

Course: *Woodworking 1*
Unit #2: *Hand Tool Use*

Year of Implementation: 2023-2024

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Stage One - Desired Results

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

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

https://www.nj.gov/education/standards/clicks/Docs/2014_9.3_21LifeAndCareers.pdf

https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA_Companion9-10.pdf

https://www.nj.gov/education/standards/ela/Docs/2016NJSLS-ELA_Companion11-12.pdf

- **Unit Standards:**

- **21st Century Life & Career Standards**

- 9.3.12.AC-CST.4 Apply scheduling practices to ensure the successful completion of a construction 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.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
- 9.3.12.AC-DES.8 Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.
- 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving
- 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

- **English Companion Standards**

- Grade 9-10 Companion Standards:
 - RI.9-10.7. Analyze various perspectives as presented in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
 - NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content

- Grade 11-12 Companion Standards:
 - NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
 - NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

- ***Interdisciplinary Content Standards***
 - RI.9-10.7. Analyze various perspectives as presented in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
 - NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content

- ***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: <http://www.njamistadcurriculum.net/>

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 identify, select, and use the appropriate hand tool(s) to safely and accurately construct a given project.

As aligned with LRHSD Long Term Learning Goal(s):

- communicate and collaborate using appropriate technical terms to describe, analyze, interpret, and judge their work and the work of others
- 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

Students will understand that. . .

EU 1

each hand tool has a specific set of uses.

EU 2

reading and interpreting plans is an important part of the construction process.

EU 3

accuracy will affect the outcome of a project.

Knowledge

Students will know . . .

EU 1

Essential Questions

EU 1

- What factors influence tool selection?
- How do woodworkers choose tools, techniques, and materials to express their ideas?
- Can different tools be used to create the same finished product?
- What joints and fasteners are best suited based on the design and application of the project?

EU 2

- What is the value of being able to interpret plans and procedures?
- Are all woodworking plans complete?
- Is it always necessary to include a Bill of Materials as part of the plan?

EU 3

- Why is accuracy important?
- How do you determine what measuring device is the most appropriate to use in a given situation?
- What are the ramifications if one of your pieces is inaccurate?

Skills

Students will be able to. . .

EU 1

- the most effective tool and technique for the desired application. (9.3.12.AC-DES.8, 9.3.12.AC -CST.9)
- the difference between cross cutting and ripping. (9.3.12.AC-DES.8, 9.3.12.AC -CST.9)
- which type of fasteners or wood joints should be used for a given application. (9.3.12.AC-DES.8, 9.3.12.AC -CST.9)

EU 2

- layout diagrams given in plans may need to be adjusted based on imperfections in the lumber.(9.4.2.CT.3)
- the Bill of Materials lists all of the information that you need to construct a project.(9.4.12.CT.2)
- that certain pieces of wood are better suited for different applications.(9.4.2.CT.3)

EU 3

- layout is an important step in making accurate cuts.(9.3.12.AC-CST.4, 9.3.12.AC-DES.6, 9.4.2.CT.3)
- measuring tapes and squares are used to measure length.(9.3.12.AC-CST.9)
- there is a specific way to make a cut with each hand tool.(9.3.12.AC-CST.9,9.4.2.CT.3)

- demonstrate the uses of each hand tool.(9.3.12.AC-DES.8, 9.3.12.AC-CST.9)
- select the appropriate tool for a desired process.(9.3.12.AC-DES.8, 9.3.12.AC -CST.9)
- select the appropriate fasteners or wood joint when combining parts together.(9.3.12.AC-DES.8, 9.3.12.AC-CST.9)

EU 2

- Plan cut parts from lumber to minimize waste while taking grain pattern and imperfections into account. (9.4.2.CT.3)
- read and interpret a Bill of Materials. (9.4.12.CT.2)
- select the appropriate piece of wood to construct a specific part.(9.4.2.CT.3)

EU 3

- layout, cut, and assemble given wood joints.(9.3.12.AC-CST.4, 9.4.2.CT.3)
- use measuring tapes and squares to measure specific distances.(9.3.12.AC-CST.9)
- use each hand tool appropriately.(9.3.12.AC-CST.9)

Stage Two - Assessment

Stage Three - Instruction

Learning Plan: **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**. The following color codes are used to notate activities that correspond with interdisciplinary connections and 21st Century Life & Career Connections (which involves Technology Literacy): **Red = Interdisciplinary Connection; Purple = 21st Century Life & Career Connection**

- Teacher led discussions on proper hand tool usage (A EU1, EU3)
- Demonstrations on hand tool usage.(A,M, EU1, EU3)
- Student note taking on tool use and safety.(A, EU1, EU3)
- Practice new skill sets on hand tools (M, EU1, EU3)
- Layout, cut and assemble wood joints using hand tools. (M, T, EU1, EU2, EU3)
- Demonstration of the importance of accuracy when laying out and processing material. (M, T, EU3)
- Practice making accurate measurements with appropriate tool choice (M,T, EU3)
- Teacher led discussion of different style fasteners and wood joints in different applications (M, EU1)
- Teacher led discussion on interpreting layout diagrams (A, M, EU2)
- Teacher led discussions on Bill of Materials (A, M, EU2)
- Create a safety and operations worksheet outlining the function of given tools (M,T EU1)
- Demonstrate proper tool usage (M,T EU1,EU3)
- Student journaling (M,T EU1,EU2, EU3)

Pacing Guide

Unit #	Title of Unit	Approximate # of teaching days
1	Safety	30
2	Hand Tool Use	50
3	Power Tool Use	70
4	Assembly and Finishing	30

Instructional Materials

Subscription

- Woodsmith Library Annual subscription <https://www.woodsmithlibrary.com/unlimited/>

Fully Equipped woodworking shop

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.