

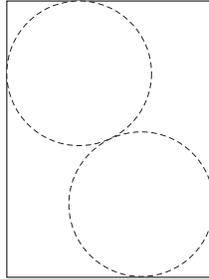
Tubular Bowls

(art + math)

A few simple geometry skills and a little time spent making paper rolls is all that goes into this eye-catching art paper bowl. It's a great way to recycle materials or use up scrap paper, and your students will learn about repeating patterns and design rhythm as they place each tube of paper.

Grade Levels 3-12

Note: instructions and materials are based upon a class size of 25 students. Adjust as needed.



Preparation

1. Cut circles from heavyweight laminating film. (A) Using a compass on the paper side, measure a 6.25" diameter circle that touches the edges of the sheet, see (A). Two circles may be cut from one sheet of film.
2. Cut paper into approximately pieces measuring approximately 6" x 6". Use newspaper, magazines, scrap paper, foil, wrapping paper, or any lightweight to medium-weight paper. Combining recycled and first-use papers is most effective. Each bowl requires approximately 42, 6" x 6" papers (1,500 square inches).
3. Cut construction paper into 1" x 9" strips.

Process

1. With the paper front-side down, rub the glue stick along one side, then align a pencil on the opposite side and roll it into the glue. Smooth the paper edges and remove the pencil. This process will create one tube. Repeat to make at least 40 tubes.
NOTE: coated or glossy papers may hold with tape better than with a glue stick. Use a small piece of tape at the center of the seam to seal it.
2. Use a protractor to find the center of the film circle. Mark 90°



Materials

Graphix® Laminating Film, heavyweight, 9" x 12" package of three sheets (23204-0051); share one sheet between two students

Assorted papers for rolling tubes; recommend combining the following with each other or with recycled materials:

Folk Art Origami Assortment, 40-sheet package, 6" x 6" (11206-0149)

Folia® Origami Paper, 6" x 6", 500-piece assortment (12233-1033)

Hygloss™ Metallic Foil Paper, 20" x 26", 24-sheet assortment (11205-1001)

C-Thru® Math Kit, set of three tools (55741-2009); one per student

Fiskars™ Schoolworks Scissors, 5" Safety (57602-1005); need one pair per student

Dixon® Ticonderoga® Pencils, box of 12 (20305-2009); need one pencil per student

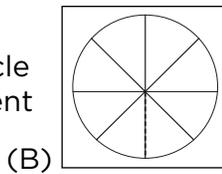
UHU® Stic Clear Glue Stick, .026-oz (23822-0010); need one stick per student

3M® Scotch® # 810 Magic™ Transparent Tape, 1/2" wide x 36-yd roll (23012-0050), share between two students

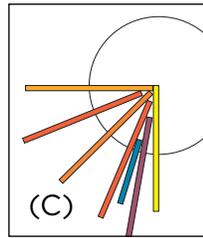
Blick® Construction Paper, 9" x 12" assorted colors, package of 50 sheets (11409-1003); share one package across class

Process, continued

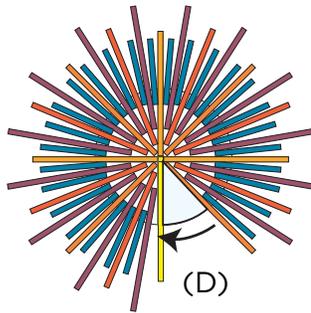
and 45° angles, dividing the circle into eighths. Cut out one segment from edge to center, see (B).



Peel the paper to expose the adhesive on 1/4 of the circle. Fold the paper back on that line or cut it away. Work with 1/4 of the circle at a time to protect the permanent adhesive and avoid unintentional positioning.



3. Apply the paper tubes in a staggered fashion, pressing them down firmly onto the adhesive, see (C). Continue placing the tubes until 1/4 of the segment is filled. In order to fit snugly together, the tubes may be cut in half, angled on the end or compressed to make them more narrow.
4. Peel paper back from the next 1/4 section and repeat step 3, filling all but the last 1/8 of the circle with paper tubes.
5. Peel the paper back from the last 1/8 section and expose the adhesive. Place this section over the top of the first section, forming a bowl shape, see (D). Press the adhesive firmly into place (the clear film will form the inside of the bowl).
6. On the back (the paper side), place 1" pieces of tape in a line around the bowl where it is least visible from the front. This will keep the paper tubes securely in place.
7. To make a stand, form a ring with a construction paper strip and tape it closed. Set the bowl on top of the ring.



ArtStraws™ (61775-1320). Box of 1800 assorted color straws will make about 100 bowls.

National Standards for Visual Arts Education

Content Standard #1 Understanding and applying media, techniques, and processes

K-4 Students use art materials and tools in a safe and responsible manner

5-8 Students intentionally take advantage of the qualities and characteristics of art media, techniques, and processes to enhance communication of their experiences and ideas

9-12 Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks

Content Standard #6 Making connections between visual arts and other disciplines

K-4 Students identify connections between the visual arts and other disciplines in the curriculum

5-8 Students describe ways in which the principles and subject matter of other disciplines taught in the school are interrelated with the visual arts

9-12 Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences



Options

- Many colored papers and printed materials will fade. For lasting, lightfast bowls, use [Fadeless® Art Paper](#), 12" x 18", package of 60 sheets, assorted colors (12915-1006); need seven sheets per student.
- For a similar project that doesn't require rolling paper, use

