Max’s Measurement Mission: Designing the Community Garden

Learning objective: To calculate the area and perimeter of rectilinear shapes and compound shapes using standard units of measurement.

Max the monkey is helping the local community design a new garden. Your task is to calculate the space needed for different sections of the garden. Use the grid provided or your own measurements to solve the problems below. Remember to include the correct units (cm, m, cm^2, or m^2) in your final answers.

Word bank: perimeter · area · rectilinear · compound · squared · dimensions · calculation · formula · length · width

1. The Vegetable Patch: A rectangular plot measures 5m by 4m. Calculate the perimeter and the area of this patch. Show your working out. (2 marks)

2. The Flower Bed: Design a rectilinear shape for a flower bed that has a total area of $12m^2$. Draw your shape and label the lengths of the sides to prove your calculation. (3 marks)

3. Fencing Costs: Max needs to buy wooden fencing for the perimeter of a 6m by 3m rectangular pond. If fencing costs £4 per meter, how much will the total cost be? (2 marks)

4. The Compound Path: Imagine a compound shape made of two rectangles (a 3m x 2m section joined to a 2m x 2m section). Calculate the total area of the path. (3 marks)

5. Max’s Challenge: If you double the length and width of a 2cm by 3cm rectangle, what happens to the area? Explain your finding. (2 marks)

Extension challenge: Try creating a 'budget' for your garden. If you have a total of £200 to spend on soil at £5 per square meter, what is the maximum area of garden you can cover?