



ALIGNED WITH
NCCER
NATIONAL
STANDARDS

MASON TENDER SKILLS STANDARDS

OD33151

COMPETENCY-BASED EDUCATION: OKLAHOMA'S RECIPE FOR SUCCESS

BY THE INDUSTRY FOR THE INDUSTRY

Oklahoma's *CareerTech* system of competency-based education uses industry professionals and certification standards to identify the knowledge and abilities needed to master an occupation. This industry input provides the foundation for development of instructional materials that help prepare the comprehensively trained, highly skilled employees demanded by our workplace partners.

TOOLS FOR SUCCESS

CareerTech relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

Skills standards provide the foundation for competency-based instruction in Oklahoma's *CareerTech* system. The skills standards outline the knowledge, skills, and abilities needed to perform related jobs within an industry. Skills standards are aligned with national skills standards; therefore, a student trained to the skills standards possesses technical skills that make him/her employable in both state and national job markets.

Curriculum materials contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources provide supplemental activities to enhance learning and provide hands-on training experiences.

Competency Assessments test the student over material outlined in the skills standards and taught using the curriculum materials. When used with classroom performance evaluations, written competency assessments provide a means of measuring occupational readiness.

Although each of these components satisfy a unique purpose in competency-based education, they work together to reinforce the skills and abilities students need to gain employment and succeed on the job.

MEASURING SUCCESS

Written competency assessments are used to evaluate student performance. Results reports communicate competency assessment scores to students and provide a breakdown of assessment results by duty area. The results breakdown shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

Group analysis of student results also provides feedback to instructors seeking to improve the effectiveness of career and technology training. Performance patterns in individual duties indicate opportunities to evaluate training methods and customize instruction.

TRUE TO OUR PURPOSE

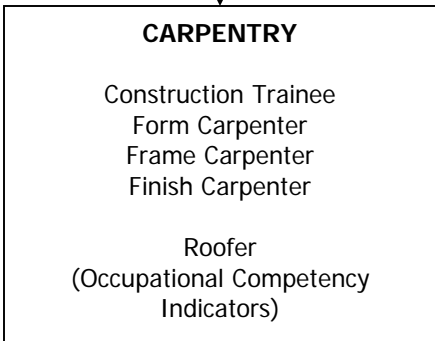
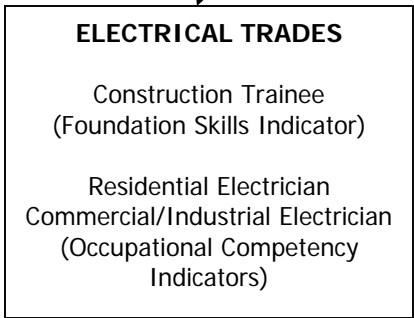
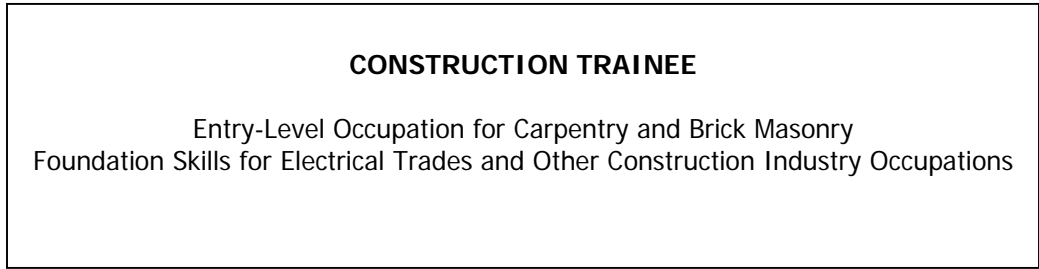
"Helping Oklahomans succeed in the workplace" defines the mission of Oklahoma *CareerTech* and its competency-based system of instruction. Skills standards, curriculum, and assessments that identify and reinforce industry expectations provide accountability for programs and assure *CareerTech*'s continued role in preparing skilled workers for a global job market

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Prior to the 2004-2005 school year, Construction Trainee was included in the Skills Standards published for Carpentry and Brick Masonry; beginning with the 2004-05 school year, Construction Trainee was removed from these two documents and is now published separately as *Construction Trainee Skills Standards* (OD33001). Construction Trainee is still recognized as an entry-level occupation for Carpentry and Brick Masonry. For the 2004-05 school year and beyond, Construction Trainee is recognized ONLY as a prerequisite to completing the Residential or Commercial Electrical Trades competency test.

Two versions of the competency test for Construction Trainee were previously published—*Carpentry Construction Trainee* (#9306) and *Brick Masonry Construction Trainee* (#9203). One version of this test is now published—*Construction Trainee* (#33001).

**MASON TENDER
SKILLS STANDARDS
Frequency and Criticality Ratings**

- Duty A: Orientation to the Trade
- Duty B: Communication Skills
- Duty C: Employability Skills
- Duty D: Basic Safety
- Duty E: Identify/Safely Use Hand, Power, and Masonry Tools
- Duty F: Introduction to Construction Math
- Duty I: Mortar
- Duty J: Masonry Units and Installation Techniques
- Duty K: Assist Mason

Frequency: represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

- 1 = less than once a week
- 2 = at least once a week
- 3 = once or more a day

Criticality: denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

- 1 = slight
- 2 = moderate
- 3 = extreme

Duty A: Orientation to the Trade

CODE	TASK	F/C
	Level One (Introduction to Masonry)	
A.01	Discuss the history of masonry.	1 / 1
A.02	Describe modern masonry materials and methods.	1 / 2
A.03	Explain career ladders and advancement possibilities in masonry work.	1 / 1
A.04	Describe the skills, attitudes, and abilities needed to work as a mason.	2 / 2

Duty B: Communication Skills

CODE	TASK	F/C
	Core Competencies	

B.01	Demonstrate the ability to understand information and instructions that are presented in both written and verbal form.	2 / 2
B.02	Demonstrate the ability to communicate effectively in on-the-job situations using written and verbal skills.	2 / 2

Duty C: Employability Skills

CODE	TASK	F/C
	Core Competencies	
C.01	Explain the construction industry, the role of the companies that make up the industry, and the role of individual professionals in the industry.	2 / 2
C.02	Demonstrate critical thinking skills and the ability to solve problems using those skills.	3 / 3
C.03	Demonstrate knowledge of computer systems and explain common uses for computers in the construction industry.	1 / 2
C.04	Demonstrate effective relationship skills with teammates and supervisors, exhibit the ability to work on a team, and demonstrate appropriate leadership skills.	2 / 2
C.05	Be aware of workplace issues such as sexual harassment, stress, and substance abuse.	2 / 2

DUTY D: Basic Safety

CODE	TASK	F/C
	Core Competencies	
D.01	Identify the responsibilities and personal characteristics of a professional craftsperson.	2 / 2
D.02	Explain the role that safety plays in the construction crafts.	2 / 3
D.03	Describe what job-site safety means.	2 / 3
D.04	Explain the appropriate safety precautions around common job-site hazards.	2 / 3
D.05	Demonstrate the use and care of appropriate personal protective equipment. <ul style="list-style-type: none"> • Hard hat • Safety glasses • Ear protection • Clothing, jewelry, footwear • Dust masks • Steel toed boots 	3 / 3
D.06	Follow safe procedures for lifting heavy objects. <ul style="list-style-type: none"> • Apply ergonomics 	3 / 3
D.07	Describe safe behavior on and around ladders and scaffolds.	3 / 3
D.08	Describe and demonstrate knowledge of the Occupational Safety and Health Act (OSHA) <ul style="list-style-type: none"> • HazCom and MSDS • bloodborne pathogens 	2 / 2
D.09	Describe fire prevention and fire fighting techniques.	1 / 1
D.10	Define safe work procedures around electrical hazards.	2 / 2

Duty E: Identify/Safely Use Hand and Power Tools

CODE	TASK	F/C
	Level One (Masonry Tools and Equipment)	
E.01	Identify and name the tools used in performing masonry work.	3 / 3
E.02	Identify and name the equipment used in performing masonry work.	3 / 3
	Masonry (Introduction and Safety)	
E.03	Describe how each tool is safely used and maintained.	3 / 3
	Level One (Masonry Tools and Equipment)	
E.04	Describe how the equipment is safely used and maintained.	3 / 3
E.05	Use the correct procedures for fueling and starting a gasoline-powered tool.	2 / 2
E.06	Associate trade terms with the appropriate tools and equipment.	3 / 3
E.07	Demonstrate the correct procedures for assembling and disassembling scaffolding according to federal safety regulations, under the supervision of a competent person.	3 / 3

Duty F: Introduction to Construction Math

CODE	TASK	F/C
	Core Competencies	
F.01	Add, subtract, multiply, and divide whole numbers, with a calculator.	2 / 2
F.02	Use a standard ruler to measure.	2 / 2
F.03	Add, subtract, multiply, and divide fractions.	2 / 2
F.04	Add, subtract, multiply, and divide decimals, with a calculator.	2 / 2
F.05	Convert decimals to percents and percents to decimals.	2 / 2
F.06	Convert fractions to decimals and decimals to fractions.	1 / 1
F.07	Recognize and use standard units of length, weight, volume, and temperature.	2 / 2
F.08	Recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.	2 / 2

Duty I: Mortar

CODE	TASK	F/C
	Level One (Masonry)	
I.01	Properly set up the mortar mixing area.	3 / 3
I.02	Properly mix mortar by hand.	3 / 3
I.03	Properly mix mortar with a mechanical mixer.	3 / 3
I.04	Perform the following basic bricklaying procedures: <ul style="list-style-type: none"> • Mixing of mortar • Laying a mortar bed • Laying bricks 	3 / 3

Duty J: Masonry Units and Installation Techniques

CODE	TASK	F/C
	Level One (Masonry)	
J.01	Describe the most common types of masonry units.	3 / 3
J.02	Describe and demonstrate how to set up a wall.	3 / 3
J.03	Lay a dry bond.	3 / 3
J.04	Spread and furrow a bed joint, and butter masonry units.	3 / 3
J.05	Describe the different types of masonry bonds.	3 / 3
J.06	Cut brick and block accurately.	3 / 3
J.07	Lay masonry units in a true course.	3 / 3

DUTY K: Assist Mason

CODE	TASK	F/C
K.01	Read measuring instruments <ul style="list-style-type: none">• Tape measure• Folding rule• Framing square• Plumb bob and level• Speed square	3 / 3
K.02	Identify the appropriate units of measurement for a measurement task	3 / 3
K.03	Communicate measurements using proper symbols or words	3 / 3
K.04	Use appropriate measuring instruments to measure distances	3 / 3
K.05	Assist in cleaning the finished wall <ul style="list-style-type: none">• Dry cleaning• Wet cleaning	3 / 3
K.06	Assist in protecting the wall from weather <ul style="list-style-type: none">• Cover wall with plastic or cold weather blanket• Brace wall as required	3 / 3
K.07	Assist in grouting the wall <ul style="list-style-type: none">• Low lift• High lift	3 / 3
K.08	Assist in installing reinforcement <ul style="list-style-type: none">• Wall ties• Horizontal reinforcement	3 / 3
K.09	Assist in placing insulation <ul style="list-style-type: none">• Loose fill• Bag disposal• Rigid styrofoam	3 / 3

**MASON TENDER
SKILLS STANDARDS**

**Crosswalk of Curriculum and National Standards to
CIMC Curriculum**

AS=Assignment Sheet

JS=Job Sheet

Curriculum:

- 1) Fundamentals of Bricklaying
- 2) Brick and Block Masonry
- 3) Stone, Panel, and Tile Installation

Duty A: Orientation to the Trade

CODE	TASK	Curriculum
	Level One (Introduction to Masonry)	
A.01	Discuss the history of masonry.	
A.02	Describe modern masonry materials and methods.	
A.03	Explain career ladders and advancement possibilities in masonry work.	1) A1.1-A1.2
A.04	Describe the skills, attitudes, and abilities needed to work as a mason.	1) A1.3-A.113 AS A1-1 to A1-7

Duty B: Communication Skills

CODE	TASK	Curriculum
	Core Competencies	
B.01	Demonstrate the ability to understand information and instructions that are presented in both written and verbal form.	
B.02	Demonstrate the ability to communicate effectively in on-the-job situations using written and verbal skills.	

Duty C: Employability Skills

CODE	TASK	Curriculum
	Core Competencies	
C.01	Explain the construction industry, the role of the companies that make up the industry, and the role of individual professionals in the industry.	
C.02	Demonstrate critical thinking skills and the ability to solve problems using those skills.	
C.03	Demonstrate knowledge of computer systems and explain common uses for computers in the construction industry.	
C.04	Demonstrate effective relationship skills with teammates and supervisors, exhibit the ability to work on a team, and demonstrate appropriate leadership skills.	
C.05	Be aware of workplace issues such as sexual harassment, stress, and substance abuse.	

DUTY D: Basic Safety

CODE	TASK	Curriculum
	Core Competencies	
D.01	Identify the responsibilities and personal characteristics of a professional craftsperson.	
D.02	Explain the role that safety plays in the construction crafts.	1) A2.2-A2.3
D.03	Describe what job-site safety means.	1) A2.4, A2.19-A2.20 AS A2-1 & A2-2
D.04	Explain the appropriate safety precautions around common job-site hazards.	1) A2.4, A2.19-A2.20 AS A2-1 & A2-2
D.05	Demonstrate the use and care of appropriate personal protective equipment. <ul style="list-style-type: none"> • Hard hat • Safety glasses • Ear protection • Clothing, jewelry, footwear • Dust masks • Steel toed boots 	1) A2.18
D.06	Follow safe procedures for lifting heavy objects. <ul style="list-style-type: none"> • Apply ergonomics 	1) A2.21 JS A2-1
D.07	Describe safe behavior on and around ladders and scaffolds.	1) A2.5-A2.6 C3.6-C3.9, C3.18 AS C3-1
D.08	Describe and demonstrate knowledge of the Occupational Safety and Health Act (OSHA) <ul style="list-style-type: none"> • HazCom and MSDS • bloodborne pathogens 	1) A2.4, A2.10-A2.16
D.09	Describe fire prevention and fire fighting techniques.	1) A2.9
D.10	Define safe work procedures around electrical hazards.	1) A2.4

Duty E: Identify/Safely Use Hand and Power Tools

CODE	TASK	Curriculum
	Level One (Masonry Tools and Equipment)	
E.01	Identify and name the tools used in performing masonry work.	1) C1.1-C1.3
E.02	Identify and name the equipment used in performing masonry work.	1) C3.1, C3.3, C3.11 C4, all
	Masonry (Introduction and Safety)	
E.03	Describe how each tool is safely used and maintained.	1) C1.4-C1.12 C1.16A to C1.16D JS C1-1 to C1-4 C4, all 2) A1.14
	Level One (Masonry Tools and Equipment)	
E.04	Describe how the equipment is safely used and maintained.	1) C3.2, C3.12, C4 all, E1.5, E1.10, E1.15

E.05	Use the correct procedures for fueling and starting a gasoline-powered tool.	2) A1.14
E.06	Associate trade terms with the appropriate tools and equipment.	
E.07	Demonstrate the correct procedures for assembling and disassembling scaffolding according to federal safety regulations, under the supervision of a competent person.	1) C3.1, C3.4-C3.10, C3.19a JS C3-1

Duty F: Introduction to Construction Math

CODE	TASK	Curriculum
	Core Competencies	
F.01	Add, subtract, multiply, and divide whole numbers, with a calculator.	1) B1.1-B1.7
F.02	Use a standard ruler to measure.	
F.03	Add, subtract, multiply, and divide fractions.	1) B1.8-B1.15
F.04	Add, subtract, multiply, and divide decimals, with a calculator.	1) B1.16-B1.20
F.05	Convert decimals to percents and percents to decimals.	1) B1.21-B1.24
F.06	Convert fractions to decimals and decimals to fractions.	1) B1.21-B1.24
F.07	Recognize and use standard units of length, weight, volume, and temperature.	1) B1.25-B1.30
F.08	Recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.	1) B1.25-B1.26

Duty I: Mortar

CODE	TASK	Curriculum
	Level One (Masonry)	
I.01	Properly set up the mortar mixing area.	2) A1.2
I.02	Properly mix mortar by hand.	2) A1.13, A1.15B-D JS A1-2 to A1-4
I.03	Properly mix mortar with a mechanical mixer.	2) A1.12, A1.15A JS A1-1
I.04	Perform the following basic bricklaying procedures: <ul style="list-style-type: none"> Mixing of mortar Laying a mortar bed Laying bricks 	2) A1.2, A1.12-A1.15B B1, all JS B1-1 to B1-4

Duty J: Masonry Units and Installation Techniques

CODE	TASK	Curriculum
	Level One (Masonry)	
J.01	Describe the most common types of masonry units.	2) A2.1-A2.8
J.02	Describe and demonstrate how to set up a wall.	2) A2.1-A2.3, B2.9 B2.14-B2.16B JS B2-1 & B2-2
J.03	Lay a dry bond.	2) A2.15, JS A2-1
J.04	Spread and furrow a bed joint, and butter masonry units.	

J.05	Describe the different types of masonry bonds.	2) A2.9-A2.14 B2.10-B2.11
J.06	Cut brick and block accurately.	1) C2.7 JS C2-1 TO C2-3
J.07	Lay masonry units in a true course.	2) B1, all & B2.4-B2.8 JS B1-1 to B1-6

DUTY K: Assist Mason

CODE	TASK	Curriculum
K.01	Read measuring instruments <ul style="list-style-type: none"> • Tape measure • Folding rule • Framing square • Plumb bob and level • Speed square 	1) B2.1-B2.10, C4.13D JS C4-4
K.02	Identify the appropriate units of measurement for a measurement task	1) B2.11-B2.15
K.03	Communicate measurements using proper symbols or words	
K.04	Use appropriate measuring instruments to measure distances	
K.05	Assist in cleaning the finished wall <ul style="list-style-type: none"> • Dry cleaning • Wet cleaning 	1) E1.1-E1.9
K.06	Assist in protecting the wall from weather <ul style="list-style-type: none"> • Cover wall with plastic or cold weather blanket • Brace wall as required 	
K.07	Assist in grouting the wall <ul style="list-style-type: none"> • Low lift • High lift 	2) B2.12, B4.14-B4.16
K.08	Assist in installing reinforcement <ul style="list-style-type: none"> • Wall ties • Horizontal reinforcement 	2) A3.2-A3.5, A3.7B, B2.13 JS A3-2
K.09	Assist in placing insulation <ul style="list-style-type: none"> • Loose fill • Bag disposal • Rigid styrofoam 	2) B4.20-B4.22