CUSTOMIZED TEACHER ASSESSMENT BLUEPRINT

MASON/MASONRY

Test Code: 5933
Version: 01

Specific competencies and skills tested in this assessment:

Tools and Equipment
Identify masonry lab tools and equipment
Read and use a modular and spacing rule
Mark and use a story pole to gauge work
Demonstrate the ability to secure mason's line to line blocks, pins, and line stretchers
Discuss and set a trig properly
Demonstrate the use of a hammer and chisel to cut block and brick
Demonstrate proper trowel techniques
Demonstrate proper use and techniques of masonry joiners
Identify various cutting blades for a masonry saw
Safely operate a gas cut-off saw
Safely operate a mortar mixer
Safely operate a masonry saw

Bricklaying Techniques
Identify different types of masonry fasteners and reinforcements
Identify brick types and bonds
Lay out proper dry bond of a brick wall
Lay brick to the line
Install window and door openings in brick walls (jambs)
Install flashing for windows and doors
Install weep holes/vents
Install a soldier course
Lay a brick and block composite wall
Build brick columns
Construct a brick veneer wall
Construct a brick cavity wall
Corbel a brick wall
Demonstrate cleaning a brick wall
Lay a course of rowlocks
Lay a course of headers
Construct a brick rack back lead
Construct a 4-inch brick inside corner
Construct a 4-inch brick outside corner

Mason/Masonry (continued)

Blocklaying Techniques
Identify different types of masonry fasteners and reinforcements
Identify and construct various block types and bonds
Lay block to the line
Construct a brick ledge using various size block
Discuss and install a control joint
Install window and door openings in block walls
Set lintels
Construct block piers
Parge a block wall
Construct a jamb block lead
Construct an inside corner block lead
Construct an outside corner block lead

Safety Practices
Explain and use personal protective equipment and safety practices
Demonstrate safe use and care of masonry hand tools
Demonstrate safe use and care of a mortar mixer
Erect and dismantle steel tubular scaffolding within OSHA guidelines
Place material and stock scaffolding properly
Demonstrate knowledge of MSDS information

Blueprint and Layout
Identify types of blueprint plans
Read and interpret blueprint plans
Lay a building out using a builder's level
Square a building using the 3-4-5 Pythagorean Theorem

Mortar
Describe various types of mortars and their characteristics
Mix mortar by hand
Mix mortar with a power mixer
Demonstrate procedures for tempering mortar

Residential Chimneys and Fireplaces
Construct a brick chimney
Construct a block chimney
Discuss and install flashing on chimneys
Identify parts of a chimney and fireplace

Arch Construction
Discuss arch terminology
Identify types of arches

Materials Estimation
Estimate brick masonry work
Estimate block masonry work
Estimate mortar for brick and block

Written Assessment:

Administration Time: 3 hours
Number of Questions: 194

Areas Covered:

20%	Tools and Equipment
19%	Bricklaying Techniques
19%	Blocklaying Techniques
11%	Safety Practices
6%	Blueprint and Layout
9%	Mortar
7%	Residential Chimneys and Fireplaces
4%	Arch Construction
5%	Materials Estimation

Sample Questions:

Which of the following tools eliminates the need for constructing masonry leads?

A. corner poles
B. plumb lines
C. levels
D. framing square

Before masonry is installed above a window, the opening should be spanned with

A. wood headers
B. angle iron
C. flat metal
D. square tubing

The unit placed over an opening in a wall is called a

A. sill
B. lintel
C. refractory
D. jamb

The most frequently used scale for home construction is the

A. 1/8-inch
B. 1/4-inch
C. 1/2-inch
D. 3/8-inch

The distance between the two jambs of an arch is called a

A. spall
B. spandrel
C. span
D. stretcher

Performance Assessment:

Administration Time: 3 hours
Number of Jobs: 3

Areas Covered:

12% **Job Layout**
Participants will select and safely use tools to measure project size according to the drawing specifications provided. Participants will then snap a chalk line, dry bond the first course using 3/8-inch mortar joints, mark off the dimensions, and square the project.

44% **Construct a Block Wall**
Participants will lay appropriate masonry units according to the drawing specifications provided and maintain 3/8-inch head joints. Participants will then re-square the inside corner on the first course and measure the course height from the specified point. Participants will be required to level, plumb, range each course, and tool all exposed joints, cut (tags), brush, and retool the project.

44% **Construct a Brick Veneer**
Participants will construct a brick veneer according to the drawing specifications provided. Steps will include laying the appropriate masonry units, re-squaring the corner on the first course, and measuring the course height from a specified point. Participants will be required to level, plumb, and range each course, tool all exposed joints and cut (tags), and brush and retool the project.

Sample Job: Job Layout

Maximum Job Time: 15 minutes

Participant Activity: The participant, using appropriate tools, will measure project size according to drawing specifications provided, snap a chalk line, dry bond the first course using 3/8-inch mortar joints, mark off dimensions for the project, and square the project.