, 3, 4, 5, 7, 10, 11, 12, 15		
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	The student will be able to perform the following equipment maintenance. a. Removal and installation of cutting parts b. Equipment sharpening c. Abrasive surface removal and replacement d. Lubrication e. Cleaning f. Adjustments	1, 2, 3, 4, 5, 7, 10, 11, 12, 15		
9.4.12. B.(2).9 – 13 9.4.12. B.72-75	When the student has completed this unit they should be able to: a. Plan b. Use set-ups and fixtures c. Fabricate like interchangeable part d. Work on individual, tea, or group projects e. Use modern assembly techniques	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #7 Student will demonstrate knowledge of: describe a variety modern of construction materials

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	Assessment Strategies 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	Materials, Technology Resources 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).1 – 2 9.4.12. B.5	List and identify the ingredients of concrete. a. Characteristics of b. Uses of	1, 3, 5, 6, 7, 9, 10, 11, 12, 14, 15		
9.4.12. B.(2).1 – 2 9.4.12. B.72-75	Identify the types of wood and wood composites used in the construction of products and structures. a. To include: dimension lumber, fiber board, hardboard, laminated beams and joist, paneling, particle board, plywood, oriented strand board and wood composites	1, 3, 5, 6, 7, 9, 10, 11, 12, 14, 15		
9.4.12. B.(2).1 – 2 9.4.12. B.1,5	Identify the uses of metals in construction	1, 3, 5, 6, 7, 9, 10, 11, 12, 14, 15		
9.4.12. B.(2).1 – 2 9.4.12. B.1,5	Identify several types of adhesives and explain their uses	1, 3, 5, 6, 7, 9, 10, 11, 12, 14, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #8 Student will demonstrate knowledge of:

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).15 – 17 9.4.12. B.72-75	At the completion of this proficiency the student should be able to identify and select for use the following mechanical fasteners. 1. Nails a. Sizing system b. Types of c. Proper nailing technique 2. Screws a. Sizing system b. Types of c. Installation procedures 3. Other fasteners a. Bolts and nuts i. Size and types b. Framing anchors i. Size and types	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #8 Student will demonstrate knowledge of:

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).1 5 – 17 9.4.12. B.1, 5, 72-75	At the completion of this proficiency the student should be able to identify and describe the benefits of power activated fastening systems. 1. Types of system power a. Powder b. Fuel cell c. Pneumatic d. Electrical, (AC & DC cordless) 2. Benefits a. Time reduction b. Quality connections 3. Type of system a. Nail b. Screw c. Staple d. Specialty powered systems	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #9 Student will demonstrate knowledge of: <u>needed construction technology safety</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).1 5 – 17 9.4.12. B.1, 5, 72-75	At the completion of this objective the student shall exercise good working habits. a. Falling tools/objects b. Always watch where you step c. Look out for the safety of your fellow worker d. Do not engage in horseplay e. Lift properly	2, 4, 5, 12, 13		
9.4.12. B.(2).1 5 – 17 9.4.12. B.1, 5, 72-75	At the completion of this objective the student shall exercise good housekeeping. a. Scrap lumber management b. Material storage c. Tool and equipment storage d. Cleanliness e. Clean air	2, 4, 5, 12, 13		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #9 Student will demonstrate knowledge of: <u>needed construction technology safety</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).9 – 13 9.4.12. B.40 - 46	At the completion of this training the student will understand the following about fire prevention. 1. Types of fires a. Class A, B, C, D 2. Preventive measures a. Do not allow combustibles to accumulate b. Use containers c. Store volatile materials properly d. Keep flammable liquids tightly capped in proper containers 3. Extinguishing fires a. Fire extinguisher i. Placement and use of ii. Types and type usage b. Calling for help	2, 4, 5, 12, 13		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #10 Student will demonstrate knowledge of: <u>continued exposure to career planning and workplace readiness</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.3.12. C.1 – 6 9.4.12. B.60, 65	Before leaving this course the student will be able to: 1. Describe the importance of personal skills 2. Identify personal interest, abilities and skills 3. List skills transferrable from one occupation to another 4. Select appropriate accompanying courses	2, 4, 6, 10, 12, 14, 15		
9.3.12. C.1 – 6 9.4.12. 70, 71	Before leaving this course the student should begin to demonstrate employable skills, such as: 1. Work habits 2. Honesty 3. Work ethics 4. Dependability 5. Promptness 6. Getting along with others	2, 4, 6, 10, 12, 14, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #11 Student will demonstrate knowledge of: describe types of construction

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.3.12. C.1 – 6 9.4.12. B.65,68 ,71	The student will be able to explore employment in the following wood related careers. 1. Skilled occupations a. Cabinet maker b. Assembler c. Bench worker d. Model maker e. Interior design f. Forestry g. Wood technologist h. Industrial arts teacher i. Woods products engineer j. Architect k. Furniture design	2, 4, 10, 12, 14, 15		
9.3.12. C.1 – 6 9.4.12. B.65,68 ,71	The student will be able to explore employment in the following construction related careers 2. Apprentice able occupations a. Carpenters b. General contractor c. Construction laborers d. Other building trades workers	2, 4, 10, 12, 14, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #11 Student will demonstrate knowledge of: describe types of construction

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities 1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	Assessment Strategies 1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	Materials, Technology Resources 1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12. B.(2).5 – 9 9.4.12. M.(2).4	The student will understand the existence of and the membership status of the carpenters union. 1. The United Brotherhood of Carpenters and Joiners of America 2. Jobs other than carpenter a. Mill-cabinet workers b. Pile drivers c. Mill wrights d. Resilient floor installers e. Industrial workers	2, 4, 10, 12, 14, 15		
9.4.12. B.(2).5 – 9 9.4.12. M.(2).4	The student will be able to list other building trades' workers. 1. Laborer 2. Stonemasons 3. Bricklayer 4. Iron workers 5. Electricians 6. Plumbers 7. Heating, ventilation and air conditioning 8. Pipefitters 9. Sheet metal workers 10. Operating engineers 11. Plasterers 12. Painters and paper hander 13. Glazers 14. Floor covering installers 15. Roofers 16. Tile setters	2, 4, 10, 12, 14, 15		

MONROE TOWNSHIP PUBLIC SCHOOLS INSTRUCTIONAL PLAN

Focus Topic #12 Student will demonstrate knowledge of: <u>explore the building trades</u>

Content Standard CPI	Established Goals Content Objectives Measurable Skills	Suggested Instructional Strategies/Activities	Assessment Strategies	Materials, Technology Resources
		1. Problem Based Learning 2. Teacher Directed 3. Study Groups 4. Technology 5. Demonstration 6. Cooperative Groups 7. Literature Circles 8. Participation & Discussion 9. Reading 10. Application 11. Lab (report) 12. Homework 13. Field Trip 14. Projects 15. Other (explain)	1. Multiple Choice 2. Essay 3. Fill-In-Blanks 4. Academic Prompts 5. Writing Samples 6. Lab Report 7. Problem Solving 8. Oral Presentation 9. Self-Assessment 10. Class Survey 11. Rubrics 12. Reflective Discussion 13. Performance Tasks 14. Teacher Observation 15. Portfolio 16. Other (explain)	1. Textbooks 2. Technology Software 3. Technology Hardware 4. Graphic Organizers 5. AVA/Video 6. Primary Sources 7. Resource People 8. Internet Resources
9.4.12.B.(2).16, 17	After completing this activity the student will be able to construct a typical wall used in residential construction 1. List component parts of the wall a. DBL tope plate b. Sole plate c. Studs: regular, partition, jack d. Cripples e. Headers f. Sill	2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15		
9.4.12.B.(2).16, 17	Student shall demonstrate this ability to assemble the above listed components into the complete wall. 1. To include: a. Layout using appropriate symbols b. Cut component parts c. Assemble using 12d nails	2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15		

Resource

Textbook

(25 copies available in shop class)

Feirer, John L.
Furniture and Cabinet Making
Glencoe Publishing Co., Mission Hills, CA 1983

Supplementary Text:

(available in Industrial Arts office)

Nelson, John A.
The Weekend Worker
Rodale Press, Emmaus, PA, 1990

Hutching, Gilbert R.
Feirer, John L.
Bennett Publishing Co., Peoria, ILL, 1983

Supplementary Text:

(available in High School Media Center)

VT 234 Del Stubbs
Bowl Turning

VT 233 Jim Cummins
Small Shop Projects

Supplementary Text:

(available in Industrial Arts Office)

Fales, James F.
Construction Technology Today and Tomorrow
Glencoe/ McGraw Hill 1991
Peoria, ILL. 61615-2190

Gloucester Country Consortium Technology Plan 1996

N.J. Core Curriculum Content Standards May 1996