DOCUMENT RESUME

ED 139 962 CE 010 983

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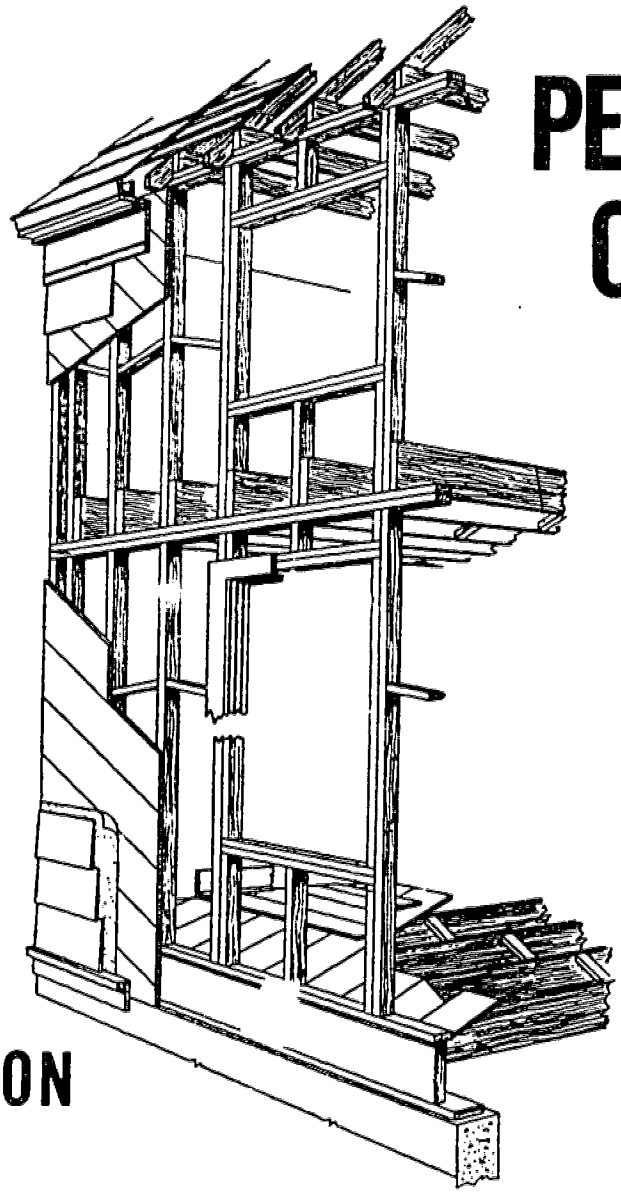
TITLE Carpentry. Performance Objectives. Basic Course.
INSTITUTION Duval County School Board, Jacksonville, Fla.
PUB DATE Oct 74
NOTE 31p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Behavioral Objectives; Building Trades; Career Exploration; *Carpenters; *Construction (Process); *Criterion Referenced Tests; Curriculum Guides; Hand Tools; Machine Tools; Post Secondary Education; Secondary Education; *Shop Curriculum; *Skill Development; Student Evaluation; Trade and Industrial Education; Woodworking

ABSTRACT

Several intermediate performance objectives and corresponding criterion measures are listed for each of 12 terminal objectives in this course guide in basic carpentry. The guide is designed to prepare persons for initial employment, or to upgrade or retrain persons already employed, or to provide the apprenticeship related course work necessary to insure successful employment in the carpentry trade. The plan of instruction includes specialized classroom and shop experiences concerned with all phases of construction carpentry. Included is training in layout, fabrication, assembly, installation, and repair of structural units. Emphasis is placed on care and use of carpentry tools, equipment and materials, common systems of frame construction and principles involved, drafting, blueprint reading, applied mathematics, materials estimating, and interpretation of building codes. The titles of the terminal performance objective sections are Orientation, Safety, Basic Measurement, Hand Tools, Power Tools, Maintenance of Tools, Building Products, Building Insulation, Hardware (Rough and Finish), Adhesives, Building Nomenclature and Blueprint Reading, and Simulated House Construction. (This manual and 54 others were developed for various secondary level vocational courses using the System Approach for Education (SAFE) guidelines.) (HD)

CARPENTRY



PERFORMANCE OBJECTIVES

BASIC COURSE

CAREER EDUCATION

DUVAL COUNTY SCHOOL BOARD

DR. JOHN T. GUNNING

SUPERINTENDENT OF SCHOOLS

DUVAL COUNTY SCHOOL BOARD

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Duval County Public Schools

October, 1974

A C K N O W L E D G E M E N T S

This manual was developed using System Approach For Education (SAFE) Guidelines.

Appreciation and recognition are extended to the following educators who have assisted in the preparation of this manual:

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Syllabus of Terminal Performance Objectives

1.0 Orientation

2.0 Safety

3.0 Basic Measurement

4.0 Hand Tools

5.0 Power Tools

6.0 Maintenance of Tools

7.0 Building Products

8.0 Building Insulation

9.0 Hardware (Rough and Finish)

10.0 Adhesives

11.0 Building Nomenclature and Blueprint Reading

12.0 Simulated House Construction

Course Objective

This course is designed to prepare persons for initial employment, or to upgrade or retrain persons already employed, or to provide the apprenticeship related course work necessary to insure successful employment in the Carpentry trade under such primary job titles as the following as taken from the Dictionary of Occupational Titles:

860.381-026 Carpenter

Course Description

Plan of instruction includes specialized classroom and shop experiences concerned with all phases of construction carpentry. Included is training in layout, fabrication, assembly, installation, and repair of structural units. Emphasis is placed on care and use of carpentry tools, equipment and materials, common systems of frame construction and principles involved, drafting, blueprint reading, applied mathematics, materials estimating, and interpretation of building codes.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 1.0 — Orientation

The learner will define carpentry, list the course requirements, define apprentice and Journeyman, and name three (3) types of carpenters.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		1.0	Define carpentry, apprentice, and Journeyman. List course requirements and three (3) types of carpenters.
1.1	The learner will list the items he/she needs to bring to class each day to be successful. in this course. a. Notebook b. Pen/Pencil c. Ruler/Scale	1.1	List three (3) items you need to bring to class each day.
1.2	Given four (4) classifications to be used for determining the final grade of this course, the student will correctly write the percentage value each has on his final grade: Written work/ notebook 10% Daily shop Assignment 10% Project Assign. 30% Tests (Daily) 30% Nine week test 10% Class Involvment & Discussion 10%	1.2	Write the percentage value each of the following items will have on your final grade: a. Test (Daily) _____% b Project Assignment _____% c. Written work/notebook _____% d. Daily shop Assignments _____% e. Nine week test _____% f. Class Involvement & Discussion _____%

COURSE CARPENTRY - Basic

TERMINAL PERFORMANCE OBJECTIVE NO. 1.0 (cont'd) Orientation

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.3	The learner will demonstrate his/her knowledge of various types of carpenters classifications by naming four: a. Finish carpentry b. Cabinetmaker c. Frame or rough carpentry d. Roofing carpentry	1.3	Name four different types of carpenter classifications:
1.4	The learner will define three given terms associated with the organization of workers in the building trades: a. Apprentice b. Journeyman c. Master	1.4	Define: a. Apprentice b. Journeyman c. Master
1.5	Given two lists, one of building trade crafts and one of typical construction duties, the learner will correctly match the two lists with 80% accuracy.	1.5	Match: _____ Plumber — 1. Installs flashing. _____ Electrician — 2. Installs framing. _____ Roofer — 3. Installs brickwork. _____ Carpenter — 4. Installs conduit. _____ Mason — 5. Installs drains _____ — 6. Installs carpeting.
1.6	The learner will with 75% accuracy answer given questions about the student club available to carpentry students.	1.6	a. Name one club especially designed for the Industrial Education student. b. Who can belong to VICA? c. What are three (3) benefits you can derive from VICA? d. What do the initials "VICA" Stand for?

COURSE CARPENTRY - Basic

TERMINAL PERFORMANCE OBJECTIVE NO. 1.0 (cont'd) Orientation

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
1.7	Given a list of eight obligations a carpenter has to his/her employer, the student will define seven(7) of the eight correctly: a. Punctuality b. Safety c. Efficiency d. Loyalty e. Cooperation f. Self-improvement g. Integrity h. Courtesy	1.7	Write your definition of what your obligation as a carpenter would be to your employer for each of the following: a. Punctuality b. Safety c. Efficiency d. Loyalty
1.8	Given instruction on the history and development of the carpentry trade, the learner will correct-ly write the definition of carpentry with 100% accuracy. Carpentry- Work which is performed by a craftsman in cutting , framing and joining pieces of timber in the construction of ships, houses, and other structures of a similiar character.	1.8	Define "Carpentry".

COURSE CARPENTRY - Basic

TERMINAL PERFORMANCE OBJECTIVE NO. 12.0 SAFETY

The learner will list with 85% accuracy the carpentry shop safety rules, and will define the term "OSHA".

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
2.1	Given instructions concerning 15 general safety rules for the carpentry shop, the learner will recall them in writing with 90% accuracy.	2.0	List ten shop safety rules and define "OSHA".
		2.1	Write the 15 general safety rules for the carpentry shop.
2.2	The learner will demonstrate his/her knowledge of eye safety devices by choosing the correct protective device and wearing it for each job requiring eye safety protection.	2.2	Select and wear the proper eye safety device each working day.
2.3	The learner will define the term "OSHA" and will name three (3) implications OSHA has on safe working conditions for carpenters.	2.3	Define the term "OSHA", and list three (3) safe working conditions for carpenters that are attributed to OSHA.
2.4	The learner will demonstrate his/her knowledge of good housekeeping conditions by performing assigned clean-up duties with 80% proficiency.	2.4	Perform the clean up duties assigned to you by the instructor. You will be evaluated on how well clean up duties were performed.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 3.0 BASIC MEASUREMENT

Given three (3) pieces of lumber, the learner will measure each with a given different measuring tool (framing square, 6 foot folding rule, metal tape), record the measurements of each, and figure the board feet of each with 90% accuracy.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
3.1	Given instruction on using a metal tape and six foot wood rule, the learner will correctly measure 10 pieces of given lumber with 80% accuracy. (1/16" tolerance.)	3.0	The instructor will take three pieces of lumber. Given to the learner to figure board feet.
		3.1	Write the measurement of 10 pieces of lumber. (Instructor will supply lumber.)
3.2	The learner will demonstrate his/her knowledge of estimating lumber by figuring how many board feet in 5 pieces of lumber with 80% accuracy.	3.2	Measure and compute separately the number of square feet in 5 pieces of lumber.
3.3	Given a list of areas to measure the learner will correctly measure with 80% accuracy.	3.3	Measure the following and write the answer: a. shop b. classroom c. parking lot d. work table
3.4	The learner will demonstrate his/her knowledge of the framing square by measuring given pieces of lumber and laying out given common rafters.	3.4	Write the length of pieces of lumber and layout a given rafter. Example: Span - 12' Find total length total run - 6' and layour on overhang - 1'

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 4.0 — HAND TOOLS

The learner, with 80% accuracy, will list the correct names of 40 given carpenter hand tools. (As shown in 4.1)

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		4.0	List the correct names to the forty given hand tools. (Instructor will layout on the table and number.)
4.1	Given a group of hand tools the learner will identify with 90% accuracy. Instructor will number the following tools for the learner to identify.	4.1	Write the correct name for each numbered tool shown.
	(List on next page)		(List on next page)

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1.1 (1) Hand saw (crosscut, rip)
(2) Coping saw
(3) Keyhole saw (compass)
(4) Back saw
(5) Hand drill
(6) Breast drill
(7) Hack saw
Hammer - (ripping or straight claw)
- (curved claw)
- (flooring)
- (dry wall)
- (slidge)

(9) Chalk box
(10) Plum box
(11) Brace (ratchet)
(12) Expansive bit
(13) Auger bit
(14) Screwdriver bits
(15) Forstner bit
(16) Countersink bit
(17) Framing square
(18) Combination square
(19) Try square
(20) Twist drill
(21) Smooth plane
(22) Block plane
(23) Power Auger bit
(24) Dividers
(25) Nail set
(26) Hand rasp
(27) Level
(28) Scratch awl
(29) Utility knife
(30) Center punch
(31) Scriber
(32) Pliers - cutting
- pinched (carpenter)
- combination
(33) Six (6) foot wood rule
(34) Tape
(35) T - level
(36) Wrecking bar
(37) Trammel points
(38) Screwdrivers - straight
- phillips
(39) Tin snips
(40) Chisel

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 4.0 (cont'd) HAND TOOLS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
4.2	The learner will correctly use the following given carpenters basic tools and demonstrate use with 80% accuracy. They will layout specific sizes and cuts with hand tools. (Note: Use the equipment mentioned above on 4.1) (1) Hammer (2) Handsaw (3) Plane (4) Framing square (5) Brace (6) Auger bit	4.2	Select and use carpenters basic tools in select projects. Instructor will rate. Layout and cut board 6'. 2'-5/8", 3", 1'-1.16", 1/2 1/8", using a framing square, 6' wood rule and hand saw. (1) Hammer (2) Handsaw (3) Plane (4) Framing square (5) Brace (6) Auger bit
4.3	The learner will identify given main basic parts of the carpenters basic hand tools with 80% accuracy. (See above list on 4.1)	4.3	Draw and label parts for the following hand tools. Draw arrow to correct part. (Use list above on 4.1)
4.4	The learner with 90% accuracy will list three safety rules for the given hand tools. (1) Hammer (2) Hand Saw (3) Screwdriver (4) Knives (5) Adjustable wrenches	4.4	List three safety precautions for each of the following: (1) Hammer (2) Hand Saw (3) Screwdriver (4) Knives (5) Adjustable wrenches

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 5.0 — POWER TOOLS

Given a list of 12 power tools the learner will identify each tool and will write a primary use for each tool and three safety rules for each tool with 85% accuracy.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		5.0	List the names of 12 power tools and their primary use. List three safety rules for each.
5.1	The learner will identify given power tools with 90% accuracy. (1) Circular saw (2) Sabre saw (3) Router (4) Reciprocating saw (5) Power planer (6) Table saw (7) Radial arm saw (8) Band saw (9) Jointer (10) Power miter box (11) Grinder (12) Portable electric drill	5.1	Select and identify correctly in writing the name of the basic power tools. (1) Circular saw (2) Sabre saw (3) Router (4) Reciprocating saw (5) Power planer (6) Table saw (7) Radial arm saw (8) Band saw (9) Jointer (10) Power miter box (11) Grinder (12) Portable electric drill
5.2	Given safety instruction on all power tools mentioned above the learner will list three safety rules for each with 100% accuracy.	5.2	Write three safety precautions for each power tool mentioned above.
5.3	Given the main parts of the power tools the learner will identify correctly with 80% accuracy. (See 5.1 list)	5.3	Label or identify the main parts of the power tools, √(See 5.1 list)

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 5.0 (cont'd) POWER TOOLS

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
5.4	The learner will correctly use given power tools with 100% accuracy. Layout and cut a board to specific length.	5.4	Perform correctly the following length and angles and cut with circular saw. (1) 8"-90° cut (2) 12 1/4"- 90° cut (3) 16" - 90° cut (4) 24 1/2" - 90° cut (5) 11 3/8" - 45° cut (6) 12 1/8" - 30° cut (7) 13 5/8" - 60° cut (8) 15 3/16" - 45° cut

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 6.0 — Maintenance of tools

Given five (5) hand tools and ten (10) power tools the learner will demonstrate basic maintenance, lubrication and/or sharpening with 85% accuracy.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		6.0	Take five (5) hand tools, and ten (10) power tools lubricate and/or sharpen. Hand tools: Plane, Auger bit, Chisel, Drill bit, Tin snips Power tools: Router, Circular saw, Table saw, Band saw, Jointer, Power miter box, Radial arm saw, Portable electric drill, Grinder
6.1	Given demonstration & instruction on maintaining hand tools the learner will demonstrate knowledge by lubricating and sharpening given tools with 80% accuracy. (1) Plane (2) Auger bit (3) Chisel (4) Drill bit (5) Tin snips	6.1	Perform maintenance or sharpen the following tools: (1) Chisel (2) Auger bit (3) Drill bit (4) Plane (5) Tin snip

COURSE CARPENTRY - Basic

TERMINAL PERFORMANCE OBJECTIVE NO. 6.0 (cont'd) Maintenance of tools

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
6.2	Given a demonstration & instruction on maintaining power tools the learner will demonstrate knowledge by lubricating and sharpening given tool, with 80% accuracy. (1) Circular saw (2) Sabre saw (3) Router (4) Table saw (5) Band saw (6) Jointer (7) Power miter box (8) Cut off saw (Radial Arm) (9) Portable Electric drill (10) Grinder	6.2	Perform maintenance or sharpening of tools (Assigned by instructor and evaluated on results) (1) Circular saw (2) Sabre saw (3) Router (4) Table saw (5) Band saw (6) Jointer (7) Power miter box (8) Cut off (Radial Arm) (9) Portable electric drill (10) Grinder

COURSE CARPENTRY - Basic

TERMINAL PERFORMANCE OBJECTIVE NO. 7.0 Building Products

The learner, with 80% accuracy, will identify the kind, use and size of given building materials. Successful completion of each I.P.O. will be the criteria for success for this terminal objective.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.1	Given instruction of hardwoods and soft woods the learner will list four examples of each with 80% accuracy. Softwoods: Cedars & Junipers, Cypress, Douglas fir, White fir, Hemlocks, Larch, Pines, Redwood, Spruce, Tamersek, Yew Hardwoods: Alder, Ashes, Aspen, Basswood, Beech, Birch, Buckeye, Butternut, Cherry, Chestnut, Willow, Cottonwood, Elm, Gums, Hackberry, Hickories, Locurt, Magnolia, Oaks, Sycamore, Walnut, Yellow - Poplar	7.1	Identify and list four hardwoods and four softwoods.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 7.0 (cont'd) Building Products

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.2	The learner will identify with 80% accuracy the given use, manufacturing and size class, factory or shop lumber. Use classification: 1) Structural lumber 2) Factory and shop lumber 3) Yard lumber Size Classification: 1) Rough or nominal size 2) Actual or dressed size Manufacturing Classification: 1) Rough lumber 2) Dressed (surfaced) lumber 3) Worded lumber	7.2	Write and identify the use, manufacturing and size class factory or shop lumber.
7.3	The learner will demonstrate their knowledge of given lumber measurement and wood joints with 80% accuracy by identifying and making specific common wood joints. Handout consist of following joints: 1) Spliced (for compression) 2) Spliced (for tension) 3) Spliced (for cross strain) 4) Oblique butt joint 5) Lap Joint 6) Cross lap 7) End lap joint 8) Toe nailed 9) Doweled butt 10) Dado	7.3	Identify and construct specific wood joint in handout.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE
OBJECTIVE NO. 7.0 (cont'd) Building Products

	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
7.3 cont.	11) Rabbett 12) Glued and blocked 13) Plain butt 14) Coped joint 15) Edge butt joint 16) Battened joint 17) Doweled joint		
7.4	The learner will identify given plywood construction and grading with 80% accuracy. They will list three types of plywood panels. A) Veneer core B) Lumber core C) Particle board core Plywood grading N - (Highest or best) A B C D	7.4	List the three types of plywood panels and the five common grading.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 8.0 — Building Insulation

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		8.0	List two types of building insulation and give two examples of each.
8.1	Given instruction on thermal building insulation the learner will list with 80% accuracy the two types of material used today and two examples of each. Types: a) Flexible Blanket & batt Loose fill b) Rigid Structural Insulation board Slab or block	8.1	List two major types of building insulators and give two examples of each.
8.2	The learner will correctly define given STC (sound transmission class) and give the best STC for a home with 80% accuracy. STC (sound transmission class) scale to measure sound efficiency and a rating of 50 is desirable.	8.2	Define STC, and what is the best STC for a home.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 9.0 Hardware rough & finish

Given a written test covering nail identification, nail sizing, screw identification, bolt identification and door identification the learner will achieve 85% or better accuracy.

INTERMEDIATE PERFORMANCE OBJECTIVES NO.	NO.	CRITERION MEASURES
	9.0	Identify the following nails: 1) Common nails 2) Box nails 3) Finish nails 4) Casing nails 5) Brad nails 6) Concrete nails 7) Cut nails 8) Roofing nails 9) Shingle nails 10) Gypsum board nails 11) Masonry nails 12) Double head nails 13) Clout nails 14) Ratchet nails 15) T-nails 16) Escutcheon nails 17) Tacks 18) Staples 19) Dowel pins 20) Lead Tell whether a door is left or right hand. (Instructor will draw on board.) Identify bolts and screws on handout: 1. wood screws 2. metal screws 1. carriage bolts 2. machine bolts 3. lag bolts 4. stove bolts

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 9.0 (cont'd) Hardware rough & finish

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.1	The learner will demonstrate his/her knowledge concerning nails by listing given names of various common nails with 80% accuracy. 1) common nails 2) box nails 3) finish nails 4) casing nails 5) brad nail lengths 6) concrete nails 7) cut nails 8) roofing nails 9) shingle nails 10) gypsum board nails 11) masonry nails 12) double head nails 13) clout nails 14) ratchet nails 15) t-nails 16) escutcheon pin 17) tacks 18) staples 19) dowel pins 20) lead	9.1	Draw the following nails and give proper use.
9.2	Given instruction on the various types of staples, acrews, bolts and anchors the learner will identify with 80% accuracy. (Given types below) A. Staples a) crosscur chisel b) inside chisel	9.2	List and identify common types of staples, screws, bolts, and anchors.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 9.0 (cont'd) Hardware rough & finish

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
9.2 cont	c) outside chisel d) chisel B. Screws a) Wood screws 1. flat head 2. round head b) Metal screws 1. flat heads 2. oval head 3. round head c) Bolts 1. carriage bolts 2. machine bolts 3. lag bolts 4. stove bolts d) Anchors a) anchor bolts b) metal ties c) sleeper pins d) toggle bolts		
9.3	The learner will demonstrate their knowledge on given door terms by identifying with 80% accuracy the type of hinges and bolts. List four basic type of door hinges. 1) full mortise 2) half mortise 3) full surface 4) half surface Bolts 1. surface 2. flush 3. floor 4. chain	9.3	List four main types of hinges and bolts.

COURSE CARPENTRY - BASIC

PERFORMANCE
UNIT NO. 9.0 (cont'd) Hardware rough & finish

INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
Given four (4) nails the learner will correctly name the penny (d) size of each with 75% accuracy.	9.4	Write the penny size of the nail given to you.
Given instruction on identifying doors whether they are right-hand, left-hand, right-hand reverse, or left-hand reverse the learner will identify with 90% accuracy.	9.5	Identifying whether a door is left-hand, right-hand, left-hand reverse or right-hand reverse instructor will draw or use doors available.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 10.0 — Adhesives

The learner will list the main two types of adhesives and give two examples of each with 80% accuracy.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		10.0	List two main types of adhesives and give two examples of each.
10.1	Given instruction on safety rules concerning adhesives, the learner will list with 80% accuracy. 1) check label for specifications 2) use good ventilation 3) no flames 4) avoid prolonged breathing 5) avoid getting near sensitive area (eyes,etc.) 6) store in cool, dry place.	10.1	List five safety rules for adhesives.
10.2	The learner will identify the two types of adhesive, and give two examples of each. 1. Glues (glue wood) a. Liquid (glue wood) b. Animal (glue wood) 2. Mastics a. Paste cement (tile) b. Adhesives gun (paneling)	10.2	List the two major types of adhesive, give two examples and use.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 11.0 — Building Nomenclature & Blueprint Reading

Given an exploded view of platform construction the learner will label each part with 85% accuracy and given a blueprint of a residence and a work sheet the learner will read the print and fill out the worksheet with 85% accuracy.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		11.0	Label the parts on a exploded view or platform construction. Fill out a worksheet from a blueprint.
11.1	Given instructions on scales the learner will demonstrate knowledge with 80% accuracy by defining "scale" and drawing a small box to scale according to instructor. Draw a box. 1/2" = 1' - 0" 1" = 1' - 0" 3/8" = 1" - 0" Scale - Drawings that are reduced proportionly to a size that can be handled conveniently.	11.1	Define scale. Draw a box to scale according to instructor handout using the following scale. 1/2" = 1' - 0" 1" = 1' - 0" 3/8" = 1' - 0"
	The learner will identify given symbols commonly found on a drawing. 1. Brick 2. Stone 3. Concrete 4. Structural steel 5. Interior partitions 6. Glass 7. Insulation 8. Wood 9. Sheet metal flashing 10. Earth 11. Rock	11.2	Identify common symbols.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 11.0 (cont'd) Building Nomenclature & Blueprint Reading

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.2	12. Sand 13. Gravel or cinders 14. Toilet 15. Septic tank 16. Gas 17. Water heater 18. Heating unit 19. Supply duct 20. Exhaust duct 21. Thermostat 22. Refrigerator 23. Drop in Range 24. Ceiling fixtures 25. Wall fixture 26. Ceiling fan 27. Floor outlet		
11.3	Given instruction on the nomenclature of building the learner will identify parts of a building with 80% accuracy. 1. Roof- Gable, hip, gambrel, mansard. 2. Wall- Non-bearing, bearing 3. Floor- Concrete, wood 4. Foundation- Concrete sill	11.3	Name and identify the parts of a building.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 11.0 (cont'd) Building Nomenclature & Blueprint Reading

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
11.4	The learner will demonstrate knowledge of blueprints by naming parts of the working drawing with 80% accuracy. 1. Plans- Floor, plot 2. Elevations- Front, back, right, side, left side. 3. Sections- Thru fireplace, thru windows, thru walls. Details- Beam, kitchen, truss.	11.4	Name the following parts of the working drawings.
11.5	Given instruction on platform framing the learner with 80% accuracy will list steps in building a single story house.	11.5	List steps on building a single story house.

COURSE CARPENTRY - BASIC

TERMINAL PERFORMANCE OBJECTIVE NO. 12.0 — Simulated House Construction

The learner will correctly use given tools, measurements, safety rules and materials to build a storage building with 85% accuracy in each.

NO.	INTERMEDIATE PERFORMANCE OBJECTIVES	NO.	CRITERION MEASURES
		12.0	Build a storage building according to blueprint.
12.1	The layout will demonstrate knowledge of a given basic hand tools, power tools and layout by constructing the following projects to within 85% accuracy as per given specifications. 1. Saw horse 2. Shoulder tool box 3. Miter box 4. Saw vise 5. Work bench 6. Stepladder 7. Straight edge 8. Door jack 9. Tool case 10. Suitcase tool box.	12.1	Make the following: 1. Saw horse 2. Miter box 3. Work bench 4. Shoulder tool box 5. Saw vise 6. Stepladder 7. Straight edge 8. Door jack 9. Tool case 10. Suitcase tool box The instructor will grade quality of finished work.
12.2	The learner will participate in the construction of a utility building, storage building, houses, or other small buildings with 85% accuracy in each of the following: A. Safety B. Blueprint reading C. Selection of materials D. Hand tool use E. Power tool use - accuracy of measurements.	12.2	Make a utility building, storage building, houses, other small buildings, as assigned You will be graded on the following: A. Safety B. Blueprint reading C. Selection of materials D. Hand tool use E. Power tools use - accuracy of measurement.