Facilitation Guide

5-7 Min Routine

Digital Guide

ARTS EVERY DAY IN BALTIMORE CITY PUBLIC SCHOOLS

Partitioning Baltimore Murals

Explore Brain Science

VISUAL THINKING

ROUTINE OVERVIEW

In this lesson launch, students will view murals from various locations throughout Baltimore City and discuss how **partitioning** was used to divide them into equal parts (halves, thirds, fourths, sixths, etc.). Teachers will also discuss the background, location, and motivation for creating the murals.

Maryland Standards

MARYLAND STATE MATH STANDARDS

- **3.NOS.F.10** - Recognize and explain that a fraction represents a part of a whole. a. Partition shapes into parts with equal areas and express the area of each part using a unit fraction. b. Explain that a fraction represents one part of a whole that is divided into d equal parts, and that a fraction represents c parts of size.

MARYLAND ARTS STANDARDS

- **VA.AS7:I:3-5:1** - Analyze similarities and differences between the elements of art in observed form.
- **VA.AS7.E:3-5:1** - Analyze components in visual imagery that convey messages and compare personal interpretations.

Not in MD? View National Standards in the Digital Guide

Getting Ready

⭐ **REVEAL MATH: 3rd Grade: 7-1**

ARTS INTEGRATED LEARNING OBJECTIVE:
Students will be able to identify and explain how shapes are partitioned into equal and unequal parts by analyzing mural images using visual thinking strategies and purposeful questions.

MATH DOMAIN:

Number and Operation Sense	Develop an understanding of fractions as numbers	Partition shapes into parts with equal areas

MATERIALS

- Slides

WHAT'S BEFORE: Partition rectangles and circles into halves, thirds, and fourths (2nd grade)

WHAT'S NEXT: Represent and compare fractions by counting unit fractions, using area and length models, and benchmark reasoning; show the size of a fractional part depends on the size of the whole

MATH SKILL: Partition a shape into equal parts

ART SKILL: Visual thinking strategies to derive meaning from images

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ARTS EVERY DAY IN BALTIMORE CITY PUBLIC SCHOOLS

TEACH

Facilitation Steps

Slide 1: Provide background about Baltimore City murals

- Baltimore is one city that is known for its **street art** and **murals**.
  - Street art = visual artwork created in public spaces, such as on building walls, streets, and bridges
  - Mural=a large painting on an outdoor wall or public pavement, often created to beautify a neighborhood or share a community message
- Ask: *"Have you seen any street art in our local community?"*

Slide 2: Model thinking about murals using the See, Think, Wonder protocol

- Model Mural: Mural of Freddie Gray by Nether on corner of Mount and Prestbury; photo © BA Street Art
  - *The following questions and answers can be used, but teachers are welcome to make their own observations and guide the discussion however feels natural:*

- "What do I see?"
  - *Possible student response: I see three equal parts with people dressed in suits on the left, Freddie Gray in the middle section, and a crowd on the right with sad facial expressions.*
    - Teacher should state that the center with Freddie Gray is **⅓ of the mural.** The whole mural is 3/3 because it is broken up into 3 equal parts, and the whole mural is the 3 parts.

- "What do I think about that?"
  - *It makes me think that Freddie Gray is an important person since he takes up one part of the mural.*

- "What does it make you wonder?"
  - *It makes me wonder how the people on the left and right sides are connected to each other.*

- "What is the main idea of the mural?"
  - *The main idea is that Freddie Gray's death caused people to come together and fight for justice.*

- "How is the mural broken up into different sections?"
  - *The mural is broken up into three different sections. Gray is in the center because he is the focus, and the people in the background are there as supporting characters. There is a clear group of people in the left section, and another group of people on the right.*

Slide 3: Pose Purposeful Questions

- Present the students with **two** images of Baltimore City murals.
  - Mural 1: Mural by ECB (photo © BA Street Art)
  - Mural 2: Mural by Gaia in Baltimore (photo © BA Street Art)
- Provide students with adequate time (1-2 minutes) to quietly observe the two images and consider their similarities and differences. The teacher should model looking from left to right and individually at both images.

SLIDES

COMING SOON

VIDEO PLAYLIST

MATERIALS
GOOGLE FOLDER

TEACH

Facilitation Steps

- Students share to the group or a partner the similarities and differences, some of which may be mathematical and others non-mathematical.
  - *Teachers may use equity sticks, turn and talks, or other strategies that they rely on in their classrooms.*
  - *The teacher accepts and acknowledges all student responses, while repeating what students share (in the students' words) so that all students can hear and build on one another's responses.*
- *Ask: How are each of these murals partitioned? How many sections do they each have?*
- These follow-up questions are meant to help advance students' understanding of equal parts and partitioning:
  a. Ask *"What do you notice about the size of each part in each mural?"*
  b. Ask "*Does the way that the mural is partitioned create meaning? If it does, what meaning does it create for you?"*
  c. Ask *"How would this mural look if it wasn't partitioned? Would the meaning change?"*

Slide 4: Explore and Develop

- Explain to students that they can partition a shape into smaller parts in different ways. Guide students to discuss how they would partition this mural into smaller parts. They might note that they could create equal or unequal parts.

Assessment & Reflection

Teachers will check for understanding by informally observing during the lesson. Teachers can use their own checklists or classroom procedures for holding students accountable during the lesson and ensuring that students are engaged and sharing their thinking with partners and the class.

TEACH

Differentiation

- This lesson could be modified for small group targeted instruction by using the same murals. The teacher could print copies of the murals and have students physically cut the murals (sixths and thirds) into equal groups in order to reinforce what partitioning is and what makes something an equal sized part.
- This lesson could be adjusted for 4th grade, unit 8 in Reveal, to focus on equivalent fractions. Purposeful questions could include, "If the murals are the same size, what fraction on the first mural is equivalent to what fraction on the second mural?" (eg. 2/6=⅓) The MD math standard associated with this is **4.NOS.D.9.**
- You can make this more complex by having different groups of students explore one mural and then share their discussion as experts on their mural. Then the class could come back together to discuss similarities and differences between the artwork. This would require the murals to be shared virtually or printed so that each group has a designated mural.
- Additionally, if you teach in a different state, feel free to change the art to be more representative of your local community.