

Sheet Metal Working Workshop

LESSON PLANS

Lesson One – 2 hour field trip to Sheet Metal Workers Local #73

- I. Overview of the sheet metal working trade and local #73's apprenticeship program.
- II. Tour of the school and workshop

Lesson Two – 2 ½ hour workshop

- I. Introduction to drafting/pattern making as related to sheet metal
- II. Introduction project
 - A. Introduction to drafting tools
 - B. Explanation of drawing, definitions and symbols, line work guidelines.
 - C. Review project instructions and walk students through the project.
 - D. Assist students in completing their drawings.

Handouts: Patternmaking drawing and instructions, and definitions

Tools and materials: 18" x 12" drafting paper, T-squares, drawing boards, pencils, erasers, masking tapes, drafting triangles and eraser shield

Lesson Three – Approximately 3 to 4 hour session per group

- I. Create fitting on the pattern completed during the previous class.
 - A. Calculate a cut list
 - B. Measure and scratch bends and mark the location of rivets (two on each side) for both pieces
 - C. Drill holes for rivets
 - D. Bend metal on hand brake
 - E. Rivet seams
- II. Students will connect their fitting to create a duct run.
 - A. Bend back two sides on each end of the duct run using bar folder.
 - B. Cut S and drive cleats to size.
 - C. Work with a partner to connect with S and drive cleats.
 - D. Continue until the class creates one long duct run.

Handouts: Safety rules, drawings from lesson two

Tools and Materials: 2- 26 to 28 gauge sheet metal sheets (10" x 11"), 1/8" drill bits, rivet gun, 1/8" rivets, Aviator snips, scratch awl and/or scribe, bar folder block of wood and C clamp to protect surface from drilling, seamers, Combination square, gloves, safety glasses, hammer, hand brake, S and drive cleat.



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