Plane Figures
of the Geometry Cabinet

These Who Am I? story cards are designed to be matched with the frames and insets of the Montessori geometry cabinet. This second period activity encourages the internalization of the definitions of the 25 plane figures that are the focus of the study of surfaces or regions. The study of triangles, quadrilaterals and polygons can begin once the child has learned the characteristics and distinctions of lines and angles. The concrete investigation of congruence, similarity and equivalence is made easier when the child has a secure understanding of the plane figures and can label each of them quickly and with confidence.

Directions for Assembly:

This material includes definitions and labels to be mounted on mat board cut to the same size as the yellow frames of the Montessori geometric cabinet.

1. Trim all labels and definitions just outside the border. Leave a 2 mm margin outside the line.

2. Cut blue mat board for backing: thirty-six 5.5 in. squares for definitions; and thirty-six 5.5 in. x 1.25 in. strips for labels. (Page 12 has two alternatives for the same shape used by different manufacturers. The set also includes six extra labels that may be used for teaching purposes.)

3. Once labels have been mounted, cover reverse side first with clear contact paper cut flush with the edge of the backing board. On front side, cut tabs from edge and fold over to seal edges.

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quadrilateral

I am a triangle with unusual sides. The sides of my shape are curved lines. I am very easy to guess.

I have only three sides but they are all the same length. My name comes from the Latin words *aeguus* which means equal and *latus* which means side. The rest of my name comes from *tri* meaning three and *angulus* which means angle. My name should be easy to guess.

curvilinear triangle

equilateral triangle

I have three sides and they are all different lengths. These line segments or sides come together to form three sharp angles each less than ninety degrees. My name comes from: *acutus* meaning to sharpen, *skalenos* meaning uneven and *tri* plus *angulus* which means three angles. With those clues you should guess my name.

I am a triangle with unequal sides. However, where two of my sides meet a right angle is formed. Part of my name comes from the Greek word *skalenos* meaning uneven. Can you name me?

acute angle scalene triangle

right angle scalene triangle

I have three sides. All of my sides or line segments are different lengths. One of my angles is greater than ninety degrees and is very blunt. My other two angles are acute. My name comes from: the Latin word *obtusus* meaning blunt, the Greek word *skalenos* meaning uneven, and the Latin words *tri* and *angulus* meaning three angles. I know you can guess my name now.

I have three sides. Two of my sides are the same length. One of my angles is greater than ninety degrees and is very blunt. My other two angles are acute. My name comes from the Latin word *obtusus* meaning blunt, or dulled. Can you guess my name?

obtuse angle scalene triangle

obtuse angle isosceles triangle

I am a triangle with angles all less than ninety degrees. These angles are very sharp. Be careful you don't hurt yourself when you touch my angles. Two of my sides are equal in length. Part of my name comes from the Latin word *acutus* meaning to sharpen. Do you know my name?

I am a triangle with two of my sides equal in length. These two sides form a ninety degree or right angle where they intersect. Can you name me? Part of my name comes from the Greek words *isos* meaning equal and *skelos* meaning leg.

acute angle isosceles triangle

right angle isosceles triangle

My four sides are all the same length. These sides meet to form four right angles. My name comes from the Latin word *quattour* meaning four. Can you name me?

All four of my sides are equal in length. The sides opposite each other are parallel. The angles opposite each other are also equal. My name comes from the Greek word *rhombos* which means spinning top. Can you name me?

square

rhombus

I have two pairs of parallel lines. These lines meet to form four right angles. My pairs of lines may be different lengths. My name comes from the Latin words *rectus* meaning right and *angulus* meaning angle. What is my name?

rectangle

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rectangle

rectangle

scalene triangle

isosceles triangle

acute angle triangle

obtuse angle triangle

right angle triangle

I am a four-sided plane figure. The sides opposite each other are parallel. Also, the sides opposite each other are equal in length, but not all of the pairs of sides are the same length. My name comes from the Greek words *parallelos* meaning parallel and *gramme* meaning line. Can you name me?

parallelogram

I have four sides and two of my sides are parallel. They will never meet each other. My other two sides are not parallel. My name comes from the Greek words *trapeza* meaning table and *eidos* meaning form. Who am I?

I have four sides and two of them are parallel. They will never meet each other. My other two sides are not parallel. At least one of my angles is a right angle. The others are not. Part of my name comes from the Greek words *trapeza* meaning table and *eidos* meaning form. Who am I?

trapezoid

right angle trapezoid

I have four sides even though my name comes from the Greek word *delta* which means triangular. This may be because I look like two triangles joined at their bases. I am the only plane figure in your cabinet with a concave angle on the outside. Can you guess who I am?

I have four sides and I look like an inverted letter V. My name comes from the Latin word *capreoli* which refers to the rafters that hold up the roof of a house. I can be seen on the sleeves of uniforms to show rank or length of service. I am the only plane figure in your cabinet with a concave angle on the outside. Can you guess who I am?

deltoid

chevron

I am a quadrilateral because I have four sides. None of my sides are parallel. I have two pairs of equal adjacent sides. One pair of my opposite angles are equal. I may remind you of a light framework covered with cloth, plastic or paper which you have flown in the wind at the end of a string. My name comes from an Old English word meaning bird of prey. Who am I?

I am a flower-like curved figure with four foils or lobes. My name comes not from Greek or Latin but from the Old French words *quatre* meaning four and *foil* meaning leaf. Who am I?

kite

quatrefoil

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have five angles. Since I am regular, all of my angles are the same size. Also, all of my five sides are the same length. My name comes from the Greek words *penta* which means five and *gonia* which means angle. Can you guess my name?

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have six angles. Since I am regular, all of my angles are the same size. Also, all of my six sides are the same length. My name comes from the Greek words *hex* meaning six and *gonia* meaning angle. Can you guess my name?

pentagon

hexagon

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have seven angles. Since I am regular, all of my angles are the same size. Also, all of my seven sides are the same length. My name comes from the Greek words *hepta* meaning seven and *gonia* meaning angle. Can you guess my name?

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have eight angles. Since I am regular, all of my eight angles are the same size. Also, all of my eight sides are the same length. My name comes from the Greek words *okto* meaning eight and *gonia* meaning angle. Do you know who I am?

heptagon

octagon

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have nine angles. Since I am regular, all of my angles are the same size. Also, all of my nine sides are the same length. My name comes from the Latin word *nonus* meaning nine and the Greek word *gonia* meaning angle. Do you know who I am?

I am a regular polygon, and since I am a polygon I have many angles. In particular, I have ten angles. Since I am regular, all of my angles are the same size. Also, all of my ten sides are the same length. My name comes from the Greek words *deka* meaning ten and *gonia* meaning angle. Can you guess who I am?

nonagon

decagon

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

circle

circle

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

circle

circle

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

I am bounded by a curved line. Every point on my circumference, my outer limit, is the same distance from the center. My name comes from a Latin word *circus* which means ring. Who am I?

circle

circle

If you took a circle and flattened it a bit you would make my shape. The distance around my outer edge follows a pattern similar to the orbit of planets around the sun. What is my name?

My shape resembles an egg. My sides are curved. My name comes from the Latin word *ovum* or egg. I am an easy shape to guess.

ellipse

oval