Maths Targets for pupils in Year 2

A booklet for parents

Help your child with mathematics

For additional information on the agreed calculation methods, please see the school website.

ABOUT THE TARGETS

These targets illustrate what **most** children will have been taught by the **end of** Year 2. However, some children may need consolidation of earlier objectives, therefore greater focus will be given to these. Some children will have exceeded these targets, and will be working to more challenging objectives.

THE TARGETS

Number - number and place value

- count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
- recognise the place value of each digit in a two-digit number (10s, 1s)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems

Number - addition and subtraction

- solve problems with addition and subtraction:
    - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
    - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
    - a two-digit number and 1s
    - a two-digit number and 10s
    - 2 two-digit numbers
    - adding 3 one-digit numbers
- show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

Number - multiplication and division

- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) signs
- show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot

- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Number - fractions

- recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$

Measurement

- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- compare and order lengths, mass, volume/capacity and record the results using >, < and =
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- compare and sequence intervals of time
- tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
- know the number of minutes in an hour and the number of hours in a day

Geometry - properties of shapes

- identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line
- identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
- compare and sort common 2-D and 3-D shapes and everyday objects

Geometry - position and direction

- order and arrange combinations of mathematical objects in patterns and sequences
- use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)

Statistics

- interpret and construct simple pictograms, tally charts, block diagrams and tables
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ask-and-answer questions about totalling and comparing categorical data

Parents play a vital role in children's mathematical development. Many key mathematical skills can be supported at home through everyday activities such as:

- Telling the time
- Weighing for cooking
- Measuring for craft and DIY
- Using money and playing board games.

Many of these skills are the "real-life" maths that we use every day, and are more effectively learned in the setting in which we use them.

Fun activities to do at home

Pasta subtraction

For this game you need a dice and some dried pasta or buttons.

- Start with a pile of pasta in the middle. Count the number of pasta pieces in total
- Throw a dice. Say how many pieces of pasta you subtract that number.
- Then take the pieces of pasta away and check right!
- Keep playing.
- The person to take the last piece wins!
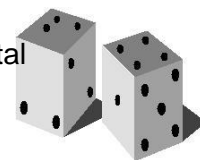
How heavy?

You will need some kitchen scales that can weigh things in kilograms.

- Ask your child to find something that weighs close to 1 kilogram.
- Can he / she find something that weighs exactly 1 kilogram?
- Find some things that weigh about half a kilogram.
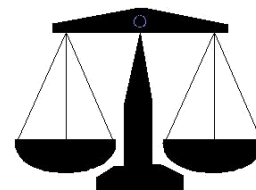
Weigh ingredients in cooking.

Out and about

- During a week, look outside for 'thirties' numbers, such as 34 or 38, on house doors, number plates, bus stops, etc. How many can you spot? What is the biggest one you can find?

31 39 36 35 33

- Next week, look for 'fifties' numbers, or 'sixties'…

100 Square activities

Use your number square to add/subtract
Jump on/back

Find numbers – link to money matching 10p/1p coins

Practice writing the numbers correctly using different media e.g. paint, write in sand, water and paintbrush.

How much?

- Once a week, tip out the small change from a purse. Count it up with your child.

Counting

Practise counting. Start at 5, and count on from there to 11. Start at 9, count back from there to zero.
Choose a different starting number each time.

Number facts

You need a 1–6 dice.

- Take turns. Roll the dice. See how quickly you can say the number to add to the number on the dice to make 10, e.g.

 and 6

- If you are right, you score a point.
- The first to get 10 points wins.

You can extend this activity by making the two numbers add up to 20, or 50.

Roll 2 dice – add together (you could change the numbers on the dice).

Speedy pairs to 10

Make a set of 12 cards showing the numbers 0 to 10, but with two 5s. If you wish, you could use playing cards.

- Shuffle the cards and give them to your child.
- Time how long it takes to find all the pairs to 10.

| 0 | 10 | | 2 | 8 | | 4 | 6 |
| 1 | 9 | | 3 | 7 | | 5 | 5 |
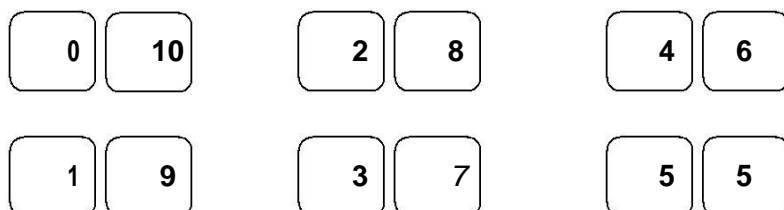
Repeat later in the week. See if your child can beat his / her time.

Estimate amounts of various small household objects.

Guess my shape

Think of a 2-D shape (triangle, circle, rectangle, square, pentagon or hexagon). Ask your child to ask questions to try and guess what it is.

You can only answer *Yes* or *No*. For example, your child could ask:
Does it have 3 sides? or: *Are its sides straight?*

See if he can guess your shape using fewer than five questions. Now ask them to choose a shape so you can ask questions.
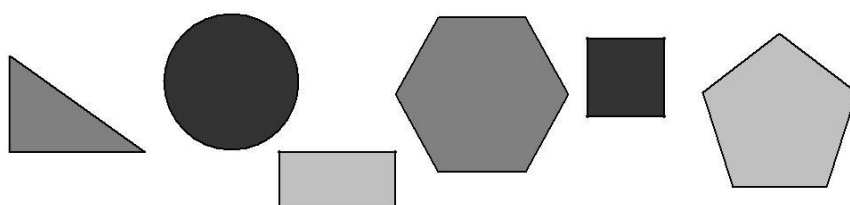
Build a shape castle – name the shapes.

Board Games

Play any games – snakes and ladders is a great game that encourages counting on/back – predict the end number.

Make a board like this. The numbers are arranged
differently from usual, but the games will still
work if you use a normal snakes and ladders
board.

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

♦ Roll a dice twice. Add the two numbers.
♦ Move along that number of spaces. Before you move, you must work out what number you will land on.
♦ If you are wrong, you don't move!
♦ The first to the end of the board wins.

For a change, you could roll the dice and move backwards. Or you could roll the dice once, then move the number that goes with your dice number to make 10, e.g. throw a 3, move 7.

Straight lines

Choose 4 toys and lay them on the table in order of length. Use a ruler to measure each toy to the nearest cm.

Shopping maths

After you have been shopping, choose 6 different items each costing less than £1. Make a price label for each one,
e.g. 39p, 78p. Shuffle the labels. Then ask your child to do one or more of these.

♦ Place the labels in order, starting with the lowest.
♦ Say which price is an odd number and which is an even number.
♦ Add 9p to each price in their head.
♦ Take 20p from each price in their head.
♦ Say which coins to use to pay exactly for each item.
♦ Choose any two of the items, and find their total cost.
♦ Work out the change from £1 for each item.

Circle trios

Draw four circles each on your piece of paper. Write four numbers between 3 and 18, one in each circle.

(12) (16) (8) (17)
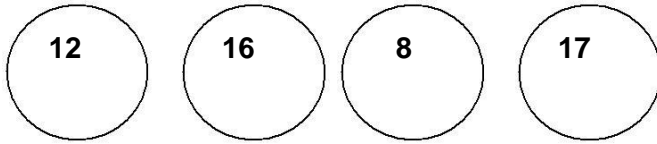
- Take turns to roll a dice three times and add the three numbers.
- If the total is one of the numbers in your circles then you may cross it out.
- The first to cross out all four circles wins.

Counting in 2s, 5s, 10s, 3s – variety of objects.

Pay for items in a shop or play shops at home with real money.