DECONSTRUCT TO CONSTRUCT!

TRADE LINK: CABINET MAKING

TEACHER BACKGROUND

Duration: two 45-minute classes
Group Size: 2
Setting: Classroom

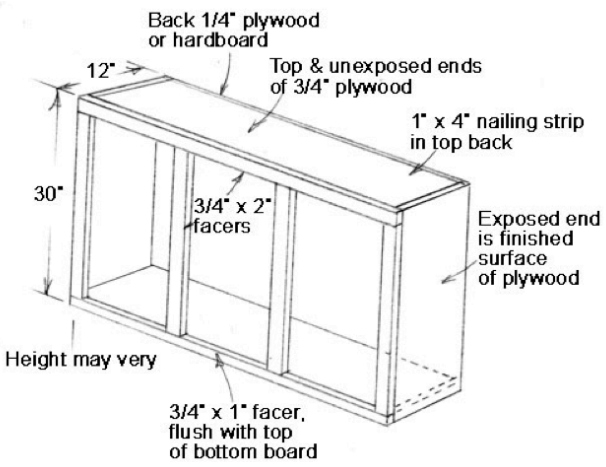
RATIONALE:

Cabinetmaking involves more than simply designing, building, and repairing cabinets. It encompasses working with a variety of structures such as doors, windows and window frames, and all types of furniture. Cabinetmakers use many types of materials in this work, including veneer, fiberboard, particleboard, hardboard, plywood, adhesives, abrasives, hardware and metal fastenings. Students will have the opportunity to work backwards in creating a blueprint for a cabinet located within the classroom or somewhere in the school.

METHOD:

This activity will test students' knowledge of deconstructing a piece of furniture or cabinetry to create the blueprint for the piece that they select. Working backwards will take a keen eye and ensure that students pay attention to the detail necessary to ensure that a cabinet maker would be able to construct their woodworking piece from their produced plans. Learners will receive a few samples of deconstructed blueprints similar to the example below. The teacher could also bring in blueprints found online or for Ikea products. Instructors will go over their expectations and the level of detail required, based on the class and pre-existing knowledge of the students.

Students must work together to ensure that no details are missed in deconstructing the cupboard. They must ensure that measurements are precise and that their model accurately reflects what a cabinetmaker would need to build or use to build his finished product.



MATERIALS:

- Computer with internet access (in case research is necessary)
- Blueprints from ikea or other online blueprints found.
- If possible, a deconstructed cabinet that can be sourced
- Measuring tape
- Graph paper
- Pencils

GETTING STARTED:

Take a look around. Identify how many cabinets; desks or other pieces of furniture are inside this classroom. Do you ever wonder who makes all of these items and products? Most people don't, but cabinetmakers and woodworkers create products for people worldwide. It could be industrially manufactured, made in someone's wood shop or made "the old fashioned" way by Mennonite communities for example. Today, you'll have the opportunity to help a cabinetmaker by deconstructing a piece of furniture and drawing a blueprint for them to follow in creating their work of art.

THE ACTIVITY (SKILLS FOR SUCCESS:

1. Have students look around the class and discuss what they would need to create a blueprint for a cabinetmaker. (Creativity & Innovation, Collaboration)
2. Study and determine the key components in creating a blue print, based on the materials provided by the teacher. (Writing)
3. Determine a list of materials that could or would be needed to create a cabinet of this nature from start to finish. Conduct online research to assist in determining common materials needed for particular tasks. Look for the type of work that would work best, the handle placement, hinges, drawers, etc. (Problem Solving)
4. Students will take measurements of everything needed to construct the piece of furniture. Information that is not found should be derived from measurements taken. (Numeracy).
5. Have students price out a rough estimate for constructing this piece of furniture, based on their knowledge from the blueprint. (Numeracy)

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(CONTINUED)

BRANCHING OUT (EXTENSIONS AND VARIATIONS):

1. If available, students may be able to create a 3D model using CAD technology and print out their design. CAD will help them better identify mistakes that they may have made. (Digital)
2. Have students swap blueprints and attempt to build a 3D module using materials found within the classroom (i.e. cardstock, cardboard, etc.). (Reading)
3. Younger learners could determine the process or steps that go into creating a cabinet from start to finish with their teacher or a professional cabinetmaker.

INFORMATION BITE:

They must follow blueprints and designer specifications exactly to construct and repair these wooden articles. Accuracy is imperative, as they regularly need to fit small parts and sub-assemblies together, to precisely make and install cupboards and cases and to operate woodworking machines to cut and form parts. Today sophisticated equipment, basic woodworking machines, and portable power and hand tools are used to perform many of the job functions.

Cabinetmakers must have a broad knowledge of wood, its structures and properties, and an assortment of cabinetry hardware and materials. A worker with training and education could start in production and work their way up to a supervisory or management position in the wood industry, as the skills are transferable to a number of other professions.