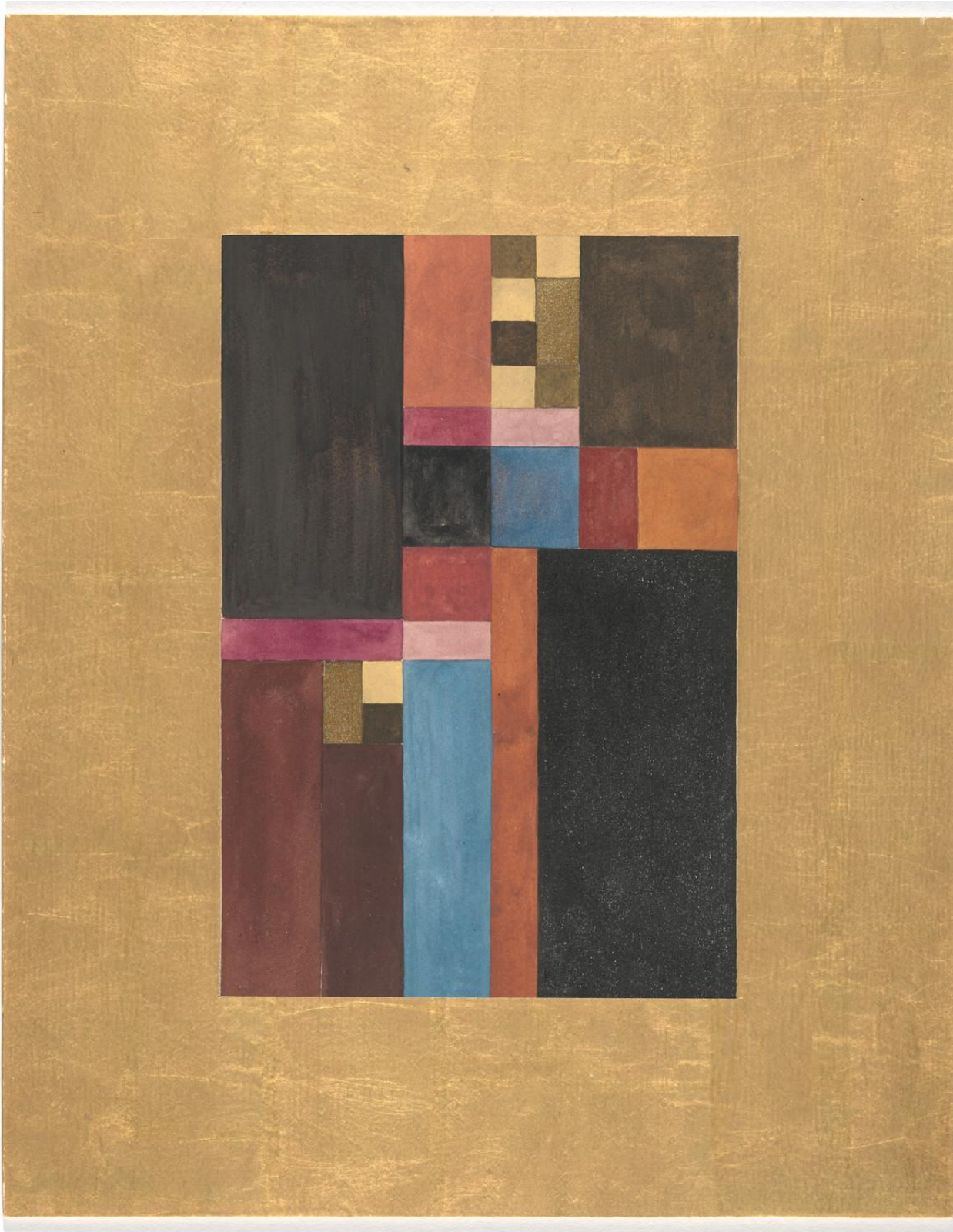


Learn with MoMA



MoMA

Step 1

Look closely

1. How many different shapes are you able to find?
2. Where can you find the same shape repeated?
3. How do the colors affect the appearance of the shapes?

Step 2

Learn more

Sophie Taeuber-Arp was a multidisciplinary artist; she was a teacher, puppet maker, interior designer, painter, sculptor, textile artist, and jewelry maker, among other things.

Taeuber-Arp often used grids to create complex abstract compositions for her textiles. The grid was a tool she could use to transfer her ideas from one material to another, but it was also a creative tool that she could work against and play off of. Rectangles, squares, verticals, and horizontals are all prevalent in her art, and all share the same basic geometry found in a sheet of graph paper.

Step 3

Look again: math connections

Elementary-School Questions:

1. What do these shapes have in common?
2. Choose any square in the artwork. If one side of the square measures one unit, what is the total perimeter of the square?
3. Find the gray square at the top center of the artwork. How many of these squares would fit into the dark orange rectangle to the left of it?

Middle-School Questions:

1. Find any square in the artwork. If the length of one of the sides is one unit, what is the area of the square?
2. Find the gray square at the top center of the artwork. If the gray square is one unit, what is the area of the dark orange rectangle to the left of it?
3. Are the two large black rectangles equal to each other? How do you know?

High-School Questions:

1. Find the gray square at the top center of the artwork. If the gray square is one square unit of measurement, can you find the total area of the artwork?
2. Find two shapes that look congruent. How can you use properties of congruence in quadrilaterals to show that they are congruent?
3. Are the black rectangles congruent? Are these two figures a transformation or a rotation?

Step 4

Activity: Create a geometric composition on a grid

Suggested materials: graph paper, ruler, pencil, colored pencils or markers.

1. Use a ruler on the graph paper to outline one large rectangle. Create an outline around the edge of the paper to create a border.
2. Divide your large rectangle into smaller rectangles and squares. Use your ruler and the grid lines as your guides.
 - a. How many smaller shapes do you want to create?
 - b. Do you want them all the same size, or do you want them different sizes?
 - c. Which shapes will be horizontal and which will be vertical?
 - d. How do all the shapes fit together?
3. Color in the squares and rectangles using different colors.

Step 5

Share!

Share your composition with your classmates. Or you can email a photo of it to us at MoMA:

schoolprograms@moma.org.



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Image: Sophie Taeuber-Arp. *Vertical, Horizontal, Square, Rectangular (Vertical, horizontal, carré, rectangulaire)*. 1917. Gouache, metallic paint, and pencil on paper. Acquired through the generosity of Marlene Hess and James D. Zirin, and gift of Judge and Mrs. Henry Epstein (by exchange). © 2023 Artists Rights Society (ARS), New York / VG Bild-Kunst, Bonn