Geometry and Measurement

Students will:
- Identify and describe plane figures and solid figures based on geometric properties
- Develop an understanding of the inner-relatedness of solid and plane figures
- Investigate the outcomes when geometric figures are combined and cut apart
- Expand the ability to see geometry in the real world
- Further develop their understanding of the concept of time by determining elapsed time (to an hour, half, and quarter-hour)
- Continue to develop their abilities to recognize the appropriate unit of length needed to measure a specified item
- Compare the relationship of one unit to another within a single system of measurement
- Check by measuring to determine if estimates are accurate for length and temperature
- Determine a tool that is appropriate for measuring length
- Recognize benchmarks for commonly-used units of measure

Classroom Cases:
1. Sort shapes into groups by attributes. Identify the shape and describe it.

Case Closed - Evidence:
A, B, and D are all quadrilaterals. A is a trapezoid, B is a square or rhombus, and D is a parallelogram. C and E are both triangles. E is a scalene triangle with one right angle and C is an equilateral triangle because all the sides are the same length.

Clues:
Measuring seems simple, but for elementary students it can pose a real challenge. Even though students can do measurement worksheets and manipulate measurement data on paper, they may not have had much experience using rulers and other measuring tools. Sometimes students need help:
- To line up the ruler so that the end of the object is at zero.
- To measure from the zero end of a ruler.
- To use appropriate units and not combine metric and U.S.A. customary units.
- To use tools appropriate for the task: yardstick, meter sticks, rulers, and tape measures.

A vital part of your child’s learning is the opportunity to discuss reasonableness of measurements, to measure several times, and to correct measuring mistakes.

Encourage your child to use pictures to represent measurement conversion. For example,

<table>
<thead>
<tr>
<th>3 feet = ? inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 foot</td>
</tr>
<tr>
<td>1 foot</td>
</tr>
<tr>
<td>1 foot</td>
</tr>
<tr>
<td>12 inches</td>
</tr>
<tr>
<td>12 inches</td>
</tr>
<tr>
<td>12 inches</td>
</tr>
</tbody>
</table>

12 in. + 12 in. + 12 in. = 36 inches

Book’em:
- Three Pigs, One Wolf and Seven Magic Shapes by Grace Maccarone
- Grandfather Tang’s Story by Anne Tompert
- The Fattest, Tallest, Biggest Snowman Ever by Bettina Ling
- The Measuring Penny by Loreen Leedy
- The Greedy Triangle by Marilyn Burns