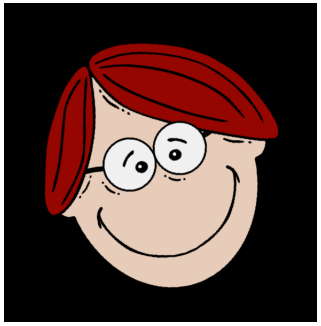
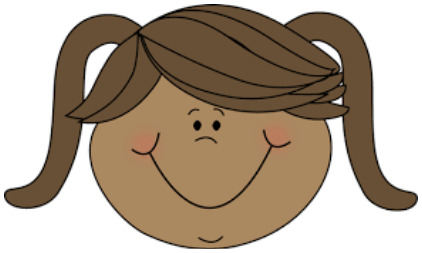
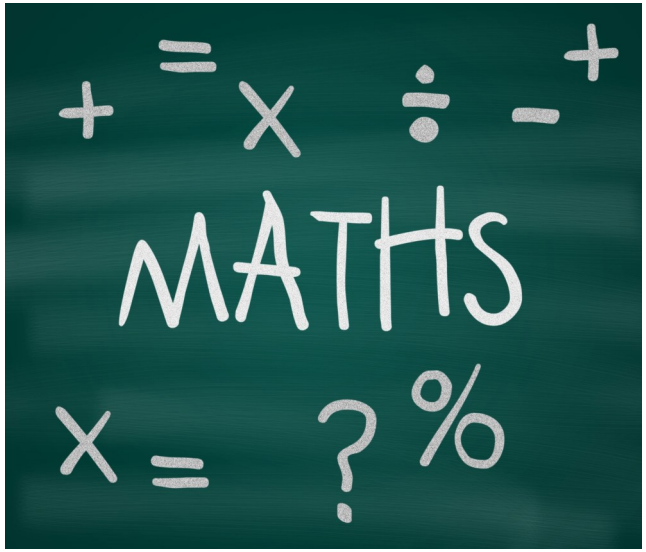
Supporting your child at home with maths.

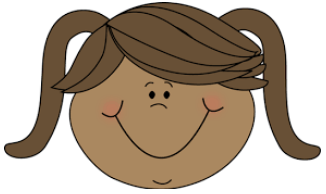


Key Stage 1








During KS1, it's important for your child to get to grips with maths in a very practical, hands-on way. Working individually, as a class and in groups, they will be investigating, counting, playing number games and using everyday objects to help them solve problems and do simple calculations.

As they start to become more familiar with the language used in maths, they will be encouraged to talk about their methods for solving problems and presenting their results. Children will be given opportunities to deepen their learning by using their logic and reasoning skills in a range of real life contexts and problems.

We are very lucky to have such a wonderful group of parents' at Downs Infants and we know that you are always looking for ways to support your child at home. This guide has been put together to give you an idea of little games and activities that can be played at home, which will consolidate the learning taking place in school and help develop your child's fluency in maths.

Little and often is the best approach to delivering these activities, keeping things as fun as possible with lot's of praise.

The activities do not cover all areas of the curriculum but are intended to give you a good starting point. At the end of this guide there are some websites that will direct you to other games and information which you may find useful.

Number and Place Value

Pupils will be taught to:

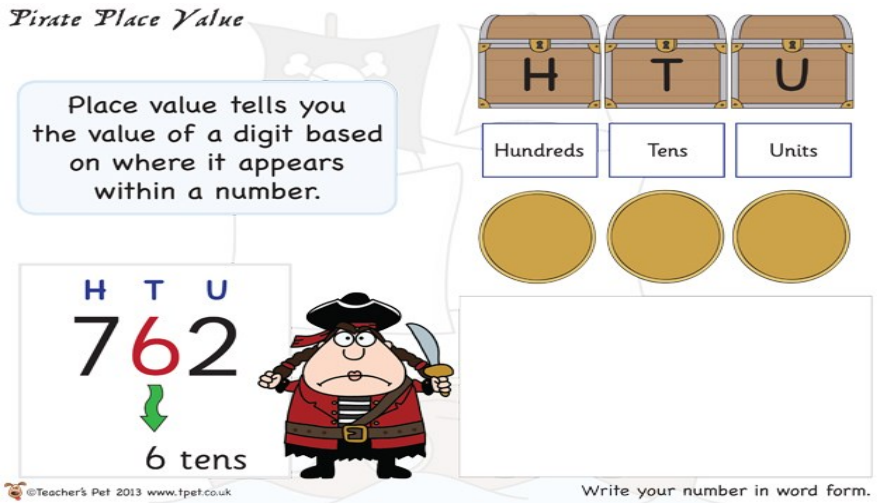
• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number

• count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens

• given a number, identify one more and one less

• identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

• read and write numbers from 1 to 20 in words



These statements show some of the things your child should be able to do by the end of Y1. Some statements are harder than they seem, e.g. children who can count up to 20 may still have trouble saying which number comes after or before 12. They may have to start at 1 and count from there. These games and activities will help to develop your child's fluency and ability to work with numbers quickly.

Guess my number

Write the numbers 0 to 20 on a sheet of paper.

• Ask your child secretly to chose a number on the paper. Then ask them some questions to find out what the number is, e.g.

• Is is less than 10?

• Is it between 10 and 20?

• Does it have a 5 in it?

• Is it odd?

They may only answer yes or no.

• One you have guessed the number, it is your turn to choose a number. Your child asks the questions.

Easier: use numbers to 10.

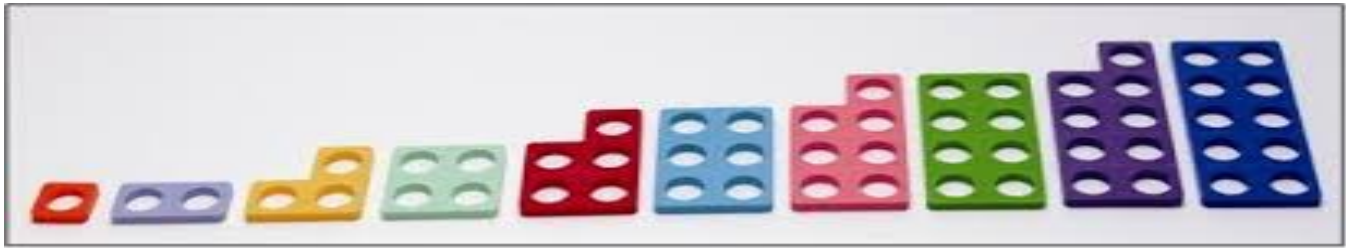
What is place value?

A good understanding of place value (the value ofeach digit in a number) is vital in early maths.

Place value is the value of each digit in a number.

It means understanding that 582 is made up of

500, 80 and 2, rather than 5, 8 and 2.

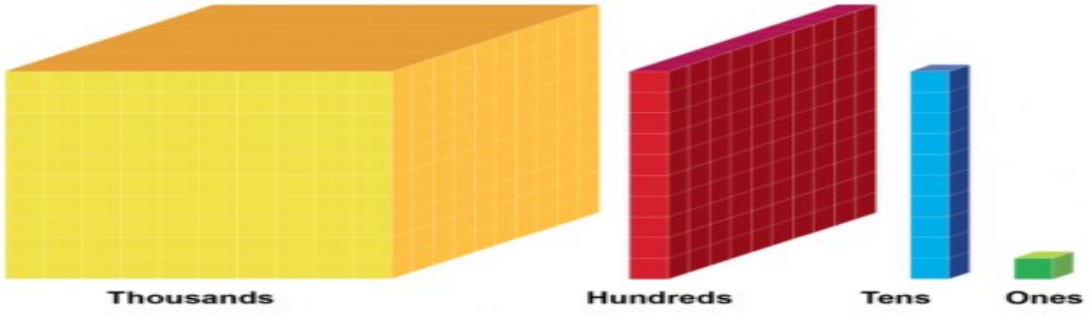


Children learn to visual numbers as concrete objects, with Numicon Shapes representing the numbers 1-10. They learn to build 2-digit numbers (e.g.23, 45 etc.), which they can then use to support their understanding of addition and subtraction in early maths.

Deines blocks are blocks in which cubes represent units/ones, rods of ten cubes represent tens, flats of 100 cubes represent hundreds and blocks of 1000 cubes represent thousands.

How will my child be taught Place Value at Downs Infants?

In KS1 we use a range of practical resources to develop our children's understanding of this key area. Numicon develops mathematical fluency by using a visual, practical base to develop conceptual understanding and fluent recall. It helps children to reason mathematically through the use of concrete objects and encourages children to explain and justify mathematical concepts developing them into confident problem-solvers.



In KS1, a child might be given some ten and units (ones) Deines blocks and asked to make a number such as 43. They would need to select 4 tens rods and 3 ones blocks. This makes it very clear to them that a two-digit number it made up of tens and ones. It also helps them to practise counting in tens.

Track Games

Make a number track to 20, or longer. Make it relevant to your child's interests- space, castles, sea world, monsters.

Then play on it.

Throw a dice. Move along that number of spaces. but before you move, you must work out what number you will land on. If you are wrong, you don't move! The winner is the first to land exactly on 20. Now play going backwards to 1.

• Throw a dice. Find a number on the track that goes with the number thrown to make either 10 or 20. Put a counter on it, e.g. you throw a '4' and put a counter on either 6 or 16. If someone else's counter is there already, you may replace it with yours! The winner is the first person to have a counter on 8 different numbers.

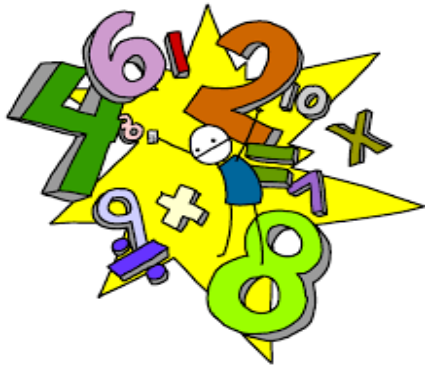
For this game you need a dice and about twenty 10p coins.

• Take turns to roll the dice and take that number of 10p coins.

• Guess how much money this is. Then count aloud in tens to check, e.g. saying ten, twenty, thirty, forty…

• If you do this correctly you keep one of the 10p coins.

• First person to collect £1 wins.



Daily Practise: Help your child toidentify numbers in everyday life. Can they read door numbers, the

number of different channels on TV,

page numbers in books etc.

Daily Practise: Counting in 10s to and from 100 from 0 or any given number regularly will increase fluency and will support addition subtraction.

A hundred square can support children's counting.

Counting in 10s

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

Count forward ↓

Count backward ↑

Birthdays!

Start with your child's age. Ask your child:

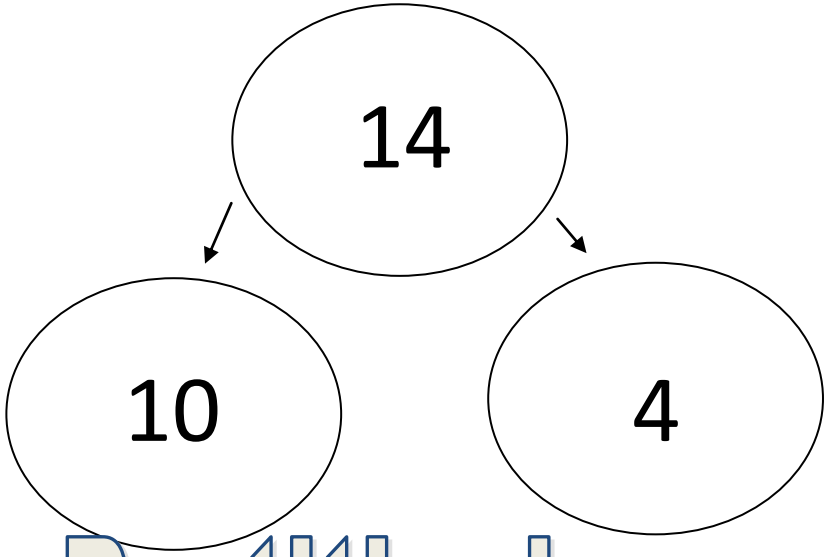
- How old will you be when you are 1 year older?
- How old were you last year?
- How old will you be 2/5/10 years from now?

Repeat with the ages of different relatives.

When walking down the street with your child, look at house numbers. These will probably follow a pattern of either odd or even numbers. Can your child predict what number will be on the next house? Talk about the pattern.

Cut out numerals from newspapers, magazines or birthday cards. Then help your child to put the numbers in orders.

Daily Practise: Make mistakes when chanting, counting or ordering numbers. Can your child spot what you have done wrong?



Partitioning

Partitioning is where we partition or break up a number into its separate parts. In the above example we have partitioned 14 into 10 and 4. We often do this in circles laid out above as it shows the children how to break apart the number.

Addition and Subtraction

Pupils will be taught to:

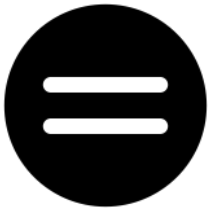
- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9.

When faced with a calculation problem, encourage your child to ask...

- Can I do this in my head?
- Could I do this in my head using drawings or jottings to help me?
- Do I need to use a written method?

- Also help your child to estimate and then check the answer. Encourage them to ask…
- Is the answer sensible?
- Can I check my answer using a different method?

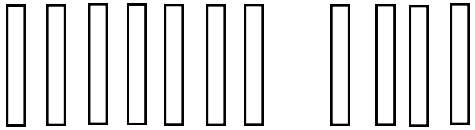
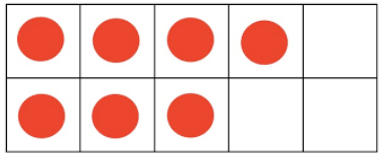
Give your child an answer. Ask them to come up with as many calculations as possible with that answer.



Daily Practise: Find out which number facts your child is learning at school (addition facts to 10, times tables, doubles etc). Try to practise for a few minutes each day using a range of vocabulary.

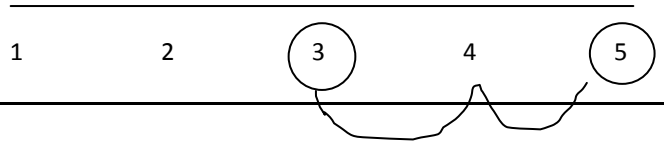
Addition

Children are taught to understand addition as combining groups/ sets of objects and counting on (when numbers increase).

At a party, I eat 2 cakes and my friend eats 3. How many cakes did we eat altogether? 	Encourage your child to work out the calculation for the word problem (2+3=). Sometimes they may draw a picture to help them work out the answer. Eventually they will work this out mentally.
7 people are on the bus. 4 more get on at the next stop. How many people are on the bus now? 	Encourage your child to recognise that they are trying to find the equivalent to 7+4 in order to make the calculation balance. They could use dots or tally marks (quicker than drawing pictures). They could record this as 11=7+4.
3+4 = ? Children find and circle the 3 on the number line and then jump on 4 times and land on the 7. This is their answer. 	Encourage your child to circle the starting number (in our example 3) and the final number they land on—the answer (in our example 7). When adding we teach the children that it doesn't matter which number you start with (though it is easier to start with the greater number).
Adding by making ten using a ten frame.  7 + 5 = ? We teach your child to fill up the ten frame first (make 10) and then add on the remainder (2). So 7+5 Is the same as 10+2. Both equal 12.	Encourage your child to fill up the ten frame first (make 10) and then count on from there. For example 6+7= 13 is the same as 6+4 (makes 10) add 3.

Subtraction

Children are taught to understand subtraction as taking away (counting back) and finding the difference (counting up).

I had 5 cakes and then I ate 2. How many do I have left? 	When first teaching subtraction we use real life objects and physically 'take away'. In our example we would have 5 cakes and I would move 2 away and the child could then count how many they have left.
I had 5 cakes and then I ate 2. How many do I have left? 	We then move onto drawing pictures and crossing out. We would draw 5 cakes and cross 2 out and count how many we had left.
 I had 5 cakes and then I ate 2. How many do I have left?	The next step is to use dots or tally marks to represent objects (quicker than drawing pictures). They could record this as 3 = 5—2.
I had 5 cakes and then I ate 2. How many do I have left? 	The next stage is using a number line to solve the calculation. Children circle the starting number (5) and jump back (2) and land on the answer (3). When subtracting jumps always go underneath the number line.

Number fact Bingo

Draw a simple grid for a bingo board. This can be done on any scrap of paper.

- Each player chooses five answers (e.g. numbers to 10 to practise simple addition, multiples of 5 to practise the five times tables).
- Ask a question and if a player has the answer, they can cross it off.
- The winner is the first player to cross off all their answers.

Go Fish

Make number cards from 0-10 (3 sets of each number).

- Play "Go Fish" to add numbers to 10. e.g. You have fished a 4. What number do you need to fish to make 10?

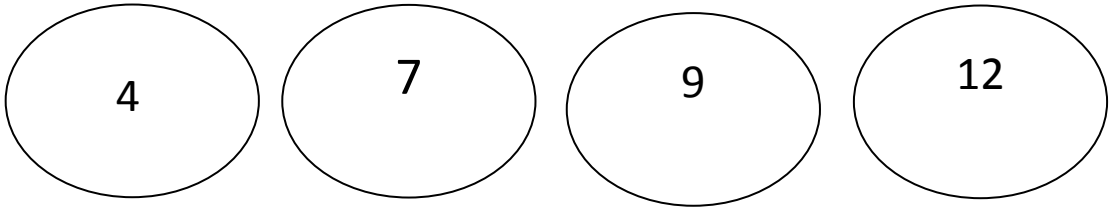
The winner is the first person to find all the pairs that add to 10.

Have a 'fact of the day', e.g. 16=8+8. Pin this fact up around the house. Practise reading it in a quiet, loud, or squeaky voice. Ask your child over the day if they can recall the fact.

Number circles

For this game you will need a dice, a pencil and paper.

- Each of you should draw 4 circles on your piece of paper.
- Write a different number between 2 and 12 on each circle.
- Roll the dice twice and add the two numbers.
- If the total is the same as a number in the circles you can cross it out.
- The first person to cross out all of the numbers wins.



Cupboard Maths

Choose two tins or packets from your food cupboard.

- Ask your child to hold one in each hand and tell you which is heavier, and which is lighter. (Check by reading the weight on each tin or packet.)
- If they are right, they keep the lighter one. Then choose another item from the cupboard, trying to find one that is lighter still.
- Carry on until your child has found the lightest item in the cupboard. It might be suitable to eat as a prize!

Daily Practise: Choose a number of the week e.g. 5. Practise counting to 5 and on from 5. Count out groups of 5 objects (5 dolls, 5 bricks, 5 pens). See how many places you can spot the numeral 5.

Out and about.

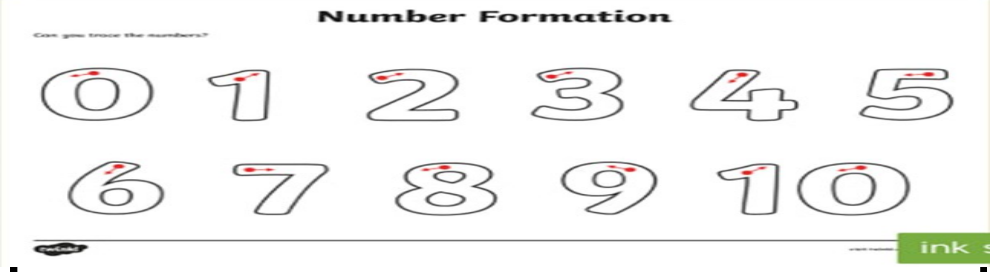
On the way to school see how many cones, cuboids, spheres and cylinders you can spot.

Which did you see most of?

Grab bag subtraction

Choose a number of things to work with, and put that many objects into a bag.

- You can use crayons, coins, beans, buttons, etc.
- Grab a handful of the items and count them. Use subtraction to work out how many items are now left in the bag.
- Write down the calculation.
- Encourage counting up or back.
- Let your partner have a turn.
- Whoever leaves the least amount in the bag is the winner.



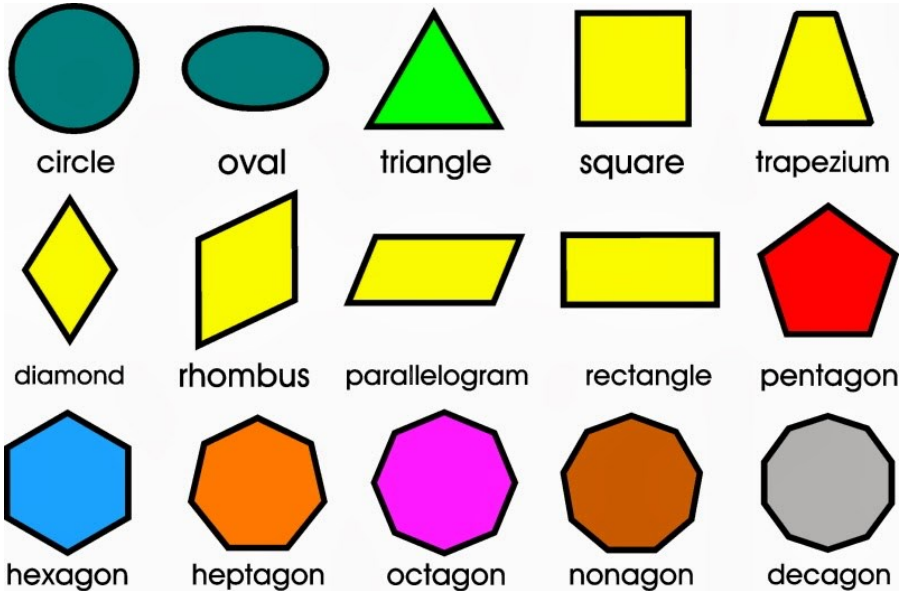
Regular practise of forming each digit correctly will really imbed this skill.

2D Shape hunt

At home, or when you are out, look at the surface of shapes. Ask your child – what shape is this plate, this mirror, the bath mat, the tea towel, the window, the door, the red traffic light, and so on.

- Choose a shape for the week, e.g. a square.

How many of these shapes can your child spot during the week, at home and when you are out?



Useful websites

http://www.mathletics.co.uk

http://www.mathsisfun.com/links/curriculum-year-1.html

http://www.snappymaths.com/year1/

http://www.topmarks.co.uk/Interactive.aspx?cat=8

https://uk.ixl.com/math/year-1

http://urbrainy.com/maths/year-1-age-5-6

https://www.gov.uk/ (National Curriculum can be downloaded here)

http://www.theschoolrun.com