

## Objectives

- Students will be able to find the circumference of a circle.
- Students will be able to identify and discuss the style of Andrew Smith's work
- Students will be able to observe and copy basic parts of machinery and create a new composition based on Andrew Smith's Moon Pool

## Introduction

Visit Andrew Smith's website with students and show them his pieces. Several video clips are available to showcase kinetic sculptures. You can also read the artist statements attached to the pieces and his biography.

Watch the video for *Moon Pool*, on display at the Springville Museum of art.

<https://www.youtube.com/watch?v=DEOqjKFBd9w>

Ask the students the following questions:

- What do you think inspired Andrew Smith to create his artwork?
- What forces are causing the sculpture to move?
- What are three words you can use to describe his artwork?
- How is Andrew Smith's artwork different from other paintings and sculptures you have seen?

## Learning Activity

1. Pass out copies of *Moon Pool* to students. Each student should have their own copy or have one copy per two students.
2. Review with students how to find the circumference of a circle.
3. Challenge students to find the circumferences of 4 circles in the piece.
4. When students are finished, pass out images of Andrew Smith pieces and other images of machinery parts or real machinery if you have them available.
5. Instruct students to create their own Andrew Smith inspired image using a combination of parts.
6. Instruct students to look carefully at the images of machinery as they draw the individual parts with their pencils.

When students are finished drawing their machinery parts, instruct them to outline the pencil lines with charcoal or chalk pastel. Students will then take their finger (or a blending stump if available) and "shade" the image with the charcoal smudges.



Andrew Smith, *Moon Pool*, 2004

## Variations

If students are not familiar with finding the circumference of a circle, students can also identify the angles found in *Moon Pool*.

## Extension

When students are finished with their pieces, have them measure the circumferences of the circles in their artwork.

## Sources

[Andrewsmithart.com](http://Andrewsmithart.com)

## Materials

- Images of *Moon pool* and other pieces by Andrew Smith
- Images of machinery parts or real pieces of machinery- screw, gears, wheels, etc. (Students can also bring in their own machinery pieces if desired)
- Vine Charcoal (found at art stores) or black chalk pastels
- A piece of copy paper for each student
- Pencils
- Rulers
- Erasers
- Blending Stumps (Optional)
- Various sizes of circular objects (lids, etc.) or compasses to draw or trace circles

## Images from the Museum

- Andrew Smith, *Moon Pool*

## Utah Core Standards

Mathematics Standard 4.MD.C

An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through  $\frac{1}{360}$  of a circle is called a "one-degree angle," and can be used to measure angles.

Solve real-world and mathematical problems involving area, surface area, and volume.

Visual Art Standard 4

Objective 3c

Explain how scientific information can be communicated by visual art.

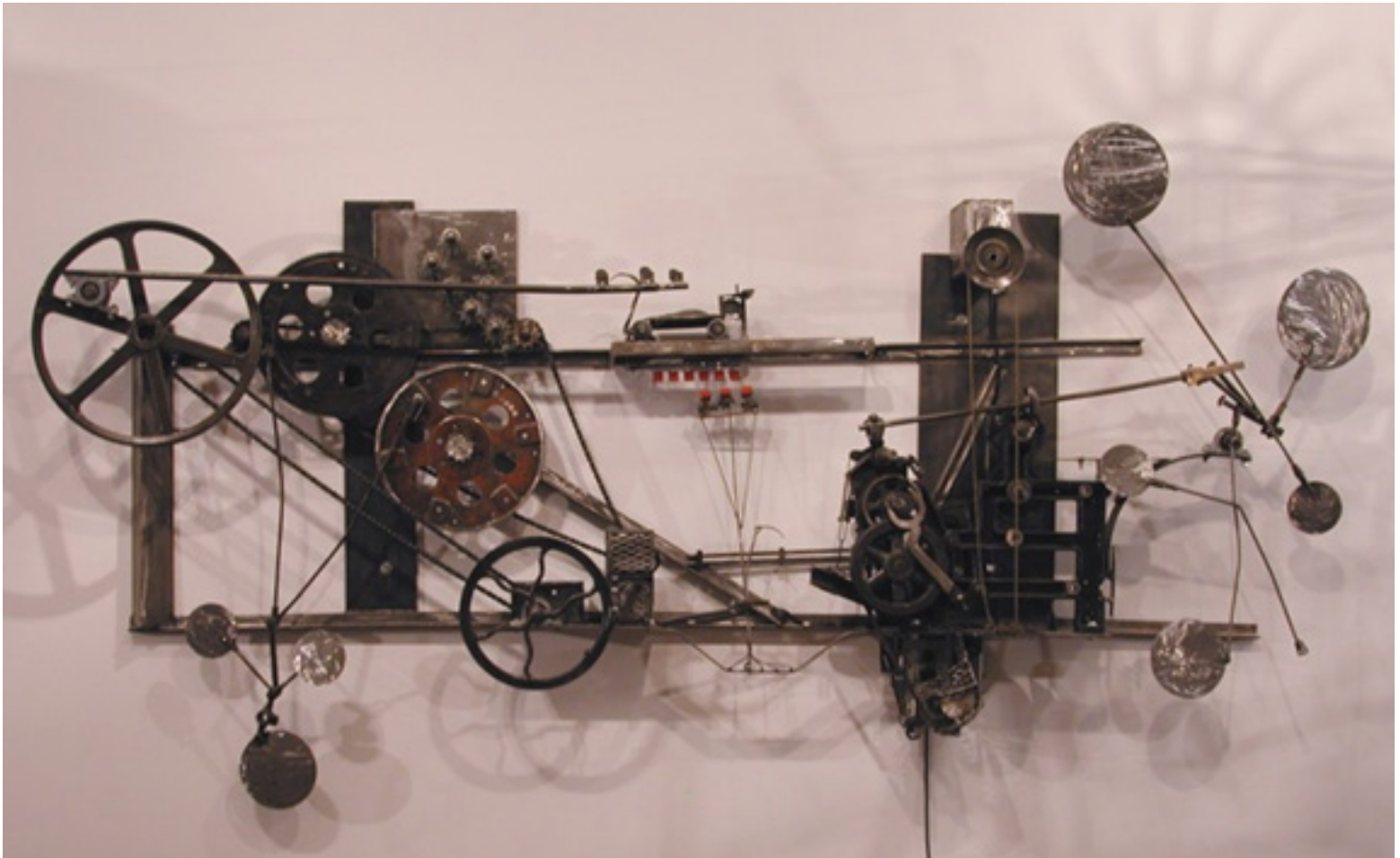
## Assessment

CATEGORY	4	3	2	1	Score
<b>Use of materials</b>	Student typically keeps drawing materials and area clean and protected without reminders. The student shows great respect for the materials and his fellow students.	Student typically adequately cleans materials and work area at the end of the session without reminder, but the area may be messy during the work session. Student shows respect for materials and fellow students.	Student adequately cleans and takes care of materials if reminded. Occasional spills and messy work area may be seen. Shows some respect for materials and fellow students.	Student deliberately misuses materials AND/OR does not adequately clean materials or area when reminded. Shows little respect for materials or fellow students.	
<b>Drawing</b>	Drawing is expressive and detailed. Shapes, patterns, shading and/or texture are used to add interest to the piece. Student has great control and is able to experiment a little.	Drawing is expressive and somewhat detailed. Little use has been made of pattern, shading, or texture. Student has basics, but had not "branched" out.	Drawing has few details. It is primarily representational with very little use of pattern, shading or texture. Student needs to improve control.	The drawing lacks almost all detail OR it is unclear what the drawing is intended to be. Student needs to work on control.	
<b>Time/Effort</b>	Class time was used wisely. Much time and effort went into the planning and design of the drawing.	Class time was used wisely. Student could have put in more time and effort.	Class time was not always used wisely.	Class time was not used wisely and the student put in no additional effort.	

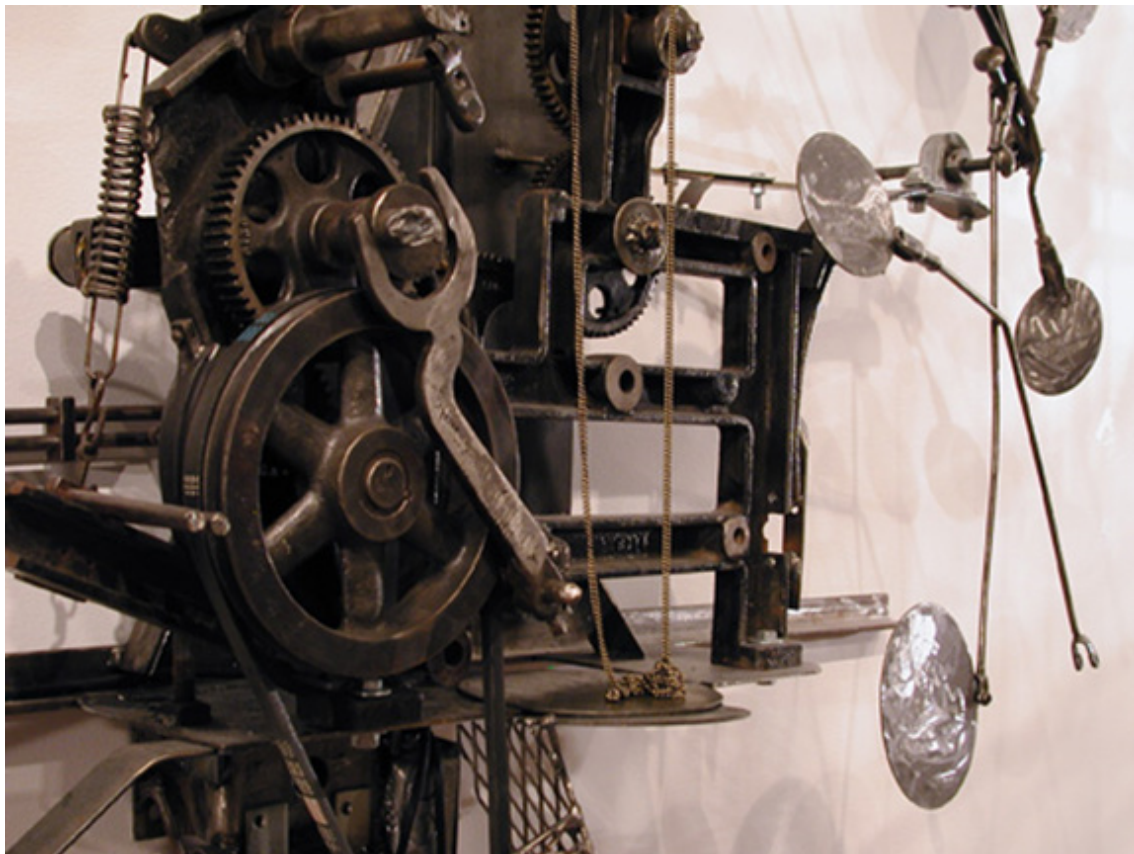


Andrew Smith, *Moon Pool*, 2004





Andrew Smith, *Geared Up*, 2012



Andrew Smith, *Geared Up*, 2012 (detail)



Andrew Smith, *Water Source*, 2005