

Enhanced Woods—Math/CTE Framework

Math and CTE teachers team-teach this algebra enhanced woodworking course that aligns the learning of math concepts with practical, woodworking and construction-oriented projects. The objective is to improve math skill retention, make math meaningful and relevant, and reinforce the importance of math in the student's further education and career plans.

CIP Code: 480701

Total Framework Hours: 180 (90 occ ed, 90 math)

Courses: Enhanced Woods—Math/CTE

Exploratory

COMPONENTS AND COMPETENCIES

Performance Assessments: Employability – Core Components

- Student completes projects that span a number of career opportunities in the field of woodworking and related construction.
- Grading Criteria includes employability attributes
 - Working well as a team
 - Regard for safety
 - Reliability—(absences and tardies)
 - Work ethic—(level of effort, pride in work)
- Teacher observation of student interaction with guest speakers and guest teachers
- Teacher led discussion of career opportunities with these skills

Standard: C-1 Develop employability skills to secure and keep employment in chosen field

Total Learning Hours for Standard: 3

Competency	Competency Description
C-1.1	Assess interest areas to determine potential career pathways, including career ladders
C-1.2	Demonstrate employability skills needed to get and keep a job
C-1.3	Assess alternative occupational choices (e.g. working conditions, benefits, and opportunities to change

EALRs or GLEs (Taught & Assessed in Standards)

Reading	Communications
3.2.2 Apply understanding of complex information, including functional documents, to perform a task. 3.3.1 Apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing	
2.4.1 Produces documents used in a career setting.	

SKILLS

Leadership:

- 1.1 The student will analyze, refine, and apply decision-making skills through classroom, community, family, and work-related experiences.
- 1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.
- 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding

outcomes of related decisions.
 1.5 The student will demonstrate self-advocacy skills by achieving planned, individual goals.
 2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.
 2.6 The student will use knowledge, build interest, guide and influence decisions, organize efforts, and involve members of a group to assure that a pre-planned group activity is completed.

Employability:
 Resources A. Time - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
 Resources C. *Material and Facilities* – Acquires, stores, allocates, and uses materials or space efficiently
 Interpersonal A. *Participates as a Member of a Team* – contributes to group effort
 Interpersonal F. *Works with Diversity* – works well with men and women from diverse backgrounds
 Information B. *Organizes and Maintains Information*- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
 Systems C. *Improves or Designs Systems* – suggests modifications to existing systems and develops new or alternative systems to improve performance

Analytical, Logical & Creative Thinking:
 Observe, Cause/Effect, Goal Setting

Relevance to Work:
The student will be able to:

- Describe their work plan
- Describe various occupations within this discipline
- Understand how the skills relate to the occupations.

Performance Assessments: Communication

- Students must read and apply the knowledge from building plan sheets to complete projects.
- Students prepare written plans when design modifications are required and keep project notebooks.
- Students work in teams and must communicate with each other to solve problems, coordinate work, and build the project.

Standard: C-2 Communicate in multiple modes to address needs within the career and technical field	Total Learning Hours for Standard: 1
---	---

Competency	Competency Description
C-2.1	Apply reading skills and strategies to work-related documents
C-2.2	Write work-related materials
C-2.3	Apply basic skills for work-related oral communication
C-2.4	Demonstrate effective negotiation and conflict management
C-2.5	Apply active listening skills to obtain and clarify information
C-2.6	Communicate with others in a diverse workforce

EALRs or GLEs (Taught & Assessed in Standards)	
Reading	Communications
3.2.2 Apply understanding of complex information, including functional documents, to perform a task. 3.3.1 Apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing	

2.4.1 Produces documents used in a career setting.	
SKILLS	
Leadership:	
1.1 The student will analyze, refine, and apply decision-making skills through classroom, community, family, and work-related experiences.	
1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.	
1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.	
1.5 The student will demonstrate self-advocacy skills by achieving planned, individual goals.	
2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.	
Employability:	
Resources A. Time - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules	
Interpersonal A. <i>Participates as a Member of a Team</i> – contributes to group effort	
Interpersonal F. <i>Works with Diversity</i> – works well with men and women from diverse backgrounds	
Information B. <i>Organizes and Maintains Information</i> - organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion	
Systems C. <i>Improves or Designs Systems</i> – suggests modifications to existing systems and develops new or alternative systems to improve performance	
Analytical, Logical & Creative Thinking:	
Analysis, Evaluation, Problem Solving, Goal Setting, Originality, Decision Making, Flexibility	
Relevance to Work:	
The student will be able to:	
<ul style="list-style-type: none"> • Write clearly in a business setting • Speak and present clearly in a business setting • Lead a small group • Interact with others to achieve a common goal 	
Performance Assessments: Solve Problems	
<ul style="list-style-type: none"> • Student reads plans, develops plan to build project, modifies plan as problems occur, designs solutions, and evaluates results (finished product). 	
Standard: C-3 Solve problems using critical thinking	Total Learning Hours for Standard: 16
Competency	Competency Description
C-3.1	Demonstrate skills used to define and analyze a given problem
C-3.2	Explain the importance and dynamics of individual and teamwork approaches of problem solving
C-3.3	Describe methods of researching and validating reliable information relevant to the problem
C-3.4	Explain strategies used to formulate ideas, proposals and solutions to problems
C-3.5	Select potential solutions based on reasoned criteria
C-3.6	Implement and evaluate solution(s)
EALRs or GLEs (Taught & Assessed in Standards)	
Reading	Communications
2.1.4 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: use prior knowledge. 3.3.1 Apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing	Math

2.4.1 Produces documents used in a career setting.	1.1 Understand and apply concepts and procedures from number sense 1.3 Understand and apply concepts and procedures from geometric sense. 2.1.1 Formulate questions to be answered to solve a problem 2.1.3 Identify what is known and unknown in complex situations 2.2.1 Select and use relevant information to construct solutions. 2.5 Evaluate and Verify Results 3.1 Gather Information 4.1 Relate Concepts and Procedures within Mathematics 4.3 Relate Mathematical Concepts and Procedures to Real-World Situations
--	--

SKILLS

Leadership:

- 1.1 The student will analyze, refine, and apply decision-making skills through classroom, community, family, and work-related experiences.
- 1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.
- 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.
- 1.5 The student will demonstrate self-advocacy skills by achieving planned, individual goals.
- 2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.

Employability:

- Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy
- Information B. Organizes and Maintains Information- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
- Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods
- Interpersonal A. *Participates as a Member of a Team* – contributes to group effort
- Systems A. *Understands Systems* – knows how social, organizational, and technological systems work and operates effectively with them
- Systems B. *Monitors and Corrects Performance* – distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions
- Systems C. *Improves or Designs Systems* – suggests modifications to existing systems and develops new or alternative systems to improve performance

Analytical, Logical & Creative Thinking:

Cause/Effect, Analysis, Predict, Evaluate, Problem Solving, Decision Making, Goal Setting, Risking

Relevance to Work:

The student will be able to:

- Identify problems to be solved in a business setting
- Develop a plan to address problems defined
- Evaluate the effectiveness of the plan

Performance Assessments: Work Behaviors

- Student completes projects that span a number of career opportunities in the field of woodworking and related construction.
- Grading Criteria includes employability attributes
 - Working well as a team
 - Regard for safety
 - Reliability—(absences and tardies)
 - Work ethic—(level of effort, pride in work)

Standard: C-4 Demonstrate positive work behaviors

Total Learning Hours for Standard: 3

Competency

Competency Description

C-4.1	Identify time management and task prioritization skills
C-4.2	Explain the importance of following workplace etiquette/protocol
C-4.3	Demonstrate willingness to learn and further develop skills
C-4.4	Demonstrate self-management skills
C-4.5	Describe the importance of having a positive attitude and techniques that boost morale
C-4.6	Show initiative by coming up with unique solutions and taking on extra responsibilities
C-4.7	Explain the importance of setting goals and demonstrate the ability to set, reach, and evaluate goals
C-4.8	Explain the importance of taking pride in work accomplished and extrinsic and intrinsic motivators that can be used to increase pride
C-4.9	Value the importance of professionalism, including reliability, honesty, responsibility, and ethics
C-4.10	Demonstrate a respect for diversity and its benefit to the workplace

EALRs or GLEs (Taught & Assessed in Standards)

Reading	Communications
2.1.4 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: use prior knowledge. 3.2.2 Apply understanding of complex information, including functional documents, to perform a task. 3.3.1 Apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing	
2.4.1 Produces documents used in a career setting.	

SKILLS

Leadership:

- 1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.
- 1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.
- 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.
- 1.5 The student will demonstrate self-advocacy skills by achieving planned, individual goals.
- 1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.
- 2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.
- 2.4 The student will demonstrate skills that assist in understanding and accepting responsibility to family, community, and business and industry.
- 2.6 The student will use knowledge, build interest, guide and influence decisions, organize efforts, and involve members of a group to assure that a pre-planned group activity is completed.

Employability:

- Resources A. Time - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
- Resources B. Money - Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
- Resources C. *Material and Facilities* – Acquires, stores, allocates, and uses materials or space efficiently
- Interpersonal A. Participates as a Member of a Team – contributes to group effort
- Interpersonal C. Serves Clients/Customers – works to satisfy customers' expectations
- Interpersonal D. *Exercises Leadership* – communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
- Interpersonal F. *Works with Diversity* – works well with men and women from diverse backgrounds

<p>Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy</p> <p>Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods</p> <p>Systems B. <i>Monitors and Corrects Performance</i> – distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions</p>	
<p>Analytical, Logical & Creative Thinking: Decision Making, Goal Setting, Persistence, Flexibility</p>	
<p>Relevance to Work: The student will be able to:</p> <ul style="list-style-type: none"> • Manage time effectively • Understand and practice work etiquette • Exhibit a positive attitude • Exercise tolerance for others 	
<p>Performance Assessments: Define Health and Safety</p> <ul style="list-style-type: none"> • Observation of students after instructor led discussion on safety standards in the classroom (marked safety areas, guards, eye protection) • Discussion of OSHA standards 	
<p>Standard: C-5 Define health and safety regulations</p>	<p>Total Learning Hours for Standard: 1</p>
<p>Competency</p>	<p>Competency Description</p>
C-5.1	Explain procedures for documenting and reporting hazards to appropriate authorities
C-5.2	List penalties for non-compliance with appropriate health and safety regulations
C-5.3	Create a systematic safety program which would achieve OSHA compliance and promote a safe working environment
<p><i>EALRs or GLEs (Taught & Assessed in Standards)</i></p>	
<p>Reading</p>	<p>Communications</p>
	1.1.1 Applies a variety of listening strategies to accommodate the listening situation.
<p>SKILLS</p>	
<p>Leadership: 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. 2.7 The student will demonstrate the ability to train others to understand the established rules and expectations, rationale, and consequences and to follow those rules and expectations.</p>	
<p>Employability: Resources C. Material and Facilities – Acquires, stores, allocates, and uses materials or space efficiently Systems A. <i>Understands Systems</i> – knows how social, organizational, and technological systems work and operates effectively with them</p>	
<p>Analytical, Logical & Creative Thinking: Observe, Classify, Decision Making, Precision</p>	
<p>Relevance to Work: The student will be able to:</p> <ul style="list-style-type: none"> • Work in a safe manner • Demonstrate proper safety procedures 	
<p>Performance Assessments: Demonstrate Health and Safety</p> <ul style="list-style-type: none"> • Student demonstrates knowledge of health and safety practices through written, oral, and performance tests. 	

Standard: C-6 Demonstrate health and safety practices		Total Learning Hours for Standard: 1
Competency	Competency Description	
C-6.1	Identify, describe and demonstrate personal, shop and job site safety practices and procedures	
C-6.2	Locate emergency equipment in your lab, shop, and classroom, including (where appropriate) eyewash stations, shower facilities, sinks, fire extinguishers, fire blankets, telephone, master power switches, and emergency exits	
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>		
Reading		Communications
		1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing		
2.4.1 Produces documents used in a career setting.		
SKILLS		
Leadership: 1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences. 2.7 The student will demonstrate the ability to train others to understand the established rules and expectations, rationale, and consequences and to follow those rules and expectations.		
Employability: Resources C. Material and Facilities – Acquires, stores, allocates, and uses materials or space efficiently Interpersonal A. Participates as a Member of a Team – contributes to group effort Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy Information B. Organizes and Maintains Information- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods		
Analytical, Logical & Creative Thinking: Observe, Classify, Decision Making, Precision		
Relevance to Work: <ul style="list-style-type: none"> • Work in a safe manner • Demonstrate proper safety procedures 		
Performance Assessments: Situations of Health and Safety <ul style="list-style-type: none"> • Instructor observes student behavior during discussion of safety rules and oral explanation of written tests that include legal ramifications, liability and first aid procedures. 		
Standard: C-7 Demonstrate responses to situations that threaten health and safety		Total Learning Hours for Standard: 1
Competency	Competency Description	
C-7.1	Identify practices used to avoid accidents	
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>		
Reading		Communications

	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
--	--

SKILLS

Leadership:

1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.
2.7 The student will demonstrate the ability to train others to understand the established rules and expectations, rationale, and consequences and to follow those rules and expectations.

Employability:

Resources A. Time - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
Resources C. Material and Facilities – Acquires, stores, allocates, and uses materials or space efficiently
Interpersonal A. Participates as a Member of a Team – contributes to group effort
Interpersonal B. *Teaches Others New Skills*
Interpersonal D. Exercises Leadership – communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
Interpersonal F. Works with Diversity – works well with men and women from diverse backgrounds
Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy
Information B. Organizes and Maintains Information- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods
Systems A. *Understands Systems* – knows how social, organizational, and technological systems work and operates effectively with them

Analytical, Logical & Creative Thinking:

Observe, Classify, Decision Making, Precision

Relevance to Work: The student will be able to:

- Describe first-aid procedures
- Work in a safe manner
- Identify possible safety issues

Performance Assessments: Individual Responsibility Health and Safety

- Instructor observes student behavior during project work.

Standard: C-8 Compare and contrast how the responsibility for health is dependent upon the individual, as opposed to a supervisor or others

Total Learning Hours for Standard: 1

Competency	Competency Description
C-8.1	Demonstrate awareness that all machine guards are in place and operating properly before using equipment

EALRs or GLEs (Taught & Assessed in Standards)

Reading	Communications
	1.1.1 Applies a variety of listening strategies to accommodate the listening situation.

SKILLS

Leadership:

1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.
 2.7 The student will demonstrate the ability to train others to understand the established rules and expectations, rationale, and consequences and to follow those rules and expectations.

Employability:

Resources A. Time - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
 Resources C. Material and Facilities – Acquires, stores, allocates, and uses materials or space efficiently
 Interpersonal A. Participates as a Member of a Team – contributes to group effort
 Interpersonal B. Teaches Others New Skills
 Interpersonal D. Exercises Leadership – communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
 Interpersonal F. Works with Diversity – works well with men and women from diverse backgrounds
 Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy
 Information B. Organizes and Maintains Information- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
 Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods
 Systems A. *Understands Systems* – knows how social, organizational, and technological systems work and operates effectively with them
 Systems B. *Monitors and Corrects Performance* – distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions

Analytical, Logical & Creative Thinking:

Observe, Classify, Decision Making, Precision

Relevance to Work: The student will be able to:

- Describe first-aid procedures
- Work in a safe manner
- Identify possible safety issues

Performance Assessments: Math

- Student completes projects that match the building plan.
- Student completes math worksheets and tests with competency.

Standard: C-9 Math

Total Learning Hours for Standard: 90

Competency	Competency Description
C-9.1	Add, subtract, multiply, and divide whole numbers with and without a calculator
C-9.2	Use a standard ruler and a metric ruler to measure
C-9.3	Add, subtract, multiply, and divide fractions
C-9.4	Add, subtract, multiply, and divide decimals with and without a calculator
C-9.5	Convert decimals to percentages and percentages to decimals
C-9.6	Convert fractions to decimals and decimals to fractions
C-9.7	Calculates area and utilizes the results in a project of regular and irregular shapes
C-9.8	Uses equations involving ratios, volume, surface area and square feet.
C-9.9	Calculates slope and demonstrates graphing and linear equation skills.
C-9.10	Effectively use system equations to determine break even points by calculating equipment, material and labor costs.

C-9.11	Develop a project plan.
EALRs or GLEs (Taught & Assessed in Standards)	
Reading	Communications
	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Writing	Math
2.4.1 Produces documents used in a career setting.	A1.4.A Solving linear equations A1.4.B Graphing lines in slope-intercept form A1.4.C Identify and interpret slope A1.4.D Write and solve systems of linear equations A1.8.A Reasoning A1.8E Interpreting Diagrams and Graphs 6.4.B Finding areas of irregular shapes 7.2.D Scale Drawings 7.3.A Volume and Surface Area 7.3.C Changing scale factor 8.5.F Apply a previously used mathematical idea to a new situation. G.6.D Predicting changes
Leadership: 1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences. 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. 1.5 The student will demonstrate self-advocacy skills by achieving planned, individual goals. 2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.	
Employability: Information A. <i>Acquires and Evaluates Information</i> - identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy Information B. <i>Organizes and Maintains Information</i> - organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion Information C. <i>Interprets and Communicates Information</i> – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods	
Analytical, Logical & Creative Thinking: Classify, Patterns, Sequence, Problem Solving, Decision Making, Precision	
Relevance to Work: Student will be able to: <ul style="list-style-type: none"> • Apply mathematical skills to achieve desired professional results and dimensions. • Scale models larger and smaller. • Plan and manage materials and financial resources through cost estimating and material inventory. 	
Performance Assessments: Prints <ul style="list-style-type: none"> • Project has to match the working drawing print to earn credit. • Students develop a material list and cost sheet. 	

Standard: C-10 Read and interpret prints		Total Learning Hours for Standard: 15
Competency	Competency Description	
C-10.1	Interpret and follow drawing dimensions	
C-10.2	Identify, develop and complete material quantity takeoff sheets	
C-10.3	Read working drawings	
C-10.4	Read shop drawings	
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>		
Reading		Communications
2.1.4 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: use prior knowledge. 3.2.2 Apply understanding of complex information, including functional documents, to perform a task. 3.3.1 Apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.		
Writing		Math
2.4.1 Produces documents used in a career setting.		1.1 Understand and apply concepts and procedures from number sense 2.1.1 Formulate questions to be answered to solve a problem 2.1.3 Identify what is known and unknown in complex situations 2.2.1 Select and use relevant information to construct solutions. 2.5 Evaluate and Verify Results 3.1 Gather Information 4.1 Relate Concepts and Procedures within Mathematics 4.2 Organize, represent and share information 4.3 Relate Mathematical Concepts and Procedures to Real-World Situations
SKILLS		
Leadership:		
1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.		
Employability:		
Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy		
Information B. <i>Organizes and Maintains Information</i> - organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion		
Information C. Interprets and Communicates Information – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods		
Analytical, Logical & Creative Thinking:		
Reasoning, Decision Making, Goal Setting, Compare/Contrast, Precision		
Relevance to Work:		
The student will be able to:		
<ul style="list-style-type: none"> • Understand and interpret construction documents • Apply plans to actual construction 		
Performance Assessments: Hand Tools		
<ul style="list-style-type: none"> • Students complete written test and demonstrate hand tool competency with their project. 		

Standard: C-11 Properly use hand tools		Total Learning Hours for Standard: 5
Competency	Competency Description	
C-11.1	Demonstrate safe operating procedures for hand tools	
C-11.2	Demonstrate use and maintenance of pounding tools	
C-11.3	Demonstrate use and maintenance of measuring tools	
C-11.4	Demonstrate use and maintenance of sawing tools	
C-11.5	Demonstrate use and maintenance of sharp edge tools	
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>		
Reading		Communications
		2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
SKILLS		
Leadership:		
1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.		
1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.		
Employability:		
Technology A. <i>Selects technology</i> – chooses procedures, tools or equipment including computers and related technologies		
Technology B. <i>Applies Technology to Task</i> – Understands overall intent and proper procedures to setup and operation of equipment		
Technology C. <i>Maintains and Troubleshoots Equipment</i> – Prevents, identifies, or solves problems with equipment, including computers and other technologies		
Analytical, Logical & Creative Thinking:		
Reasoning, Attending, Precision		
Relevance to Work:		
The student understands the proper use of equipment in the workplace.		
Performance Assessments: Joinery and Fasteners		
<ul style="list-style-type: none"> Students complete individual projects to demonstrate the skills. 		
Standard: C-12 Identify and install cabinetmaking joinery and mechanical fasteners		Total Learning Hours for Standard: 2
Competency	Competency Description	
C-12.1	Layout and fabricate a tongue and groove	
C-12.2	Layout and fabricate a miter (Woods 2)	
C-12.3	Layout and fabricate a dowel joint (Woods 2)	
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>		
Reading		Communications
		2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
SKILLS		
Leadership:		
1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding		

outcomes of related decisions.	
1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.	
Employability:	
Technology A. <i>Selects technology</i> – chooses procedures, tools or equipment including computers and related technologies	
Technology B. <i>Applies Technology to Task</i> – Understands overall intent and proper procedures to setup and operation of equipment	
Technology C. <i>Maintains and Troubleshoots Equipment</i> – Prevents, identifies, or solves problems with equipment, including computers and other technologies	
Analytical, Logical & Creative Thinking:	
Reasoning, Attending, Precision	
Relevance to Work: The student understands the proper use of equipment in the workplace.	
Performance Assessments: Sanding	
<ul style="list-style-type: none"> Projects are sanded with grain (lack of scratch marks, proper grade of sand paper). Project is not complete until proper finish is applied. 	
Standard: C-13 Sand materials by hand	
Total Learning Hours for Standard: 1	
Competency	Competency Description
C-13.1	Demonstrate flat sanding
C-13.2	Demonstrate curved sanding
C-13.3	Identify and select sand paper
C-13.4	Identify hand sanding equipment and procedures
EALRs or GLEs (Taught & Assessed in Standards)	
Reading	Communications
	2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
SKILLS	
Leadership:	
1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.	
1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.	
Employability:	
Technology A. <i>Selects technology</i> – chooses procedures, tools or equipment including computers and related technologies	
Technology B. <i>Applies Technology to Task</i> – Understands overall intent and proper procedures to setup and operation of equipment	
Technology C. <i>Maintains and Troubleshoots Equipment</i> – Prevents, identifies, or solves problems with equipment, including computers and other technologies	
Analytical, Logical & Creative Thinking:	
Reasoning, Attending, Precision	
Relevance to Work: The student understands the proper use of equipment in the workplace.	
Performance Assessments: Adhesives	
<ul style="list-style-type: none"> Student demonstrates the proper application of bar, wood, plastic, and strap clamps. Student proper applies woods glue and waterproof glue. 	
Standard: C-14 Apply adhesives to materials	
Total Learning Hours for Standard: 1	
Competency	Competency Description
C-14.1	Identify types of glue

C-14.2	Identify uses of glue
C-14.3	Identify types of clamps
C-14.4	Demonstrate flat clamping procedures
SKILLS	
Reading	Communications
	1.1.1 Applies a variety of listening strategies to accommodate the listening situation. 2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
Leadership: 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. 1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.	
Employability: Technology A. <i>Selects technology</i> – chooses procedures, tools or equipment including computers and related technologies Technology B. <i>Applies Technology to Task</i> – Understands overall intent and proper procedures to setup and operation of equipment Technology C. <i>Maintains and Troubleshoots Equipment</i> – Prevents, identifies, or solves problems with equipment, including computers and other technologies	
Analytical, Logical & Creative Thinking: Reasoning, Attending, Precision	
Relevance to Work: The student understands the proper use of equipment in the workplace.	
Performance Assessments: Estimating <ul style="list-style-type: none"> • Students must submit a working plan sheet before project is built. • Students calculate labor and material costs 	
Standard: C-15 Estimate the costs of a project	Total Learning Hours for Standard: 8
Competency	Competency Description
C-15.1	Compile a material takeoff
C-15.2	Calculate a labor estimate
EALRs or GLEs (Taught & Assessed in Standards)	
Writing	Math
2.4.1 Produces documents used in a career setting.	1.1 Understand and apply concepts and procedures from number sense 2.1.1 Formulate questions to be answered to solve a problem 2.1.3 Identify what is known and unknown in complex situations 2.2.1 Select and use relevant information to construct solutions. 2.5 Evaluate and Verify Results 3.1 Gather Information 4.1 Relate Concepts and Procedures within Mathematics 4.2 Organize, represent and share information 4.3 Relate Mathematical Concepts and Procedures to Real-World Situations
Leadership: 1.1 The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.	

1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.
 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.

Employability:
 Information A. *Acquires and Evaluates Information*- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy
 Information B. *Organizes and Maintains Information*- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
 Information C. *Interprets and Communicates Information* – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods

Analytical, Logical & Creative Thinking:
 Analysis, Problem Solving, Decision Making, Goal Setting, Predict

Relevance to Work:
 The student practices planning and resource management skills used in the workplace.

Performance Assessments: Project Layout

- Student prepares a building project plan providing a chronological order of tasks and activities.

Standard: C-16 Properly layout a project	Total Learning Hours for Standard: 8
---	---

Competency	Competency Description
------------	------------------------

C-16.1	Identify purposes of layout for woodwork
--------	--

EALRs or GLEs (Taught & Assessed in Standards)

Writing	Math
---------	------

2.4.1 Produces documents used in a career setting.	
--	--

SKILLS

Leadership:
 1.1 The student will analyze, refine, and apply decision-making skills through classroom, community, family, and work-related experiences.
 1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills.
 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.
 2.1 The student will communicate, participate, and advocate effectively in pairs, small groups, teams, and large groups in order to reach common goals.

Employability:
 Resources A. *Time* - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
 Resources D. *Human Resources* – Assesses skills and distributes work accordingly, evaluates performance and provides feedback
 Interpersonal D. *Exercises Leadership* – communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
 Information A. *Acquires and Evaluates Information*- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy
 Information B. *Organizes and Maintains Information*- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion
 Information C. *Interprets and Communicates Information* – selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods

Analytical, Logical & Creative Thinking:
 Evaluation, Reasoning, Originality, Analysis, Sequence, Precision, Problem Solving

Relevance to Work:
 The student practices layout skills used in the workplace.

Performance Assessments: Power Equipment

- Student completes written and oral testing on proper and safe operation of power equipment.
- Student uses power equipment safely and successfully builds the project.

Standard: C-17 Safely set up, operate and maintain power equipment relating to construction

Total Learning Hours for Standard: 10

Competency	Competency Description
C-17.1	Set-up, adjust, and maintain a variety of pieces of power equipment
C-17.2	Make a face, joint edge, rabbet, and taper by using a joiner
C-17.3	Plane solid stock to given thicknesses using a planer
C-17.4	Perform a cross cut, rip cut, miter joint, and dado with a radial arm saw.
C-17.5	Drill a hole to given dimensions with a drill press
C-17.6	Demonstrate the ability to set fences and stops on a sander as required
C-17.7	Smooth the surfaces of a variety of materials using a sander.
C-17.8	Make cuts using an electric miter box saw, including adjusting stops
C-17.9	Make rip, cross, and miter cuts using a panel saw

EALRs or GLEs (Taught & Assessed in Standards)

Reading

Communications

2.2.2 Applies skills and strategies to contribute responsibly in a group setting.

SKILLS

Leadership:

1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.

1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.

Employability:

Technology A. *Selects technology* – chooses procedures, tools or equipment including computers and related technologies

Technology B. *Applies Technology to Task* – Understands overall intent and proper procedures to setup and operation of equipment

Technology C. *Maintains and Troubleshoots Equipment* – Prevents, identifies, or solves problems with equipment, including computers and other technologies

Analytical, Logical & Creative Thinking:

Observe, Attending, Precision, Decision Making

Relevance to Work:

The student understands the proper use of equipment in the workplace.

Performance Assessments: Portable Power Tools

- Student completes written and oral testing on proper and safe operation of portable power tools.
- Student uses power tools safely and successfully builds the project.

Standard: C-18 Properly use portable power tools

Total Learning Hours for Standard: 5

Competency	Competency Description
------------	------------------------

C-18.1	Demonstrate the ability to use a pistol drill safely
C-18.2	Exercise the safe use of a belt sander
C-18.3	Identify the proper methods of using a circular saw
C-18.4	Identify blades, cutters, bits and grits of sandpaper required of stationary and portable power tools
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>	
Reading	Communications
	2.2.2 Applies skills and strategies to contribute responsibly in a group setting.
SKILLS	
Leadership:	
1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.	
1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.	
Employability:	
Technology A. <i>Selects technology</i> – chooses procedures, tools or equipment including computers and related technologies	
Technology B. <i>Applies Technology to Task</i> – Understands overall intent and proper procedures to setup and operation of equipment	
Technology C. <i>Maintains and Troubleshoots Equipment</i> – Prevents, identifies, or solves problems with equipment, including computers and other technologies	
Analytical, Logical & Creative Thinking:	
Observe, Attending, Precision, Decision Making	
Relevance to Work:	
The student understands the proper use of equipment in the workplace.	
Performance Assessments: Architectural Woodwork	
<ul style="list-style-type: none"> Student completes a test identifying different types of wood. 	
Standard: C-19 Apply Architectural Woodwork Quality Standards	Total Learning Hours for Standard: 1
Competency	Competency Description
C-19.1	Identify the qualities of solid wood (AWI section 100)
C-19.2	Identify plywood and composite materials
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>	
Reading	Communications
SKILLS	
Leadership:	
1.1The student will analyze, refine, and apply decision-making skills through classroom, family, community, and business and industry (work-related) experiences.	
Employability:	
Information A. <i>Acquires and Evaluates Information-</i> identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy	
Information B. <i>Organizes and Maintains Information-</i> organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion	

Analytical, Logical & Creative Thinking: Reasoning, Observe, Analysis	
Relevance to Work: The student understands the use of materials in the workplace.	
Performance Assessments: Production Procedures <ul style="list-style-type: none"> Student designs a production line process to manufacture the product. 	
Standard: C-20 Apply Production Procedures and Techniques	Total Learning Hours for Standard: 6
Competency	Competency Description
C-20.1	Design production system
<i>EALRs or GLEs (Taught & Assessed in Standards)</i>	
Writing	
2.4.1 Produces documents used in a career setting.	
SKILLS	
Leadership: 1.1 The student will analyze, refine, and apply decision-making skills through classroom, community, family, and work-related experiences. 1.3 The student will demonstrate oral, interpersonal, written, and electronic communication and presentation skills and understands how to apply those skills. 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions.	
Employability: Information A. Acquires and Evaluates Information- identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy Information B. Organizes and Maintains Information- organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion	
Analytical, Logical & Creative Thinking: Evaluation, Reasoning, Originality, Sequence, Cause/Effect, Analysis, Precision, Problem Solving, Decision Making, Predict	
Relevance to Work: The student understands the processes and techniques used to construct products in the workplace.	
Performance Assessments: Apply Hardware <ul style="list-style-type: none"> Student successfully applies hardware to the project. 	
Standard: C-21 Apply Hardware	Total Learning Hours for Standard: 1
Competency	Competency Description
C-21.1	Identify types, finishes, and mechanisms of hardware
Reading	
Communications	
2.2.2 Applies skills and strategies to contribute responsibly in a group setting.	
SKILLS	
Leadership: 1.4 The student will be involved in activities that require applying theory, problem-solving, and using critical and creative thinking skills while understanding outcomes of related decisions. 1.6 The student will conduct self in a professional manner in practical career applications, organizational forums, and decision-making bodies.	

Employability:

Technology A. *Selects technology* – chooses procedures, tools or equipment including computers and related technologies

Technology B. *Applies Technology to Task* – Understands overall intent and proper procedures to setup and operation of equipment

Technology C. *Maintains and Troubleshoots Equipment* – Prevents, identifies, or solves problems with equipment, including computers and other technologies

Analytical, Logical & Creative Thinking:

Observe, Attending, Precision

Relevance to Work:

The student understands materials and techniques used in the workplace.