

Children should be taught to:

Use language to describe the shape and size of solids and flat shapes, begin to name shapes and use them to make models, pictures and patterns

As end-of-year outcomes, children should, for example:

Understand and use in practical contexts the words: *shape, pattern... flat, curved, round, straight, solid, hollow, corner, face, side, end... sort... make, build, draw...*

Recognise, name and talk about 3-D and 2-D shapes such as: *cube, cone, sphere... circle, triangle, square, rectangle...*

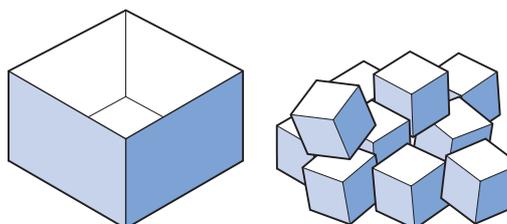
3-D shapes

- Identify solid shapes that can be seen around the school and in the classroom: for example, on different display tables; in the home corner or classroom shop; on a 'shape walk' around the school...
- Start to become aware of some properties of solid shapes when looking at, talking about and comparing them: for example, shapes that are hollow... whose faces are all flat... that roll... that slide...
- Guess the name of a solid shape when it is covered with tin foil or wrapping paper, or placed in a cloth bag.
- Make models using shapes that vary in shape, size and texture, using, for example: big blocks, wooden or plastic, of different shape and size... reclaimed materials: packets, rolls, containers, boxes, tins... construction kits: Poleidoblocks, Lego, Duplo...

Describe the model and say what shapes have been used to make it. For example:

The garage for my car has been made from lots of blocks, and they have straight edges and flat sides and ends.

- Make shapes from modelling material such as: Playdough, Plasticine, sand... Describe the shape made. For example: *My cube has eight corners.*
- Make a copy of a simple model as accurately as possible.
- Fit solid shapes together. For example: investigate solid shapes to see which of them will stack; pack smaller boxes, packets, containers... inside a large cardboard box and talk about how they fit in...



Children should be taught to:

Use language to describe the shape and size of solids and flat shapes, begin to name shapes and use them to make models, pictures and patterns (continued)

As end-of-year outcomes, children should, for example:

2-D shapes

- Find similar shapes on faces of objects. For example:
find two circles, such as a drinks mat and the base of a jar;
find two triangles, such as a silk scarf and a Logiblock;
match lids to jars or boxes...



- Sort or match scraps of fabric, or buttons. Identify:
Which scraps of fabric have the same pattern? Which have stripes? Which have dots? Which have square checks?
Which scraps, or which buttons, are the same shape?
Which are the same shape and size?
- Find solid shapes around the classroom with at least one face matching a 2-D outline or picture.
- Without using its name, describe a thin plastic shape hidden in a cloth bag. For example:
My shape has three corners and three sides.
My shape is curved all the way round.
- Sort into trays a collection of varied flat shapes, either thin plastic shapes, shapes made from paper, or drawn or stuck on card, and explain how they have been sorted:
for example, shapes with corners, with three sides...
- Find shapes which are **not** square, round...
- Talk about and make shapes when playing in the sand pit or working at the sand tray. For example:
trace a shape with a finger;
draw round a shaped template;
make impressions of solid and hollow shapes by pushing them into damp sand... or identify which shape has made a particular impression.
- Cut up a greetings card to make a jigsaw and reassemble it.
- Begin to sketch 2-D shapes. For example:
draw two squares, draw three circles...
make a rectangle by finger painting...

Children should be taught to:

Put sets of objects in order of size

Talk about, recognise and recreate patterns

As end-of-year outcomes, children should, for example:

Understand and use in practical contexts:
size, bigger, larger, smaller...

Listen to and talk about stories related to size, such as:
*The Three Bears, Three Little Pigs, Jack and the Beanstalk...
You'll Soon Grow Into Them, Titch* by Pat Hutchins
Jolly Tall by Jane Hussey
How Do I Put It On? by Shigeo Watanake
Hue Boy by Caroline Binch

Put in order of size a set of teddies, nesting boxes, Russian dolls, towers, saucepans, saucepan lids...

Discuss the fact that the shapes are the same although the sizes change.

Now place one more in the order. Where does it go?

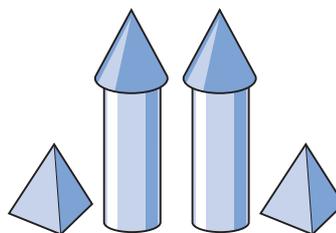
Make 'families' of the same shape in different sizes:

- make a family of Plasticine worms...
- paint a family of monsters or giants...
- build houses for the three bears...

Talk about and recreate simple patterns made from people, beads, shapes, sounds... or by using computer programs...

For example:

- Use a mirror and mosaics to explore patterns.
- Find halves of paper shapes by folding them.
- Make a symmetrical model from bricks, or from reclaimed materials such as packets, rolls and containers. Point out matching pairs on each side of the middle, such as the two cones, the two pyramids...



- Make repeating patterns from bricks or beads: for example, two cubes, one cone, two cubes, one cone... Describe the pattern and say what shapes have been used to make it. For example:
My pattern has two circles, then two squares, then two more circles and two more squares.
- Make patterns from thin plastic shapes, gummed paper shapes, felt shapes, mosaic shapes, pegs and pegboard... by using a computer program... by printing on paper or fabric... with sponges or blocks... by painting blobs on paper and folding... by cutting out shapes from folded paper...

Talk about the shapes that have been used, the way that they fit together, how one shape matches another...

For more examples, see reasoning about shapes (page 18).

Children should be taught to:

Use everyday words to describe position, direction and movement

As end-of-year outcomes, children should, for example:

Understand and use in practical contexts:

position, over, under, above, below, on, in, outside, inside, behind, beside, before, after, next to, opposite, between... close, far, apart...

middle, corner, top, bottom, front, back, side...

direction, left, right, up, down, forwards, backwards, sideways, across, along, around, through, to, from, towards, away from...

movement, roll, slide, turn, stretch, bend...

Listen to and discuss stories such as *Rosie's Walk*, *Bear Hunt*, *Where's Spot?* Make own *Where's Spot?* book.

Talk about **positions**. For example:

- Describe where objects are in a picture. For example:
The fish is above the weed in the pond...
The frog is under the rock beside the pond...
- In PE, stand in front of, behind, beside, opposite a partner... or between two others... Follow instructions to get through an obstacle course or over climbing equipment.
- In class, answer questions such as:
Who is sitting next to, beside, in front of... Ranjit?
- Describe how things are stored on shelves in the classroom or in a cupboard. For example, respond to:
Are the felt pens on top of, under, next to... the books?
- Follow instructions to put play-people or models into a scene. For example: put the girl outside the shop; put the car inside the garage...

Talk about **movements and directions**. For example:

- In PE, follow instructions to run forwards, walk backwards, turn on the spot, turn to the left, turn to the right, face the front or side or back or corner of the room, move away from the bars, slide down the ramp, roll on the mat...
- Give instructions to other children: *Go around the stool, go in front of the beam, stop behind the swing...*
- Use a simple modelling program to explore the sequence of instructions to complete a task: for example, to load an elephant on to a lorry.
- Describe a walk round the school or its grounds:
We went along the path, through the tunnel in the adventure playground and then across the field...
- Describe movements taken on a track or in a maze:
I am moving forwards, turning left, going straight on, turning the corner...
- Explore and talk about things that turn, such as the hands of a clock, wheels, taps, keys in locks, screw top lids on jars... Try to fit nuts and bolts together when blindfolded...
- Collect and sort objects that will:
roll (a wooden egg, a ball, an apple...);
slide (a Lego brick, a story book...);
both roll and slide (a baked bean tin, a coin...).