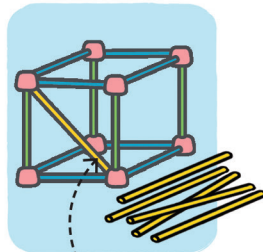
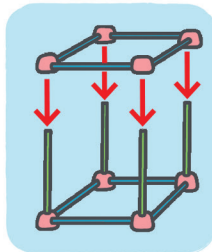
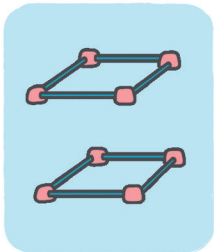


Building shapes

Learn how some shapes are stronger than others, and are harder to knock down.

118 Build a tall tower

1. Use short drinking straws and marshmallows to build two squares.
2. Use four more short straws to join the squares, making a cube.
3. Trim six longer straws and add one straw to each square to make a diagonal.



Adding diagonals makes the cube less wobbly.

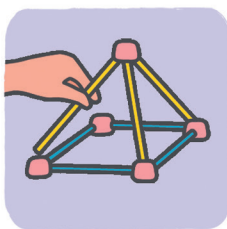
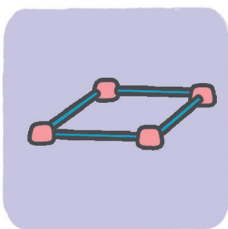
4. Make more squares. Join them onto the cube to make a tower, adding diagonals as you go. Place a cardboard platform on top and see if the tower can support a toy.

The tower is strong because each side is supported by the sides around it, and the diagonals stop the sides from twisting out of shape. The tower can support a toy because the toy's weight spreads through all the straws and is supported equally by each one.



119 Build a pyramid

1. Build a square using short straws and four marshmallows.
2. Add four longer straws and one marshmallow to make a pyramid.



A pyramid is strong because it is good at spreading out weight. If you push on the tip, or lean a book against the side, the weight will spread through the straws and be supported.

3. Test the strength of the pyramid by pushing on its tip. Can you lean a book against the pyramid?

