

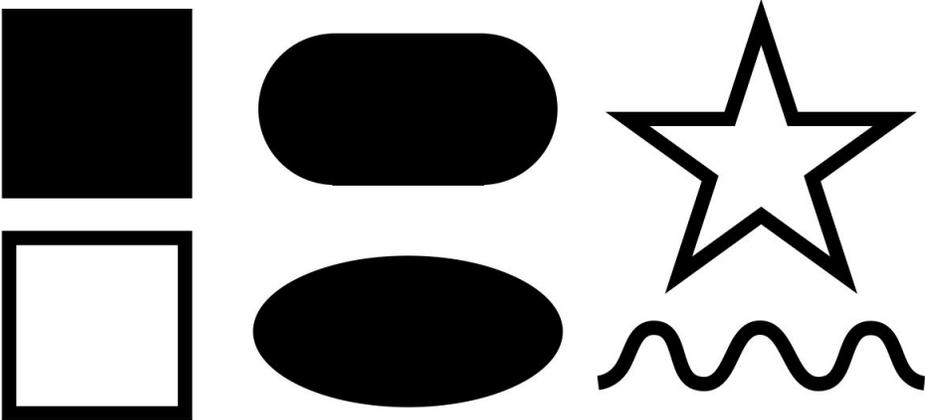
## PANCAKES AND WORMS

---

|  |   |
|--|---|
| <b>Level</b>                               | 2 (Age group 8 – 10)  |
| <b>Resources Required</b>                  | Play-dough<br>Shape cards   |
| <b>Alternate Options for the Resources</b> | <p>Adults can make playdough by mixing the ingredients below:</p> <ol style="list-style-type: none"> <li>1. 2 cups flour</li> <li>2. <math>\frac{3}{4}</math> cup salt</li> <li>3. 2 cups lukewarm water</li> <li>4. 2 tablespoons of vegetable oil</li> </ol> <p>To create shape cards:</p> <ol style="list-style-type: none"> <li>1. Cut out pieces of paper the size of your palm.</li> <li>2. Draw one of the shapes in the Images/Illustrations section, or draw one of your own shapes. Some of these shapes have to be filled in to represent the area and some of these are empty to represent perimeter</li> </ol> |
| <b>Strand Covered</b>                      | Shape & Space   |
| <b>Targeted Skills</b>                     | Shape recognition: Perimeter construction versus area construction.   |
| <b>Inspired by</b>                         | <a href="#">Pocket of Preschool, Julia Robison Mathematics Festival - Gordon Hamilton</a>   |
| <b>Time Required</b>                       | 10 minutes<br>30 minutes (setup of playdough and cards)   |
| <b>Previous Learning Required</b>          | Knowledge of 2-D and 3-D shapes<br>Understand the concept of perimeter and area   |
| <b>Support Required</b>                    | Low supervision   |

### Rules of the Game:

|              |   |
|--------------|---|
| <b>Goal</b>  | The first student who creates the 10 shapes and correctly identifies whether the shape represents area or perimeter wins. |
| <b>Rules</b> | <ol style="list-style-type: none"> <li>1. Players will get dealt equal number of cards</li> </ol>                         |

|                                       |   |
|---------------------------------------|---|
| <p><b>Steps</b></p>                   | <p>Step 1: Make a deck of 10 shape cards per player. Make sure that there is a mix of shape cards that are filled in and empty.</p> <p>Step 2: Give each player their 10 shape cards face-down in a pile and playdough (enough to make 10 basic shapes with).</p> <p>Step 3: Instruct the students that they will be creating the shapes on their shape cards. They must also be able to identify if the shapes they make represent area or perimeter.</p> <p>Step 3: When the teacher says “start”, students flip over their first shape card and try to make it using playdough. Students continue to flip over cards and make the shapes on them until they run out of cards.</p> <p>Step 4: When a student finishes their deck, they raise their hand. The student must also verbally demonstrate which shapes represent areas and which represent perimeter. The shapes that are filled in represent the area and ones that are empty inside represent the perimeter</p> <p>Step 5: The first student to construct all of their shapes and correctly identify which ones represent area and which ones represent perimeter wins.</p> |
| <p><b>Images or Illustrations</b></p> | <div style="text-align: center;">  </div> <p>*An Oval (top middle) and ellipse (bottom middle) are often confused.</p>  |
| <p><b>Enrichment</b></p>              | <ul style="list-style-type: none"> <li>- Use more complex shapes for example hexagon, octagon etc.</li> <li>- Use 3D shapes</li> </ul>  |
| <p><b>Simplification</b></p>          | <ul style="list-style-type: none"> <li>- Use a few simple shapes</li> <li>- Use either area shapes or perimeter shapes, but not both.</li> </ul>  |