artsNOW
Integrated learning solutions

KANDINSKY'S CIRCLES & PLACE VALUE
Grade Band: 2-3
Content Focus: Visual Arts & Math

LEARNING DESCRIPTION

In this lesson, students will examine place value through the lens of Wassily Kandinsky's painting, *Several Circles*. Inspired by this painting, students will create visual representations of a number using different sized circles to represent place value. Students will show their knowledge of standard, expanded, and word form, as well as observe one another's work to identify and compare numbers.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How can proportion be used in art to represent place values of the digits in a number?	I can read and write numbers in standard, word, and expanded forms. I can compare the value of digits within a number. I can identify value, color, and proportion in art.

	I can create unique and creative artwork.

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
Grade 2 2.NR.1: Using the place value structure, explore the count sequences to represent, read, write, and compare numerical values to 1000 and describe basic place-value relationships and structures **Grade 3** 3.NR.1: Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000.	**Grade 2** VA2.CR.2 Create works of art based on selected themes. VA2.CR.3 Understand and apply media, techniques, and processes of two-dimensional art. VA2.CN.2 Integrate information from other disciplines to engage in the understanding and production of works of art. **Grade 3** VA3.CR.2 Create works of art based on selected themes. VA3.CR.3 Understand and apply media, techniques, and processes of two-dimensional art. VA3.CN.2 Integrate information from other disciplines to engage in the understanding and production of works of art.

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
Grade 2 2.NSBT.3 Read, write and represent numbers through 999 using concrete models, standard form, and equations in expanded form. **Grade 3** 3.NSBT.4 Read and write numbers through 999,999 in standard form and equations in expanded form.	**Anchor Standard 1:** I can use the elements and principles of art to create artwork. **Anchor Standard 2:** I can use different materials, techniques, and processes to make art.

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
• Place value - The value of a digit based on its position within a number • Digit - A numerical symbol used to represent numbers, typically ranging from 0 to 9 • Expanded form - A way of representing a number by breaking it down into its component parts based on place value • Word form - Expressing a number using written words rather than digits • Standard form - The conventional way of writing a number using digits and place value, without any exponents or special notation	• Value - The lightness or darkness of a color • Cool colors - Blue, green, violet • Warm colors - Red, orange, yellow • Space - How an artist organizes the elements in a composition • Proportion - How one thing relates to another in terms of size

MATERIALS

- Watercolor paper for each student
- Watercolor set, cup of water, and brush for each student
- Paint sticks (one set per two students)
- Index cards (one per student)
- Pencils

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

- Begin by reviewing place value with students, including standard form, word form, and expanded form.
- Assign each student a number to study. Students should write their number in standard form, word form, and expanded form on their notecards.
- Next, show students Wassily Kandinsky's *Several Circles* painting.
    - Ask students to work collaboratively to engage in the See, Think, Wonder protocol.
        - First, students will identify what they see in the image. Emphasize that they should make objective observations about the painting (i.e. physical features, colors, textures, etc.).
        - Next, ask students to identify what they think about the image. Emphasize that students should be creating inferences using visual evidence from the painting.
        - Finally, ask students what they wonder about the image.
        - Facilitate a class-wide discussion around students' observations, inferences, and questions.

- Discuss the history of the painting and point out the varying sizes, colors, and values of the circles.

Work Session

- Tell students that they will be creating artwork that is inspired by Kandinsky's *Several Circles* to visually represent the places values of each of their numbers.
- Have the students begin by painting a watercolor background for their piece. Encourage the class to use light values, such as pastels, in order for the circles that they will paint to pop. Allow to dry.
- After drying, have the students use paint sticks to create circles that mimic the number they were assigned on their index cards.
  - Discuss how to use size and proportion to represent place value. The largest place value should be the largest circles on the page (for example, 2,456 would have two extra large circles of equal size on the paper).
  - Repeat this process with the rest of the place value digits (using 2,456 there should be two extra large circles of equal size, 4 large circles of equal size, 5 medium circles of equal size, and 6 small circles of equal size).
  - Tell students that they can make compositional choices such as overlapping or allowing circles to go off the page.
  - Tell students that using contrasting colors will make their circles pop. For example, if the background is blue, which is a cool color, students might want to use warm colors (red, orange, and yellow) for their circles.
  - Allow artwork to dry.

Closing/Reflection

- Allow students to share their artwork with one another. Review how the largest circles represent the digit in the largest place value.
- Next, have the students try to guess each other's numbers based on how they used proportion in their art. This can be done in a small group setting or as a whole class.
- Finally, have students compare their numbers and arrange their artwork from smallest to largest number.

ASSESSMENTS

Formative

Teachers will assess student learning by observing students' ability to represent place value in standard, expanded, and word form; students' responses to discussion of Kandinsky's *Several Circles;* and students' ability to represent place value through proportion and size in their circles.

Summative

CHECKLIST

- Students can identify the place values of the digits in their numbers and correctly.
- Students can accurately portray place value through size and proportion in art.
- Students can identify and use value, color, and proportion in art.

**See Teacher/student rubric.*

DIFFERENTIATION

Acceleration:

- Advanced students can be assigned larger numbers based on their levels.
- Students can write an art review of one of their peers' artwork and describe what number it is showing explaining their reasoning.

Remediation:

- Students can be assigned smaller numbers to represent in their artwork.
- Students can work in pairs to analyze their numbers. Students can then either work together to create one artwork or create their own individual artworks.

ADDITIONAL RESOURCES

- Wassily Kandinsky's *Several Circles* painting
- See, Think, Wonder protocol
- Teacher/student rubric

**This integrated lesson provides differentiated ideas and activities for educators that are aligned to a sampling of standards. Standards referenced at the time of publishing may differ based on each state's adoption of new standards.*

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