

Lesson Plan

Title: Metal Garden Sculpture	Grade Level: 10-11
The Big Idea (Overall Concept): Design and build a sculpture for a specific environment	
Description of Lesson (Brief Summary): Students will design and build a fitting decorative sculpture for an outdoor garden setting using the skills of observation, ideation, and critical reflection. They will use any of the metalworking techniques learned and practiced previous assignments. The development of these ideas will be sketched, written, discussed as a class, in small groups, and with me individually. Their final work will be displayed, photographed, and critiqued in a garden setting.	
Time: 17 x 60 min classes (3.5 weeks)	
Enduring Understandings: <ul style="list-style-type: none"> • People create and interact with objects, places, and design that define, shape, enhance, and empower their lives. • Through artmaking, people make meaning by investigating and developing awareness of perceptions, knowledge, and experiences. • Artists, curators and others consider a variety of factors and methods including evolving technologies when preparing and refining artwork for display and or when deciding if and how to preserve and protect it. 	21st Century Skills: <ul style="list-style-type: none"> • Creativity • Analytical thinking • Problem solving Studio Habits: <ul style="list-style-type: none"> • Develop craft • Envision • Express
Essential Questions: <ul style="list-style-type: none"> • How do artists and designers create works of art or design that effectively communicate? • How does making art attune people to their surroundings? • What methods and processes are considered when preparing artwork for presentation or preservation? 	Technical Skills: <ul style="list-style-type: none"> • Sketching / ideation • Planning through prototypes • Sawing • Piercing • Riveting • Soldering • Polishing • Stamping • Roll printing • Heat patina • Chemical patina
National Core Art Standard's: http://www.nationalartsstandards.org/ <ul style="list-style-type: none"> • VA:Pr5.1.IIa - Evaluate, select, and apply methods or processes appropriate to display artwork in a specific place. • VA:Re7.1.IIa - Recognize and describe personal aesthetic and empathetic responses to the natural world and constructed environments. • VA:Re7.1.IIa - Recognize and describe personal aesthetic and empathetic responses to the natural world and constructed environments/ • VA:Cn10.1.Ia - Document the process of developing ideas from early stages to fully elaborated ideas. 	

Instruction - daily plan:

Day 1 - Introduction (20 min) / school garden (40 min)

I will begin the day by introducing an outline of the lesson. The objective of this assignment is to design and create a sculpture that's made intentionally to exist in a specific environment. Students are able to use any metal techniques that we've learned so far in earlier lessons. There is an open-ended creative freedom to this project, so every student's project will end up looking completely different. I will not show any examples of garden sculptures at this point because I want them to think independently. After the introduction, we will move class to the garden. Students will bring their sketchbooks, sit, and observe the space silently. They will sketch what they see and brainstorm ideas of what artwork would look fitting to exist there. I will ask the students: What do you see? What do you notice? What's the intention of creating a garden sculpture? What are you trying to communicate? What does it mean for a sculpture to "make sense" in its environment? How can we challenge cliché and predictability and think more creatively? Students will sketch at least three ideas of garden sculptures.

Day 2 - We will meet in the classroom, then make our way to the garden to spend time there for the entire hour. We will begin class by sitting in a circle and have a discussion about our observations, inclinations, and ideas from the day before. After about 20 minutes of discussion, students will work in their sketchbooks, sit, draw, and observe silently. When 10 minutes are remaining, students will get into groups of three to share their progress.

Day 3 - Students will use the hour to develop a process plan. Looking over their sketches and ideas, they will pick their best one and work on developing it. On a sheet of paper, they will sketch different angles and details of their sculpture, and answer the following questions: What does this sculpture mean to you? Why did you choose this form? How does it fit in the space of a garden? What processes are you going to use? What challenges might you encounter? Their process plan sketches will be turned in to me at the end of the hour. If students need more time, they can show me at the beginning of class the next day.

Day 4 - Students will receive their process plans back with helpful feedback. Students who are still developing concrete ideas will be paired up to discuss their individual ideas with each other. Students who are ready to begin will use the day to create their work. I will walk around to answer questions and discuss with students individually. We will ideally have enough sheet metal and scraps for students to work with, but if not, I will help acquire any extra resources students may need.

Day 5 - All students should be working on the first stages of creating their sculpture. This will look differently for everyone based off of their particular design. I will walk around and work with students individually.

Days 6, 7, 8, and 9 - Students will begin class by setting up their materials and getting straight to work. Students will be working through their own individual ideas and processes. They will be sawing out forms for their sculpture. Pieces of metal will be attached by either piercing and riveting or soldering. Texture and color will be added through stamping, roll printing, polishing, and heat and chemical patinas. They will file, sand, and polish their work. Each student will have their own particular process and challenges. I will walk around and work with students individually, and also encourage them to discuss with each other and use external resources for guidance.

Day 10 - I will remind students that this is their halfway point through the project. They will have the day plus five more days to complete their projects.

Days 11, 12, and 13 - Students will begin class by setting up their materials and getting straight to work. Students will be working through their own individual ideas and processes. They will be sawing out forms for their sculpture. Pieces of metal will be attached by either piercing and riveting or soldering. Texture and color will be added through stamping, roll printing, polishing, and heat and chemical patinas. They will file, sand, and polish their work. Each student will have their own particular process and challenges. As they work toward completion, they may run into challenges with their structural decisions. They may have questions about how to achieve a particular texture. I will walk around and work with students individually, and also encourage them to discuss with each other and use external resources for guidance.

Day 14 - Students will work for the hour toward completing their projects. Final details will be added. Work should be completely or almost done by the end of the hour.

Day 15 - Students will cover their work in a protective sealant to protect from outdoor risks of weathering (oxidation, corrosion). After this process, their work will be complete.

Days 16 and 17 - These two days will be spent in the garden for a group critique and to photograph the sculptures in the environment they were intended to exist in.

During critique, we will discuss the following topics:

- What inspired this design?
- In which ways is this fitting for a garden?
- What was a success and a challenge?
- How does the work interact with its surroundings?

Students will have time at the end of each critique day to photograph their sculptures from a variety of different angles. They will upload their top three photographs to a google drive.

Resources: (Websites, Books, Music, etc...)

- Garden sculpture examples
 - <https://www.architecturendesign.net/amazing-diy-ideas-for-outdoor-rusted-metal-projects/>
 - <https://www.ofdesign.net/interior-design/20-ideas-for-unusual-garden-sculptures-to-make-your-own-2929>

Materials Needed:

- Sketchbook and pencil
- Sheet metal - 16-20 gauge thickness of copper and brass
- Saw and blades - size #0, #1, and #2
- Bezel wire (copper, brass)
- Silver solder - easy, medium, hard
- Drills and drill bits
- Copper and brass wire
- Sand paper
- Polishing machine
- Roll printing machine
- Hammer, pliers, files
- Stamps
- Torch, setup, and safety protection
- Chemical patina
- Citric acid (pickle)
- Flux
- Fire extinguisher
- Sink, soap, sponge, paper towel
- Sealant to protect from weather

Evaluations:

Formative

- Group discussions (day 2)
- Process plan (day 3)
- Working with students individually (days 4-15)

Summative

- Final critique and photographs (days 16 and 17)