Year 6 Assessment: Measurement Mastery

Learning objective: To solve problems involving the conversion of metric units, the calculation of perimeter and area, and the conversion between imperial and metric units.

Read each question carefully. Show your working out clearly, as marks are awarded for your method even if your final answer is incorrect. Ensure you include the correct units of measurement in your answers.

Max the monkey is helping his friends prepare for the annual Forest Feast. He needs to measure ingredients, calculate the size of the picnic area, and ensure all the decorations are the right length for the trees.

Word bank: millimetres · centimetres · metres · kilometres · grams · kilograms · millilitres · litres · perimeter · area · conversion

1. Max has a piece of ribbon that is 4.5 metres long. He needs to cut it into smaller strips of 25 centimetres each. How many complete strips can he cut? Show your working. (3 marks)

2. The rectangular picnic site measures 12 metres by 8 metres. Calculate the perimeter of the site. If Zara the zebra wants to put a decorative border around the site costing £1.50 per metre, what will be the total cost? (4 marks)

3. Finn the dolphin is tracking his migration. He swims 15 kilometres in one day. How many metres has he swum? Explain how you converted the units. (3 marks)

4. Bea the honeybee collects 450 grams of nectar. If she needs to fill a jar that holds 2 kilograms in total, how many more grams does she need to collect to fill the jar completely? (3 marks)

5. A small bottle contains 330 millilitres of water. Nova the owl says that 5 of these bottles will contain more than 1.5 litres. Is Nova correct? Use calculations to justify your answer. (4 marks)

6. Extended Task: Ellie the elephant is designing a vegetable patch. The patch is a compound shape made of two rectangles: Rectangle A is 4m by 3m, and Rectangle B is 2m by 5m. Draw a diagram of this shape, calculate the total area, and write a short explanation of how you found the area of a compound shape. (8 marks)

Draw: Sketch the compound shape described in the final question, ensuring you label the side lengths clearly in metres.

Extension challenge: Total: /25