

Lesson #1: Blueprint Reading/Bill of Materials

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
Working Drawing PowerPoint
<https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3Aa9fc3d58-1990-4af2-af49-58193ebf2fcd>

Lesson Sequence

- Hand out copies of the *Box Working Drawing* and the *Bill-of-Materials*. Use the *Working Drawing PowerPoint* and have your students follow along on their prints while you point out some of the key components of a working drawing to them.
- Be sure to cover the (1) there are usually three-views of the object to be built in a

working drawing; top, front, and right side. (2) Point out the different lines used on the drawing, such as dimension lines and object lines and point out any details or notes that the drawings contain.

- Answer any questions or clarifications students may have (50 minutes)

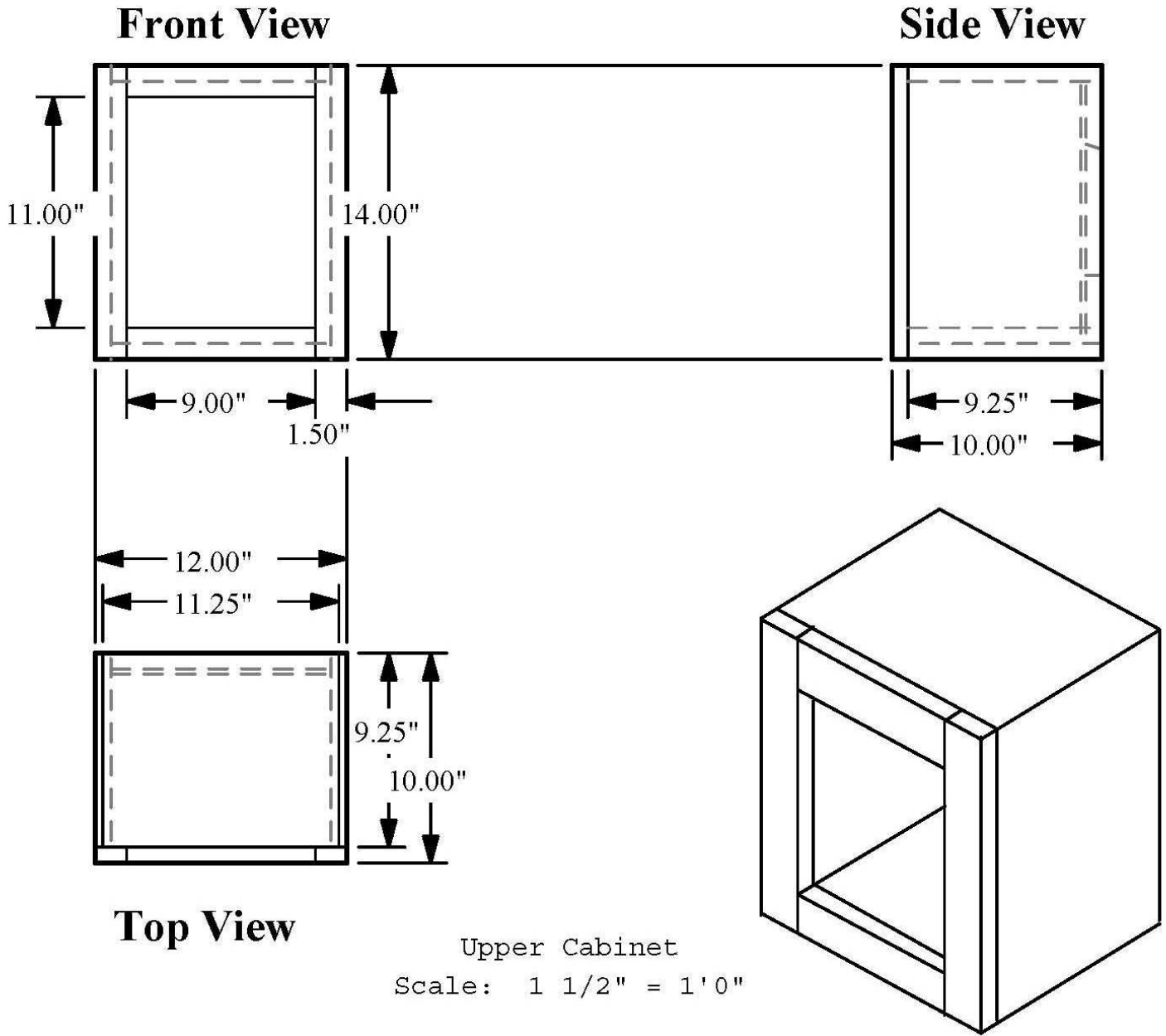
Assessment

Check for understanding through questioning.

Accommodations/Modifications

Visuals
Partner Students Up as Needed
One on One Support

Box Working Drawing



Upper Cabinet
Scale: 1 1/2" = 1'0"

Project #1: Bill of Materials

Part #	Description	Material Type	Dimensions (calculate footage)		Footage (bd/ft, lin/ft, sq/ft)	Quantity Of Parts	Unit Cost	Total Cost
				=				\$-
				=				-
				=				-
				=				-
				=				-
				=				-
				=				-
				=				-
				=				-
				=				-
To calculate board feet with all measurements in inches:					$\frac{T \times W \times L}{144}$		Total	
					144		Cost:	\$-