

First Level - Beyond Number Shape, Position and Movement Homework Cards



SPM1.1 I can create a picture or model using a wide variety of 3D objects or 2D shapes

2D shape house Ask children to draw their house or an imaginary house using the 2D shapes they have discussed in class.



SPM1.1 I can create a picture or model using a wide variety of 3D objects or 2D shapes

Robot challenge Ask children to draw a picture of a robot using at least 3 different 2D shapes. Back in class, ask children to name some of the shapes they used.



SPM1.2a I have explored and can talk about a range of 3D objects and 2D shapes - 3D objects

3D objects at home Ask children to write down five real-life examples of different 3D objects in their home and, if they can, to give the mathematical name of the 3D object, e.g. *toilet roll is a cylinder*.



SPM1.2a I have explored and can talk about a range of 3D objects and 2D shapes - 3D objects

3D objects - similarities and differences Ask children to find two different 3D objects at home. They draw them, write their names and then list some of their similarities and differences.



SPM1.2b I have explored and can talk about a range of 3D objects and 2D shapes - 2D shapes and the link to 3D objects

Rectangles on 3D objects Ask children to make drawings of 3D objects in the home that have at least one rectangular face, for example, door, TV, picture frame.



SPM1.2b I have explored and can talk about a range of 3D objects and 2D shapes - 2D shapes and the link to 3D objects

Outlines Ask children to find things in the home they can draw round to produce a circle, rectangle or square. They write inside the drawing what the object was they drew around.



SPM1.3 I can make my own symmetrical pictures and patterns and can recognise when a shape or pattern

Symmetrical shapes At home, children find and draw one shape which is symmetrical and one which is not.



SPM1.3 I can make my own symmetrical pictures and patterns and can recognise when a shape or pattern

Symmetry challenge *paper* Ask children to fold a piece of paper in half and draw on one side of the fold line. Back in class they swap papers and challenge a partner to complete the other half so the picture is symmetrical.



SPM1.4 I can describe the position of a person or object in my own way

Picture maps Ask children to make a picture map of a room in their home. Tell them to start by drawing the outline of the room's floor (e.g. a rectangle) and indicate where the key objects are, e.g. chair, table, TV etc. They could imagine they are a bird or fly near the ceiling, and try to imagine what it can see.



SPM1.4 I can describe the position of a person or object in my own way

Shoes and gloves Ask children to draw a pair of shoes or gloves (either their own, or a pair they would like to have) and label them left and right as appropriate.



SPM1.5 I can give and follow directions using simple language of movement and can record these in my own way

Robot directions Ask children to draw a simple plan of a room at home (e.g. kitchen, garden, bedroom). They write directions to program a robot to go from one place in the room to another (e.g. from fridge to sink). Encourage children to think carefully about the way they are facing.



SPM1.5 I can give and follow directions using simple language of movement and can record these in my own way

No directions? Ask children to imagine what life would be like without directions. They record in any way they wish (write down, draw, talk about) some situations which would be very difficult if there were no direction words.



SPM1.6a I can name 3D objects and 2D shapes and can sort them according to their properties - 3D objects

Properties of objects Tell children to find some examples of 3D objects at home and to record their findings (writing or labelling drawings). They should think about why the object is the shape it is. Back in class, they tell their group about the objects, for example, *An ice-cream cone is an example of a cone. It has a curved face and you can see a circle when you look at the open end. The shape of the cone makes it easy to hold and the open end means the ice-cream sits in it without falling.*



SPM1.6a I can name 3D objects and 2D shapes and can sort them according to their properties - 3D objects

Rolling objects Tell children to find some 3D objects at home and to record which will roll and which will not roll. Ask them to identify what property of the object allows it to roll.



SPM1.6b I can name 3D objects and 2D shapes and can sort them according to their properties - 2D shapes and the link to 3D objects

2D pictures Ask children to choose any scene, imagined or real. They draw it using just two kinds of shape, for example, circles and squares or triangles and rectangles.



SPM1.6b I can name 3D objects and 2D shapes and can sort them according to their properties - 2D shapes and the link to 3D objects

Shapes on the way to school Ask children to think about their journey between home and school. Tell them to list five objects they pass on the way. They record (writing or drawing) the 2D shapes that are in the 3D objects.



SPM1.7 I have explored how different shapes fit together to make a tiling pattern

Tile shapes Ask children to find parts of their home that show tiling patterns (e.g. roof slates, bathroom floors, etc.). They draw and label the shapes they spot.



SPM1.7 I have explored how different shapes fit together to make a tiling pattern

Create a tiling pattern squared paper Ask children to create a pattern of tiles for their bathroom on squared paper.



SPM1.8 I have explored how to check shapes and patterns for lines of symmetry and can create my own

Lines of symmetry search Ask children to find some symmetrical shapes or pictures of symmetrical objects. They sketch the shapes and draw any lines of symmetry. Back in class, discuss their sketches. Use these to create a display.



SPM1.8 I have explored how to check shapes and patterns for lines of symmetry and can create my own

Is it really symmetrical? Ask children to record (e.g. draw, write, photograph) some items around their home that at first glance might be symmetrical but actually are not. Ask children to describe why they are not symmetrical, for example, the numbers on a clock are not symmetrical.



SPM1.9 I have explored different grid systems and can use them to describe and locate positions

Instructions for the design *squared paper* Ask children to create a simple design on a grid of squared paper by colouring squares. They can decide how big and complicated to make their design. Then they write instructions for creating this design, for example, *Colour B6 blue*.



SPM1.9 I have explored different grid systems and can use them to describe and locate positions

Parking lot Tell children to draw an 8×8 grid to represent a car park which is used by different vehicles. A lorry takes up 4 squares, a car takes up 2 squares, a bus takes up 4 squares and a bike takes up 1 square. Ask children to decide where to park some of these vehicles and record the grid references for each vehicle.



SPM1.10 I can give and follow directions using an extended range of vocabulary and can record these in a variety of ways

Shape codes *squared paper* Ask children to draw (on squared paper) an outline of a shape involving only right or left turns, for example, a cross. Ask them to write the instructions for drawing this in code form, for example, they could write 'forward 5' as *F5*. Back in class they swap codes with a partner and try to draw each other's shapes.



SPM1.10 I can give and follow directions using an extended range of vocabulary and can record these in a variety of ways

Directions in my house Children think about a simple journey they make in their home, say from the kitchen to their bedroom. They record how they make this journey. *Start at the kitchen door and turn left. Walk six steps. Turn right and go through the door.*



SPM1.11 I have explored an extended range of 3D objects and 2D shapes and can discuss and compare their properties

Describe the object Ask children to choose any solid object at home (e.g. kitchen cupboard, TV, book, phone) and record the object's properties. Tell them to use the words flat, curved, face, edge, corner as appropriate.



SPM1.11 I have explored an extended range of 3D objects and 2D shapes and can discuss and compare their properties

Finding shapes Ask children to think of something at home (or in the street or at the shops) which is approximately a sphere, a cuboid, a cylinder, a prism. They choose one example of each and draw it.



SPM1.12 I can identify and mark lines of symmetry on a range of different shapes

A tile for my bathroom Ask children to create a design for a tile which has more than one line of symmetry.



SPM1.12 I can identify and mark lines of symmetry on a range of different shapes

Plate design Ask children to draw round a circular plate. They use this circle to create a design for a new plate which has 1, 2 or 4 lines of symmetry. Tell children to write on the back the numbers of lines of symmetry their design actually has. Back in class they compare their designs and create a display.



SPM1.13 I can use the compass points to help me locate positions and follow directions

Compass directions - all around Ask children over the course of a week to record where they hear or see compass directions mentioned (e.g. TV, newspaper article).



SPM1.13 I can use the compass points to help me locate positions and follow directions

Directions at home Ask children to guess approximately where N, S, E, W are in relation to their house, using their knowledge that the sun rises in the east and sets in the west. They use this to record a route from one room to another using compass directions and the number of steps to take.



SPM1.14 I have explored how to use right angles to help me describe turns

Why might it be right? Ask children to research or come up with their own explanation about why a right angle is called a right angle.



SPM1.14 I have explored how to use right angles to help me describe turns

Right angle turns Ask children to identify and record where they see right angle turns around the home, for example, turning the dishwasher dial from 0 to position 2.



SPM1.15 I can use my knowledge of right angles to help me compare and describe the angles in 2D shapes

Right angles at home Give children a corner of paper to use as an angle tester. They test and record (by drawing or writing about) five objects which have right angles in them.



SPM1.15 I can use my knowledge of right angles to help me compare and describe the angles in 2D shapes

Buildings Children draw an imaginary building which has walls, windows and doors at angles other than right angles and imagine what it would be like to live in such a building. Back in class, children share their thoughts. *What would happen if shelves weren't put up at right angles to the walls?*



SPM1.16 I can record and interpret a route or journey using pictures, symbols and maps

Route from home to school Ask children to create a route map of their way to or from school. They should show any points where a left or right turn is needed. Encourage them to detail this turn, for example, *at the mini-supermarket turn right*.



SPM1.16 I can record and interpret a route or journey using pictures, symbols and maps

Fantasy map/plan *squared paper* Ask children to use squared paper and draw a map or plan showing a place or room or house in any story or film they choose. They don't need to follow the story exactly but can create their own fantasy place. They should make up a key to explain any symbols they invent. Back in class they explain their map to a partner.
