

Counting and Cardinality: Dot Math

Get Smarts THROUGH the

Math & Visual Arts

Grade
K

Math Common Core Standard(s) Grade K

*Standard K.CC.4: Understand the relationship between numbers and quantities; connect counting to cardinality.
Standard: K.CC.4a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.*

Visual Arts (MD) Standard(s) Grade K

1.1.b Represent observed form by combining colors, lines, shapes, and textures.



CONNECTED OBJECTIVES

Students will identify the numbers 0-10 and count sets of dots by creating pointillism artwork using dot markers.

MATERIALS & RESOURCES

- Dot markers
- Poster board (blank or a line drawing for students to fill in with the dots)
- Two dice per student pairs. One die should have the numbers 0-5 and the other 5-10.
- Dice with colored dots to represent the markers.

KEY CONTENT VOCABULARY

- Numbers 0-10
- Counting

KEY ARTS VOCABULARY

- Pointillism

A S S E S S M E N T

- Are students able to identify numbers?
- Are students able to correctly count the dots to show cardinality?
- Are students able to make an image using pointillism?



L E S S O N S T E P S

- Explain that in math today students will be practicing identifying their numbers and counting by creating artwork using a technique called pointillism.
- Introduce pointillism by defining as, a technique of painting in which small, distinct dots of pure color are applied in patterns to form an image. View the Dots in Art & Math PowerPoint on Blackboard. Georges Seurat is credited with first using the technique around 1886.
- Review the numbers 0-10. (We listened to Dr. Jean's "Number Song." I modeled writing the numbers on the board and students wrote the numbers on paper/mini-white boards.)
 1. Explain that students will work with a partner.
 2. Each will get a number die and they will share the color dot die.
 3. First one person will roll their number die and the color die.
 4. Both will say the number and color (e.g. "Seven yellow dots").
 5. Both will use their markers to make seven yellow dots. Encourage them to count aloud. Teacher will be checking to see if the number and color on the dot matches what they are counting.
 6. Then the other person will take a turn rolling using their number die and the shared color die.
- Model the procedure with a student.
- Students were encouraged to make a simple pictures (I made a big flower to show them what it could look like). Have students share artwork ideas with each other. (My students made a boat, fish, flower, snake, etc.) Some students chose to make random dots (as seen in photo).
- Teacher assesses by observing if students can name the numbers and if they are counting out the dots accurately.
- Have students share their artwork and discuss the numbers and review the pointillism technique.

EXTENSIONS & OPTIONS SOURCES & RESOURCES

- Larger numbers can be used for students who have shown mastery of the numbers 0-10.
- Some students may be ready for addition in which they could practice adding the dice together to make dots.
- Line drawings (coloring pages) could be used if students need more guidance instead of them having to make the design themselves.

Dots in Art & Math! PowerPoint located on: Blackboard/Arts Integration in Anne Arundel County/Lesson Seeds + Resources/Kindergarten Ideas, Seeds and Resources/Oct. 25, 2012/Dots in Math & Art!.pptx

Adapted from:
<http://tonsoffunpreschoolactivities.blogspot.com/2012/02/dot-marker-counting.html>

G E T S M A R T T H R O U G H T H E A R T S

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S u p p o r t i n g D o c u m e n t s

