Unit 2 - Hardware & Drilling

Content Area: **Arts**
Course(s): **Wood Arts Tec 2**
Time Period: **Semester 1**
Length: **2 Weeks**
Status: **Published**

Standards

MA.G-CO.A.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
1.5.2.Pr5	Developing and refining techniques and models or steps needed to create products.
1.5.2.Cn10	Synthesizing and relating knowledge and personal experiences to create products.
8.2.2.NT.1	Model and explain how a product works after taking it apart, identifying the relationship of each part, and putting it back together.
8.2.2.ETW.1	Classify products as resulting from nature or produced as a result of technology.
8.2.2.ETW.2	Identify the natural resources needed to create a product.
MA.G-MG.A.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

Enduring Understandings

1. The geometry principles of circles and cylinders plays are significant role in drilling processes and techniques.

2. Hardware and interchangeable parts allow for quick construction and repair of products or technology.

3. Different natural resources are needed to create hardware's that is resistant to the elements or have structural integrity.

Essential Questions

1. What is the concept of interchangeable parts and how has this had an impact on society?

2. How should different drill bits be ordered to achieve a precise shape and depth?

3. What natural resources are used to make hardware?

Knowledge & Skills

Hardware & Drilling Students will be able to:

- Identify natural materials hardware is made from.
- Choose the correct hardware for a building application.
- Order drill bits to create precise shapes when drilling.
- Create a project requiring various types of hardware using tools and machines.
- Choose the proper machines based on prior knowledge and experience.
- Drill a succession of holes to leave a bore and through hole.

Hardware:

- Screws
- Nails
- Washers
- Bolts
- Nuts

Resources

Resources:

- Drill Press
- Drill Bits
- Drill Index
- Hardware
- Fasteners
- Lumber
- PPE

Transfer Goals

1. Students will be able to understand that interchangeable parts and hardware are used to fasten or repair products efficiently.

2. Students will be able to use drilling techniques to create a succession of holes according to a plan at the required depth and diameter.

Assessments

Assessments

Modifications

Modifications