Summary
In this art project, students combine their knowledge of geometry and value to explore depth in both 2D and 3D art. Students create a flat arrangement of paper shapes using three values (white, grey and black), and then add folded paper to the flat surface to develop the composition into a paper relief sculpture.

This lesson is best suited for Grades 3-6, but will also work well for Grades 7-12 as a warm-up activity or introduction to a unit on sculpture.
Curriculum Ties
Fine Arts: 3-8.V.CR, L1-3.V.CR

Time Frame
60 minutes

Materials
11x17 paper in a neutral tone
White, grey and black construction paper
Paper cutter (for teacher prep)
Glue sticks
Scissors

Intended Learning Outcomes
• Students understand key differences between 2D and 3D art.
• Students can compare and contrast representations of depth in 2D and 3D art.
• Students understand characteristics of relief sculpture.
• Students apply understanding of basic geometric shapes and value to create depth in a 2D artwork.
• Students transform paper from flat material into folded form to create depth in a 3D artwork.

Resources
Caitlin Cherry’s artworks complicate the boundary between painting and sculpture. She says of her work, "It’s sculpture trying to mold into painting, painting trying to mold into sculpture."1 Painted live from clay-and-paper maquettes, her illusionistic surfaces break down figures and their environments into high contrast geometric shapes, saturated color schemes, and painterly brushstrokes. A recurring character in these scenes, the chameleon-like Golem allows Cherry to comment on different moments throughout history.2 Cherry’s carefully rendered paintings are combined with sculptural elements to create the final work. Her artworks explore themes such as militarization, power, history and politics.3

An artwork in UMOCA’s Object(ed) exhibition, Mute City, Big Blue, Port Town includes a canvas painted in cool colors and placed at the bottom of a sculptural pool, complete with white tile, beach towels, and water. Cherry combines the illusion of depth offered by the submerged canvas with the dangerously shallow pool of water, creating a tension between fun and fear, pleasure and anxiety.
Mute City, Big Blue, Port Town

Artist Website: cargocollective.com/caitlincherry
View Object[ed]: www.utahmoca.org/portfolio/objected

Related Artists:
• Lygia Clark (www.alisonjacquesgallery.com/artists/49-lygia-clark/works)

1 www.interviewmagazine.com/art/caitlin-cherry-nominated-by-kara-walker#
2 www.youtube.com/watch?v=gC7ThYvmDQ4
3 www.nyartsmagazine.com/?p=12073

Students Should Understand the Following Vocabulary

Two-Dimensional (2D) - An artwork with elements organized on a flat surface (defined by height and width only), such as the picture plane of a drawing or painting.

Three-Dimensional (3D) - An artwork with elements organized in space defined by height, width and depth. Three-dimensional artworks have volume and mass.
**Sculpture** - A 3D artwork. Traditional sculptural materials include stone, clay, metal and wood. However, contemporary sculptures are made from found materials, paper, fabric and much more.

**Relief Sculpture** - A 3D artwork that protrudes from a background surface (like a wall) but remains connected to the flat background plane. Low relief is raised only slightly from the surface, high relief involves part of the sculpture rendered in three-dimensions with undercutting, and sunken relief is carved into the surface material. Relief sculptures cannot be viewed “in-the-round.”

**Geometric** - Referring to precise shapes made from points and lines, such as triangles, squares, and circles.

**Value** - An element of art: the range of lightness to darkness. Value variation gives a sense of space and depth to an object, emphasizing its three-dimensionality.

**Depth** - Having dimension or a sense of distance, through illusionistic use of perspective techniques in 2D artworks or actual use of space in 3D artworks.

**Composition** - The placement or arrangement of visual elements or ingredients in a work of art, as distinct from the subject of a work. It can also be thought of as the organization of the elements of art according to the principles of art.

**Instructional Procedures**

**TEACHER PREP:** Use white, grey and black construction paper to cut squares and triangles for students to use in both the 2D and 3D parts of their artwork.

- 3”x3” Squares: You will need approx. 2 white, 2 grey, and 8 black squares per student.
- ½ Size Triangles: Cut right triangles that are ½ the size of the 3”x3” squares by folding squares in half diagonally and cutting along this line. You will need approx. 4 white, 10 grey, and 4 black ½ size triangles per student.
- ¼ Size Triangles: Cut right triangles that are ¼ the size of the 3”x3” squares by folding ½ size triangles in half and cutting along this line. You will need approx. 16 white, 4 grey, and 4 black ¼ size triangles per student.

1. In this art project, we will explore differences between 2D and 3D artworks, particularly how depth is created two-dimensionally and three-dimensionally. *What are traditional characteristics of 2D art? What about traditional characteristics of 3D art? Have you ever seen an artwork that was both 2D and 3D? What is depth? In 2D art, is depth real or imaginary? What about in 3D art?*
2. Start with an 11x17 base paper. Gently fold in half both ways and crease to find the middle of the paper.
3. First, assemble flat white paper shapes (squares and triangles) into a large, irregular geometric composition in the middle of your paper by placing each new shape adjacent to a previous shape without overlapping, matching the edges together. Glue down. Add
grey shapes in the same manner, and then black shapes as you get closer to the edges of your paper. How do you see depth in your 2D composition? Even though your artwork is flat, which value seems like it pops out? Which value seems like it recedes backwards?

Example: Step 3

4. For the next step, you will need only black 3”x3” squares, grey ½ size triangles, and white ¼ size triangles. Fold several of each of these in half (along the line of symmetry) to make smaller triangles and crease well. Unfold creases to a 90-degree angle. We will use these folded shapes to turn our flat paper collage into a dimensional relief sculpture. What is a relief sculpture? How is relief similar to 2D artworks like drawing or painting? How is relief similar to 3D “in-the-round” sculpture?

5. Match one side of your folded, dimensional triangles to existing shapes of the same value on your artwork. Glue down so that one side of the folded shape is flat against your page, while the other side sticks straight up in the air. Continue gluing folded paper to your composition, so that the black areas of your flat artwork now have large, black triangles coming off the page; the grey areas have medium-sized, grey triangles coming off the page; and the white areas have small, white triangles coming off the page. How many or how few is up to you.

6. When finished, cut around your artwork, removing the excess of your base paper.
7. Place your artworks flat on your desk or tape to the classroom wall at eye level. *How does your artwork change when you change your perspective?* When looked at from straight on, the 3D shapes appear flattened out. When looked at from an angle, the actual depth of the folded paper becomes apparent. The dark areas that seemed to recede backwards now are raised higher from the background surface, forming the foreground. The light areas that seemed to pop off the page are now revealed to be lower to the background surface, closer to the background.
QUESTIONS TO ASK AT THE END OF THE PROJECT:

- How did you create depth in a 2D artwork?
- How did you create depth in a 3D artwork?
- How can you use varying depths to create a compelling relief sculpture?
- What characteristics does your artwork share with a traditional 2D artwork?
- What characteristics does it share with a traditional 3D artwork?

ADAPTING THIS LESSON FOR GRADES 7-12:

Students in Grades 7-12 can be challenged further by increasing the size and complexity of their 2D paper composition, and by exploring what happens to the depth of their artwork when they break a “rule” in the 3D project instructions.

- What happens when you add a folded paper shape on top of a flat area of a different value?
- What happens when you add additional folded paper triangles that are even smaller in size?
- What happens when you reverse the value scale of your relief, using taller white shapes and shorter black shapes, or a combination thereof?