

FRANKLIN-SIMPSON HIGH SCHOOL

Course Name: Principles of Agriculture **Unit Name: Concrete Stepping-Stone Construction**

Quality Core Objectives: 1.1, 2.36, 2.38, 2.3, 2.30, 2.37, 2.3, 2.8, 2.9, 2.10

Unit 1 The Language of Physics: Using Mathematics to Describe Motion	
1. General Safety in the Shop	a. Identify safety hazards in the shop area
	b. Identify correct disposal of waste products
	c. Identify correct placement and storage of tools
	d. Analyze safety hazards of each stationary tool in the shop
2. Use of Power Tools in the Shop	a. Demonstrate ability to adjust and maintain power hand tools
	b. Demonstrate ability to operate power hand tools within 1/8" of an inch
3. Basics of Wood-Working	a. Identify proper wood for power tool operation
	b. Demonstrate measurement of wood products within 1/8"
	c. Construct concrete forms of 2"X4" and OSB following all power tool safety instructions
B.1. Basics of Concrete Construction	a. Calculate amount (volume) of concrete needed to fill concrete form
	b. Demonstrate ability to properly mix and spread concrete

Purpose of the Unit:

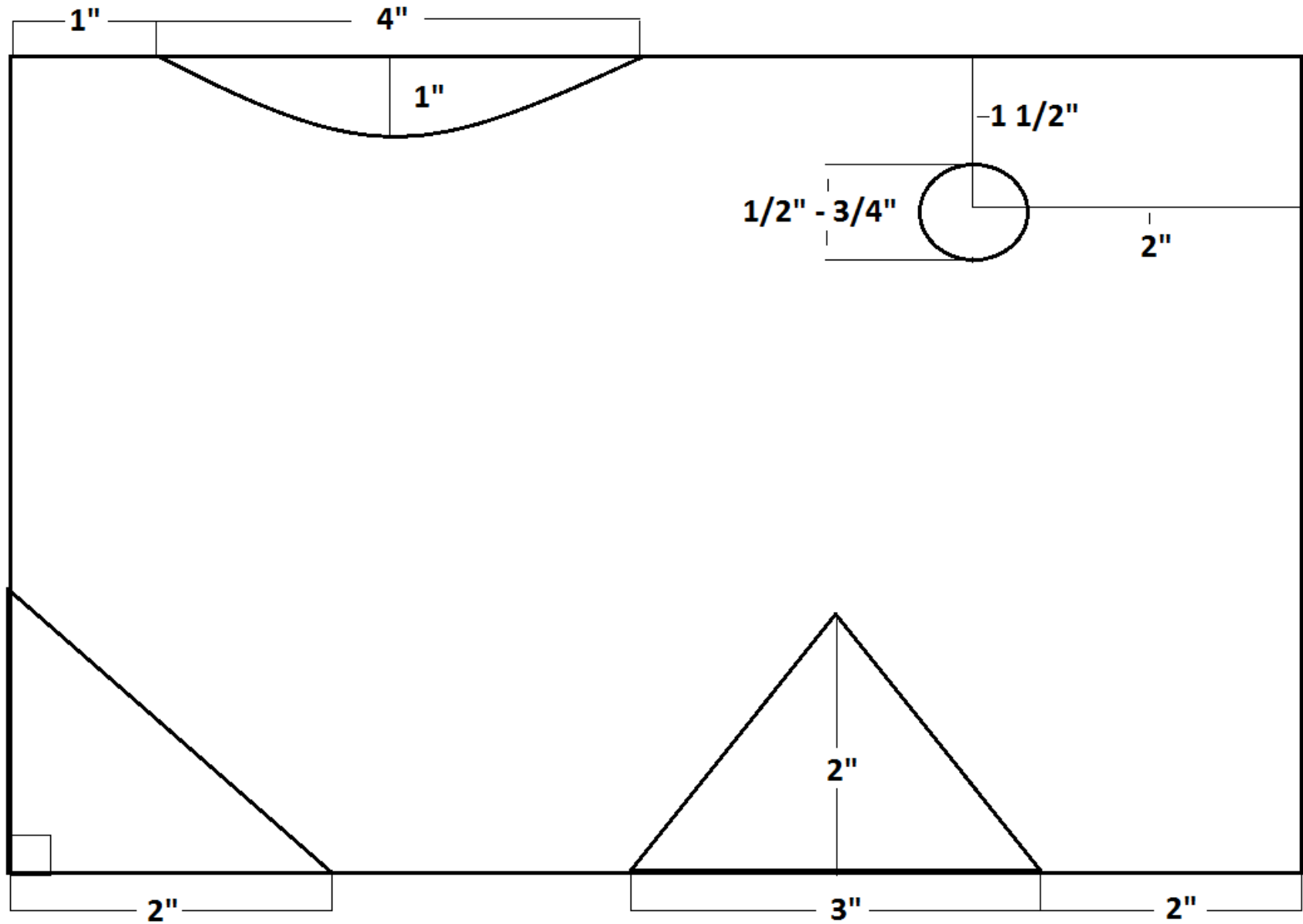
Students are given an introduction to Ag. Construction and are exposed to safety of wood-working, power tools, measurement and masonry calculations.

Daily Lesson Guide

Day	Lesson Content and Objectives	Focus Questions	Critical Thinking (High Yield / Literacy /LTF/etc.)	Engagement	Assessment and/or Accommodations
1	General Safety in the Shop	Identify safety hazards in the shop area Identify correct disposal of waste products		Students are escorted through the shop and are acquainted with the disposal, storage	Informal assessment of students' comprehension of materials demonstrated.

		Identify correct placement and storage of tools		and possible hazards in the shop area.	
2	General Safety in the Shop	Analyze safety hazards of each stationary tool in the shop	Students are given packet of information concerning general safety in the shop and must pass with 100% in order to operate tools in the shop.		25 question MC assessment which must be completed with 100%.
3	Use of Power Tools in the Shop	Demonstrate ability to adjust and maintain power hand tools		Instructor/select students demonstrate ability to adjust and utilize power tools properly	Informal assessment based upon questioning throughout the demonstration
4	Use of Power Tools in the Shop	Demonstrate ability to operate power hand tools within 1/8" of an inch	Students cut, drill and create template of wood based off of rubric	Students work in pairs completing template.	Students are graded based upon their finished product.
5	Use of Power Tools in the Shop	Demonstrate ability to operate power hand tools within 1/8" of an inch	Students cut, drill and create template of wood based off of rubric	Students work in pairs completing template.	Students are graded based upon their finished product.
6	Basics of Wood-Working	Identify proper wood for power tool operation Demonstrate measurement of wood products within 1/8" Construct concrete forms of 2" X4" and OSB following all power tool	Students construct their forms based upon submitted drawings of the finished product.	Students work in pairs completing forms.	Students are graded based upon their finished product.

		safety instructions			
7	Basics of Wood-Working	<p>Identify proper wood for power tool operation</p> <p>Demonstrate measurement of wood products within 1/8"</p> <p>Construct concrete forms of 2" X4" and OSB following all power tool safety instructions</p>	Students construct their forms based upon submitted drawings of the finished product.	Students work in pairs completing forms.	Students are graded based upon their finished product.
8	Basics of Concrete Construction	<p>Calculate amount (volume) of concrete needed to fill concrete form</p> <p>Demonstrate ability to properly mix and spread concrete</p>		Students work in pairs to calculate volume of concrete needed and properly mix and spread concrete within their forms.	Students are graded based upon their finished product by rubric.



20	Proper safety utilizing each tool is carried out successfully
20	Proper measurements of each measurement defined (within 1/8")
5	Work area is cleaned when finished
5	Tools are properly placed back in tool room
	Total

Concrete Forms

35	Area for stepping stone is 1' X 1' (within 1/8")
20	Corners are square
15	Concrete is evenly spread and air bubbles are removed correctly
10	Concrete is stamped correctly
10	Safety procedures are utilized at all times
10	Work area is clean
	Total