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Teaching notes: Shapes and Structures

The Rose Garden is an ideal space for practical maths investigations.

There are a variety of shapes and structures here.

Encourage children to spot shapes within shapes:

e.g. the wooden plinth is an octagon made up of triangles
the trellis has squares, rectangles and triangles in its design
the benches have different shapes in the seat backs

The Rose Garden has been designed to use shapes to create beauty. Which shapes appeal most? Do children prefer clearly defined shapes (regular shapes) or more free-form shapes (irregular shapes)?

Do the shapes have a specific purpose?

e.g. triangular bracing on the trellis increases stability
pyramid rose supports with a square base are more stable than with a triangular base

Different structures have different purposes. What are they? Is the shape an essential part of the purpose or could it be different?

e.g. several arches in the garden have differing outlines
not all the benches are the same pattern
brickwork varies from place to place
plant supports may be hoops, pyramids, columns

Measuring is an important aspect of mathematical work. It may help to bring some metre rules but it is also interesting to use non-standard units (like children, stride lengths and handspans).

Please encourage children to be considerate of other garden visitors and of the structures and plants in the garden.

Have fun with maths in the Rose Garden!