



MORSE
MUSEUM

TANGRAM PORTRAITS



GRADES/LEVEL:

Kindergarten–5th grade

TIME REQUIRED:

45 minutes

LESSON OBJECTIVES:

Students will:

- learn the components and history of tangrams.
- produce artwork using the seven tangram shapes.
- use two elements of art—shape and color—in an original artwork.

MATERIALS:

- Tangram pattern template (see end of lesson)
- Tangram puzzle worksheets (see end of lesson)
- 8 ½" x 11" plain white paper
- Inkjet/laser printer or photocopier
- Markers, colored pencils, crayons, or digital coloring program (like Microsoft Paint 3D)
- Scissors
- Glue stick
- Magazines or decorative paper
- Buttons, string, googly eye stickers, tissue paper, colored/textured paper, found objects, etc.
- 9" x 12" sheets of construction paper or 9" x 12" canvases

VOCABULARY:

Color: the reflection or absorption of light from a given surface.

Geometric shape: a shape with clearly defined edges (circles, triangles, rectangles, etc.).

Organic shape: a shape with curved or irregular edges (clouds, leaves, puddles, etc.).

Shape: a two-dimensional area or plane.

Tangram: a puzzle consisting of seven flat, geometric shapes—2 large right triangles, a medium right triangle, 2 small right triangles, a square, and a parallelogram. These shapes called *tan* can be used to form other shapes in various configurations.

ACTIVITY DESCRIPTION:

Tangrams are seven-piece puzzles that originated in China during the Song dynasty (960–1279). Tangrams were brought to America by Captain M. Donaldson in 1815 and gained great popularity during the 19th century.

Tangram puzzles can be made of a variety of materials. Common materials include paper and wood, but there are also sets that have been exported from China made of materials like tortoise shell, glass, ivory, and jade.

There are four rules for completing any tangram puzzle: all seven pieces must be used; all pieces must lie flat; all pieces must touch; and no pieces may overlap.

INSTRUCTIONS:

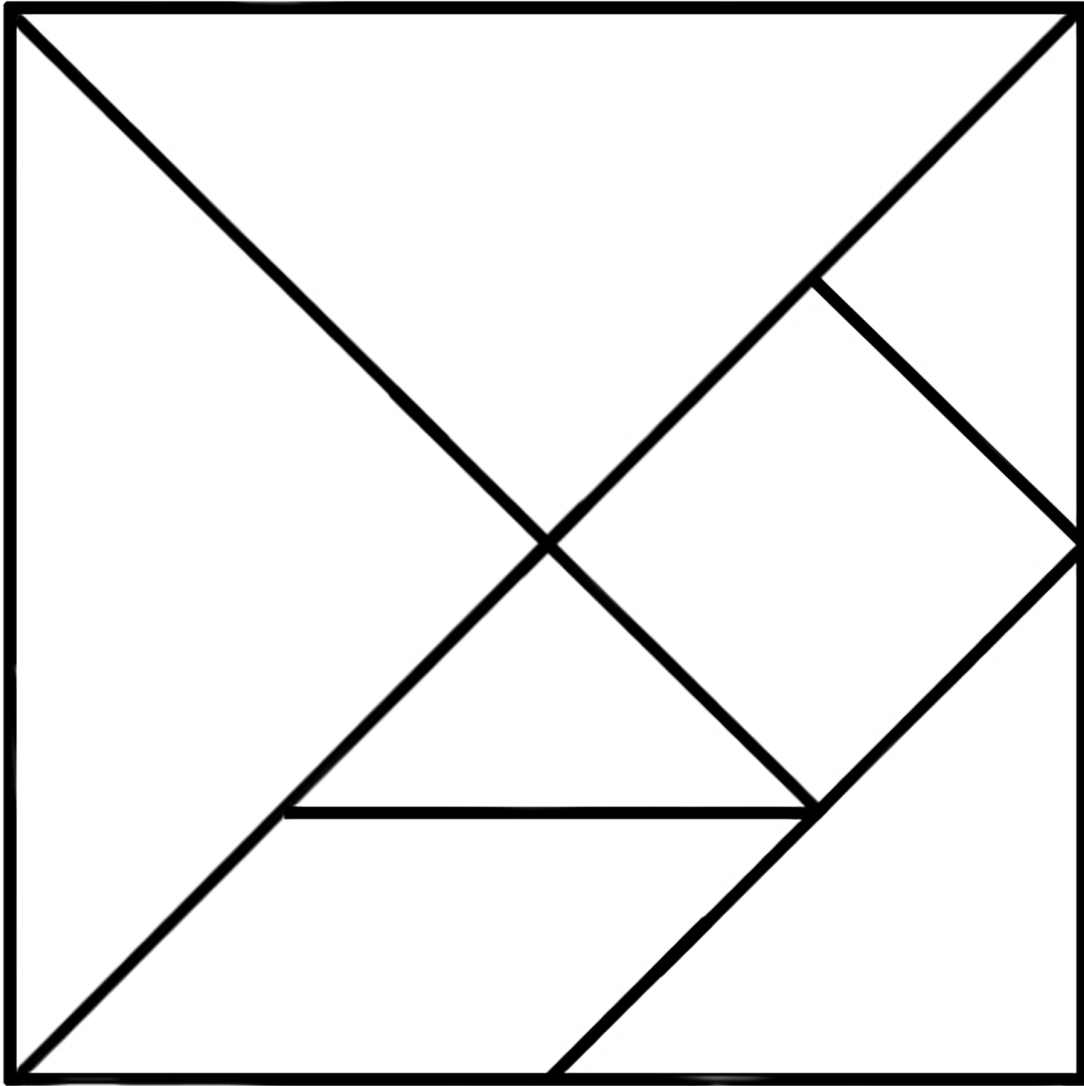
- 1) Provide each student with a digital or printed copy of the tangram pattern template. Introduce the concept and the history of the tangram and, as a class, identify the seven shapes that make up the square. Have students cut out the individual shapes.
- 2) Give each student a copy of the printed tangram puzzle worksheet (see end of lesson). Have students experiment with using the seven tangram shapes to create the different images depicted on the sheet.
- 3) Explain to students that they will now use their seven tangram shapes to create a self-portrait. This can be done using any shape configuration they would like. Self-portraits, however, must adhere to the four tangram puzzle rules:
 - all seven pieces must be used.
 - all seven pieces must lie flat against the background.
 - all pieces must touch.
 - no pieces may overlap.
- 4) Have students color the tangram shapes. Use crayons, markers, colored pencils, or open the tangram pattern in Microsoft Paint 3D and color the shapes digitally. Colors can be solid or patterned.
- 5) Give each student a sheet of 9" x 12" paper, or a 9" x 12" canvas. Have students glue tangram self-portraits to paper or canvas. Give the students materials to personalize their self portraits: buttons, string, googly eye stickers, tissue paper, colored/textured paper, and/or other objects. Encourage students to decorate "themselves" as well as the background areas. Adhere additional materials with glue. Use crayons, markers, and/or colored pencils to add details.
- 6) While waiting for glue to dry, have students write a short, one-paragraph description of their portrait explaining how it represents them. Display descriptions along with portraits in a visible location.

ASSESSMENT:

Students should:

- be able to name and identify the seven tangram shapes.
- be able to successfully create a work of art using the seven tangram shapes.
- experiment with non-traditional media and apply imaginative techniques to a two-dimensional artwork.

TRANGRAM PATTERN TEMPLATE



TANGRAM PUZZLE WORKSHEET
(BEGINNER VERSION)



CAPITAL "T"



ARROW

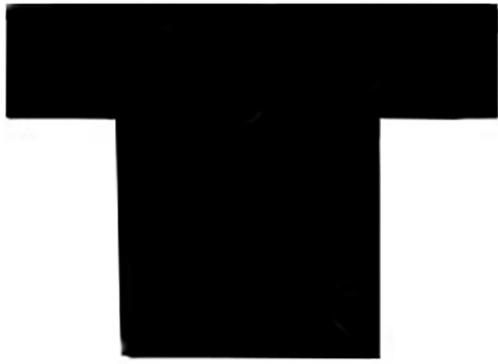


BAT

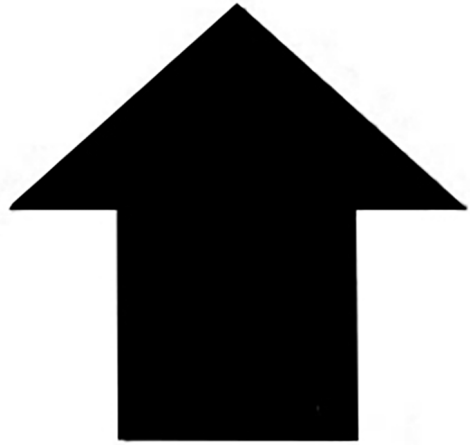


CAT

TANGRAM PUZZLE WORKSHEET
(EXPERT VERSION)



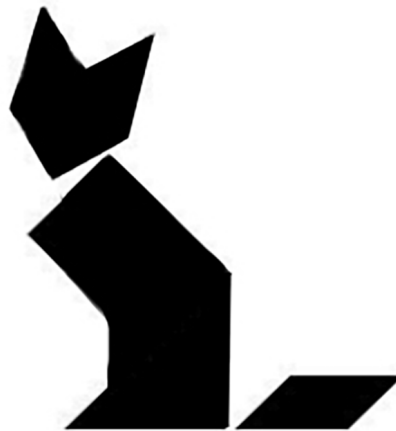
CAPITAL "T"



ARROW



BAT



CAT