

Max's Garden Planner: Area and Perimeter Investigation

Learning objective: To calculate the perimeter of rectilinear shapes and find the area by counting squares or using multiplication.

Max the monkey is helping the forest animals design their vegetable patches. Use your ruler to measure the shapes on your grid paper. Follow the steps below to help Max calculate the space needed for each garden.

Word bank: perimeter · area · centimetres · square centimetres · rectilinear · length · width · total

1. Garden Shape Description: Describe the shape of the vegetable patch you have drawn. Is it a rectangle or a complex rectilinear shape? (2 marks)

2. Perimeter Calculation: Write down the length of each side of your garden. Add these together to find the total perimeter in cm. (3 marks)

3. Area Investigation: How many squares are inside your garden? If one square equals 1cm^2 , what is the total area of the patch? (2 marks)

4. Budgeting for Seeds: If one packet of seeds costs £2 and covers 4cm^2 of area, how many packets do you need for your garden? What is the total cost in pounds? (3 marks)

5. Comparison Challenge: If you designed a different garden with the same perimeter but a different area, how would you change the shape? (3 marks)

Extension challenge: Try to draw a shape with a perimeter of exactly 20cm on your squared paper. Can you calculate its area?