

Put on Your Math Goggles™ Seeing Math in the Visual Arts

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Exploring Cylinders Inspired by the Art of Andy Warhol

Grade: PreK-Kindergarten

Math concepts/skills: cylinders, attributes of cylinders

Common Core Standards: K.G.A.1, K.G.A.2, K.G.A.3, K.G.B.4, K.G.B.5

Featured artist: Andy Warhol (1928 - 1987)

Featured artwork: *Campbell's Soup Can (Tomato)* (1962) (artwork appears later in document)

Overview: Students examine and describe attributes of real-life examples of cylinders and then create their own cylinder inspired by Andy Warhol's *Campbell's Soup Can (Tomato)* (1962). Students also color their own colorful Warhol-inspired soup can art.

Materials:

- real-life examples of cylinders (soup can, gluestick, unsharpened pencil, drinking straw, candle, paper towel roll, cup, can of tunafish, soda can, etc.)
- soup can net (separate pdf file; 2 soup cans appear on the page; cut page in half)
- crayons, tape

Activity:

- Share the accompanying Andy Warhol PowerPoint with students so they can learn about the artist and see some of his most famous works. Encourage the students to observe each work of art and allow them to comment on what they find appealing.
- Allow each child to hold a real-life example of a cylinder. Ask the students to describe the characteristics of a cylinder (has a circle on both ends, round-ish, no pointy edges, etc.).
- Keeping the image of Warhol's *Campbell's Soup Can (Tomato)* in view, announce that the students will create their own soup can, which is an example of a cylinder.
- Distribute one soup can "net" to each student (separate pdf file; cut page in half, as 2 soup cans appear on the one page pdf file). A "net" is a two-dimensional pattern of a three-dimensional figure that can be folded to form the figure. That is, a net is a "flattened" three-dimensional figure, which can be turned back into the solid by folding or manipulating it.

- Instruct the children to put on their math goggles[™] and look at their net. What shape is it? (It's a rectangle, which is a two-dimensional shape, because it has a length and a width). Tell students we need to turn the rectangle into a cylinder, which is a three-dimensional shape (a shape that has a length, depth, and height). How are we going to do this?
- Challenge students to somehow "move" the paper net in a certain way in order to create a soup can; that is, a cylinder. (The students will discover that by "rolling" the paper net will result in a cylinder. Make sure that when the students roll the paper net, the soup label appears on the outside.)
- Tape the net to secure its shape as a cylinder, with the soup label facing out.
- Students hold up in the air their soup cans and celebrate turning a 2dimensional shape (a rectangle) into a three-dimensional shape (a cylinder).
- Take students on a "shape hunt" and, with their math goggles[™] on, students look for additional real-life examples of cylinders in the classroom, on the playground, or on the school campus. Ask students to find real-life examples of cylinders at home.

Extensions:

- Transform a classroom wall into an art gallery! Go to the Soup Can Coloring Page website (listed below) and print out one soup can page for each student. Encourage the students to color in their soup cans using odd colors, in the spirit of Andy Warhol's, *Colored Campbell's Soup Cans* (1965), appearing in the PowerPoint that accompanies this lesson plan. Create and hang on a classroom wall an array of the students' colored soup can art. (See a sample of a classroom wall transformed into an art gallery at end of this document.) Use their arrayed artwork as a springboard to counting!
 - Read the book, *Uncle Andy's*, authored by Andy Warhol's nephew, James Warhola. Students will love learning about this eccentric artist, and how his trash served as the inspiration to his masterpieces, not to mention how he owned 25 cats all named Sam!

Related children's literature:

- Uncle Andy by James Warhola
- Andy Warhol: Getting to Know the World's Greatest Artists by Mike Venezia
- Cubes, Cones, Cylinders and Spheres by Tana Hoban
- I Spy Shapes in Art by Lucy Micklethwait

Related websites (Please review BEFORE showing to your students in case the content has changed, and that the content is age-appropriate.):

- Soup Can Coloring Page (Scroll down to see soup can coloring page) <u>http://museumchick.com/2010/04/museumkid-free-coloring-book-pages.html</u>
- Andy Warhol's Colored Campbell's Soup Can (1965) http://learn.columbia.edu/warhol/campbells/
- Andy Warhol Slideshow for Kids <u>http://www.youtube.com/watch?annotation_id=annotation_51892&feature=iv&</u> <u>src_vid=ulZ64VDhwXM&v=kZTsbJcr9VI</u>



Andy Warhol Campbell's Soup Can (Tomato) (1962)

Source: <u>http://www.christies.com/features/2010-october-andy-warhol-campbells-soup</u> can-tomato-1022-1.aspx Examples of student work:



Students roll their nets to make cylindrical soup cans.



Students' Warhol-colored soup can art.

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Examples of student work:



Transform your classroom into an art gallery!

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