

**Course:** *Woodworking 2*  
**Unit # 3:** *Furniture Making and Cabinetry*

**Year of Implementation:** 2024-2025.

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## Stage One - Desired Results

**Link(s) to New Jersey Student Learning Standards for this course:**

*{provide all applicable links to standards here}*

<https://www.state.nj.us/education/cccs/2020/>

- **Unit Standards:** *(keep each of the following headings in place)*
  - **Content Standards**
    - 8.2.12.ED.1: Use research to design and create a product or system that addresses a problem and make modifications based on input from potential consumers.
    - 8.2.12.ED.4: Design a product or system that addresses a global problem and document decisions made based on research, constraints, trade-offs, and aesthetic and ethical considerations and share this information with an appropriate audience.
    - 8.2.12.ED.6: Analyze the effects of changing resources when designing a specific product or system (e.g., materials, energy, tools, capital, labor).
    - 8.2.12.NT.2: Redesign an existing product to improve form or function.
  - **21st Century Life & Career Standards**
    - 9.3.12.AC.6 Read, interpret and use technical drawings, documents and specifications to plan a project.
    - 9.3.12.AC-CST.9 Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.
    - 9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues
    - 9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.

- 9.3.MN-PPD.3 Monitor, promote and maintain a safe and productive workplace using techniques and solutions that ensure safe production of products.  
<https://www.state.nj.us/education/cccs/2020/2020%20NJSLS-CLKS.pdf>
- **English Companion Standards**
  - List grade-level appropriate companion standards for History, Social Studies, Science and Technical Subjects (CTE/Arts) 9-12. English Companion Standards are required only in these subject/content areas. This section can be deleted for all other content areas.
  - Grade 9-10 Companion Standards:
    - RST.9-10.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
    - RST.9-10.7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.  
[https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA\\_Companion9-10.pdf](https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA_Companion9-10.pdf)
  - Grade 11-12 Companion Standards:
    - RH.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, qualitatively, as well as in words) in order to address a question or solve a problem.
    - RST.11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
    - 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.  
[https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA\\_Companion11-12.pdf](https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA_Companion11-12.pdf)
- **Interdisciplinary Content Standards**
  - MATH.G-CO.D.12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.

- MATH.G-GMD.B.4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
- MATH.G-MG.A.3. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
- **NJ Statutes:** NJ State law mandates the inclusion of the following topics in lesson design and instruction as aligned to elementary and secondary curriculum.

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35 A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A. 18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

Diversity and Inclusion (N.J.S.A. 18A:35-4.36a) A board of education shall incorporate instruction on diversity and inclusion in an appropriate place in the curriculum of students in grades kindergarten through 12 as part of the district's implementation of the New Jersey Student Learning Standards.

Asian American and Pacific Islanders (AAPI) P.L.2021, c.410 Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416)

For additional information, see

**NJ Amistad Curriculum:** <https://www.nj.gov/education/amistad/about/>

**Diversity and Inclusion:** <https://www.nj.gov/education/standards/dei/index.shtml>

- (Sample Activities/ Lessons): <https://www.nj.gov/education/standards/dei/samples/index.shtml>

**Asian American and Pacific Islanders:**

- [Asian American and Pacific Islander Heritage and History in the U.S.](#)

*A Teacher's Guide from EDSITEment offering a collection of lessons and resources for K-12 social studies, literature and arts classrooms that center around the experiences, achievements and perspectives of Asian Americans and Pacific Islanders across U.S. history.*

**Transfer Goal:** Students will be able to independently use their learning to construct a custom piece of furniture from a given set of plans.

- *acquire, integrate, and apply design processes and essential technical skills to solve problems, create products, and improve the quality of life for our local and global community*

Enduring Understandings {use Arial 11 font}

Students will understand that. . .

EU 1

- reading and interpreting a plan of procedure is a important part of the design process

EU 2

Essential Questions {use Arial 11 font}

- What is the value in being able to interpret plans and technical drawings?
- How does product design, tool selection and tool usage combine to affect the overall quality of a woodworking project?

<ul style="list-style-type: none"> <li>• there are a variety of tools and techniques a woodworker can use to create a desired product.</li> </ul> <p><i>EU 3</i></p> <ul style="list-style-type: none"> <li>• the art of furniture making or cabinetry encompasses a vast array of woodworking skills and techniques</li> </ul>	
<p><u>Knowledge</u> Students will know . . .</p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> <li>• how to read project plans</li> <li>• how to read a bill of materials</li> <li>• how to interpret a working drawing</li> </ul> <p><i>EU 2</i></p> <ul style="list-style-type: none"> <li>• the most effective tool and technique for a desired application</li> <li>• which tool to use a hand tool versus a power tool</li> <li>• which wood joint to use for a project</li> </ul> <p><i>EU 3</i></p> <ul style="list-style-type: none"> <li>• types of frame construction</li> <li>• leg and rail construction</li> <li>• proper lumber selection</li> <li>• shelf construction</li> <li>• top construction</li> </ul>	<p><u>Skills</u> Students will be able to . . .</p> <p><i>EU 1</i></p> <ul style="list-style-type: none"> <li>• interpret a project plan to complete a desired project</li> </ul> <p><i>EU 2</i></p> <ul style="list-style-type: none"> <li>• select the proper tool for the job</li> <li>• know the proper technique to achieve the desired outcome</li> <li>• operate hand/power tools safely and effectively</li> </ul> <p><i>EU 3</i></p> <ul style="list-style-type: none"> <li>• construct face frames and aprons</li> <li>• construct a variety of legs and rails</li> <li>• select the appropriate lumber for the given project</li> <li>• design and construct shelves</li> <li>• design and construct tops</li> </ul>

<b>Stage Two - Assessment</b>	
•	
<b>Stage Three - Instruction</b>	
<p><b><u>Learning Plan:</u> Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer. {place A, M and/or T along with the applicable EU number in parentheses after each statement} All knowledge and skills must be addressed in this section with a corresponding lesson/activity which teaches each concept. The following color codes are used to notate activities that correspond with interdisciplinary connections and 21st Century Life &amp; Career Connections (which involves Technology Literacy):</b> <b>Red = Interdisciplinary Connection; Purple = 21st Century Life &amp; Career Connection</b></p> <p>For example:</p> <ul style="list-style-type: none"><li>● Teacher led discussions on cabinet making techniques (A EU1,2)</li><li>● Demonstrations on power tool usage(A,M, EU2)</li><li>● Student note taking on wood joint assembly(A, EU1,2)</li><li>● Practice new skill sets on power tools(M, EU1,2)</li><li>● Create a safety and operations worksheet outlining the function of given tools (M,T EU2)</li><li>● Demonstrate proper tool usage (M,T EU1,2)</li><li>● Student journaling (M,T EU1,2)</li></ul>	



<b>Pacing Guide</b>
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{This chart will be identical in all of the units for this course.}

<b>Unit #</b>	<b>Title of Unit</b>	<b>Approximate # of teaching days</b>
1	<i>Safety and Machine Maintenance</i>	30
2	<i>The Assembly Process</i>	40
3	<i>Furniture Making and Cabinetry</i>	80
4	<i>Finishing Process</i>	30

### **Instructional Materials**

*Students will use chromebooks for google classroom, which will often have plans and directions for projects.*

Rulers  
 Measuring Tapes  
 Tri Square  
 Framing Square  
 Sliding T-bevel  
 Chisels  
 Files  
 Sanders  
 Sandpaper  
 Block planes  
 Portable Drill  
 Drill Bits  
 Hammers  
 Mallet  
 Screwdrivers

Glue  
Wood Clamps  
C-clamps  
Bar clamps  
Hand saws  
Tablesaw  
Bandsaw  
Radial Arm Saw  
Drill Press  
Surface Planer  
Jointer

**Accommodations**



*Special Education:* The curriculum will be modified as per the Individualized Education Plan (IEP). Students will be accommodated based on specific accommodations listed in the IEP.

*Students with 504 Plans:* Students will be accommodated based on specific accommodations listed in the 504 Plan.

*English Language Learners:* Students will be accommodated based on individual need and in consultation with the ELL teacher.

*Students at Risk of School Failure:* Students will be accommodated based on individual need and provided various structural supports through their school.

*Gifted and Talented Students:* Students will be challenged to enhance their knowledge and skills through acceleration and additional independent research on the subject matter.