Name_____
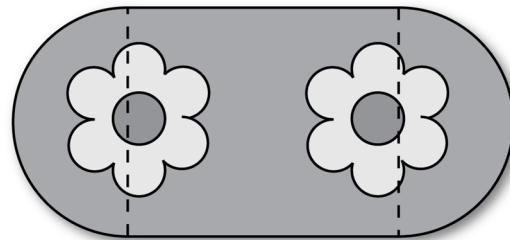
Dear Family,

Many families enjoy making crafts. Sewing, scrap-booking, landscaping, gardening, and doing woodwork are just a few activities that use mathematics to form pleasing shapes.

When you lay out a circular garden in a landscape, you cut the edging to match the circumference of the circle. Then you curve the edging around the circular plot to define the area. The area of the circle is used to figure out how much mulch, plants, and flowers you will need.

Similarly, basting the edge of a placemat involves figuring out the length of the edge. For a placemat with semicircles on each end, you use the circumference to find the lengths around the curves. You then add those lengths to the sides of the rectangular portion in the middle.

Find a craft to enjoy with your student. Ask your student to help with the following.

- Draw a plan of your project. You can use combinations of geometric shapes (like the rectangle and circle in the placemat above) to help a find the measurements.
- Find the parts of the project that use measurements around the perimeter and then make a list of the lengths of each edge. Use these lengths to plan for outlining and edging material.
- Find the parts of the project that fill in an area and make a list of the areas for each part. You will use these areas to plan for interior material, such as the amount of fabric or wood.

As you work with your student, ask him or her whether to cut material exactly to the measurements or leave a little extra—different crafts have different needs. Work out strategies for changing your plans to match the materials you have readily available.

(You and your student will have a lasting record of your work together—have fun showing it off to your friends and family!

Lesson	Learning Target	Success Criteria
8.1 Circles and Circumference	Find the circumference of a circle.	• I can explain the relationship between the diameter and circumference of a circle. • I can use a formula to find the circumference of a circle.
8.2 Areas of Circles	Find the area of a circle.	• I can estimate the area of a circle. • I can use a formula to find the area of a circle.
8.3 Perimeters and Areas of Composite Figures	Find perimeters and areas of composite figures.	• I can use a grid to estimate perimeters and areas. • I can identify the shapes that make up a composite figure. • I can find the perimeters and areas of shapes that make up composite figures.
8.4 Measuring Angles	Measure and draw angles.	• I can measure angles using non-standard and standard units. • I can draw and measure angles using a protractor. • I can construct a triangle using angle measures.
8.5 Finding Unknown Angle Measures	Use facts about angle relationships to find unknown angle measures.	• I can identify adjacent, complementary, supplementary, and vertical angles. • I can use equations to find unknown angle measures. • I can find unknown angle measures in real-life situations.