

WOODS 8

STRING ART CHALLENGE

Time duration goes here

Introduction

This is an introductory level project. String Art is an art form that uses string wrapped around nails to outline a design. The string is also used to fill in negative or positive spaces on a wooden base.

In this unit students will:

- Draft a string art design
- Fabricate a wooden base,
- Lay out your design on the base,
- String up your design,
- Share your piece with the class.

Within this unit you will cover; wood grain identification, stock breakout, lamination strategies, use of hand tools (jack plane, hand saw, hammer, hand drill), ideating simple designs, design plotting, design transfer, applying finish to wood and creating appealing finish with string.

Prerequisites

This is an introductory unit so minimal skills are needed.

C

Explain / Recount and reflect on experiences and accomplishments

T

Develop Ideas Question and Investigate

PS

Personal values and choices

BIG IDEAS

Design can be responsive to identified needs.

Complex tasks require the acquisition of additional skills

Complex tasks may require multiple tools and technologies

WOODS 8

STRING ART CHALLENGE

Vocabulary

Lamination
Jack Plane
Reference Edge
Reference Face
Hand Saw

Grit
Wood Grain
Vice
Stock Breakout
Clamping
Wood Glue
Square
Waste Side

Plot
Drafting
Dimensioning
Layout
Precision
To Scale
Curing

CONTENT - Students will know

- Historical and current contexts of wood working.
- Identification, characteristics, and properties of a variety of woods, both manufactured and natural.
- Elements of plans and drawings.
- Woodworking techniques.
- Traditional and non-traditional joinery using hand tools and power equipment.
- Options for reuse of wood and wood products.

Student Support

- E.L.L.**
- Demonstrate all stages of project, using clear language to build on knowledge.
 - Use visual aids when describing tools or techniques.
 - Ask for reenactments of safety procedures to relay clarification.

WOODS 8

STRING ART CHALLENGE

Workflow chart

Each day is set at 80 minutes

Day 1	Day 2	Day 3	Day 4	Day 5
Introduction	Layout	Sawing		Stock Breakout
Day 6	Day 7	Day 8	Day 9	Day 10
	Laminating	Layout	Sanding	
Day 11	Day 12	Day 13	Day 14	Day 15
Finishing		Nailing	Stringing	
Day 16	Day 17	Day 18		
Flex day	Presentation / Assessment			

WOODS 8

STRING ART CHALLENGE

Lesson Breakdown

LESSON TOPIC	OBJECTIVES	METHODS	ACTIVITY	MATERIALS	ASSESSMENT
1 Introduction to string art challenge	<ul style="list-style-type: none"> - Recognize Design Process - Read through challenge - Start ideation sketches 	<ul style="list-style-type: none"> - Lecture 	<ul style="list-style-type: none"> - Student Exploration 	<ul style="list-style-type: none"> - Info, process, safety - Power point - Colouring books 	<ul style="list-style-type: none"> - Range of ideas generated -
2 Layout on graph paper	<ul style="list-style-type: none"> - Draw to size layout - Plan out in process sheet 	<ul style="list-style-type: none"> - Lecture / Demo 	<ul style="list-style-type: none"> - Draft out design - Plot nail points 	<ul style="list-style-type: none"> - Graph paper - Rulers - Process sheet 	<ul style="list-style-type: none"> - Quality of drawing - Approval of final design
3 Sawing	<ul style="list-style-type: none"> - Create layout lines - Cut straight lines with saw 	<ul style="list-style-type: none"> - Demo 	<ul style="list-style-type: none"> - Students practice sawing - Saw baseboard - Fill out process sheet 	<ul style="list-style-type: none"> - Saw - Vices - Safety Sheets - Safety Glasses 	<ul style="list-style-type: none"> - Cutting on line - Straight cut - Process sheet
4 Stock Breakout	<ul style="list-style-type: none"> - Know reference edge and face - Create a reference edge 	<ul style="list-style-type: none"> - Demo 	<ul style="list-style-type: none"> - Practice planing - Plane 2 reference edges on board - Fill out process sheet 	<ul style="list-style-type: none"> - Safety sheet - Scrap wood - Jack Planes - Base boards 	<ul style="list-style-type: none"> - Check for level reference edge - Boards given - Process sheet
5 Laminating	<ul style="list-style-type: none"> - Laminate 2 boards together 	<ul style="list-style-type: none"> - Demo 	<ul style="list-style-type: none"> - Laminate base boards together - Fill out process sheet 	<ul style="list-style-type: none"> - Base Boards - Wood Glue - Clamps - Safety Sheet 	<ul style="list-style-type: none"> - Securing of the edges, no gaps - Process sheet
6 Sanding	<ul style="list-style-type: none"> - Know the levels of sanding 	<ul style="list-style-type: none"> - Demo 	<ul style="list-style-type: none"> - Sand baseboards - Fill out process sheet 	<ul style="list-style-type: none"> - Sand paper - Wood Base 	<ul style="list-style-type: none"> - Elimination of wood imperfections - No scratches or cut marks - Process sheet

WOODS 8

STRING ART CHALLENGE

Lesson Breakdown

LESSON TOPIC	OBJECTIVES	METHODS	ACTIVITY	MATERIALS	ASSESSMENT
7 Finishing	- Know different finishes	- Demo	- Students will apply a fishing to their base - Fill out process sheet	- Rags - Finish - Wood Base - Safety Sheet	- Even coat - Nice Appearance - Process sheet
8 Nailing	- Nailing straight	- Demo	- Students will put nails in appropriate locations - Fill out process sheet	- Nails - Hammer - Safety Sheet	- Straight Nails - Appropriate depth - Process sheet
9 Stringing	- Create String Art	- Demo	- String up their board	- String - Process Sheet	- Final Appearance - Process sheet
10 Presentation	- Share your project with classmates - Students will discuss design process	- Presentation	- Share ideation, positives, struggles		- Clear understanding of project and what it entails

Literacy Objectives

Oral - Students will explain their design process to peers and teachers.
 - Students will recount safe working habits to peers and teachers.
 - Students will present their projects to their class.

Written - Students will demonstrate understanding of safe work habits by completing safety forms.
 - Students will demonstrate their understanding of wood working processes by filling in their process journal.

WOODS 8

STRING ART CHALLENGE

CURRICULAR COMPETENCIES - Students will be able to

- Choose a design opportunity.
- Identify criteria for success.
- Generate potential ideas and add to others.
- Choose an idea to pursue.
- Develop a plan that identifies key stages and resources.
- Record iterations of prototyping.
- Gather peer/user/expert feedback.
- Make changes, troubleshoot and test again.
- Identify and use appropriate tools for production.
- Make a plan for production that includes key stages.
- Use materials in a way that minimizes waste.
- Reflect on design and thinking process.
- Demonstrate an awareness of safety.
- Identify and evaluate the skills and skill levels needed, individually or as a group, in relation to a specific task, and develop them as needed.