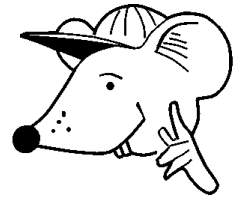


# MATHEMATICS



**N.S. Yr. 1 P.88**

**Describe movement in a straight line and turning  
and understand angle as a measure of turn.**

## Equipment

Three dimensional and two dimensional shapes.

# MathSphere

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## **Concepts**

Children should understand and use in practical contexts the following vocabulary:

***slide, roll, turn, whole, half***

Most of the work associated with this Numeracy Hour module for this age of child is of a practical nature. The sheets provided here should be regarded as a summary of much practical activity.

At the end of the module we give some ideas for practical work you can undertake with your children.

Children should find objects that will roll and slide down slopes and be able to sort these into groups.

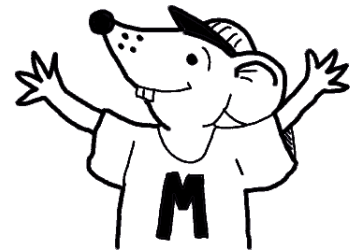
They should be able to make half turns with their bodies and turn objects through whole and half turns.

They should also be able to recognise and describe simple repeated sequences of shapes.

Take a big piece of paper and  
draw two circles on it.

Put in one circle shapes  
that will roll.

Put in the other circle  
shapes that will slide.



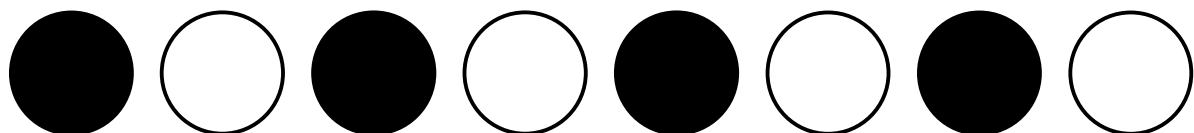
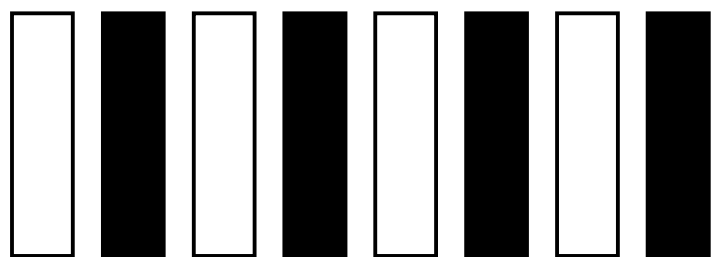
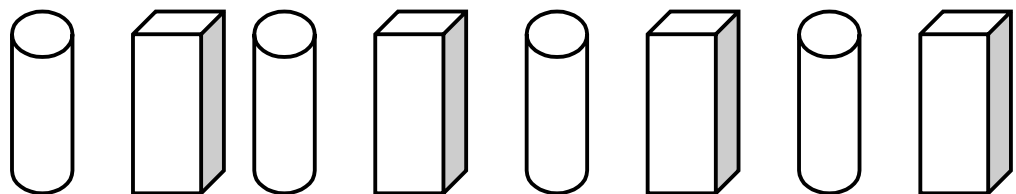
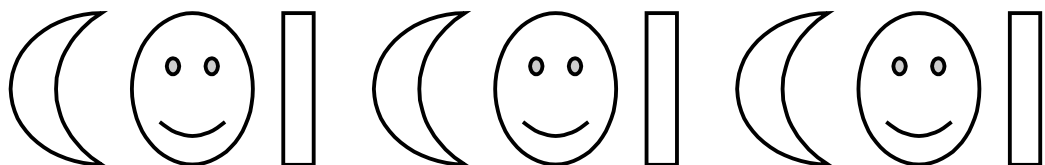
Do you have any shapes that  
will roll and slide?

Where are you going to put  
them?



## Patterns

In each pattern, say which shapes are used and how they repeat:



### **Ideas for practical shape work**

1. Children slide down slides. Do some children slide quickly and others more slowly? Try forward and backward rolls (under supervision).
2. Try to roll three dimensional objects such as cubes and cylinders (cans). See which roll and which do not. It is best to do this down a slope as any object will 'roll' if thrown hard enough!
3. Watch real objects turning such as bicycle wheels, windmill arms, hands on a clock, and make smaller objects turn such as tops, taps, model car wheels and scissors. Distinguish between those that turn about a line such as doors, coins, tops and the Earth, and those that turn about a point such as clocks and scissors.
4. Make simple models that turn. These do not have to be complicated. For example, glue two lollysticks at right angles to each other on the flat face of a cotton reel. Put a pencil horizontally through the hole from the other end and you have a windmill. Arrange the pencil vertically and you have a roundabout.
5. When you have a collection of objects that turn, ask the child to turn them through one whole turn, two whole turns, one half turn, two half turns etc.
6. Arrange patterns with plastic or card shapes like the ones on page 4. First of all make a pattern and ask the child to explain and continue it. Later, invent a rule such as 'one red triangle and two blue triangles' and ask the child to make this into a repeating pattern. Then the child can make a rule. If they are able, they can verbalise this rule as you did.
7. Use a turtle to practise programming instructions. Make it turn and draw patterns.
8. Let children give each other directions.  
E.g. Take one step forward.  
Make a full turn  
Take two steps forward  
Make a half turn  
Take three steps forward.  
Can they reach a given target? Can they negotiate an obstacle course?

- 9.** Face a given mark (on wall or floor).  
Turn half turn. What are you facing?  
Turn a half turn other way. What are you facing?  
Notice that one turn cancels out the other.

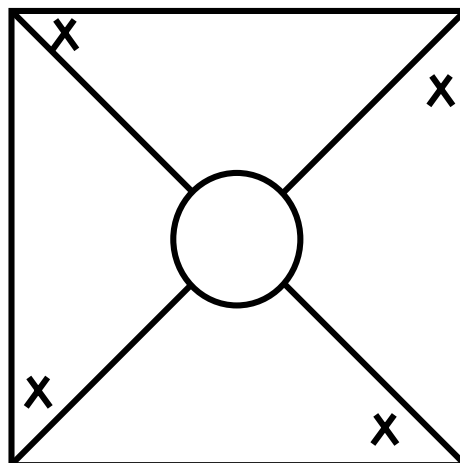
Repeat with different turns (e.g. quarter turn clockwise).  
Repeat starting by facing different marks.

- 10.** Make a card windmill. Make one sail a different colour to the other three  
and blow it or run into the wind and watch it rotate.  
Is it possible to blow it so that it only makes one whole turn? One half turn?  
One quarter turn? Three whole turns? Etc.  
In summer, you may be able to buy a toy windmill from a local shop.

You can make your own from a square of thick paper or thin card.

Draw the following shape and cut along the diagonals towards the circle.

Fold the corners marked **X** in and fix near centre. Insert wire and tie other end to a suitable stick.



- 11.** Ask about angles turned.  
E.g. Face the cupboard. Turn to face the chair.  
How far did you turn?

Turn to face the chair again.  
How far did you turn this time?

Continue with different starting positions.