

Facilitation Guide



10-15 Min
Small Group



Digital Guide

ARTS EVERY DAY
IN BALTIMORE CITY PUBLIC SCHOOLS



Mondrian Addition

ROUTINE OVERVIEW

In this teacher-led small group activity, students will use the elements of visual art to create a composition inspired by painter Piet Mondrian that models and solves addition problems within 10, with an optional extension of adding within 20.

Maryland Standards

MARYLAND STATE MATH STANDARDS

- **K.AT.A.1** – Represent addition and subtraction situations (presented with numerals or mathematical symbols) within 10 with objects, fingers, drawings, sounds (e.g., claps), acting out situations, using verbal explanations, and/or writing expressions and equations.

MARYLAND ARTS STANDARDS

- **VA.AS1.I:P-2:2** – Experiment with design elements/principles such as; colors, line, and shapes.
- **VA.AS2.I:P-2:1** – Develop and experiment in the creation and design of artworks.



Not in MD? View [National Standards in the Digital Guide](#)

Getting Ready ★ **REVEAL MATH:** Kinder: 6–5

ARTS INTEGRATED LEARNING OBJECTIVE: I can use elements of visual art (colors, lines, and shapes) to create a Mondrian-inspired composition that models and solves addition problems within 10.

MATH DOMAIN:

Operations and
Algebraic
Thinking

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Represent
addition within
10

WHAT'S BEFORE: Represent and solve add to and put together word problems in prior lessons (Unit 6)

WHAT'S NEXT: Solve addition and subtraction word problems (Unit 7); use addition within 20 to solve word problems (Grade 1)

MATERIALS

- [Slides](#) (Extend Thinking) with See, Think, Wonder Images and Student Example
- Dry erase surface
- Dry erase marker
- [Student Grid](#)
- Pencil
- Red, Yellow, and Blue crayons and/or markers
- [Attached worksheet for student recording](#)
- [Student Self Assessment of Skill](#)

MATH SKILL: Represent addition and subtraction situations within 10 using multiple representations

ART SKILL: Develop and experiment with color, line, and shape to create and communicate artwork and an extension of their learning

TEACH

Facilitation Steps

Step 1: Before students begin work to complete this activity independently, it is important to first spend a few minutes engaging with the art together.

Display the [included slide](#) or print the images of Piet Mondrian's artwork and engage students in a see, think, and wonder.

Ask:

"What do you notice?"

Possible student responses:

"I see lots of squares."

"There are rectangles."

"The pictures have thick black lines."

"Some spaces are colored, and some are white."

"The pictures look like a grid."

"What colors do you see?"

Possible student responses:

"Red." "Yellow." "Blue." "White."

"Black."

"I see gray in one picture."

"What shapes do you notice?"

Possible student responses:

"Squares."

"Rectangles."

"Boxes."

"Straight lines."

"No circles or triangles."

"What do you think the artist wanted us to notice?"

Possible student responses:

"The bright colors."

"The different shapes."

"The lines."

"How the colors fit together."

"The patterns."

"That simple shapes can make art."

"What do you wonder about this artwork?"

Possible student responses:

"Why did the artist only use those colors?"

"Why are some boxes white?"

"How did the artist decide where to put the colors?"

"Did it take a long time to make?"

"Why are the lines so thick?"

"Did the artist use a ruler?"



SLIDES



**VIDEO
PLAYLIST**



MATERIALS
GOOGLE FOLDER

TEACH

Facilitation Steps

After students share their observations, briefly introduce the artist.

"This artist is Piet Mondrian. He became famous for creating artwork using straight black lines, rectangles, squares, and the primary colors red, yellow, and blue, along with white spaces. Today, you are going to become artists and mathematicians by creating your own Mondrian-inspired artwork."

Step 2: Introduce the task to the students

- Provide each student with one of the four Mondrian-inspired grids based on their readiness (Grid 1 has the least amount of boxes; Grid 4 has the most).
- Explain that students will:
 - Color each section using only red, yellow, blue, or leave it white. White spaces are important!
 - Count the number of spaces of each color.
 - Use those quantities to create addition equations.

Emphasize that students choose the quantities themselves, allowing them to think strategically about the addends they create.

"You get to decide how many spaces you want to color each color. Once you finish your artwork, you'll count each color and use those numbers to create addition equations. There isn't just one right way. Your artwork and your math will be unique!"

Here is an example of what a student's finished work might look like: Point out that students may be able to write more than one equation from the same artwork.

Remind students that white spaces count too, as they are part of Mondrian's artistic style and can be used as an addend.

Step 3: Independent Work Time

Students independently:

- Create their Mondrian-inspired artwork.
- Count the number of colored sections.
- Complete one or more addition equations using the equation stems.

Step 4: Reflect and Self-Assessment

Have students complete the Student Self-Assessment of Skill worksheet.

If time allows, invite students to share:

- Their artwork
- One addition equation
- How they knew the equation matched their design



STUDENT GRID



SAMPLE



WORKSHEET

TEACH

Facilitation Steps

Closing:

Collect student artwork and equation sheets to assess understanding of addition concepts and students' ability to represent mathematical thinking visually.

Display the completed Mondrian-inspired artwork alongside the corresponding equations to celebrate students' creativity while reinforcing that mathematics can be communicated through multiple representations. This classroom display also serves as an ongoing visual reminder that addition combines parts to make a whole and that mathematical thinking can be expressed through both art and numbers.

Assessment & Reflection

Teachers will observe students as they create their Mondrian-inspired artwork and determine whether they can independently connect visual representations to mathematical ideas. As students shade sections with primary colors, the teacher looks for evidence that students:

- Create valid addition equations within 10 (or 20) that match the quantities represented in their artwork.
- Select appropriate addends and use their own addition strategy to determine the sum.
- Explain how the colors, sections of the grid, and equations are connected.
- Accurately use mathematical vocabulary such as addend and sum when describing their work.
- Teachers can also provide students with the [Student Self Assessment of Skill](#) worksheet to encourage them to reflect on their understanding and ability to represent addition through both visual art and equations.



SELF-ASSESS

TEACH

Differentiation

Accommodations:

- Provide students with pre-drawn Mondrian grids with fewer spaces (6–8 sections) to reduce the visual and cognitive load.
- Use counters, linking cubes, or two-color chips to model each addition equation before students write the given equation.
- Offer equation frames ($___ + ___ = ___$) to support students who need additional structure.
- Pair students strategically for collaborative discussions.

Extensions:

- Grade 1 (1.OA.A.1)
- Increase the number of sections.
- Challenge students to write a matching addition word problem for one of their equations or to create an equation with multiple addends.
- Exchange artwork with a partner and have the partner write equations that match the design.
- Challenge students to design a Mondrian grid with exactly 10 or 20 spaces and create equations for each color category.