UNIT OBJECTIVE

After completion of this unit, the student should be able to identify different kinds of pipes and fittings. The student should also be able to demonstrate proper procedures for fitting different kinds of pipes. This knowledge will be evidenced through demonstration and by scoring 85% on the unit test.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with plumbing to the correct definitions.
2. Identify common pipe fittings.
3. Match the various kinds of pipes to their uses.
4. Select from a list the reasons for using cutting oil.
5. Identify tools used in plumbing.
7. Demonstrate the ability to:
   a. Make an 8" pipe nipple
   b. Cut and flare copper tubing
EXPLORATORY AGRICULTURE PLUMBING

INFORMATION SHEET

I. Terms and definitions

A. Plumbing - Piping and pipe attachments used to carry water into buildings and to drain away sewage and waste

B. Fitting - Piece used to join pipe to provide an opening in pipe and to change the direction of pipe

C. Soil pipe - Any pipe that receives the discharge of waste water from house fixtures

D. Septic tank - Tank which receives all the sewage piped into it and allows the process of sewage decomposition to take place

E. Lateral pipe - Pipe which drains the liquid from the septic tank to the soil

F. House drain - Pipe which carries all the sewage from the house

II. Common pipe fittings (figure 1)

A. 45° elbow
B. 90° street elbow
C. Bell reducer
D. Coupling
E. Nipple
F. Tee
G. Union
H. Bushing
I. Cap
J. Plug
K. Floor flange
L. Straight cross
M. "Y"
N. 90° elbow

III. Kinds of pipes and their uses

A. Black - Used for natural and L.P. gas, oil, and air lines

B. Galvanized - Used for water lines

C. Copper tubing - Used for water, refrigeration, and waste systems
Pipe Fittings

Nipple
Bushing
90° Elbow
Coupling
45° Elbow
Cap
Straight Cross
90° Street Elbow
Plug
Bell Reducer
Tee
Union
"Y"
Floor Flange

FIGURE 1
INFORMATION SHEET

D. Cast iron - Used in sewage systems
E. Brass or lead - Used for traps and drains
F. Plastic - Used in water systems
G. PVC - Plastic pipe used in a water or sewage system
H. Soil - Used in sewage system; generally a cast iron pipe

IV. Reasons for using cutting oil
A. Reduces friction and provides for cooling of the die
B. Permits tools to cut easier
C. Lengthens lifetime of tools
D. Floats out burrs and cuttings from the die

V. Tools used in plumbing (Figure 2)
A. Flaring tool    E. Pipe cutter
B. Ratchet die stock  F. Die
C. Pipe vise  G. Tubing cutter
D. Pipe wrench  H. Ratchet pipe reamer

VI. Reasons for using joint compound
A. Insures tight joints
B. Prevents threads from rusting