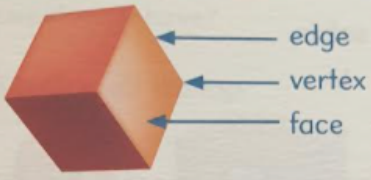
3-D shapes

Remember
3-D shapes have length, width and height.



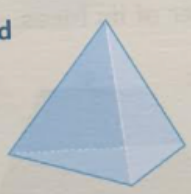
Shapes with a cross-section that doesn't change as you cut along it are called **prisms.**
The two end faces are parallel and identical.

A **cylinder** is a special prism.
It has a circular cross-section.

These shapes are called **pyramids.**

square-based pyramid

triangular-based pyramid or **tetrahedron**



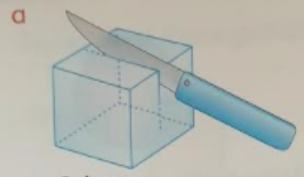
This shape is called a **cone.**

This shape is called a **sphere.**

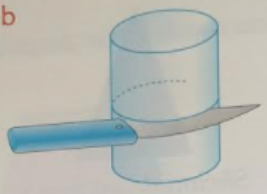
A shape which has all faces identical is called a **regular polyhedron.**

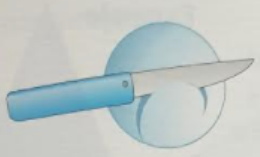
tetrahedron (4 faces) | cube (6 faces) | octahedron (8 faces) | dodecahedron (12 faces) | icosahedron (20 faces)

2 Which shape is each cross-section? Choose from the box.

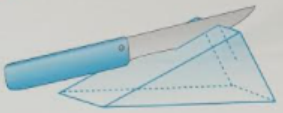


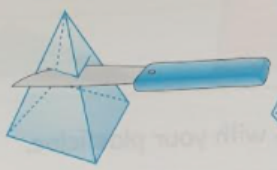
Cube

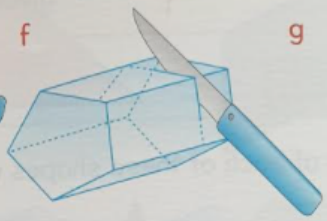




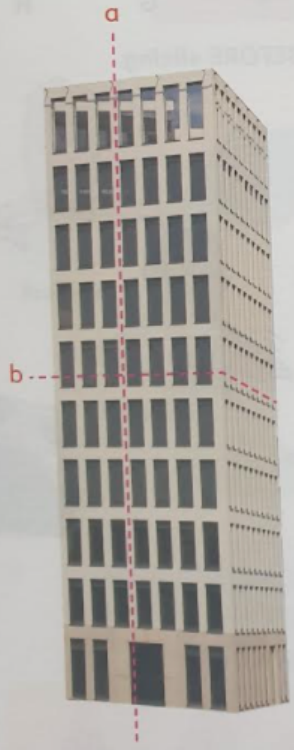
circle
rectangle
square
triangle
hexagon





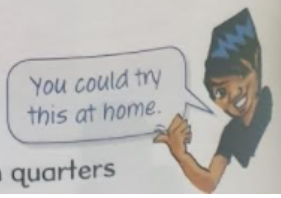


3 Draw what the cross-section would look like if you cut along each of these lines. Name the shape if possible.



4 What 2-D shapes might you get when you cut these? Sketch each one.

a tomato b cucumber c apple in halves d apple in quarters



5

Activity 5

1 Name each of these solids.

a 

b 

c 

d 

e 

f 

2 What 2-D shapes are the faces of each of these regular polyhedra?

a 

b 

c 

d 

e 

3 For each shape write the number of its faces, vertices and edges.

a 

b 

c 

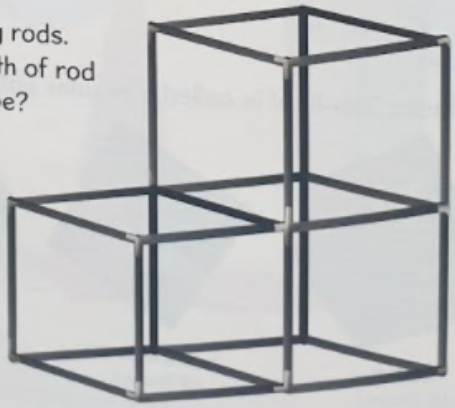
d 

Draw a table

	faces	vertices	edges
book			
can			
tent			
pyramid			

4 These 3-D shapes are made using rods. Each rod is 10 cm long. What length of rod is needed to make the whole shape?

a 

b 

5 Kiri made a plant support like this one for her tomatoes using bamboo canes.

a How many bamboo canes will she need per tomato plant?

b She tied the corners with wire. How many corners will she have to tie?

c If each cane is 1.5 m long, what is the total length of bamboo needed?