## Core Content

<table>
<thead>
<tr>
<th>Cluster Title: Draw and Identify lines and angles, and classify shapes by properties of their lines and angles.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard 3:</strong> Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</td>
</tr>
</tbody>
</table>

### MASTERY Patterns of Reasoning:

#### Conceptual:
- Students will understand the definition of symmetry.
- Students will understand the definition of a line of symmetry.
- Students will understand how to find symmetry in two-dimensional figures.
- Students will understand how to create a line of symmetry.
- Students will understand that lines of symmetry create congruent figures.

#### Procedural:
- Students can identify two-dimensional figures that have a line of symmetry.
- Students can draw lines of symmetry in two-dimensional figures.

#### Representational:
- Students can use models and pictures to identify symmetrical figures.
- Students can use models and pictures to draw lines of symmetry.

## Supports for Teachers

### Critical Background Knowledge

#### Conceptual:
- Students will know that two-dimensional figures have length and width.
- Students will understand what a line is.

#### Procedural:
- Students can identify two-dimensional figures.
- Students can identify that figures are congruent.
- Students can draw lines.

---

Code: 4.G.3
**Representational:**
Students can use models and pictures to identify two-dimensional figures and lines.

**Academic Vocabulary and Notation**
symmetry, two-dimensional, matching parts, symmetrical, line, line of symmetry, congruent

<table>
<thead>
<tr>
<th>Instructional Strategies Used</th>
<th>Resources Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give students a symmetrical two-dimensional figure. Ask students to fold the figure in half and draw a line on the fold. Then ask students to identify whether both parts match. Define where the line of symmetry is on the figure. Define what makes the figure symmetrical. Try the same thing with a two-dimensional figure that is not symmetrical.</td>
<td><a href="http://www.linkslearning.org/Kids/1_Math/2_Illustrated_Lessons/4_Line_Symmetry/index.html">http://www.linkslearning.org/Kids/1_Math/2_Illustrated_Lessons/4_Line_Symmetry/index.html</a></td>
</tr>
</tbody>
</table>

**Assessment Tasks Used**

| Skill-Based Task: Identify symmetrical figures. Draw lines of symmetry on figures given to them. | Problem Task: Use pattern blocks, tangrams, or pentaminoes to create a figure that has at least one line of symmetry. Students will draw a two-dimensional replica of their figure showing the lines of symmetry. |
|                                                                                           | [http://nrich.maths.org/1840](http://nrich.maths.org/1840) |