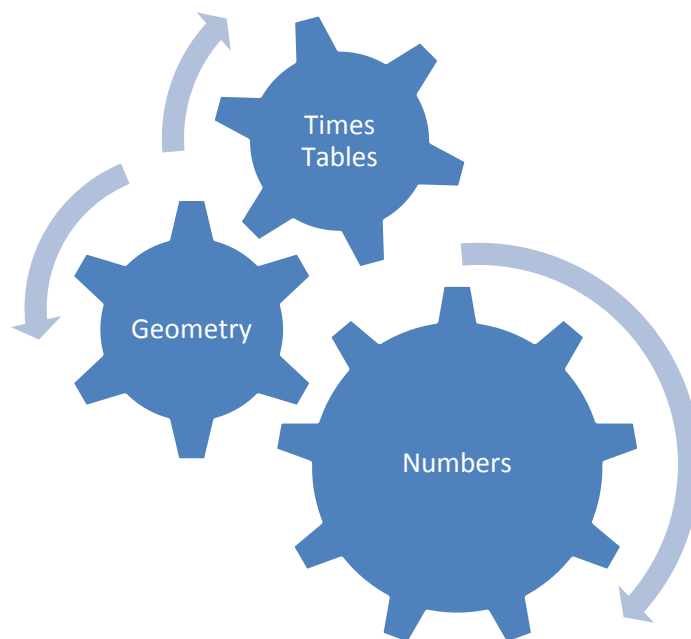# Cherry Tree Primary

Mathematics

Times
Tables

Geometry

Numbers

Year Three
2015/16

Year 3 National Curriculum Statutory Requirements

Numbers

Number: Place Value

Pupils should be taught to:

- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number

- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)

- Compare and order numbers up to 1000

- Identify, represent and estimate numbers using different representations

- Read and write numbers up to 1000 in numerals and in words

- Solve number problems and practical problems involving these ideas

Number: Addition and Subtraction

Pupils should be taught to:

- Add and subtract numbers mentally, including:
    - A three-digit number and ones
    - A three-digit number and tens
    - A three-digit number and hundreds

- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

- Estimate the answer to a calculation and use inverse operations to check answers

- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Number: Multiplication and Division

Pupils should be taught to:

- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables

- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

Number: Fractions

Pupils should be taught to:

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

- Recognise and show, using diagrams, equivalent fractions with small denominators

- Add and subtract fractions with the same denominator within one whole [for example 5/7 + 1/7 = 6/7

- Compare and order unit fractions, and fractions with the same denominators

- Solve problems that involve all of the above

Measurement

Pupils should be taught to:

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

- Measure the perimeter of simple 2-D shapes

- Add and subtract amounts of money to give change, using both £ and p in practical contexts

- Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks

- Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight

- Know the number of seconds in a minute and the number of days in each month, year and leap year

- Compare durations of events [for example to calculate the time taken by particular events or tasks]

Geometry

Geometry: Properties of Shapes

Pupils should be taught to:

- Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them

- Recognise angles as a property of shape or a description of a turn

- Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle

- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines

Statistics (Data Handling)

Pupils should be taught to:

- Interpret and present data using bar charts, pictograms and tables

- Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables

Times Tables

It is now a National Curriculum requirement that times tables up to 12 x 12 are learnt and taught by the time a child reaches the end of year 4. It would be extremely beneficial if parents could support their child at home by practising the relevant times tables for their child's year group. There are a variety of websites and apps to support the consolidation of times tables. Here are just a few of them:

Websites
http://resources.woodlands-junior.kent.sch.uk/maths/timestable/
http://www.topmarks.co.uk/maths-games/5-7-years/times-tables
http://www.maths-games.org/times-tables-games.html
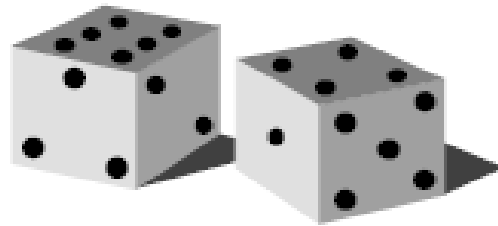
APPs
Squeeble Times Tables 2
Tap Times Tables
Times Tables Personal Assistant

Number games

Roll two dice. Make two-digit numbers, e.g. if you roll a 6 and 4, this could be 64 or 46. If you haven't got two dice, roll one dice twice. Ask your child to do one or more of the activities below.

- Count on or back from each number in tens.
- Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
- Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
- Double each number.

Cupboard maths

Ask your child to help you sort a food cupboard out, putting heavier items on the lower shelf and lighter items on an upper shelf.

Can you tell the time?

Whenever possible, ask your child to tell you
the time to the nearest 5 minutes. Use a clock
with hands as well as a digital watch or clock.
Also ask:

♦ What time will it be one hour from now?

♦ What time was it one hour ago?

Time your child doing various tasks, e.g.

♦ getting ready for school;

♦ tidying a bedroom;

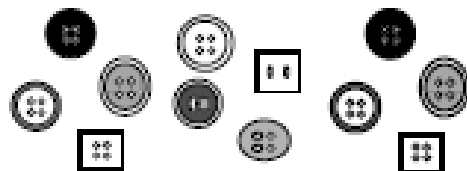♦ saying the 5 times, 10 times or 2 times table…

Ask your child to guess in advance how long they think an activity will
take. Can they beat their time when they repeat it?

Fractions

Use 12 buttons, or paper clips or dried beans or…

♦ Ask your child to find **half** of the 12 things.

♦ Now find one **quarter** of the same group.

♦ Find one **third** of the whole group.

Repeat with other numbers.

Order, order!

♦ Each of you should draw 6 circles in a row.

♦ Take turns.

♦ Roll two dice and make a two-digit number (see Number games).

♦ Write the number in one of your circles. Once the number is
written in a circle you cannot change it or move it!

♦ The first to get all six of their circle numbers in order wins.

Board games

For these games you need to sketch a board like this. Notice how the numbers are arranged.

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

- Start on 1. Toss a coin. If it lands heads, move 1 place along. If it lands tails, add 10, saying the total correctly before moving. First person to reach the bottom row wins.

- Start anywhere on the board. Roll a dice. Even numbers move you forwards and odd numbers move you backwards. If you land on a multiple of five, you can move either 10 forwards or 10 backwards. The first person to reach either the top or bottom of the board wins.

Up and down the scales

- Guess with your child the weights of people in your home.
- Then weigh them (if they agree!). Help your child to read the scales.
- Record each weight, then write all the weights in order.

Repeat after two weeks. What, if any, is the difference in the weights?

Bingo!

One person has the 2x table and the other has the 5x table. Write six numbers in that table on your piece of paper, e.g.

4   8   10   16   18   20

- Roll one or two dice. If you choose to roll two dice, add the numbers, e.g. roll two dice, get 3 and 4, add these to make 7.
- Multiply that number by 2 or by 5 (that is, by your table number, e.g. 7 x 2 or 7 x 5).
- If the answer is on your paper, cross it out.

The first to cross out all six of their numbers wins.
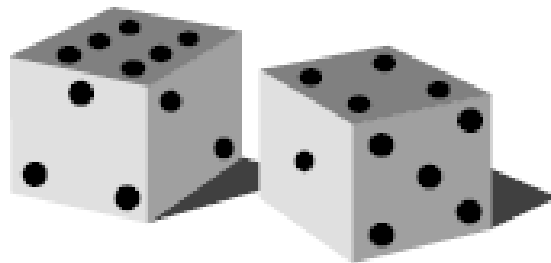
Pasta race

You need two dice and a pile of dried pasta.

- Take turns to roll the two dice.
- Multiply the two numbers and call out the answer.
- If you are right, you win a piece of pasta.
- The first to get 10 pieces of pasta wins.