**Competency Cross-Reference - Carpentry Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions:** Evaluate the student by recording the appropriate number to indicate the degree of competency. The rating for each task should reflect employability readiness rather than the grades given in class.

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| **Rating Scale (0-6):** | |
| 0 | **No Exposure -** no experience/knowledge in this area; program/ course did not provide instruction in this area |
| 1 | **Unsuccessful Attempt -** unable to meet knowledge or performance criteria and/or required significant assistance |
| 2 | **Partial Demonstration** - met some of the knowledge or performance criteria with or without minor assistance |
| 3 | **Knowledge Demonstrated** - met knowledge criteria without assistance at least once |
| 4 | **Performance Demonstrated** - met performance criteria without assistance at least once |
| 5 | **Repetitive Demonstration** - met performance and/or knowledge criteria without assistance on multiple occasions |
| 6 | **Mastered** - successfully applied knowledge or skills in this area to solve related problems independently |
| N/A | Not observed or does not apply |
| Resources | "CC:" indicates the [Career Connections series from the Mid-American Carpenters Regional Council](https://www.carpentersunion.org/training/missouri-kansas/career-connections/) |

| ***Score*** | ***#*** | ***Competency*** | ***Academic / Technical Standards*** | ***SkillsUSA Framework*** | ***Timing & Sequencing*** | ***Instructional Activities*** | ***Assessment(s)*** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Health, Safety, & Leadership | | | | | | | |
|  | 1 | Explain the idea of a safety culture and its importance in the construction crafts industry. | 1.1-1.3, 1.12, RI.1.A, RI.3.D, SL.1.A&C, A1.DS.A.8, A2.DS.A.7 | Personal Skills:  - Integrity  - Work Ethic  - Professionalism  - Responsibility  Workplace Skills:  - Communication  - Decision Making  - Teamwork  - Planning, Organizing, & Management  - Leadership  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Semester 1  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-12  CC: One Trade Many Careers Ch. 1-9  CC: Project Bk. 1 Ch. 1, Bk. 2 Ch. 1, Bk. 3 Unit 1 Ch. 1 | OSHA 10 Assessment  CC: One Trade Many Careers Ch. 1-9 Assessments  CC: Project Bk. 1 Ch. 1 & Bk. 2 Ch. 1 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Identify causes of accidents and the impact of accident costs. | 1.1, 1.3, 1.9, 1.10, RI.1.A-D, RI.3.D, A1.DS.A.8, A2.DS.A.7 |
|  | 3 | Demonstrate an understanding of safety through the OSHA 10-hour safety course and assessment. | 1.1-1.9, RI.1&2, RI.3.D |
|  | 3A | Explain the role of OSHA in job-site safety. | RI.1.A, RI.3.D, SL.1.A&C |
|  | 3B | Explain OSHA’s General Duty Clause and 1926 CFR Subpart C. | RI.1.A, RI.3.D, SL.1.A&C |
|  | 3C | Identify struck-by hazards and demonstrate safe working procedures and requirements. | RI.1.A-D, RI.3.D |
|  | 3D | Identify caught-in-between hazards and demonstrate safe working procedures and requirements. | RI.1.A-D, RI.3.D |
|  | 3E | Define safe work procedures to use around electrical hazards. | RI.1.B |
|  | 3F | Explain the importance of hazard communications (HazCom) and Material Safety Data Sheets (MSDS). | RI.1.A, RI.3.D, SL.1.A&C, A1.DS.A.8, A2.DS.A.7 |
|  | 4 | Demonstrate the use and care of appropriate personal protective equipment (PPE). | 1.2, 1.4, 1.11, RI.1&2, RI.3. |
|  | 5 | Identify other construction hazards on your job site, including hazardous material exposures, environmental elements, welding and cutting hazards, confined spaces, and fires. | 1.3, 1, 4, 1.9, 1.10, RI.1.A-D, RI.3.D, A1.DS.A.8, A2.DS.A.7 |
|  | 6 | Develop risk assessment techniques. | 1.1, 1.3, 1.4-1.8, 1.13, RI.1&2, RI.3.D, A1.DS.A.1 & 8, A2.DS.A |
|  | 7 | Demonstrate the importance of safety in the construction industry. | 1.1-1.3, 1.9, 1.12, RI.1&2, RI.3.D |
| Processing, Problem-Solving, & Layout | | | | | | | |
|  | 1 | Add, subtract, multiply, and divide whole numbers, with and without a calculator. | 1.10, 2.3, 2.4, 2.6, 2.10, 2.11, NS.A&B, RA | Technical Skills:  - Job-Specific Skills | Year 1: Semesters 1 & 2  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CC: Math for the Trades Ch. 1-7 | CC: Math for the Trades Ch. 1-7 Reviews  CC: TSA/ IRC Assessment |
|  | 2 | Use a standard ruler, and a measuring tape to measure. | 1.10, 2.3, 2.4, 2.10, 2.11, GM.B&C, A1.NQ.B |
|  | 3 | Add, subtract, multiply, and divide fractions. | 1.10, 2.3, 2.4, 2.6, 2.10, 2.11, NF.A&B, NS.C.8 |
|  | 4 | Recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them. | 1.10, 2.4, 11.3, 2.10, 2.11, GM.A&D, GM.A&B, G.CO.A,B,&D, G.SRT.A&B, G.GMD.A&B, G.MG.A |
|  | 5 | Convert fractions to decimals and decimals to fractions for cost analysis and estimation. | 1.10, 2.3, 2.5, 2.10, 2.11, NF.C, RP.A, NS.C.8 |
| Basic Communication Skills | | | | | | | |
|  | 1 | Interpret information and instructions presented in both verbal and written form. | 1.10, 2.2, RI.1&2, W.2.A, SL.1.A-B | Workplace Skills:  - Communication | Year 1: Semesters 1 & 2  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CC: One Trade Many Careers  Ch. 1-9 | CC: One Trade Many Careers Ch. 1-9 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Communicate effectively in on-the-job situations using verbal and written skills. | 1.3, 1.10, 1.13, 2.5, W.1.A, W.2.A, W.3.A, SL.1&2 |
| Basic Employability & Leadership Skills | | | | | | | |
|  | 1 | Explain the role of an employee in the construction industry. | 1.1, 1.10-1.13, RI.1.A, RI.3.D, SL.1.A&C | Personal Skills:  - Integrity  - Work Ethic  - Professionalism  - Responsibility  Workplace Skills:  - Communication  - Decision Making  - Planning, Organizing, & Management  - Leadership  Technical Skills:  - Computer & Technology Literacy  - Safety & Health  - Professional Development | Year 1: Semesters 1 & 2  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-12  CC: One Trade Many Careers Ch. 1-9  Demonstrate the use of specific technology in construction  Create a resume | OSHA 10 Assessment  CC: One Trade Many Careers Ch. 1-9 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Demonstrate critical thinking skills and the ability to solve problems using those skills. | 1.1, 1.10-1.13, 2.2, 2.4-2.6, 2.9-2.11, 4.6, RI.1&2, RI.3.D |
|  | 3 | Demonstrate knowledge of technology systems and explain common uses for technology in the construction industry. | 1.10, 4.6, 11.1, RI.1&2, RI.3.D, SL.1 |
|  | 4 | Define effective relationship skills. | 1.11-1.13, RI.1.B |
|  | 5 | Recognize workplace issues such as sexual harassment, diversity, mental health, and substance abuse. | 1.11-1.13, RI.1&2, RI.3.D |
|  | 6 | Communicate employable skills through the development of a resume. | 1.10, W.1.A, W.2.A, W.3.A |
|  | 7 | Demonstrate an understanding of a CTSO, its structure, and activities. | 1.10, 1.13, RI.1&2, RI.3.D |
|  | 8 | Demonstrate an understanding of personal values. | 1.11-1.13, RI.1&2, RI.3.D |
|  | 9 | Perform tasks related to effective self-regulation. | 1.1-1.9, 1.12, 1.13 |
|  | 10 | Demonstrate interpersonal skills. | 1.10-1.13, RI.1&2, RI.3.D |
|  | 11 | Develop and maintain a code of professional ethics. | 1.11 |
|  | 12 | Maintain an appropriate professional appearance. | 1.2, 1.12 |
|  | 13 | Perform basic tasks related to securing and terminating employment. | 1.11-1.13 |
|  | 14 | Understand processes and procedures in a group meeting. | 1.10-1.13, 2.2, SL.1&2 |
| Orientation to the Trades | | | | | | | |
|  | 1 | Identify the aptitudes, behaviors, and skills needed to be a successful construction worker. | 1.1-1.8, 1.10-1.12, 2.2, 2.4-2.6, 2.11 | Personal Skills:  - Professionalism  - Responsibility  Workplace Skills:  - Communication  - Planning, Organizing, & Management  - Leadership  Technical Skills:  - Professional Development | Year 1: Semester 2  Years 2 & 3: Embedded throughout lessons | CareerSafe OSHA 10 Modules 1-12  CC: One Trade Many Careers Ch. 1-9  CC: Project Bk. 3 Unit 1 Ch. 4  Visit Nelson Mulligan Training Center, Handshake, Eye contact, First & Last Name | OSHA 10 Assessment  CC: One Trade Many Careers Ch. 1-9 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Identify the training opportunities within the construction trades. | 1.1, 1.10, RI.1, RI.3.D |
|  | 3 | Identify the career and entrepreneurial opportunities within the construction trades. | 1.10, 2.5, RI.1, RI.3.D |
|  | 4 | Identify the responsibilities of a person working in the construction industry. | 1.1-1.3, 1.10, 1.12, 1.13, 2.2, RI.1, RI.3.D |
|  | 5 | Demonstrate the personal characteristics of a professional. | 1.2-1.9, 1.11, 1.12, RI.1&2, RI.3.D |
| Hand Tools | | | | | | | |
|  | 1 | Recognize and identify some of the basic hand tools and their proper uses in the construction industry. | 1.2, 4.1-4.3, RI.1, RI.3.A | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Quarter 1  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-4, 8, 10  CC: Project Bk. 1 Ch. 1 & 3, Bk. 2 Ch. 1 & 2, Bk. 3 Unit 1 Ch. 1 & 2  CC: Hand Tool Checklists | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Visually inspect hand tools to determine if they are safe to use. | 1.2, 4.1, RI.3.A |
|  | 3 | Safely use hand tools. | 1.2, 1.3, 1.5, 1.10, 4.1-4.3 |
| Power Tools | | | | | | | |
|  | 1 | Identify power tools commonly used in the construction trades. | 4.2, RI.1, RI.3.D | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Quarter 1  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-4, 8, 10  CC: Project Bk. 1 Ch. 1, 4, 5, Bk. 2 Ch. 1 & 2, Bk. 3 Unit 1 Ch. 1 & 2  CC: Power Tool Checklists | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1 & 6,  Bk. 2 Ch. 1 & 2 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | State the general safety rules for operating all power tools, regardless of type. | 1.5, RI.1.A, RI.3.D, SL.1.A&C |
|  | 3 | Explain the general rules for properly maintaining all power tools, regardless of type. | 1.5, 4.4, RI.1.A, RI.3.D, SL.1.A&C |
|  | 4 | Use power tools in a safe and appropriate manner. | 1.2, 1.3, 1.5, 1.9, 1.10, 2.8, 4.1, 4.2, 4.4, 4.5 |
| Ladders, Scaffolding, & Fall Protection | | | | | | | |
|  | 1 | Explain fall protection, ladder, stair, and scaffold procedures and requirements. | 1.1, 1.3, 1.6, 1.10, 2.2, RI.1.A, RI.3.D, SL.1.A&C | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Quarter 1  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-3, 7, 10, 11  CC: Project Bk. 1 Ch. 1, Bk. 2 Ch. 1, Bk. 3 Unit 1 Ch. 1  Model appropriate use and storage of ladders, scaffolding, & fall protection | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1, Bk. 2 Ch. 1 Assessment  CC: TSA/ IRC Assessment |
|  | 2 | Demonstrate the proper use of ladders. | 1.2, 1.3, 1.6, 1.9, 1.10 , RI.1&2, RI.3.D |
|  | 3 | Safely erect scaffolding systems. | 1.2, 1.3, 1.6, 1.9, 1.10, 2.2 |
|  | 4 | Demonstrate the proper use and care of fall arrest systems. | 1.2, 1.3, 1.6, 1.7, 1.9, 1.10, 2.2, RI.1&2, RI.3.D |
| Basic Rigging & Hand Signals | | | | | | | |
|  | 1 | Describe basic load-handling safety practices. | 1.7, RI.1.A, RI.3.D, SL.1.A&C | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Quarter 1  Years 2 & 3: Reteach as needed & upon the introduction of new skills | CareerSafe OSHA 10 Modules 1-3, 5, 6, 10, 11  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2, Bk. 3 Unit 1 Ch. 1 & 3  Model American National Standards Institute (ANSI) hand signals  Model basic rigging including common slings and hardware | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Demonstrate proper use of American National Standards Institute (ANSI) hand signals. | 12.1, RI.1&2, RI.3.D |
|  | 3 | Identify and describe the use of slings and common rigging hardware. | 1.7, 12.3, RI.1.C, G.CO.A & B, G.SRT, G.GMD.B, G.MG |
| Reading Construction Drawings | | | | | | | |
|  | 1 | Recognize different types of construction drawings. | 2.9, RI.3.A | Workplace Skills:  - Communication  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Computer & Technology Literacy  - Job-Specific Skills  - Safety & Health | Year 1: Quarter 1  Years 2 & 3: Build skills through application | CC: Project Bk. 1 Ch. 2, Bk. 3 Unit 1 Ch. 5, Books 1, 2, & 3  CC: Math for the Trades  Ch. 1-4, 6, 7 | CC: Project Bk. 1 Ch. 2 Assessment  Completed projects from CC: Project Books 1, 2, & 3  CC: TSA/ IRC Assessment |
|  | 2 | Relate information on construction drawings to actual locations on the print. | 2.10, 2.11, RI.3.A |
|  | 3 | Recognize and describe the types of drawings usually included in a set of plans and list the information found on each type. | 2.9, 2.11, RI.3.A |
|  | 4 | Identify the different terms, components, symbols, and types of lines used on construction drawings. | 2.11, RI.1, RI.2 |
|  | 5 | Identify selected architectural symbols and abbreviations commonly used to represent materials on plans. | 2.11, RI.3 |
|  | 6 | Read and interpret plans, elevations, schedules, sections, and details contained in basic drawings. | 2.9-2.11, RI.3.C |
|  | 7 | State the purpose of written specifications. | 1.10, 2.11, RI.3.D, SL.1.A&C |
|  | 8 | Identify and describe the parts of a specification | 1.10, 2.11, RI.1, RI.3.D, SL.1.A&C |
|  | 9 | Demonstrate or describe how to perform a quantity takeoff for materials. | 2.5, 2.6, 2.10, 2.11, RI.1&2, RI.3.D, NS, NF, RA, GM, RA.D.10, EEI.B.3, A1.NQ.B, G.CO.A & B, G.SRT, G.GMD, G.MG |
| Site Preparation & Excavation | | | | | | | |
|  | 1 | Identify property boundaries | 11, 2, 11.4, RI.1, RI.3.D, A1.NQ.B, G.CO.A, B, & D, G.SRT, G.GPE.B.5 & 6, G.GMD.B, G.MG.A | Workplace Skills:  - Communication  - Decision Making  - Teamwork  - Planning, Organizing, & Management  Technical Skills:  - Computer & Technology Literacy  - Job-Specific Skills  - Safety & Health  - Service Orientation | Year 3: Project dependent | CareerSafe OSHA 10 Modules 1, 2, 5, 9, 10  CC: Project Bk. 3 Unit 1 Ch. 5, Unit 2 Ch. 1, 2, 3  Complete projects from CC: Project Bk. 3  CC: Math for the Trades  Ch. 4 & 5 | OSHA 10 Assessment  Completed projects from CC: Project Bk. 3  CC: TSA/ IRC Assessment |
|  | 2 | Describe the purpose of a building survey as it relates to a plat plan. | 11.3, RI.1.A, RI.3.D, SL.1.A&C |
|  | 3 | Establish elevation/grade using appropriate instrumentation. | 4.6, 11.1, RI.3.D, A1.NQ.B, G.CO.A, B, & D, G.SRT, G.GPE.B.5 & 6, G.GMD.B, G.MG.A |
|  | 4 | Identify resources for locating utilities. | 11.2, RI.1, RI.3.D |
|  | 5 | Establish proper building lines according to local regulations. | 11.2, 11.3, RI.3.D, A1.NQ.B, G.CO.A, B, & D, G.SRT, G.GPE.B.5 & 6, G.GMD.B, G.MG.A |
|  | 6 | Identify hazards associated with excavation. | 1.3, 1.8, RI.3.D |
| Introduction to Materials Handling | | | | | | | |
|  | 1 | Recognize hazards and follow safety procedures required for materials handling. | 1.2-1.4, 1.9, 3.1, RI.3.D, GM, A2.DS.A.7, G.SRT, G.GMD, G.MG | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Semester 1  Years 2 & 3: Build skills through application | Career Safe OSHA 10 Modules 1, 3, 4, 6, 10  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2, Bk. 3 Unit 1 Ch. 1 & 3, Books 1, 2, & 3  Model safe lifting and material handling | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Define a load | 1.4, RI.1 |
|  | 3 | Establish a pre-task plan prior to moving a load. | 1.3, 1.4, 2.2, 3.1, W.1, W.2, W.3 |
|  | 4 | Use proper materials-handling techniques. | 1.2-1.4, RI.3.D |
|  | 5 | Choose appropriate materials-handling equipment for the task. | 1.2, 1.4, 3.1 |
| Building Materials - Fasteners & Adhesives | | | | | | | |
|  | 1 | Identify the safety precautions associated with building materials. | 1.4, 3.1, 3.4, RI.1, RI.3.D, A1.DS.A.8, A2.DS.A.7 | Workplace Skills:  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Semester 1  Years 2 & 3: Build skills through application | Career Safe OSHA 10 Modules 1, 3, 4, 6, 10  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2, Bk. 3 Unit 1 Ch. 1 & 3, Bk. 1, 2, & 3  CC: Math for the Trades  Ch. 1-4, 6 | OSHA 10 Assessment  CC: Project Bk. 1 Ch. 1 & 6, Bk. 2 Ch. 1 & 2 Assessments  CC: TSA/ IRC Assessment |
|  | 2 | Identify various types of building materials and their uses. | 3.2, RI.1, RI.3.D, A1.DS.A.8, A2.DS.A.7 |
|  | 3 | Explain the uses of various types of hardwoods and softwoods. | 3.2, RI.1.A, RI.3.D, SL.1.A&C, A1.DS.A.8, A2.DS.A.7 |
|  | 4 | Identify the different grades and markings of wood building materials. | 3.2, RI.1, RI.3.D, A2.DS.A |
|  | 5 | Describe the proper method of storing and handling building materials. | 1.5, 1.9, RI.1.A, RI.3.D, SL.1.A&C, A1.DS.A.8, A2.DS.A |
|  | 6 | State the various types and uses of engineered lumber. | 3.2, RI.1.A, RI.3.D, SL.1.A&C, A2.DS.A |
|  | 7 | Calculate the quantities of lumber and wood products using industry-standard methods. | 2.5, 2.6, 2.11, NS, NF, RA, GM, RA.D.10, GM.A, RP.A, EEI.B.3, A1.NQ.B, G.CO.A-B, G.SRT, G.GPE.B.5-6, G.GMD, G.MG |
|  | 8 | Describe the fasteners, anchors, and adhesives used in construction work and explain their uses. | 3.4, 3.5, RI.1.A, RI.3.D, SL.1.A&C, A2.DS.A |
| Introduction to Concrete | | | | | | | |
|  | 1 | Identify the parts and types of various forms. | 11.5, RI.1.A-D, RI.3.D | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Semester 1  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-5, 10  CC: Project Bk. 3 Unit 1 Ch. 1 & Unit 3 Ch. 1 & 2  Complete projects from CC: Project Bk. 3 | OSHA 10 Assessment  Completed projects from CC: Project Bk. 3  CC: TSA/ IRC Assessment |
|  | 2 | Identify the various tools used in pouring and finishing concrete. | 4.2, RI.1.A-D, RI.3.D |
|  | 3 | Identify the safety risks involved in working with concrete. | 1.3, 1.8, 3.1, RI.1, RI.3.D, A1.DS.A.8, A2.DS.A |
|  | 4 | Erect, plumb, and brace a simple concrete form with reinforcement. | 1.2, 2.4, 11.6, A1.NQ.B, G.CO.A, B, & D, G.SRT.A, G.GPE.B.4-6, G.GMD.B, G.MG |
| Floor Systems | | | | | | | |
|  | 1 | Identify the different types of framing systems. | 5.4, RI.1, RI.3.D | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 4 Ch. 1-3, Books 2 & 3  CC: Math for the Trades  Ch. 1-6 | OSHA 10 Assessment  CC: Project Bk. 2 Ch. 1 & 2 Assessments  Completed projects from CC: Project Books 2 & 3  CC: TSA/IRC Assessment |
|  | 2 | Read and interpret drawings and specifications to determine floor system requirements. | 2.2, 2.10, 2.11, RI.1, RI.3.D, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 3 | Identify floor and sill framing and support members. | 2.11, 5.4, RI.1.A-D, RI.3.D |
|  | 4 | Fasten a sill plate to a foundation. | 2.2, 5.1, RI.1.C, RI.3.D |
|  | 5 | List and recognize different types of floor joists. | 5.4, RI.1.C, RI.3.D |
|  | 6 | List and recognize different types of flooring materials. | 8.9, RI.1.C, RI.3.D |
|  | 7 | Explain the purposes of subflooring and underlayment. | 1.10, 2.2, RI.1.A, RI.3.D, SL.1.A&C |
|  | 8 | Match selected fasteners used in floor framing to their correct uses. | 3.4-3.6, RI.1, RI.3.D |
|  | 9 | Estimate the amount of material needed to frame a floor assembly. | 2.5, 2.6, NS, RA.A-D, GM, RA.D.10, EEI.B.3.b, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 10 | Demonstrate the ability to: | RI.1&2, RI.3.D, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 10A | Layout and construct a floor assembly. | 1.2-1.5, 1.9, 2.1-2.4, 2.8, 2.11, 3.4, 5.1-5.3, |
|  | 10B | Install bridging. | 1.2-1.5, 1.9, 2.1, 2.11, 3.4, |
|  | 10C | Install joists for a cantilevered floor. | 1.2-1.5, 1.9, 2.1, 5.2, 5.4, |
|  | 10D | Install a subfloor using plywood/OSB panels. | 1.2-1.5, 1.9, 2.1, 3.4, 5.3, |
| Basic Stair Layout | | | | | | | |
|  | 1 | Identify the various types and parts of stairs. | 5.5, RI.1.A-D, RI.3.D | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 8, 10  CC: Project Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 12 Ch. 1  Complete projects from CC: Project Bk. 3  CC: Math for the Trades  Ch. 1-6 | OSHA 10 Assessment  Completed projects from CC: Project Bk. 3  CC: TSA/ IRC Assessment |
|  | 2 | Identify the materials used in the construction of stairs. | 5.5, RI.1.A-D, RI.3.D |
|  | 3 | Interpret construction drawings of stairs. | 2.1, 2.2, 2.11, RI.3.C, NS, RA.A-D, GM, RA.D.10, EEI.B.3.b, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 4 | Calculate the total rise, number, and size of risers, along with the number and size of treads required for a set of stairs. | NS, RA.A-D, GM, RA.D.10, EEI.B.3.b, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 5 | Lay out and cut stringers, risers, and treads. | 1.2, 1.3, 1.5, 1.9, 2.3, 2.6, 4.2, 5.6, 5.7, NS, RA.A-D, GM, RA.D.10, EEI.B.3.b, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 6 | Build a small stair unit with a handrail. | 1.2, 1.3, 1.5, 1.6, 1.9, 1.10, 2.3, 2.4, 2.6, 2.8, 3.4, 4.2, 4.6, 5.6, 5.7, NS, RA.A-D, GM, RA.D.10, EEI.B.3.b, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
| Wall Framing | | | | | | | |
|  | 1 | Identify the components of a wood-framed wall. | 6.1, RI.1.A-D, RI.3.D | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1, 2, 3, 5 & Unit 5 Ch. 1, 2, 3, 4, 5, Commercial Construction Bk. 3 Unit 3 Ch. 1  Complete projects from CC: Project Bk. 2 & 3  CC: Math for the Trades  Ch. 1-6 | OSHA 10 Assessment  CC: Project Bk. 2 Ch. 1 & 2 Assessments  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Describe the procedure for laying out wood-framed wall plates, including corners, door and window openings, partition blocking, and fire stopping. | 1.5, 1.6, 2.2, 2.6, 2.11, 3.3, 6.7, RI.1.A, RI.3.D, SL.1.A&C |
|  | 3 | Describe the correct procedures for assembling and erecting an exterior and interior wall. | 1.5, 1.6, 2.4, 3.2, 3.3, 3.5, RI.1.A, RI.3.D, SL.1.A&C |
|  | 4 | Identify the common materials and methods used for installing sheathing on walls. | 2.4, 3.5, 6.5, RI.1.A-D, RI.3.D |
|  | 5 | Lay out, assemble, erect, and brace exterior walls for a wood-framed building. | 1.2, 1.3, 1.5, 1.6, 1.9, 2.1-2.4, 2.8, 2.10, 2.11, 3.3, 4.6, 6.2-6.6, 10.3, RI.1&2, RI.3.D, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 6 | Explain the use of metal studs in wall framing. | 1.10, 6.8, RI.1.A, RI.3.D, SL.1.A&C |
|  | 7 | Estimate the materials required to frame walls. | 2.5, 2.6, 2.10, 2.11, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
| Ceiling & Roof Framing | | | | | | | |
|  | 1 | Understand the terms associated with roof framing. | 1.10, 2.2, RI.1.A-D, RI.3.D | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 6 Ch. 1 & 2 & Unit 7 Ch. 1-4  Complete projects from CC: Project Books 2 & 3  CC: Math for the Trades  Ch. 1-6 | OSHA 10 Assessment  CC: Project Bk. 2 Ch. 1 & 2 Assessments  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Identify the roof framing members used in gable and hip roofs. | 1.10, 7.1, RI.1.A-D, RI.3.D |
|  | 3 | Identify the methods used to calculate the length of a rafter. | 1.10, 2.4, 2.6, RI.1.A-D, RI.3.D, A1.NQ.B, G.CO.A-D, G.SRT.A-C, G.GMD.B, G.MG.A |
|  | 4 | Identify the various types of trusses used in roof framing. | 1.10, 7.1, RI.1.A-D, RI.3.D |
|  | 5 | Use a rafter framing square, speed square, and calculator in laying out a roof. | 2.4, 2.6, 4.3, GM, A1.NQ.B, G.CO.A-D, G.SRT.A-C, G.GMD.B, G.MG.A |
|  | 6 | Identify various types of sheathing used in roof construction. | 1.10, 7.1, RI.1.A-D, RI.3.D |
|  | 7 | Frame a gable roof with vent openings. | 1.2, 1.3, 1.5, 1.6, 1.9, 2.1-2.4, 2.8, 2.10, 2.11, 3.3, 7.6, G.GMD.B, G.MG.A |
|  | 8 | Describe the correct procedure for laying out trusses and ceiling joist components. | 2.1-2.3, 7.2, 7.4, RI.1.A, RI.3.D, SL.1.A&C |
|  | 9 | Interpret proper bracing procedures. | 2.1-2.3, 2.10, 2.11, RI.1.A-D, RI.3.D |
|  | 10 | Estimate the materials used in framing and sheathing a roof. | 2.5, 2.6, 2.10, 2.11, NS, RA, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
| Windows & Doors | | | | | | | |
|  | 1 | Identify various types of windows and describe the procedures for proper installation. | 1.10, 9.6, RI.1, RI.3.D, G.GPE.B.6 | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7  CC: Project Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 9 Ch. 1-3 | OSHA 10 Assessment  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Install a pre-hung window. | 1.10, 9.6, RI.1, RI.3.D, G.GPE.B.6 |
|  | 3 | Identify various types of door jambs, frames, and doors. | 1.10, 8.6, 9.5, RI.1.A-D, RI.3.D |
|  | 4 | List and identify specific items included on a typical door schedule. | 2.11, RI.1.A-D, RI.3.D |
|  | 5 | Explain the different types of interior and exterior doors. | 1.10, 8.6, 9.5, RI.1.A, RI.3.D, SL.1.A&C |
|  | 6 | Install a pre-hung exterior door and a split-jamb interior door. | 1.2, 1.3, 1.5, 1.10, 8.6, 9.5, 10.1, G.GPE.B.6 |
|  | 7 | Identify the various types of door hardware and explain how they are installed. | 1.10, 8.8, RI.1, RI.3.D |
|  | 8 | Install door hardware. | 1.2, 1.3, 1.5, 1.10, 8.8 |
| Roofing Applications | | | | | | | |
|  | 1 | Explain the safety requirements for roofing. | 1.2-1.6, 1.10, 3.1, RI.1.A, RI.3.D, SL.1.A&C | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 8 Ch. 1  Demonstrate shingle applications | OSHA 10 Assessment  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Identify the materials and methods used in roofing. | 1.10, 10.5, RI.1.A-D, RI.3.D |
|  | 3 | Demonstrate an understanding of the shingling process. | 1.2, 1.3, 1.5, 1.10, 10. 3, 10.4, 10.5, RI.1&2, RI.3.D |
| Thermal & Moisture Protection | | | | | | | |
|  | 1 | Describe the requirements for insulation, and the characteristics of various types of insulation materials. | 1.10, 10.2, RI.1.A, RI.3.D, SL.1.A&C, A1.DS.A.8, A2.DS.A.4 & 8 | Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 8 Ch. 1 | OSHA 10 Assessment  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Install selected insulation materials. | 1.2-1.6, 10.2, GM |
|  | 3 | Install selected vapor barriers for wall and roof applications. | 1.2, 1.3, 1.5, 1.6, 10.3, GM |
| Exterior Finish | | | | | | | |
|  | 1 | Explain and demonstrate siding estimating methods. | 1.10, 2.5, 2, 6, 2.11, RI.1.A, RI.3.D, SL.1.A&C, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 2: Semester 2  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 2 Ch. 1, 2, 6, 7, Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 14 Ch. 1 & 2  CC: Math for the Trades  Ch. 1-6  Discuss common types of siding, exterior trim, soffits, and fascia  Demonstrate installation processes | OSHA 10 Assessment  Completed projects from CC: Project Books 2 & 3  CC: TSA/ IRC Assessment |
|  | 2 | Describe the types and applications of common wood, vinyl, and metal siding, soffits, and fascia. | 1.10, 9.1-9.3, RI.1.A, RI.3.D, SL.1.A&C |
|  | 3 | Describe fiber-cement siding uses and dangers. | 1.4, 3.1, 9.3, RI.1.A, RI.3.D, SL.1.A&C, 1.DS.A.8, A2.DS.A.4 & 8 |
|  | 4 | Explain different types of exterior finishes. | 1.10, 9.1, RI.1.A, RI.3.D, SL.1.A&C |
|  | 5 | Install multiple types of siding commonly used in your area. | 1.2-1.6, 1.10, 2.1, 3.1, 3.5, 9.3, GM |
| Drywall Installation & Finishing | | | | | | | |
|  | 1 | Identify and select the different types and thicknesses of drywall required for specific installations. | 1.10, 8.1, RI.1.A-D, RI.3.D | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 10 Ch. 1, 2, 3 & Unit 11 Ch. I, 2, 3, Commercial Construction Bk. 3 Unit 4 Ch. 4  CC: Math for the Trades  Ch. 1-6 | OSHA 10 Assessment  Completed projects from CC: Project Bk. 3  CC: TSA/ IRC Assessment |
|  | 2 | Select fasteners for drywall installation. | 3.5, 8.2, NS, GM.B, A1.NQ.B |
|  | 3 | Identify the tools used in drywall installation and demonstrate using these tools. | 4.2, RI.1.A-D, RI.3.D |
|  | 4 | Perform single-layer and multi-layer drywall installations using different types of fastening systems. | 8.2, GM |
|  | 5 | Explain drywall installation on metal studs. | 1.10, 8.2, RI.1.A, RI.3.D, SL.1.A&C |
|  | 6 | Explain how soundproofing or fire rating is achieved in drywall installations. | 1.10, 6.7, 8.1, RI.1.A, RI.3.D, SL.1.A&C |
|  | 7 | Identify the materials used in drywall finishing and state the purpose or use of each type of material, including: A. Compounds B. Joint reinforcing tapes C. Trim material D. Textures and coatings | 1.10, 8.3, RI.1.A-D, RI.3.D |
|  | 8 | Properly finish drywall using hand tools and recognize various types of problems that occur in drywall finishes. | 1.10, 4.2, 8.3, RI.1.A-D, RI.3.D |
|  | 9 | Patch damaged drywall. | 1.10, 8.2, 8.3, GM |
|  | 10 | Estimate material quantities for a drywall installation. | 2.5, 2.6, 2.10, 2.11, NS, RA, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
| Interior Finish | | | | | | | |
|  | 1 | Identify the different types of standard moldings and describe their uses. | 1.10, 8.7, RI.1.A-D, RI.3.D, SL.1.A&C | Workplace Skills:  - Decision Making  - Planning, Organizing, & Management  Technical Skills:  - Job-Specific Skills  - Safety & Health | Year 1: Completion of OSHA 10  Year 1: Completion of Math for the Trades  Year 3: Project dependent | Career Safe OSHA 10 Modules 1-4, 7, 8, 10  CC: Project Bk. 3 Unit 1 Ch. 1-3, 5 & Unit 13 Ch. 1 & Unit 14 Ch. I & 2  CC: Project Commercial Construction Bk. 3 Unit 7 Ch. 1-4, & Unit 8 Ch. 1 & 2  CC: Math for the Trades  Ch. 1-4, 5, 6  Discuss cabinet layout common door styles and hardware  Demonstrate installation processes | OSHA 10 Assessment  Completed projects from CC: Project Bk. 3  CC: TSA/ IRC Assessment |
|  | 2 | Make square and miter cuts using a power miter saw. | 1.2, 1.3, 1.5, 1.10, 4.1, GM.B & C, GM.B |
|  | 3 | Make coped joint cuts using a coping saw. | 1.2, 1.3, 1.5, 1.10, 4.1, G.CO, G.GMD.B |
|  | 4 | Select and properly use fasteners to install trim. | 1.2, 1.3, 1.5, 1.10, 3.5, 4.1, 4.5, 8.7, NS, GM.B, A1.NQ.B |
|  | 5 | Install interior trim, including: A. Door trim B. Window trim C. Base trim D. Ceiling trim | 1.2, 1.3, 1.5, 1.6, 1.10, 3.5, 4.1, 4.5, 8.7 |
|  | 6 | Estimate the quantities of different trim materials required for selected rooms. | 2.5, 2.6, 2.10, 2.11, NS, RA.A-D, GM, A1.NQ.B, G.CO, G.SRT, G.GPE.B.5-6, G.GMD.B, G.MG.A |
|  | 7 | Explain the sizes and types of typical base and wall cabinets. | 1.10, 8.4, RI.1.A, RI.3.D, SL.1.A&C, G.GMD, G.MG |
|  | 8 | Identify cabinet components and hardware, describe their purposes. | 1.10, 8.4, 8.8, RI.1.A-D, RI.3.D |
|  | 9 | Lay out factory-made cabinets, countertops, and backsplashes. | 1.10, 3.1, 8.5, A1.NQ.B, G.GMD, G.MG |
|  | 10 | Explain the installation of an island base. | 1.10, 8.5, RI.1.A, RI.3.D, SL.1.A&C |
|  | 11 | Explain the process for laying out the drop ceiling grid and installing ceiling tiles. | 1.10, 4.6, 8.10, RI.1.A, RI.3.D, SL.1.A&C |
|  | 12 | Explain different types of finished floor products and their installation. | 1.10, 8.9, RI.1.A, RI.3.D, SL.1.A&C |
| Construction Technologies | | | | | | | |
|  | 1 | Identify and explain the uses of new construction technologies. | 1.10, 4.6, RI.1.A-D, RI.3.D | Workplace Skills:  - Planning, Organizing, & Management  Technical Skills:  - Computer & Technology Literacy  - Professional Development | Year 1: Exploration  Years 2 & 3: Application | CC: Project Bk. 3 Unit 2 Ch. 1 & 2  Research VCM as an occupation  Model and/or discuss emerging technologies in construction including but not limited to lasers, drones, LiDAR, BIM platforms, and AI | CC: TSA/ IRC Assessment |
|  | 2 | Describe virtual models and their function as related to construction. | 1.10, 4.6, RI.1, RI.3.D, SL.1, GM.A&B, A1.NQ.B, G.CO, G.SRT, G.GMD, G.MG |
|  | 3 | Research and explain virtual construction management. | 1.10, 4.6, RI.1&2, RI.3, W.1.A., SL.1&2 |
| Academic Skills - English/Language Arts | | | | | | | |
|  | 1 | Gather, analyze, evaluate and use information from a variety of sources. | RI.1.A-D, RI.2.A-D, RI.3.A-D | Workplace Skills:  - Communication  - Decision Making | Included in lessons |  |  |
|  | 2 | Read and evaluate job related material | RI.1.A-D, RI.2.A-D, RI.3.A-D |
|  | 3 | Participate in formal and informal presentation and discussion of issues and ideas | SL.1.A-C, SL.2.A-C |
|  | 4 | Conduct research using multiple sources to answer a question or solve a problem. | W.1.A.a-b |
|  | 5 | Follow a writing process to produce clear and coherent writing appropriate to the task, purpose and audience. | W.2.A.a-e |
|  | 6 | Review, revise, and edit writing with consideration for the task, purpose, and audience. | W.3.A.a-e |
| Academic Skills - Math | | | | | | | |
|  | 1 | Create and evaluate expressions involving variables and exponents | EEI.A.2.a-e | Workplace Skills:  - Planning, Organizing, & Management  Technical Skills:  - Computer & Technology Literacy  - Job-Specific Skills | Included in lessons |  |  |
|  | 2 | Solve multi-step problems posed with rational numbers. | EEI.B.3 |
|  | 3 | Solve problems involving scale drawings of real objects and… | G.GM.A.1, G.GM.B-D, RP.A |
|  | 4 | Visualize relationships between two-dimensional and three-dimensional objects | G.GM.B-C, RP.A, G.GMD.B |
|  | 5 | Make geometric constructions (…using various tools and methods) | G.GM.B-C, G.CO.D |
|  | 6 | Apply geometric concepts (measurements) in modeling situations (objects/problems) | G.GM.B, G.MG.A, G.SRT.C |
|  | 7 | Use geometric shapes, their measures, and their properties… | G.GM.B, G.MG.A.1, G.SRT.C |
|  | 8 | Perform operations and solve problems with fractions and decimals | NF.A-B |
|  | 9 | Estimate the value and compare the size of irrational numbers and approximate their locations on a number line | NS.A-C |
|  | 10 | Understand and use ratios to solve problems | RP.A |
|  | 11 | Use units (of measure) to solve problems | RA.A-D, EEI.A-B, A1.NQ.B |
|  | 12 | Using (information), interpret key characteristics of…(numerical) relationships | RA.A-D, EEI.A-B, A1.IF.B.3 |
|  | 13 | Construct and analyze geometric figures and use their properties to describe objects. | G.SRT, G.MG, G.GMD, G.CO, G.GPE.B.4-6 |
|  | 14 | Analyze and interpret written and verbal plans and graphical representations to determine a given data set and estimate characteristics of the data. | A1.DS.A.1 & 8, A2.DS.A |
|  | 15 | Use units of measure as a way to understand and solve problems involving quantities. | A1.NQ.B |