

Lesson #2: Blueprint reading

Objectives

Students will be able to...

- Identify blueprints, blue lines, and CAD prints.
- Obtain the information they need from a working drawing.
- Develop a bill-of-materials.

Common Core Standards

LS 11-12.6
 RSIT 11-12.2
 RLST 11-12.2
 Problem Solving and Critical Thinking 5.1
 Leadership and Teamwork 9.1 & 9.7
 Health and Safety 6.2 & 6.10
 Responsibility and Flexibility 7.4
 Technical Knowledge and Skills 10.0, 10.1, 10.2
 Cabinetmaking and Wood Products Pathway A1.4, A1.7, A3.1, A4.1, A4.3, A4.4, A4.7,
 & A6.1
 Residential and Commercial Pathway D 2.1, D3.1 & D3.2 D 3.3

Materials

Box Working Drawing
 Bill-Of-Materials
 Clean Up Job Volunteers
 Safety Glasses

Lesson Sequence

- Finish *the Bill of Materials* then have the students get out their copies of the *Box Working Drawing*, and staple the two sheets together, and hang onto them. After using them to construct their project, the students will turn them in with the project for 25% of their total project grade. (15-20 minutes)
- Review the *clean-up jobs* that students can volunteer to complete at the end of each

period in the shop. Possibly provide extra credit to these volunteers. (5-10 minutes)

- Have students put on a pair of safety glasses and bring their bill of materials packet into the shop. For the rest of the period, demonstrate how to transfer the project pieces onto the pine board. Since most of the projects included with this curriculum are maximized to fit a 2, 3, or 4 foot piece of 1x12, be sure to stress to your students that unless they lay out their project the way you have demonstrated, they won't be able to fit all of the pieces on their board. (15-20 minutes)

Assessment

Monitor student learning while students work on their Bill of Material. Ask clarifying questions to students so they can demonstrate their understanding.

Check for understanding during demonstration in the shop.

Accommodations/Modifications

One on One Support
Provide Additional Visuals
Scaffold Instructions

Clean-up Jobs and Job Descriptions

Shop foremen (2): Makes sure that everyone is helping and that those with specific jobs are doing them. Reports to Instructor before class is released.

Safety glasses (2): Counts safety glasses before going in to shop, makes sure same number is back in case before final bell, reports any missing, or broken pairs to foremen and/or instructor.

Tools (2): Makes sure all tools that are out, get back into the tool room.

Tool Room (2): Makes sure that all tools brought into the tool room are put away in the correct place. Makes sure all tools are accounted for and cleans/straightens tool room if necessary. Reports any discrepancies or problems to foremen and/or teacher.

Machinery (2): Makes sure machines are cleaned off and cleaned out if necessary. Reports anything that is not right (broken, out of adjustment, etc.) to foremen and/or instructor.

Work benches (2): Makes sure all tools, materials, etc. are cleaned off of benches. Then sweeps them down.

Floor (sweeping) (2-4): Makes sure the entire shop is swept, and all sawdust is picked up and place in the trash or proper receptacle.

Shop Volunteers – Sign Ups

Job:	Student #1	Student #2
Shop foreman		
Safety glasses		
Tools		
Tool room		
Machinery		
Work benches		
Floor sweeping		
Floor Sweeping		