Mathematics Trail around Beaver Road Primary School

Zone One

1. "I am at the beginning of the corridor, I am partly a cylinder. What am I?"

There is some wire in a window nearby. What can you tell me about its shape?

How many lines of symmetry does this pattern in the wire have?

2. What 3-D shape keeps Britain tidy?

How many lines of symmetry does it have? Is this object symmetrical in any other way?

3. Look outside. "I am a 3-D shape. Two of my sides are pentagons and two sides are rectangles. I also have two sloping rectangular faces for my roof. What am I?"

I also have two heptagonal shapes on my sides. Can you draw them here?

What would my net look like?

4. Suppose the first cloakroom on your left needed carpeting. Estimate the floor area of the room. (Please use resources provided.) How much carpet would be needed?

5. Mrs Adams' cat is trying to count the number of trapeziums on his carpet. Can you help him?

Zone Two

1. In the communal garden, how many paving stones would you need to make the net of a cube?

How many different *nets* can you spot? *(Teacher: use children to construct the net. Then build cube from net using polydrons to see if you are right.)*

2. Name the different shapes you can see in the communal garden. Tell me two things about each shape. What else can you tell me about this mosaic?

3. What do you notice about the patterns on the air vents in the cloakroom?

4. "I am a 3D shape in the corridor. I have 6 faces, 4 of which are congruent, and 2 of my faces are different. I have 12 straight edges. I have 8 vertices. What could I be?"

5. "I am a 3D shape fixed to the wall. I have one edge. I am not a sphere. I can be cut easily into half. What colour am I?"

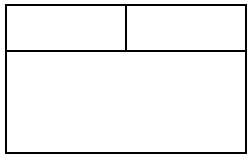
6. Go to the book shelf outside Miss Price's classroom. Trace out 5 rectangles.

7. Look up, look down, look all around – can you see any trapeziums? What can you tell me about them?

Zones 3 and 4

1. Find 6 different examples of right angles in the nursery playground.

2. How many of the small windows would fit into the bigger window?



3. How many of the small windows would fit into 7 big windows?

4. What do you notice about the shapes in the paving of the playground?

5. Find a twig that has two acute angles. Estimate the size of the angles.

6. Looking at the telephone box. If it was enlarged by a scale factor of 1.5, estimate how much taller it would be than you.

7. On the wall hanging next to the Head Teacher's office, how many repeating patterns can you see?

Can you draw one?

Rotate this pattern by 90 degrees. Can you draw it?

THE END!