Name: _____!

Date: _____ Pd: _____
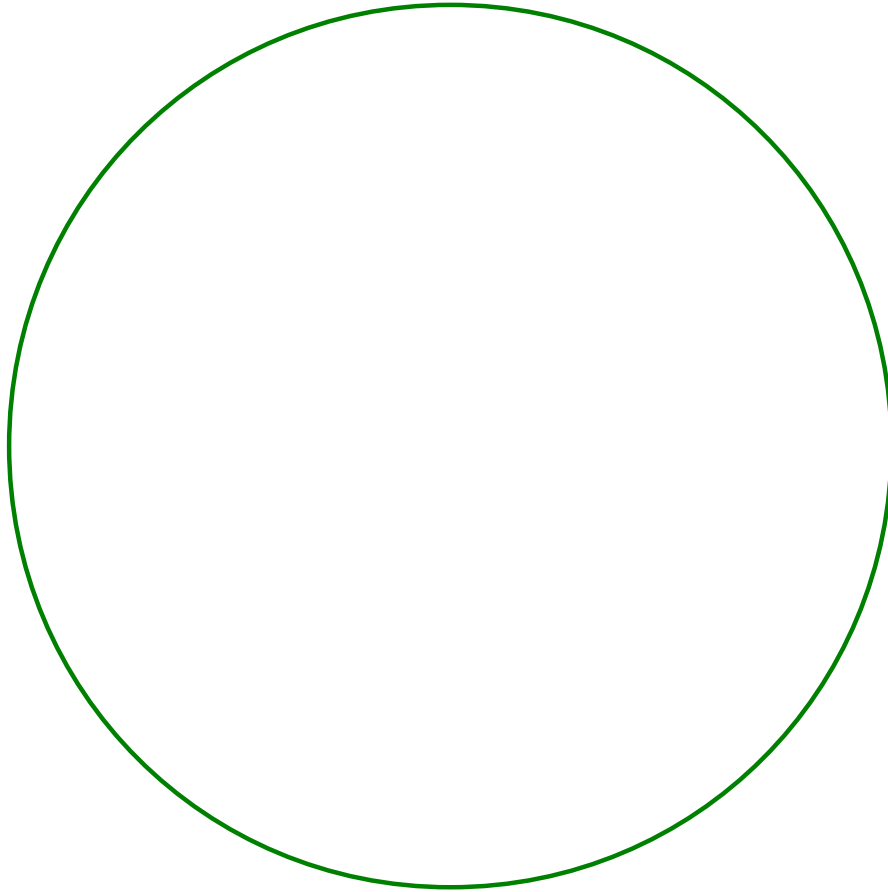
Why are circles important in our lives? What are some applications of circles in our world today?

Let's investigate: Cut out the figure below:

1) Look at the shape you are holding. It is a _____.
   - Let's play a game… called **TABOO**.
   Taboo is a word guessing party game published by Hasbro in 1989. The objective of the game is for a player to have their partners guess the word on the player's card without using the word itself or five additional words listed on the card.
   Describe a circle without using the following terms:
     o Round
     o Diameter
     o Center
     o Radius
     o Equidistant

   > This figure…

2) Look at the outer edge of your circle. What is the distance around the outside of the circle called?
   _____

3) Fold your circle exactly in half and crease it well.
4) Open the circle, the crease you made is the _____ of the circle.
5) Hold the circle at the ends of the crease. Fold your circle in half again, but this time match up the end points of the previous crease.

SNRPDP

6) Open your circle, is this also a diameter? **YES / NO**
   How do you know?

   _____

   Do the lines intersect? **YES / NO**
   Is there something special about the angles created when these lines intersect? _____
   This special type of intersection is called _____.

7) Place a dot, no bigger than the width of a pencil, at the point where the creases connect. This is called the _____ of the circle.

8) Using your pencil, trace one of the lines from the center to the edge of the circle. This line from the center is called a _____.

9) Fold in one of the outer, curved edges of the circle until it just touches the dot in the middle. Crease it well.

10) Open the fold and look at the crease you just made.
    Is it a diameter? **YES / NO**
        Why or why not? _____
    Is it a radius? **YES / NO**
        Why or why not? _____
    This line is called a _____.

11) Look at the curved part of the circle between the points where this line touches the outside of the circle. This is called an _____.
    Can you find more of these on your circle?

12) Take the opposite side of your circle and fold it so that the curved part just touches the center and the bottom forms a perfect point. Your circle will look like an ice cream cone. Crease it well.

13) Fold the top of your ice cream cone down until the curved part just touches the center of the circle. The top corners should make perfect points, crease well. Now describe the shape you have.

    _____

    Do you notice anything special about this triangle? Look at all of the angles, they are all equal as well as all of the sides are congruent.
    This triangle is called _____. You can also use the term _____.
    Both of these triangles can be classified as _____ triangles because

    _____.

14) Fold the new triangle in half by matching up two of the points. Crease well. The new cease splits the triangle in half; this line is called the _____ or _____.
    Do you notice anything else about this triangle? It is a _____ triangle.

15) Open the triangle up to the equilateral triangle.

16) Take the top corner of the big triangle and fold it. By folding along the crease of the height you can match the top point up to the bottom crease line. On the inside you will now see three smaller triangles.

17) Turn the paper over so that you do not see the creases. What is this shape called? Since it has four sides it can be classified as a _____.
    Two sides that are_____ and two that are not. It is also called a _____.

18) Turn it back over so that you now see all of the creases. Fold one of the outer triangles in so that it lies directly on top of the center triangle. Turn it back over and describe the shape you now see. In mathematics this shape is called a _____.

19) Turn your shape back over and fold the last outer triangle over onto the center one again. You should now have a smaller equilateral triangle.

20) Open up all three of the small triangles. Bring the three loose points together so that you now have a _____. This is a _____ _____ and not a squared pyramid like those built in Egypt.
21) Open your pyramid back up to the large equilateral triangle.
22) Fold over one of the points so that it just touches the dot in the middle. What shape have you re-created? _____.
23) Fold one more of the points in so that it just touches the dot in the middle. Now what shape do you have? _____. Even though it is not the traditional shape you are accustomed to, it still has five sides.
24) Now fold in the last point. What shape is it now? _____
25) Turn to the other side and fit one of the corners into a flap on the opposite side of the triangle. You may have to try more than one. Choose the one that makes the best fit. Slide the last corner under/inside the others. You have now created a…… truncated tetrahedron!

NOW:
What is a Circle?

What geometric shapes can be constructed from a circle?

What is the difference between a 2D and 3D figure?