



## Skills Demonstration Construction Technology (NCCT68)

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NOTES

### Wall Framing and Door Installation

Sketch and construct a 2 x 4 wood stud wall 12 feet long by 8 feet high (or to scale as directed by the teacher). The wall needs to have an opening (size determined by teacher) for one door located 2 feet from one end of the wall section. Studs are to be 16 inches on center.

#### Skills Demonstration Acceptance Criteria

- Sketch drawn and labeled correctly
- Selected proper tools and materials
- Proper PPE used and safety procedures followed
- Wall section plumb and square to correct dimensions

Complete the wall section by preparing the opening and hanging the door selected by the teacher. Once the door is hung, finish trimming out the door opening.

#### Skills Demonstration Acceptance Criteria

- All necessary steps to prepare door for hanging completed
- Door hung plumb and square in opening for proper fit
- Trim work completed to acceptable standard based on material supplied by the teacher
- Proper PPE used and safety procedures followed

### Electrical

(Before exam, instructor should prepare project board—see design on last page of this document.)

Wire a circuit using stranded wire that will contain two three-way switches and one four-way switch controlling a keyless fixture and a duplex receptacle in which one half is controlled by a single pole switch and the other half is constantly hot. Before energizing, there shall be no exposed live parts.

- Sketched proper components and connections
- Selected proper materials and tools
- Correctly made connections to sketch detail
- Used proper PPE and followed safety procedures
- Completed task in a neat and workmanlike manner
- Made connections to code specifications
- Correctly terminated all grounding and bonding points
- Tested circuit with VOM before energizing
- Demonstrated that circuit functioned properly when energized

## Masonry

Using material supplied by the teacher, lay out and sketch a block wall at least 6 feet long and 3½ feet high (final specifications to be determined by instructor). Develop a material and tool list to complete the task.

### Skills Demonstration Acceptance Criteria

- Proper layout meets final specifications provided by the teacher
- Prepared a complete list of needed materials and tools
- Proper PPE used and safety procedures followed
- Material staged correctly
- Mortar preparation area properly set up
- Site preparation completed
- Mortar mixed correctly
- Block laid correctly
- Mortar joints properly finished

## Piping Practices

Using ½-inch rigid type L copper pipe and sweat fittings provided, sketch a continuous loop that is equal to a 12" (center-center of pipe) square loop. Cut copper pipe and use three 90° ells and one tee to construct the loop configuration. Install the CFM adapter on one end of the tee (3" center of tee to end of adapter) for attachment of testing manifold. Clean, flux, and solder all joints. Follow teacher directions for pressure-testing the assembly.

### Skills Demonstration Acceptance Criteria

- Layout sketch done correctly
- Proper PPE used and safety procedures followed
- Pipe is properly reamed
- Pipe and fittings properly cleaned and prepared
- Tubing cut correctly
- Bends made with no flat spots
- Joints properly soldered
- Fitting connection made properly with correct tools
- Pressure test performed to teacher requirements
- Leak test performed and any leaks corrected

## Stairs

Sketch and construct a set of freestanding stairs. Stairs should have a rise of 31", a run of 4'1", and equal riser and tread measurements. Use material selected by the teacher.

### Skills Demonstration Acceptance Criteria

- Sketch shows proper dimensions
- Proper PPE used and safety procedures followed
- Proper tools used correctly
- Stairs plumb and level
- Stair dimensions match sketch

# Skills Demonstration Construction Technology (NCCT68)

## Class Summary Form

(Print) Teacher's Name:	Date:
Teacher's Signature:	School Year (e.g., 2006–2007):

**Note:**

- Print the name of each student in the class.
- Indicate with an "X" whether the student successfully completed the Skills Demonstration. Remember all tasks associated with the Skills Demonstration must be successfully completed before credit is given.
- Maintain the Class Summary form along with each student's individual performance record as required by your local school district.

	Student's Name (Last, First)	Completed Successfully	Grade
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3			
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