Unit 7: Furniture and Cabinet Construction

Content Area: **Applied Technology**
Course(s):
Time Period: **Marking Period 1**
Length: **1 Week & Ongoing**
Status: **Published**

Brief Summary of Unit

Students will learn about the many types and styles of furniture. They will learn about carcass construction as it pertains to cabinetry. They will explore drawer and door construction techniques. Students will learn how to deal with moisture issues and how to divide furniture construction into a series of small manageable assemblies. They will learn how to create table legs, shelves, and tops. Students will learn about the many careers in the furniture industry and learn how to recognize a well-done piece of furniture.

Revised July 2023

Essential Questions/Enduring Understandings

Essential Questions

What is a “furniture style” and what are the characteristics of different styles?

What are the relationships between style and function?

Enduring Understandings

All furniture has a main unit that is built upon to create the finished piece of work.

All parts of the furniture piece must be constructed to allow for the wood's continuous movement.

The final assembly of all of the sub-assemblies should form one harmonious piece of furniture.

Objectives

Students will be skilled

how to recognize a particular furniture style.

how to create a carcass upon which to build a piece of furniture.

how to break down a furniture piece into sub-assemblies.

how to choose an appropriate set of legs for a style and construct them.

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how to construct and attach drawers to a project.

how to construct raised panels and why they are used so widely in the furniture industry.

how to assemble all assemblies into a finished work.

Students will know

the effect moisture plays in the construction of furniture and how to allow for wood movement.

all tools are inherently dangerous.

when designing furniture, style is as important as function.

breaking a project into smaller sub-assemblies makes a project easier to manage.

the altering of one part of a furniture design often changes both the look and feel of a piece.

by creating a raised panel many wood movement problems can be easily overcome.

Learning Plan

Preview the essential questions and connect to learning throughout the unit.

Introduce new vocabulary.

Present lesson on period furniture.

Present the lesson on carcass construction.

With the use of the Internet, have students find examples of the various furniture styles. Present the findings to the class.

Utilizing several pieces of furniture, explain how each can be broken into sub-assemblies.

Read and discuss the relevant selections in the woodworking textbook.

Present the lesson on drawer construction; show examples of several acceptable methods for creating drawers.

Demonstrate the proper procedures for sanding both the edge and end grain on the vertical belt sander.

Demonstrate how to operate the dust collection system with the stationary sanders.

Demonstrate the proper procedures for attaching doors, drawers, and tops to a furniture piece.

Read and discuss the relevant selections in the woodworking textbook pertaining to drawer & door construction.

Have students use the Internet to research and show examples of the kind of furniture available to consumers today. Using a spreadsheet, list the materials used as well as the cost of each.

Writing prompts as homework, sharing, and evaluation in class.

Have students demonstrate proficiency in the final assembly of their work.

Allow students to work independently to apply finishes to their projects.

Have students self–evaluate their finished work using a rubric

Assessment

Formative Assessment
Do Now Questions
Exit Tickets
Writing Prompts on various steps of assembling furniture
Participation in class discussion
Student conferencing at various stages of project
Process plan

Summative Assessment
Quizzes
Unit Test
Completed Furniture Piece Grades with Rubric

Benchmark Assessment
Mid Term Exam
Final Exam

Alternative Assessment
Presentation on furniture styles

Materials

Woodworking Textbook

Internet

Safety Equipment

Power tools, electric sander, sandpaper, stain, drill, planar, etc.

Standards

9.4.12.CI	Creativity and Innovation
9.4.12.CT	Critical Thinking and Problem-solving
LA.RST.11-12.2	Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
LA.RST.11-12.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
LA.RI.11-12.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
LA.RI.11-12.5	Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
LA.RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
9.4.12.IML	Information and Media Literacy
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.

Suggested Strategies for Modification

https://docs.google.com/spreadsheets/d/1gk0WLBehVNuQkRKLMYATvY5Zk0vpdBKbdrcODZS_YFw/edit?usp=sharing