

Sorting, Stacking, and Shapes!



Lesson inspired by artist, Herb Williams

Objective

Students will sort and count crayons and then use the crayons to make geometric shapes. This lesson introduces STEM practices.

Age Kindergarten and up

Time 50-55 mins

Focus STEM, Social Emotional Learning (SEL), Visual Arts (Shape, Form, Color, Line)

Material

- Crayons
- Scrap Paper
- Containers or Bags (optional)
- Labels (optional)

Core Standards

- Common Core: Math - Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes
- Social Emotional: Relationship Management - Exhibit cooperative learning and working toward group goals; Communicate effectively
- Visual Arts: Demonstrate increasing coordination and motor control when working with visual arts tools

(See below for a full list of standards.)

Opening (5 mins)

The instructor will give students an overview of the project and then divide the class into groups containing 2-5 students each, depending on class size.

- *Today we will be sorting crayons by color and then by size. Next, we will make geometric shapes with our crayons.*

Instruction and Guided Practice (35 mins)

The instructor will give each group a large pile of un-organized crayons and ask each group to sort them by color.

Step 1: *Begin by sorting the crayons by color and separate them into contained piles on your table. For example, the green crayons go in one pile, the red in another pile, the yellow, and so on.*

Step 2: *Now that you have your crayons organized by color, next you'll organize your crayons by size within their color groups. Line up your crayons shortest to tallest within each color group -- make sure to keep the color groups separate while you do this.*

Step 3: *Next, count and write down how many crayons are in each color group. (I.e. Red=8 crayons Blue=4 crayons). Every person in the group should write the number on their own paper.*

Step 4: *Ok, now that you have all of your crayons organized, it is time to start making shapes with them. Listen carefully!*

Share each instruction one by one -- giving students time to make each shape. Students should work within their groups.

- Choose the **red crayons** and use **2** crayons to form a **line**
- Choose the **green crayons** and use **3** crayons to form a **triangle**
- Choose the **yellow crayons** and use **4** crayons to form a **square**
- Choose the **blue crayons** and use **6** crayons to form a **rectangle**
- Choose **12 different colored crayons** (it's okay if some are the same color) and create a **sun** – using the crayons as the sun rays with the crayon tips pointing out. **(See example on resource page.)**

Work Time (5-10 mins)

Circulate the room to help students as needed.

Closing (5 mins)

At the end, ask students to put the color organized crayons in separate containers or bags. If there is time, ask students to label the containers by writing the color name on the label and pasting on the containers.

Extension:

2nd-5th Grade: Suggest that students try stacking the crayons into a 3-D cube by placing two crayons parallel to each other and 3-4 inches apart. Next, place another two crayons across the other crayons but in the opposite direction (perpendicular) to the first layer of crayons. Keep going

following this pattern until desired cube height. Keep building it to create a crayon tower! (See example on resource page.)

Philosophy

Art is an essential tool for early childhood development. Studies have shown that art education helps to increase comprehension of STEM and literacy concepts as well as offering students an outlet to process trauma, develop self-discipline and self-management, and interpersonal relationship skills. Active engagement in the arts can yield positive benefits in social and emotional growth. The art lessons developed by Crayon Collection are meant to support this growth.

Standards

Common Core

Math

Identify and Describe Shapes

- Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
- Correctly name shapes regardless of their orientations or overall size.

Analyze, Compare, Create, and Compose Shapes

- Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Social Emotional Competency

Relationship Management

- Exhibit cooperative learning and working toward group goals
- Communicate effectively
- Provide help to those who need it

Visual Art

Notice, Respond, and Engage

1.1 Communicate about elements appearing in art (such as line, texture, or perspective), and describe how objects are positioned in the artwork.

Develop Skills in Visual Art

2.6 Demonstrate increasing coordination and motor control when working with visual arts tools.

Create, Invent, and Express Through Visual Art

3.1 Intentionally create content in a work of art.

Connection to Head Start Early Learning Outcomes Framework: Ages Birth to Five

Preschooler Approaches to Learning

Goals for Sub-Domain: Creativity

Goal P-ATL 12. Child expresses creativity in thinking and communication. (By 60 months)

- Asks questions related to tasks or activities that indicate thinking about new ways to accomplish the task or activity.
- Approaches tasks, activities, and play in ways that show creative problem solving.

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- Uses multiple means of communication to creatively express thoughts, feelings, or ideas.
- Goal P-ATL 13. Child uses imagination in play and interactions with others. (By 60 months)
- Engages in social and pretend play.
 - Uses imagination with materials to create stories or works of art.
 - Uses objects or materials to represent something else during play, such as using a paper plate or Frisbee as a steering wheel.

About the Artist

One of the only artists in the world to boast an account with Crayola, Herb Williams got his BFA from Birmingham-Southern College. His works have been featured in the White House and internationally at various festivals. Williams is the recipient of the The Joan Mitchell Foundation Museum Purchase Grant in 2005, the Next Star Artist Award in 2008, and was sponsored by a grant from the National Endowment for the Arts in 2011.

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Additional Resource

Tons of crayons ready to be sorted!



Begin sorting them into color groups



Can you make shapes with your crayons, like these suns?



CRAYON COLLECTION

COLLECT -> CONTRIBUTE -> CREATE

Try stacking the crayons into a 3-D tower!

