Area
Exploration Questions

1. Imagine that the grid is a geoboard where each intersection of the grid lines is a peg on the board. Using the Area Applet or a piece of graph paper, look at all the possible shapes with the set perimeters listed on the Area Record Sheet. Then record all the information asked for.

2. If the perimeter is fixed but the area is not, does the number of grid line intersections with the perimeter change?

3. Is there a correlation between the number of inside intersections of the object and the size of the perimeter? If so, what is the correlation?

4. Is there a correlation between the number of intersections inside the object and the number of possible areas for a given perimeter? If so, what is the correlation?

5. Is there a correlation between the number of possible areas for a given perimeter and the size of the perimeter? If so, what is the correlation?

6. If the perimeter is fixed but the area is not, is there a correlation between the number of outside intersections and the perimeter? If so, what is the correlation?

7. How does the shape of the perimeter affect the area of the shape? (Draw Diagrams if necessary)