

Max's Strong Structures Challenge

Learning objective: To identify and describe materials and shapes that help make a structure strong.

Max the monkey is building a tall tower for his fruit collection. He needs your help! Look at the list of shapes and materials below. Decide which ones are the best for building a strong, stable tower. Write the name of the shape or material in the correct box.

Word bank: Triangle · Cardboard · Square · Plastic · Metal · Wide base

1. Which shape helps to make a structure very stiff and strong? (Hint: Think about triangles vs squares) (2 marks)

2. Max wants his tower to stay upright. Should the bottom of the tower be narrow or have a wide base? (2 marks)

3. Which material is stronger for a tall tower: thin paper or thick cardboard? (2 marks)

4. If Max wants to build a really tall tower, why is a heavy material like metal better at the bottom than the top? (2 marks)

Draw: Draw a picture of a strong tower. Make sure the base is wide and draw some triangle shapes inside the walls to show how you are making it strong.



Extension challenge: Imagine you have £5 to spend on materials for your tower. List three things you would buy from the word bank and explain why you chose them.