Curriculum: Building Trades I

Curricular Unit: Basic Safety

Instructional Unit: A. Explain the safety obligations of workers to ensure a safe workplace

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>HEGLE: HME.4.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (H/PE) 6,7 (SC) 8</td>
</tr>
<tr>
<td>CCSS: 11-12.SL.1; 11-12.SL.2; 11-12.RST.3; 11-12.RST.4</td>
</tr>
<tr>
<td>NETS: 3b; 4b</td>
</tr>
<tr>
<td>Performance: 2.1, 3.1, 4.7</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

Learning Targets:

- Explain the idea of a safety culture and its importance in the construction crafts
- Identify causes of accidents and the impact of accident costs
- Explain the role of OSHA in job-site safety
- Explain OSHA’s general duty clause and 1926 CFR subpart C
- Understand hazard recognition and risk assessment techniques
- Explain fall protection, ladder, stair, and scaffold procedures and requirements
- Identify struck-by hazards and demonstrate safe working procedures and requirements
- Identify caught-in-between hazards and demonstrate safe working procedures and requirements
- **Define safe work procedures to use around electrical hazards**
- Demonstrate the use and care of appropriate personal protective equipment (PPE)
- Explain the importance of hazard communications (HazCom) and Material Safety Data Sheets (MSDSs)
- Identify other construction hazards on the job site, including hazardous material exposures, environmental elements, welding and cutting hazards, confined spaces, and fires
- Demonstrate an understanding of safety through the 10-hour safety course and assessment
Instructional Strategies:
- The teacher will:
  - demonstration of safety practices
  - lecture/discuss safety practices guided by multimedia presentation
  - provide guided practice implementing safety practices
- Students will:
  - read pertinent chapter in the textbook and complete guided notes
  - complete CareerSafe online modules

Assessments/Evaluations:
- Teacher observation of safety techniques
- CareerSafe online assessment:
  - Practice tests – formative
  - Final tests – summative
- Unit quizzes – formative
- Summative:
  - Unit tests
  - Safety practices assessed on all coursework

Sample Assessment Questions:

![Image of Knowledge Check](image.png)

Instructional Resources/Tools:
- *NCCER Core Curriculum*, Fourth Edition
- CareerSafe online module [www.careersafeonline.com](http://www.careersafeonline.com)

Cross Curricular Connections:
- Health: Applying safety skills during physical activities
- ELA:
  - Technical reading
  - Writing
  - Discussion

**Depth of Knowledge (Section 5)**

DOK: 3

Board Approved 8-3-15
Curriculum: Building Trades I

Curricular Unit: Math in Building Trades

Instructional: B. Basic operations of REAL numbers

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (MA) 1,2,4,5</td>
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<tr>
<td>CCSS: N-Q.1; N-Q.3; N-RN.1; G-MG.1; G-MGD.1; G-MGD.3; G-CO.12; A-CED.1; A-CED.4; A-REI.11; A-REI.13; F-BF.1</td>
</tr>
<tr>
<td>NETS: 1a; 4b</td>
</tr>
<tr>
<td>Performance: 1.10, 3.3</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- Apply and extend previous understandings of adding/subtracting/multiplying/dividing of whole numbers to solve practical problems
- Apply and extend previous understandings of adding/subtracting/multiplying/dividing of fractions to solve practical problems
- Apply and extend previous understandings of adding/subtracting/multiplying/dividing of decimals to solve practical problems
- Apply and extend previous understandings of ratios, proportions, and percents to solve practical problems
- **Use a variety of tools and methods to solve and design problems. (i.e., standard/metric ruler, architect/engineer scale, t-square, voltmeter, ammeter, ohmmeter, Vernier caliper, micrometer, hydrometer, etc.)**
- Convert and apply measurements to solve real-life and mathematical problems
- Recognize the basic shapes (2D and 3D) used in industry and apply basic geometry to measure them
- Use and apply formulas to solve real-life and mathematical problems (e.g., Pythagorean Theorem, Volume, Area, etc.)
- Solve power and root equations as they apply to real-life and mathematical problems
- Explain the metric system and how it is important in the construction trade
- Recognize and use metric units of length, weight, volume, and temperature

Board Approved 8-3-15
• COMPASS Test-Prep: Practice Algebra COMPASS test-prep targets ranging from Pre-Algebra through College Algebra

Instructional Strategies:

• The teacher will:
  • use classroom instruction and/or demonstrations to introduce or revisit targets required to practice the competency at hand
  • model appropriate work required to complete the task
  • direct students to appropriate resources when needed
  • provide:
    • examples of good vs. poor work
    • feedback during and at the conclusion of the assignment
    • small learning group opportunities when applicable

Assessments/Evaluations:

• Formative:
  • Projects/activities
  • Constructions
  • Worksheets
  • Quizzes
  • Games
• Summative: The only summative given is the Term Exam which is comprehensive of both the relevant math and the compass test-prep targets practiced

Sample Assessment Questions:

```
A  5” B  7” C  5” D

10”

E  F  G  H

7”

I  J
```

Find FC.
Instructional Resources/Tools:

- Internet sources (examples):
  - Ruler game: [http://www.rulergame.net/](http://www.rulergame.net/)
- Supplies and tools, such as:
  - rulers
  - scales
  - t-square
  - drafting boards
  - triangles
  - compass
  - protractor
- Technology tools:
  - SMART Board
  - iPad
  - Laptop
  - Scanner
  - Student desktops
  - Printer

Cross Curricular Connections:

- Embedded Math

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Orientation to the Trade

Instructional Unit: C. Reviews the history of the trade, describes the apprentice program, identifies career opportunities for carpentry and construction workers, and lists the skills, responsibilities, and characteristics a worker should possess

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>SSCLE</th>
<th>Knowledge: (CA) 5 (SS) 4</th>
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<tbody>
<tr>
<td>CCSS:</td>
<td>11-12.SL.3; 11-12.SL.5; 11-12.SL.6</td>
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<td>NETS:</td>
<td>1d; 2b; 3b</td>
</tr>
<tr>
<td>Performance:</td>
<td>1.1, 2.1, 4.1</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- Identify the training opportunities within the carpentry trade
- Identify the skills needed to be a successful carpenter
- Identify the responsibilities of a successful carpenter
- State the personal characteristics of a successful carpenter
- Summarize how to be connected to the industry through an organization like SkillsUSA
- Explain the importance of safety in the construction industry, and describe the obligations of the contractor and subcontractors to ensure a safe work environment

**Instructional Strategies:**

- The teacher will lecture/discuss the trade guided by a multi-media presentation
- Students will:
  - research topics related to the construction industry and present findings
  - read the pertinent chapter in the textbook and complete guided notes

**Assessments/Evaluations:**

- Formative:
  - Informal class presentation using media
  - Unit quizzes
- Summative: Unit tests

Board Approved 8-3-15
Sample Assessment Questions:

- A person who has achieved and continuously demonstrates the highest skill levels in the carpentry trade is a(n) ____________________.
  - Estimator
  - Journeyman carpenter
  - Master carpenter
  - Apprentice

Instructional Resources/Tools:

- *NCCER Carpentry*, Level 1
- Various online databases and websites for research
- Laptops or tablets with presentation applications

Cross Curricular Connections:

- ELA:
  - Listening
  - Technical reading
  - Research
  - Presentation skills
- Social Studies: Role of industry in the US and world economy

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Introduction to Materials Handling, Fasteners, and Adhesives

Instructional Unit: D. Identify various types of building materials and describe their uses

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>SCCLE: SC1.1.A,B</th>
</tr>
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<tbody>
<tr>
<td>Knowledge: (CA) 1,3 (MA) 1 (SC) 1</td>
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<tr>
<td>CCSS: 11-12.RST.3, 11-12.RST.6; 11-12.RST.SL.4; N-Q.1; N-Q.2; N-Q.3</td>
</tr>
<tr>
<td>NETS: 3a; 2b</td>
</tr>
<tr>
<td>Performance: 1.1, 2.1, 4.1</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

Learning Targets:

- Identify various types of building materials and describe their uses
- **Identify safety precautions associated with building materials**
- Describe the proper method of handling and storing building materials
- Explain how to calculate the quantities of lumber, panel, and concrete products using industry standard methods

Instructional Strategies:

- The teacher will:
  - demonstrate materials
  - lecture/discuss guided by a multimedia presentation
  - provide guided practice calculating material quantities
- Students will:
  - read the pertinent chapter in the textbook and complete guided notes
  - research and present on assigned building material
  - complete the CareerSafe online module over materials handling

Assessments/Evaluations:

- Formative:
  - Informal presentation introducing assigned building material
  - Unit quizzes
- Formative/summative: Material calculation assessment
- Summative: Unit tests
- CareerSafe online assessment:
  - Practice tests – formative
  - Summative tests – summative
Sample Assessment Questions:

- Bags of cement contain one cubic foot of cement by volume and weigh approximately ______________.
  - 25 pounds
  - 68 pounds
  - 86 pounds
  - 94 pounds

Instructional Resources/Tools:

- *NCCER Carpentry Level 1*
- CareerSafe online module: [www.careersafeonline.com](http://www.careersafeonline.com)
- Various websites for research

Cross Curricular Connections:

- ELA:
  - Listening
  - Technical reading
  - Research
  - Presentation skills
- Science: Understanding properties of matter
- Math: Number sense

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Introduction to Hand Tools

Instructional Unit: E. Introduces hand tools used in the construction industry

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>HEGLE: HME.4.A</th>
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</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (H/PE) 6,7</td>
</tr>
<tr>
<td>CCSS: 11-12.RST.3; 11-12.L.6</td>
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<tr>
<td>NETS: 4c</td>
</tr>
<tr>
<td>Performance: 4.1, 4.7</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- Recognize and identify some of the basic hand tools and their proper uses in the construction trade
- Visually inspect hand tools to determine if they are safe to use
- **Safely use hand tools**

**Instructional Strategies:**

- The teacher will:
  - lecture on/demonstrate each hand tool
  - provide a hand tool lab
- Students will:
  - read the pertinent chapter in the textbook and complete guided notes
  - complete CareerSafe online modules

**Assessments/Evaluations:**

- Teacher observation for each hand tool
- Formative: Unit quizzes
- Summative: Unit tests
- CareerSafe online assessment:
  - Practice tests – formative
  - Final tests – summative

**Sample Assessment Questions:**

- Which of the following tools is especially useful when laying out angle cuts for roof rafters?
  - A. Try square
  - B. Combination square
  - C. Drywall square
  - D. Speed square

Board Approved 8-3-15
### Instructional Resources/Tools:

- *NCCER Core*
- *NCCER Carpentry Level 1*

### Cross Curricular Connections:

- **Health:** Apply safety skills during physical activities
- **ELA:**
  - Technical reading
  - Writing
  - Discussion

---

**Depth of Knowledge (Section 5)**

DOK: 2
Curriculum: Building Trades I

Curricular Unit: Introduction to Power Tools

Instructional Unit: F. Introduces power tools used in the construction industry

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: HME.4.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (H/PE) 6,7</td>
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<tr>
<td>CCSS: 11-12.RST.3; 11-12.L.6</td>
</tr>
<tr>
<td>NETS: 4c</td>
</tr>
<tr>
<td>Performance: 4.1, 4.7</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- Identify power tools commonly used in construction trades
- **Use power tools safely**
- Explain how to maintain power tools properly

**Instructional Strategies:**

- The teacher will:
  - demonstrate each power tool
  - lecture on/discuss characteristics of each power tool
- Students will:
  - read the pertinent chapter in the textbook and complete guided notes
  - complete CareerSafe online modules

**Assessments/Evaluations:**

- Teacher observation of power tool use
- CareerSafe online assessment:
  - Practice tests – formative
  - Final tests – summative
- Formative: Unit quizzes
- Summative: Unit tests

**Sample Assessment Questions:**

- Identify the parts of a circular saw.

**Instructional Resources/Tools:**

- *NCCER Core*
- *NCCER Carpentry Level 1*
- CareerSafe online module: [www.careersafeonline.com](http://www.careersafeonline.com)

Board Approved 8-3-15
Cross Curricular Connections:

- Health: Apply safety skills during physical activities
- ELA:
  - Technical reading
  - Writing
  - Discussion

**Depth of Knowledge (Section 5)**

DOK: 2
Curriculum: Building Trades I
Curricular Unit: Introduction to Construction Drawings

Instructional Unit: G. Interpret construction drawings, recognize classifications of drawings, and use drawing dimensions

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>Knowledge: (CA) 3 (MA) 1,2</th>
<th>CCSS: 11-12.RST.4; 11-12.L.6; N-Q.1; G-MG.1; G-MG.2; G-MG.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>NETS: 1c; 4a</td>
</tr>
<tr>
<td>Performance: 1.8, 1.10, 2.1, 3.1</td>
<td></td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- **Recognize and identify basic construction drawing terms, components, and symbols**
- Relate information on construction drawings to actual locations on the print
- Recognize different classifications of construction drawings
- Interpret and use drawing dimensions

**Instructional Strategies:**

- The teacher will:
  - demonstration of construction drawings
  - lecture on/discuss construction drawing practices guided by a multimedia presentation
  - provide guided practice creating construction drawings
- Students will read the pertinent chapter in the textbook and complete guided notes

**Assessments/Evaluations:**

- **Formative:**
  - Teacher observation of practice drawings
  - Unit quizzes
- **Summative:**
  - Shop Drawing – assessed using the Shop Drawing summative scoring guide
  - Unit test
### Sample Assessment Questions:
- The numbering system for *MasterFormat 2012* contains ______________.
  - four digits
  - six digits
  - ten digits
  - sixteen digits

### Instructional Resources/Tools:
- *NCCER Core*
- *NCCER Carpentry Level 1*

### Cross Curricular Connections:
- **ELA:**
  - Technical reading
  - Writing
  - Discussion
- **Math:**
  - Number sense
  - Geometric/spatial sense

---

**Depth of Knowledge (Section 5)**

**DOK: 3**
Curriculum: Building Trades I

Curricular Unit: Floor Systems

Instructional Unit: H. Understanding materials and methods used in residential floor systems

### Standard Alignments (Section 2)

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (MA) 1,2</td>
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<td>CCSS: 11-12.RST.2; 11-12.L.6; A-CED.4; N-Q.1; G-MG.3</td>
</tr>
<tr>
<td>NETS: 4b,c</td>
</tr>
<tr>
<td>Performance: 3.1, 3.2</td>
</tr>
</tbody>
</table>

### Unit (Section 3)

#### Learning Targets:

- Read and interpret specifications and drawings to determine floor system requirements
- Identify the different types of framing systems
- Identify floor system components
- Describe the construction methods for floor systems, and identify floor system materials
- Estimate the amount of material needed for a floor assembly
- Identify some common alternative floor systems

#### Instructional Strategies:

- The teacher will:
  - demonstrate floor framing
  - lecture on/discuss floor framing
  - provide guided practice when building floor framing
  - Students will read the pertinent chapter in the textbook and complete guided notes

#### Assessments/Evaluations:

- Teacher observation using floor frame scoring guide
- Formative: Unit quizzes
- Summative: Unit tests

Board Approved 8-3-15
Sample Assessment Questions:

- When installing joists, ensure the crown points ____________________.
  - To the left
  - Down
  - Up
  - To the right

Instructional Resources/Tools:

- *NCCER Carpentry Level 1*

Cross Curricular Connections:

- **ELA:**
  - Technical reading
  - Writing
  - Discussion
- **Math:**
  - Number sense
  - Using formulas
  - Geometry concepts

**Depth of Knowledge (Section 5)**

DOK: 3

Board Approved 8-3-15
Curriculum: Building Trades I

Curricular Unit: Wall Framing Systems

Instructional Unit: I. Identify, describe, and build wall-framing systems

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (MA) 2</td>
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<tr>
<td>NETS: 4b,c</td>
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<tr>
<td>Performance: 3.1, 3.2</td>
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**Unit (Section 3)**

<table>
<thead>
<tr>
<th>Learning Targets:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Identify the components used of a wall system</strong></td>
</tr>
<tr>
<td>• Describe the procedure for laying out a wood frame wall, including plates, corner posts, door and window openings, partition T’s, bracing, and fire stops</td>
</tr>
<tr>
<td>• Describe the correct procedure for assembling and erecting an exterior wall</td>
</tr>
<tr>
<td>• Identify the common materials and methods used for installing sheathing on walls</td>
</tr>
<tr>
<td>• Describe the correct procedure to estimate the materials required to frame walls</td>
</tr>
<tr>
<td>• Identify alternative wall systems</td>
</tr>
<tr>
<td>• Lay out, assemble, erect, and brace exterior walls for a frame building</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructional Strategies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The teacher will:</td>
</tr>
<tr>
<td>• demonstrate wall framing</td>
</tr>
<tr>
<td>• lecture on/discuss wall framing practices guided by a multimedia presentation</td>
</tr>
<tr>
<td>• provide guided practice building wall framing systems</td>
</tr>
<tr>
<td>• Students will:</td>
</tr>
<tr>
<td>• read the pertinent chapter in the textbook and complete guided notes</td>
</tr>
<tr>
<td>• create a wall framing blueprint</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessments/Evaluations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Formative: Unit quizzes</td>
</tr>
<tr>
<td>• Summative:</td>
</tr>
<tr>
<td>• Teacher observation using Wall Framing scoring guide</td>
</tr>
<tr>
<td>• Wall framing blueprint from teacher model using Wall Framing Blueprint scoring guide</td>
</tr>
<tr>
<td>• Unit tests</td>
</tr>
</tbody>
</table>

Board Approved 8-3-15
Sample Assessment Questions:

- When nailing framing members together for a 2 x 6 wall, use ___________.
  - Two 8d nails
  - Three 8d nails
  - Three 12d nails
  - Three 16d nails

Instructional Resources/Tools:

- *NCCER Carpentry, Level 1*

Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion
- Math:
  - Number sense
  - Geometry concepts

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular: Ceiling Joist and Roof Framing

Instructional Unit: J. Understand methods and procedures used in ceiling and roof framing

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (MA) 2</td>
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<tr>
<td>CCSS: 11-12.RST.3; N-Q.1; G-GMD.4; G-MG 3</td>
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<tr>
<td>NETS: 4b,c</td>
</tr>
<tr>
<td>Performance: 3.1, 3.2</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

Learning Targets:

- Identify the components of ceiling and roof framing
- Identify common types of roofs used in residential construction
- Identify the components and define the terms associated with roof framing
- Describe the methods used to lay out a common rafter
- Describe how to erect a gable roof
- Describe how to frame a basic gable end wall
- Recognize the use of trusses in basic roof framing
- Describe the basics of roof sheathing installation
- Describe how to perform a material takeoff for a roof
- Cut and install ceiling joists on a wood frame building

Instructional Strategies:

- The teacher will:
  - demonstrate ceiling and roof framing
  - lecture on/discuss ceiling and roof framing practices guided by a multimedia presentation
  - provide guided practice implementing ceiling and roof framing practices
  - Students will read the pertinent chapter in the textbook and complete guided notes

Board Approved 8-3-15
Assessments/Evaluations:

- Teacher observation using the Ceiling and Roof Installation scoring guide
- Formative: Unit quizzes
- Summative: Unit tests

Sample Assessment Questions:

- A hip rafter has _________.
  A. Two sloping sides
  B. Four sloping sides
  C. Four sloping sides, each with a double slope
  D. Two sloping sides, each with a double slope

Instructional Resources/Tools:

- *NCCER Carpentry Level 1*

Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion
- Math:
  - Number sense
  - Geometry concepts

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Roofing Materials & Methods

Instructional Unit: K. Understand methods and procedures used in roofing applications

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 3 (MA) 1</td>
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<td>CCSS: 11-12.RST.3; N-Q.1; N-Q.2; N-Q.3</td>
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<tr>
<td>NETS: 4b,c</td>
</tr>
<tr>
<td>Performance: 3.1, 3.2</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

Learning Targets:

- List the covering materials commonly used for sloping roofs
- Define roofing terms
- Describe how to prepare and install the roof deck
- Describe reroofing procedures for asphalt shingles
- Demonstrate correct nailing patterns
- Select appropriate roofing materials for various slopes and conditions
- Explain how various roofing products are applied
- Estimate materials needed for a specific roofing job
- Lay out and install three-tab shingles

Instructional Strategies:

- The teacher will:
  - demonstrate roofing materials and methods
  - lecture on/discuss roofing materials and method practices guided by a multimedia presentation
  - provide guided practice implementing roofing materials and methods
  - Students will read the pertinent chapter in the textbook and complete guided notes

Assessments/Evaluations:

- Teacher observation of installation using Roofing Materials and Methods scoring guide
- Formative: Unit quizzes
- Summative: Unit tests

Board Approved 8-3-15
Sample Assessment Questions:

- _______________ is a self-sealing barrier applied to the eaves in cold climates.

Instructional Resources/Tools:

- *Modern Carpentry, 11th Edition*

Cross Curricular Connections:

- **ELA:**
  - Technical reading
  - Writing
  - Discussion
- **Math:** Number sense

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular: Cabinetmaking

Instructional Unit: L. Identify, demonstrate, explain, and implement the concepts in cabinet making and installation

<table>
<thead>
<tr>
<th>Standard Alignments (Section 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLE/CLE: N/A</td>
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<td>NETS: 4b,c</td>
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<tr>
<td>Performance: 3.1, 3.2</td>
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</table>

Unit (Section 3)

Learning Targets:

- Build and install a plastic laminate surface
- Estimate a cut sheet from blueprints
- Apply finishes and precautions to a cabinet
- Identify the parts of a cabinetry system
- **Build a cabinet from a prescribed blueprint**
- Install a cabinet system

Instructional Strategies:

- The teacher will:
  - demonstrate cabinetmaking
  - lecture on/discuss cabinetmaking practices guided by a multimedia presentation
  - provide guided practice implementing cabinetmaking techniques
  - Students will read the pertinent chapter in the textbook and complete guided notes

Assessments/Evaluations:

- Teacher observation using Cabinetmaking and Methods scoring guide
- Formative: Unit quizzes
- Summative: Unit tests

Sample Assessment Questions:

- Vertical members used to face a cabinet are called _____________.

Instructional Resources/Tools:

- Modern Carpentry 11th Edition

Board Approved 8-3-15
Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion
- Math:
  - Number sense
  - Geometry concepts

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Basic Communication Skills

Instructional Unit: M. Interpret information in written and verbal form and communicate effectively using written and verbal skills

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 1,4,6</td>
</tr>
<tr>
<td>CCSS: 11-12.SL.4; 11-12.WHST.8; 11-12.W.8</td>
</tr>
<tr>
<td>NETS: 2a,b</td>
</tr>
<tr>
<td>Performance: 2.1, 2.2, 2.7</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**

- Interpret information and instructions presented in both verbal and written form
- Communicate effectively on-the-job situations using verbal and written skills
- Communication effectively on the job using electronic communication devices

**Instructional Strategies:**

- The teacher will:
  - lecture on/discuss basic communication skills guided by a multimedia presentation
  - provide guided practice presenting to the class
  - Students will read the pertinent chapter in the textbook and complete guided notes

**Assessments/Evaluations:**

- Presentation skills assessed throughout course
- Class presentations incorporated in several curricular units
- Formative: Unit quizzes
- Summative: Unit tests

**Sample Assessment Questions:**

- Good communication on the job site ________________.
  A. affects safety, schedules, and budgets
  B. will make you popular
  C. takes too much time
  D. cannot be learned

**Instructional Resources/Tools:**

- *NCCER Core Curriculum, Fourth Edition*

Board Approved 8-3-15
Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion

### Depth of Knowledge (Section 5)

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Writing for Employment

Instructional Unit: N. Writing résumés and cover letters

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: ECP.4.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (CA) 1,4,7 (SS) 6</td>
</tr>
<tr>
<td>CCSS: 11-12.WHST.4; 11-12.WHST.5; 11-12.WHST.6</td>
</tr>
<tr>
<td>NETS: 1b; 6a,b</td>
</tr>
<tr>
<td>Performance: 1.4, 1.8, 1.10, 2.1</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**
- Explain the role of an employee in the construction industry
- Understand purpose and audience in employment writing
- Use precise, effective word choice
- Organize information for clarity and purpose
- Revise writing effectively
- Collaborate to improve writing of peers and self

**Instructional Strategies:**
- Students will:
  - investigate job posting in the auto tech field
  - identify and discuss most common desired employee requirements and qualities
  - construct a job objective and qualifications statement based on results of investigation
- The teacher will:
  - discuss components of a functional résumé and cover letter
  - guide creation and revision of résumés and cover letters

**Assessments/Evaluations:**
- Formative:
  - Construction Target Job Requirements Partner Research Guide
  - Résumé and cover letter drafts
- Summative: Résumé and cover letter final draft

**Sample Assessment Questions:**
- Visit the three websites listed below. Under each site, list three different job requirements or desired employee qualities you find in postings for positions in the construction trades. Try to choose different requirements or qualities from each site.

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Instructional Resources/Tools:

- Websites:
  - MidMoCareers.com
  - Monster.com
  - Careerbuilder.com
  - BLS Occupational Outlook Handbook (online)
- Google Drive and Docs
- Computer

Cross Curricular Connections:

- Social Studies: Apply economic concepts such as unemployment and full employment
- ELA:
  - Researching
  - Reading
  - Writing – forms

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular Unit: Basic Rigging

Instructional Unit: O. Introduce slings and common rigging hardware, basic inspection techniques, hitch configurations, and load-handling safety practices, as well as how to use American National Standards Institute hand signals

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>HEGLE: HME.4.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: (H/PE) 6,7 (SC) 8</td>
</tr>
<tr>
<td>CCSS: 11-12.SL.1; 11-12.SL.2; 11-12.RST.3; 11-12.RST.4</td>
</tr>
<tr>
<td>NETS: 3b; 4b</td>
</tr>
<tr>
<td>Performance: 2.1, 3.1, 4.1</td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

**Learning Targets:**
- Identify and describe the use of slings and common rigging hardware
- Describe basic inspection techniques and rejection criteria used for slings and hardware
- Describe basic hitch configurations and their proper connections
- Describe basic load-handling safety practices
- Demonstrate proper use of American National Standards Institute (ANSI) hand signals
- Explain safety practices related to basic rigging practices

**Instructional Strategies:**
- The teacher will:
  - demonstration of basic rigging
  - lecture on/discuss basic rigging practices guided by a multimedia presentation
- Students will:
  - read the pertinent chapter in the textbook and complete guided notes
  - complete CareerSafe online modules

**Assessments/Evaluations:**
- CareerSafe online assessments:
  - Practice tests – formative
  - Final tests – summative
- Formative: Unit quizzes
- Summative: Unit tests

Board Approved 8-3-15
Sample Assessment Questions:

- A fiber core wire rope has _____ breaking strength than a wire rope with an independent wire rope core.

  a. the same
  b. more
  c. less

Instructional Resources/Tools:

- *NCCER Core Curriculum, Fourth Edition*
- CareerSafe online module www.careersafeonline.com

Cross Curricular Connections:

- Health: Apply safety skills during physical activities
- ELA:
  - Technical reading
  - Writing
  - Discussion

**Depth of Knowledge (Section 5)**

DOK: 3
Curriculum: Building Trades I

Curricular: Introduction to Building Envelope Systems

Instructional Unit: P. Understand and explain the components of the building envelope

**Standard Alignments (Section 2)**

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
<th>Knowledge: (CA) 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCSS: 11-12.RST.3; 11-12.RST.7; 11-12.RST.9</td>
<td>NETS: 4b</td>
</tr>
<tr>
<td>Performance: 3.7, 3.8</td>
<td></td>
</tr>
</tbody>
</table>

**Unit (Section 3)**

Learning Targets:

- Identify the components of the building envelope
- State the requirements for proper window installation
- State the requirements for proper door installation
- Identify the various types of locksets used on exterior doors and explain how they are installed

Instructional Strategies:

- The teacher will lecture/discuss the building envelope system guided by a multimedia presentation
- Students will read the pertinent chapter in the textbook and complete guided notes

Assessments/Evaluations:

- Formative: Unit quizzes
- Summative: Unit tests

Sample Assessment Questions:

- The framework around the glass in a window is the ___________.
  A. Schenker
  B. Sash
  C. Casing
  D. Header

Instructional Resources/Tools:

- *NCCER Carpentry, Level 1*

Board Approved 8-3-15
Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion

Depth of Knowledge (Section 5)

DOK: 2
Curriculum: Building Trades I

Curricular: Basic Stair Layout

Instructional Unit: Q. Introduces the materials and methods used to construct interior and exterior wooden stairs

### Standard Alignments (Section 2)

<table>
<thead>
<tr>
<th>GLE/CLE: N/A</th>
<th>Knowledge: (CA) 3 (MA) 1,2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCSS: 11-12.RST.3; 11-12.L.6; N-Q.1; G-MG.3; A-CED.4</td>
<td></td>
</tr>
<tr>
<td>NETS: 1a; 6a</td>
<td>Performance: 1.6, 3.1</td>
</tr>
</tbody>
</table>

### Unit (Section 3)

**Learning Targets:**

- Identify the types of stairways
- Identify the various components associated with stairs
- Identify terms associated with stair framing
- Describe the procedure used to determine the total rise, number and size of risers, and number and size on treads required for a stairway
- Describe the procedure to layout and cut stringers, risers, and treads
- Construct a stair stringer

**Instructional Strategies:**

- The teacher will:
  - lecture on/discuss stair layout guided by a multimedia presentation
  - provide guided practice constructing a stair stringer
  - Students will read the pertinent chapter in the textbook and complete guided notes

**Assessments/Evaluations:**

- Formative: Unit quizzes
- Summative: Unit tests
- Teacher observation using the Stair Layout scoring guide

**Sample Assessment Questions:**

- Explain why geometrical stairways can be potentially dangerous if not properly constructed.

**Instructional Resources/Tools:**

- *NCCER Carpentry, Level 1*

Board Approved 8-3-15
Cross Curricular Connections:

- ELA:
  - Technical reading
  - Writing
  - Discussion
- Math:
  - Number sense
  - Geometry concepts
  - Using formulas

Depth of Knowledge (Section 5)

DOK: 3

Board Approved 8-3-15