MA.K.GR.1.2

Overarching Standard: MA.K.GR.1 *Identify, compare, and compose two- and three-dimensional figures.*

Benchmark of Focus

MA.K.GR.1.2: Compare two-dimensional figures based on their similarities, differences, and positions. Sort two-dimensional figures based on their similarities and differences. Figures are limited to circles, triangles, rectangles, and squares.

Example: A triangle can be compared to a rectangle by stating that they both have straight sides,but a triangle has 3 sides and vertices, and a rectangle has 4 sides and vertices.

Benchmark Clarifications

Clarification 1: Instruction includes exploring figures in a variety of sizes and orientations.

Clarification 2: Instruction focuses on using informal language to describe relative positions and the similarities or differences between figures when comparing and sorting.

Related Benchmark/Horizontal Alignment
- MA.K.M.1.1 /1.2
- MA.K.DP.1.1

Vertical Alignment

Previous Benchmarks	Next Benchmarks
VPK	MA.1.GR.1.1

Terms from the K-12 Glossary
- Circle
- Rectangle
- Square
- Triangle

Purpose and Instructional Strategies

The purpose of this benchmark is for students to build on their understanding of classification oftwo-dimensional figures by finding similarities and differences between shapes. *(MTR.5.1)*
- Instruction includes opportunities for students to sort images based on various criteria,such as same number of sides, and figures with all straight sides. *(MTR.2.1, MTR.5.1)*
- Instruction includes helping students describe objects based on relative positions. Relative position refers to students identifying left/right, in front of/behind, apart, and above/below. When comparing figures students should understand that relative positioncan change even though the other features of the figures stay the same.

- Instruction includes figures of various sizes and orientations, and may include figures that are not triangles, circles, rectangles, or squares. *(MTR.2.1)*
- Instruction includes examples of squares when discussing rectangles.
- Right angles are technically not addressed until grade 4, but it is appropriate to discuss "square corners" and corners that are not square in an informal way in kindergarten.

Common Misconceptions or Errors
- Students may not understand that all squares are also classified as rectangles; however, only specific rectangles (with sides that are the same length) are also classified as squares.
- Students may sort figures separately because of orientation and/or size rather than the identified attributes of the figures.

Strategies to Support Tiered Instruction

- Teacher provides plane shapes (circles, squares, triangles, rectangles) for students to sort.
  - o For example, instruction includes sorting shapes by how they are the same or by how they are different. The teacher asks follow up questions such as, "How did you decide to sort the shapes? How many sides does this group have?"
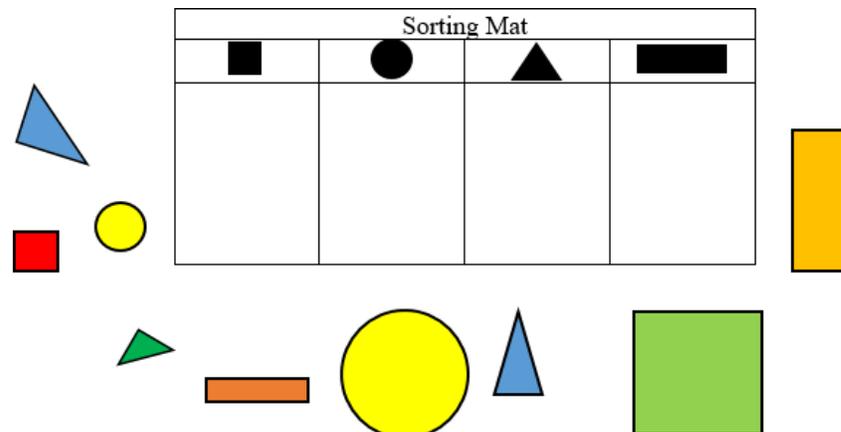
- Teacher provides the following plane figures in multiple sizes: squares, circles, triangles, rectangles. Shapes are scattered in the workspace. Students work to match the squares with the squares, the circles with the circles, etc., until all shapes are grouped. The focus is on students recognizing that shapes of different sizes go in the same group (i.e., all circles large and small should be together).
- Teacher provides instruction by doing a "Shape Show." The teacher shows and names a large rectangle. Walk fingers around its perimeter, describing and exaggerating the actions (straight side...turn, straight side...turn, straight side...turn, straight side...stop), while asking students how many sides the rectangle has and count the sides with him or her. Repeat the actions for a large square, drawing connections between the similarities. The teacher explains that squares are a special kind of rectangle.

Questions to ask students:
- Ask: *How does the square and rectangle compare?*
    - Sample answer that indicates understanding*: They both have 4 sides and 4 vertices and four right corners. They are both rectangles. The square has same length sides.*
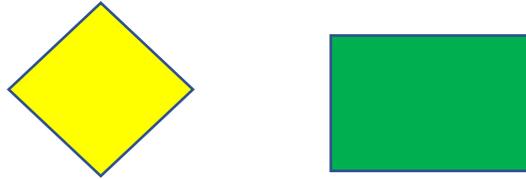
- Ask: *How does the triangle and circle compare?*
    - Sample answer that indicates understanding*: The triangle has 3 straight sides and 3 vertices. The circle has 0 straight sides and 0 vertices.*
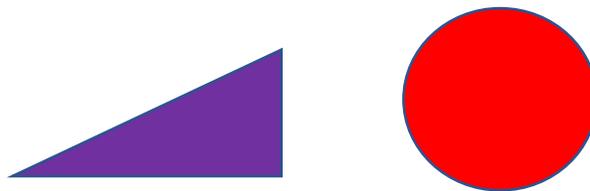
Instructional Tasks

Instructional Task 1 (MTR.2.1, MTR.4.1)

Using the figures below, create sorting cards for students.

Provide each student in a group with their own set of figures to sort. Ask each student to sort the figures in any way they choose. Once students have sorted their figures, give each studenttime to share about their choices, and explain how they sorted their figures (by shape, straightsides and circles, filled and not filled or number of sides). Once students have shared, ask them to sort their figures in a new way. Give time for sorting and sharing again. Repeat the task as needed.
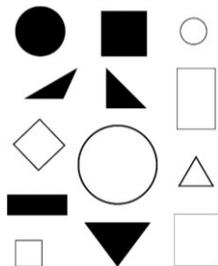
Instructional Task 2

Identify which of the figures below are rectangles and describe their relative positions.

Instructional Items

Instructional Item 1
   Circle all of the figures that have 4 sides.
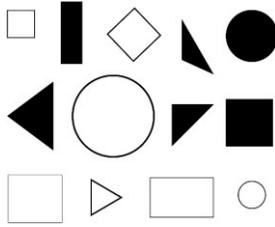
Instructional Item 2
   How many figures have straight sides?
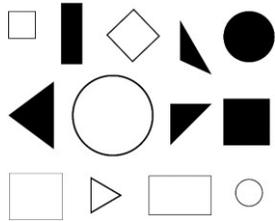
Additional Resources:

CPALMS: MA.K.GR.1.2

YouTube Video: Compare Two-Dimensional Shapes

Resources/Tasks to Support Your Child at Home:

Choose two different objects from your home, focusing on the shapes: circles, triangles, rectangles, and squares. Ask your child to describe how the two shapes are alike and how they are different. Then extend to have them find another shape that is like them.

SplashLearn Online Game: Sort Shapes Based on Attributes