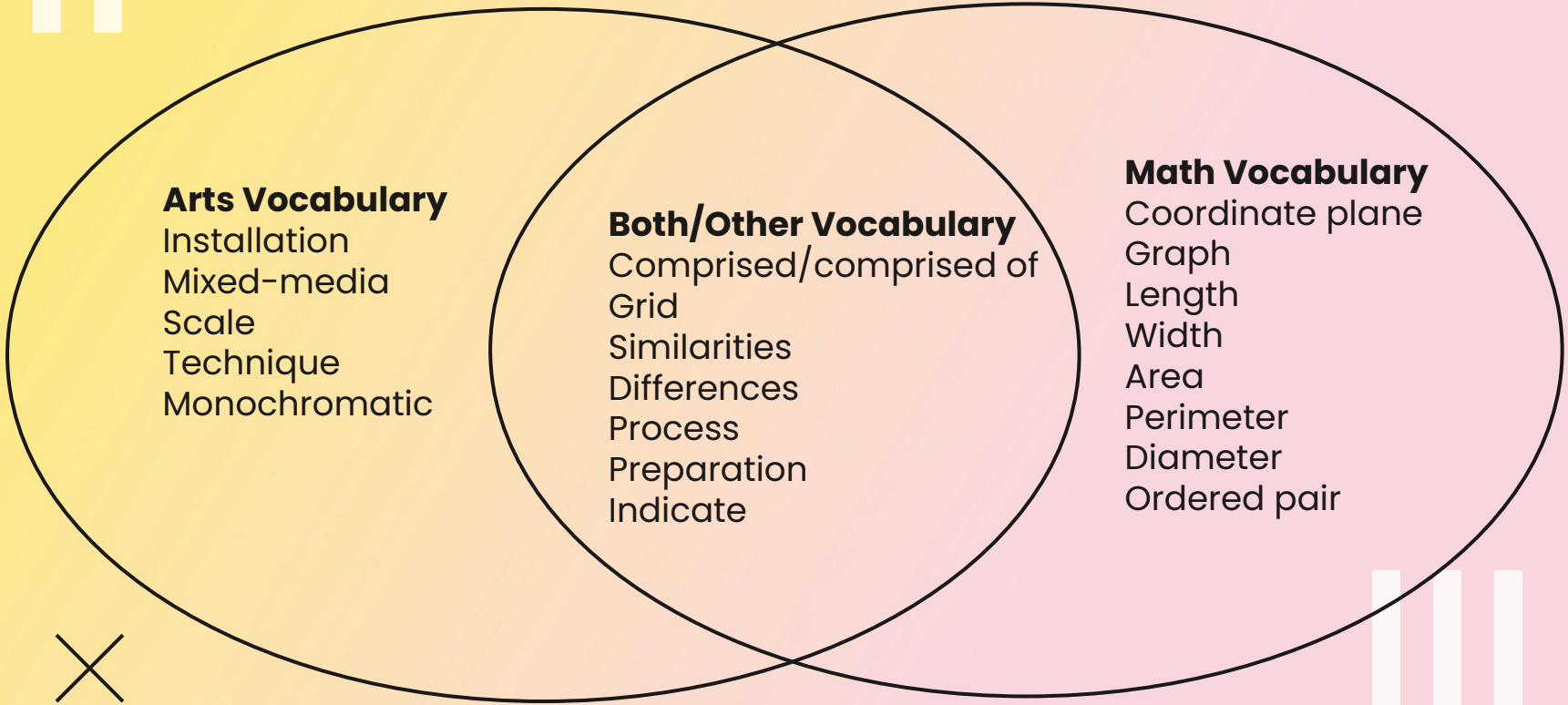
4th Grade

Arts Integration Lesson

Physics Garden by Molly Hatch

Adapted from High Museum of Art
Curriculum Connections Plan

Word Wall


Arts Vocabulary
Installation
Mixed-media
Scale
Technique
Monochromatic
Both/Other Vocabulary
Comprised/comprised of
Grid
Similarities
Differences
Process
Preparation
Indicate
Math Vocabulary
Coordinate plane
Graph
Length
Width
Area
Perimeter
Diameter
Ordered pair

Physics Garden by Molly Hatch

This ***installation*** was created by the artist Molly Hatch and is on display at the High Museum of Art in Atlanta.

The term ***installation*** is used to describe a large-scale, often **mixed-media** construction that is sometimes displayed temporarily.

What do you notice about this installation?

What do you wonder?

Molly Hatch (American, born 1978) *Physic Garden*, 2013–2014, earthenware and glaze. Acquisition supported with funds from The Fraser-Parker Foundation, 2013.671.1–456

Physics Garden by Molly Hatch

Physic Garden is a two-story, hand-painted “plate painting” installed in the Margaretta Taylor Lobby of the Museum’s Wieland Pavilion. The plate painting **comprises** 456 dinner plates featuring an original design inspired by two ca. 1755 Chelsea Factory plates from the High’s Frances and Emory Cocke Collection of English Ceramics (below).

Plates, ca. 1755, porcelain, Chelsea Factory (London, 1745–1769), Frances and Emory Cocke Collection, 1988.31.1–2.

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Using context clues, what do you think the word **comprises** means? If you cover up the word **comprises** and substitute another word in its place, what other word would make sense there?

Tip: That’s one way you can determine the meaning of unknown words!

Physics Garden by Molly Hatch

This is a photograph of upside-down plates during the ***installation*** of Hatch's artwork.

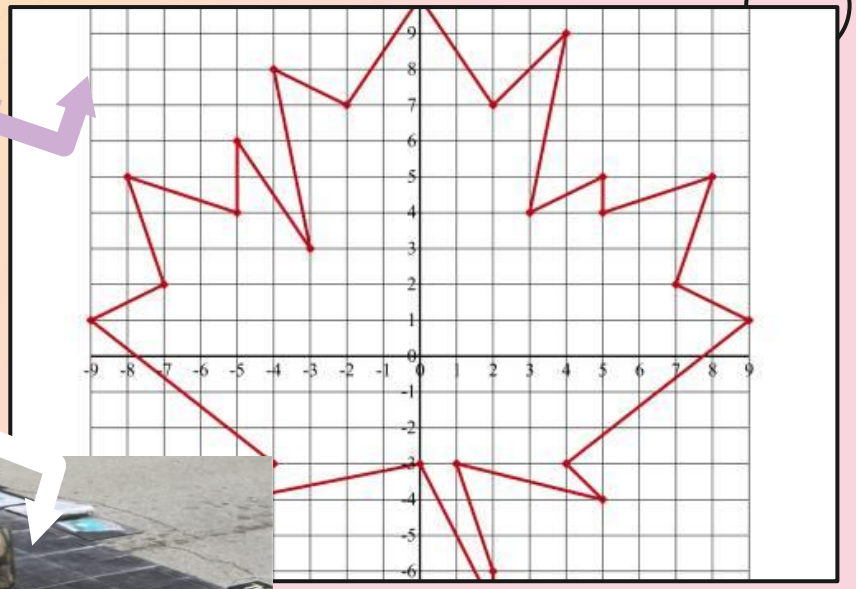
What do you think the numbers and letters on the back of the plates might ***indicate***?

How might the artist have used a **coordinate plane** or a **graph** to organize this work of art?

Physics Garden by Molly Hatch

Artists sometimes use a **coordinate plane, graph, or the grid method** to plan installations or large pieces of art (like the sidewalk art at Chalktober Fest!)

The **grid method** is when you take a reference image and draw a grid of squares on top, then you create the same grid on a larger surface to recreate the image one square at a time so that it looks the same.



Here's another Molly Hatch **piece**.

What are some **similarities** to *Physics Garden*?

What are some **differences**?

Do you think she used a similar **technique**?

Molly Hatch (American, born 1978) *Physic Garden*, 2013–2014, earthenware and glaze. Acquisition supported with funds from The Fraser-Parker Foundation, 2013.671.1–456.

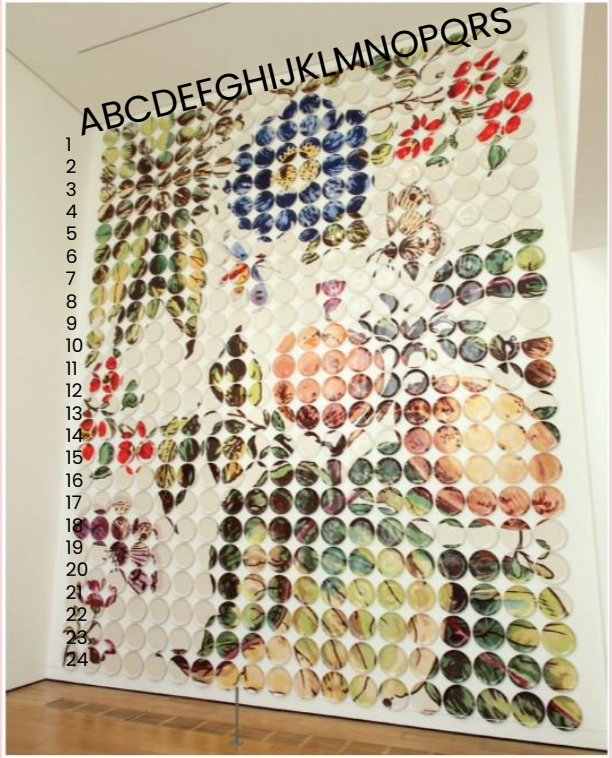
Physics Garden by Molly Hatch

Let's take another look at the numbers and letters on the back of the plates.

Look at "Physics Garden" again. If each column of plates was labeled A-S across the top, and each row was labeled 1-24 along the left side, which **ordered pair** (E,9 or H,8) do you think could represent a section with a blue flower?

Which **ordered pair** do you think might represent a leaf?

Watch a video of one of Molly Hatch's installations here.



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Physics Garden by Molly Hatch

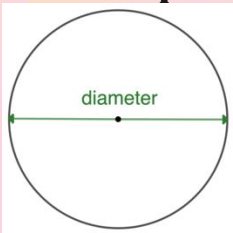
After watching a snippet of Molly Hatch's installation process,
What were some things you noticed about the process?

What **preparation** do you think went into hanging the plates?

How would this **process** or the final result have been different if the artist hadn't assigned each plate a letter and number?

Part Two!

Math Connections

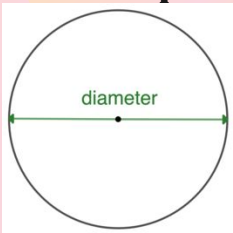


How can you **determine** how many plates are on the wall without counting each plate?

Each plate is 9 inches in **diameter**. What is the **length** of the piece?

What is the **height** of the piece?

Math Connections



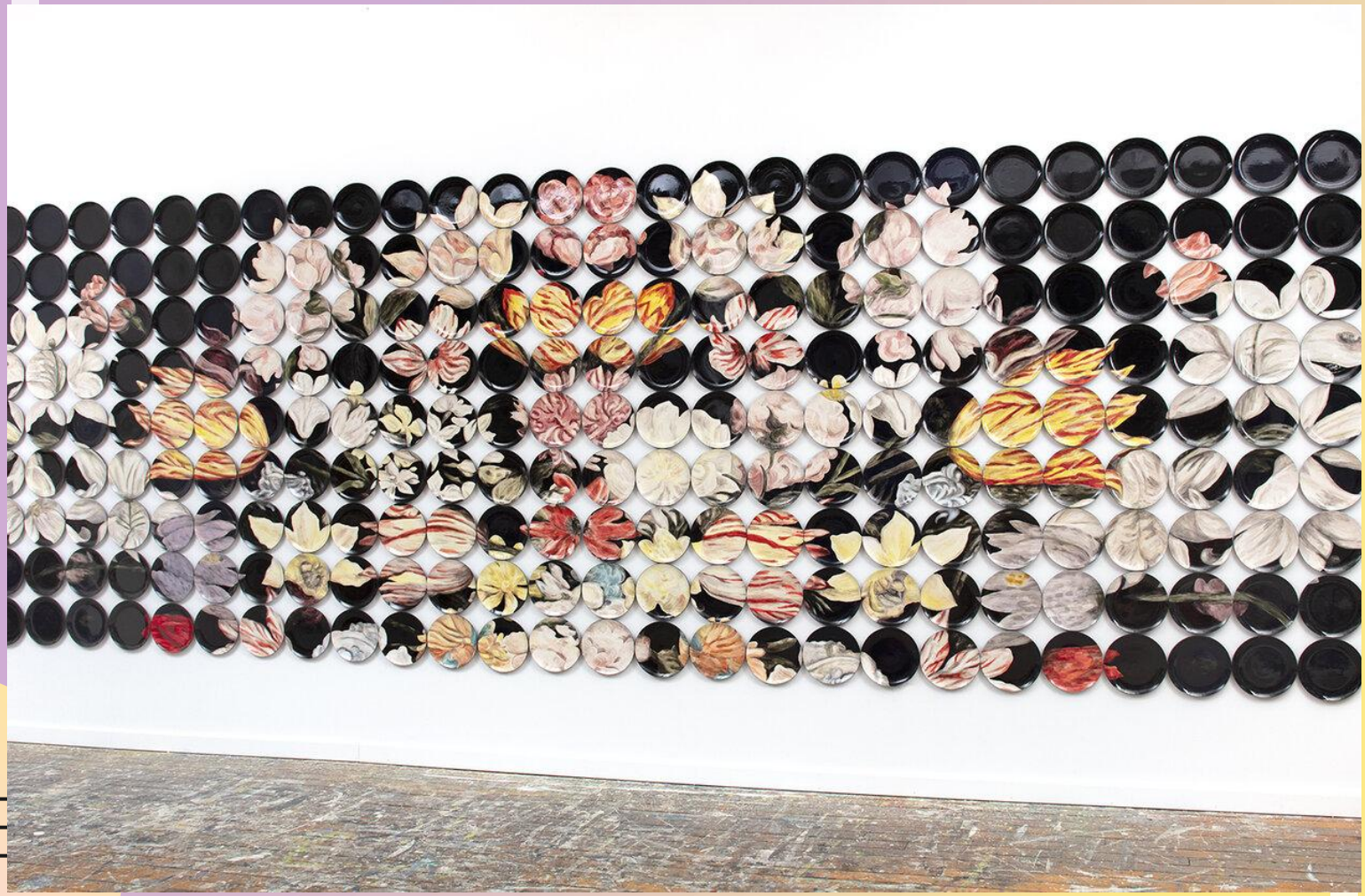
What is the **area** of the installation?

What is the **perimeter** of the piece?

Imagine each plate had a 20-inch **diameter**. What would the dimensions of the installation be?

Other Molly Hatch Pieces


What do you think the artist is doing here? What tool is she using? Have you seen this tool used anywhere else?



How is this piece different than some of Molly Hatch’s other pieces?

This piece is ***monochromatic***.

Mono means one/alone.

Chrome is derived from a Greek word that means “color”.

What do you think the word ***monochromatic*** means?

Part Three !

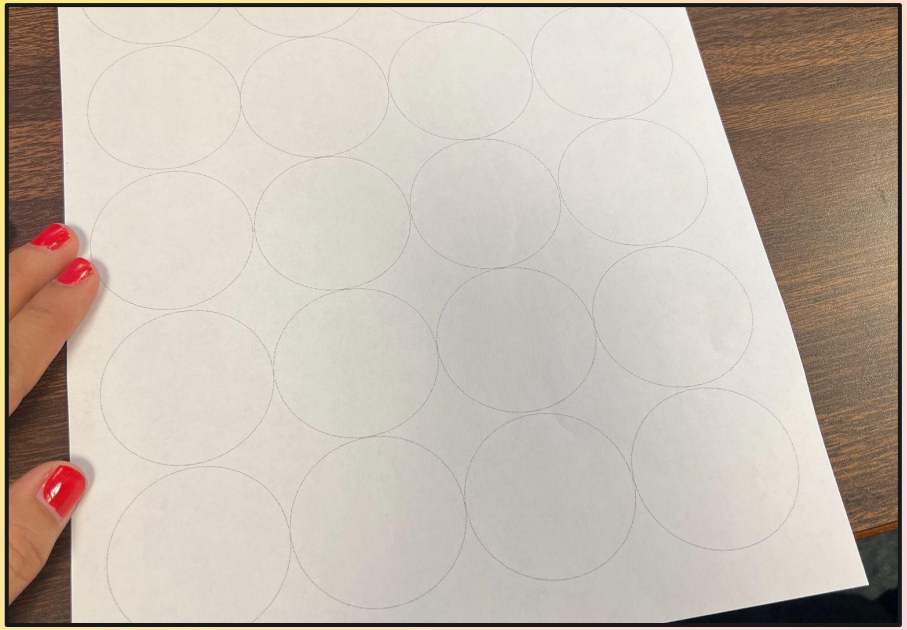
How can you create a Molly Hatch **inspired** piece using **uniform** white paper circles (instead of plates) and construction paper for a background (instead of ceramic plates on a wall)?

Materials:

- White paper circles (from template)
- Solid construction paper (9”x12”)
- Pencils
- Colored pencils, crayons, or oil pastels
- Gluesticks
- Scissors

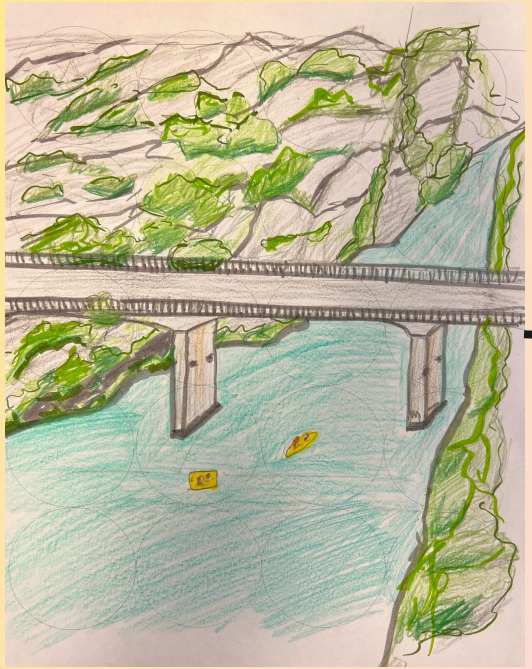
Imagine, Plan, Create

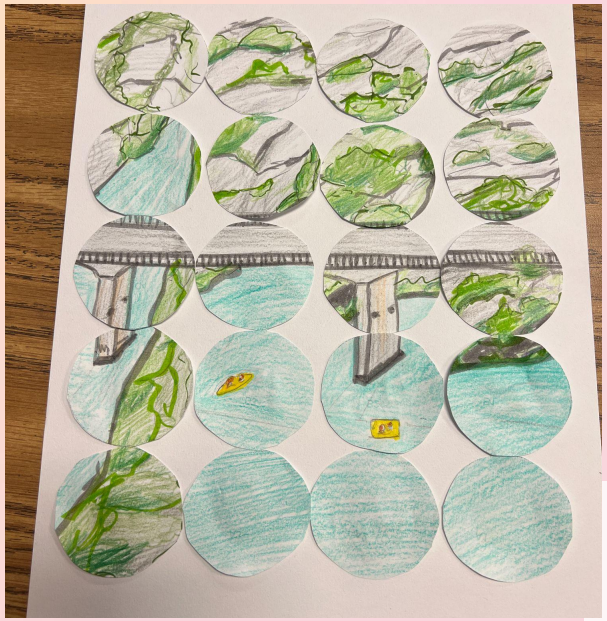
Using the circle template provided to you, draw and color an image that spans the page (fills the circles from top to bottom, left to riaht.
(Draw right on top of the circles)



Imagine, Plan, Create

Before you cut out your circles, think critically about how you will arrange the circles in the correct order on your background. You might use a numbering system (similar to Molly Hatch's system), or you may think of a different creative solution. Glue your pieces neatly to your background page, aligning them as you go.





Imagine, Plan, Create

Examples

Reflect and Improve

What went well?

What would you change?

What was your system for keeping your circles in order? Did you use ordered pairs or another numbering system? If so, was it helpful?

Standards

MGSE4.OA.1—Understand that a multiplicative comparison is a situation in which one quantity is multiplied by a specified number to get another quantity.

MGSE4.NBT.5- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers. Illustrate and explain the calculation using equations, rectangular arrays, and/or area models.

MGSE4.MD.3- Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

ELAGSE.4.L.4- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

a. Use context as a clue to the meaning of a word or phrase.
b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word.

VA4.CR.3 Understand and apply media, techniques, processes, and concepts of two-dimensional art. Apply understanding of multiple color schemes to create works of art (e.g. **monochromatic**, analogous, neutral, complementary).