CANTERBURY CITY & COUNTRY CLUSTER

MATHS MOBILITY PROJECT 2008

Kent County Council

ASK Advisory Service Kent

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Symbol Chart

☆	YEAR R
○	YEAR 1
□	YEAR 2
☺	YEAR 3
☾	YEAR 4
◇	YEAR 5

Resources Year R, 1 & 2

It will be helpful to have available the following:

Dice—Dotted and Numbered
Pretend Food, Fruit, Biscuits
Cubes/Building Bricks
Number Cards including multiples of 100
Special' Box/Bag
Objects e.g. Spiders, Buttons
Game track e.g. Snakes & Ladders
Washing Line and Pegs
Signs written on paper
Square Pieces of Card

Resources Year R, 1 & 2

Teddies	Small Cloth Bags	Counters
Dominoes	Beads and String	Baskets
Plates	Motorbikes	Cars
Coins	Pot	Number Cards 1-100
Number Fans	Large 100 square	Digit Cards
Spinners	Wrapped Sweets	2 Hoops,
Dotty Cards	Card	Circles and Squares
Scissors	Playing Cards	Number line
Post-It's	Whiteboards.	Calculators
Grids	Place Value Cards	Blu-Tac
Paper	Counting Stick	

Resources Year 3, 4 & 5

It will be helpful to have available the following:

Cards 50-100, 500-1000, (Selection of numbers in between) 10-49
Matching cards - fractions, decimals
Card 2D Shapes (on square paper)
Shapes and Parts of Shapes 1/4, 1/2
Items labelled with prices (or pictures)
Decimal Stepping Stones
Large laminated decimal spider
Picture of Thermometer with +/- °C marked
Shapes divided into 100
2dp Stepping Stones

Resources Year 3, 4 & 5

Whiteboard	Number Cards	4 Digit Number Cards
Symbol Cards	Blank Cards	Fraction Cards
Decimal Cards	Equivalent Cards	Shaded Fractions Cards
100's Square	0-100 Number Line	Place Value Cards
1-6 Dice x 2	7-12 Dice	2 Dice numbered 1-10
10 sided dice	Squared Paper	Counters
Bags	Calculator	Pictures with Price Labels
Coins,	Price Labels	Spider/Octopus
Number fans	Fraction stars	List of questions
Pens	Apples	Pears
Cars	Bikes	Shapes
Rulers		

Teddies In The Bag

LO: Find one more / less than a number 1-10. Count reliably up to 10 objects.
Resources: Teddies, Bag.

Activity: Pupil to take a handful of teddies.
"How many have you got?"
"Can you find one more/less?"
"How many teddies have you got now?"

Dicey

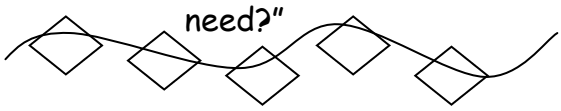
LO: Find one more / less than a number 1-10.
Resources: Dice, Counters/Cubes (use something exciting e.g. spiders, coins etc.)

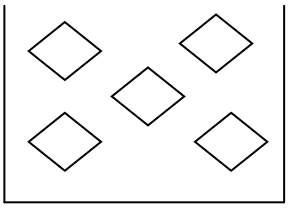
Activity: Pupil to roll dice.
"What number is it?"
"Can you count that many counters / cubes?"
Pupil then to add one more / less.
"How many have you got now?"

Beads And String

LO: Select 2 groups of objects to make a given total.
Resources: Beads and String.

Activity: "I need to have 7 beads, I have 5. How many more do I need?"





Repeat with different amounts.

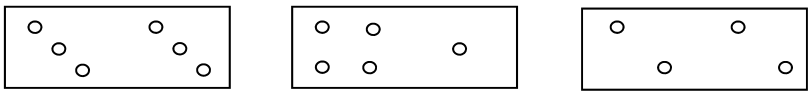
Altogether Now!

LO: Select 2 groups of objects to make a given total.
Resources: Dominoes.

Activity: Show pupil a selection of dominoes.

"Can you find the domino with 6 spots altogether?"

Repeat with different amounts.



Dominoes

LO: Recall pairs of numbers totalling 10.
Resources: Dominoes with dots totalling 10.

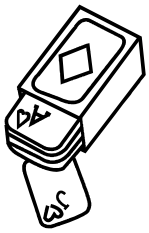
Activity: Pupil or adult turns over one domino. What number is that?

"That number and what makes/totals 10?"
e.g. 4 and what makes 10?

Continue with all dominoes to check recall of number pairs.

Card Pair

LO: Recall pairs of numbers totalling 10 and adding two single numbers together.
Resources - Number cards 0—10.



Activity: Pupil and adult have pile of cards.
Pupil turns over one card and then adult turns over card.
"Do these two numbers total/equal 10?"
(if they don't) "What do those numbers total?"
Continue with pile of cards.

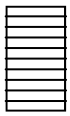
Number Fan Doubles

LO: Recall doubles of numbers to at least 10.
Resources: Number Fans

Activity: Show pupils 3 on a number fan "What's double 3?"
Can pupil find the correct answer using the number fan?
Repeat with different numbers up to 10.

Cubes

LO: Count forward and back in 1's, 2's, 5's, 10's and derive multiples of 2, 5, 10.
Resources: Cubes

Activity: 1's—Can you count in 1's to 30? 2's—Can you count in 2's to 30? 5's—Can you count in 5's to 50? 10's—Can you count in 10's to 100?
Ask pupil to use cubes to make 10 sticks,  5 sticks
and 2 sticks.

Ask pupil questions "How many tens make 100?" "How many two's make 12?" How many fives make 20?" Repeat with different multiples of 2, 5, 10.

Grid Match

LO: Derive and recall +/- for no's to 10, pairs with a total of 20.
Resources: Grids.

Activity: Match two numbers that make 10.
On separate grid - match numbers that make 20.

e.g.

10	7	2
1	8	6
6	4	3

4	19	1
18	17	5
16	2	2

Number Partners

LO: Derive and recall +/- for numbers to 10, pairs to 20.
Resources: Whiteboard.

Activity: Play number partners to ten and twenty.

"What to you think will be the number partner of six?" On the whiteboard show the sum. e.g. 10 equals 6 + 4.
"So, if we play to twenty, what will the number partner of 6 be this time?" e.g. 20 equals 6 + 14.

Repeat with other number pairs.

Hold Up

LO: Derive and recall 2,5,10,times table and related divisions.
Resources: Number cards 1-10.

Activity: Hold up a number card.
Ask the pupil to multiply it by 2, 5 and then 10.
Can they give the number sentence and related division sentence?
Repeat.

Double Trouble

LO: Derive doubles to 20 and corresponding halves.
Resources: Number cards 1-20.

Activity: Hold up a number card.
Pupil to double it and halve it if an even number.
Repeat.

Calculator Check

LO: Estimate and check answers.
Resources: Calculators and Whiteboard.

Activity: Give the pupils a sum e.g. 12 + 14
Ask them to estimate answer, then work it out on their whiteboard.
Check by using a calculator.

Turn The Card

LO: Derive and recall +/- for numbers to 20.
Resources: 0-20 Number Cards.

Activity: Spread a set of 0-20 cards face down on the table. Choose a target number between 10 and 20 e.g. 15.
Pupil turns over 2 cards, one at a time.
The pupil can add or subtract the two cards to make the target number.
If they can make the number, they can keep the card and say the number sentence out loud. e.g. 7 + 8 = 15

Times Galore

LO: Derive and recall 2, 3, 4, 5, 6, 10 times table and related division.
Resources: 1-6 Dice x 2, Whiteboard.

Activity: Roll both dice.

Pupil to multiply the 2 numbers together and give the answer.

Can they write the number sentence and the corresponding division sentence?

Repeat.

Checker

LO: Estimate and check including using inverses.
Resources: Whiteboard.

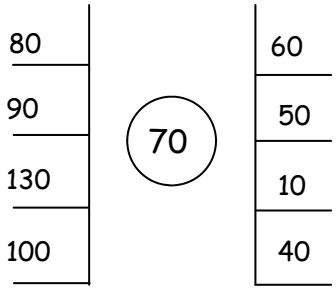
Activity: Write a sum on the whiteboard.
e.g. 57 + 49 or 39 - 12

Ask pupil to estimate the answer (using rounding).
Calculate the actual answer.
Use the inverse to check.

Pairs Of Multiples

LO: Derive sums and differences of pairs of multiples of 10 to 1000.

Resources: Spider/Octopus
Whiteboards



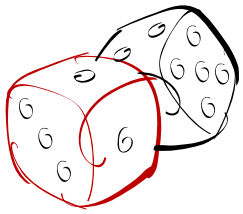
Activity: Ask the pupil what they have to do to reach the target number in the middle. e.g. From 130, how do we get to 70? From 10, how do we get to 70?

Multiplying Dice

LO: To derive and recall × facts up to 10 × 10.

Resources: 2 Dice numbered 1-10

Activity: Roll 2 'dice' multiply numbers and give answer.



Double and Half

LO: Double 2 digit numbers and multiples of 10,000. Find corresponding halves.
Resources: Number cards and their corresponding halves.

Activity: Lay the cards out as below. Ask the pupil to match pairs of doubles and halves. e.g.

14	27	63	42

Need to be matched to one of below

54	126	84	28

20	300	160
600	320	40

36	200	15	150
72	30	300	400

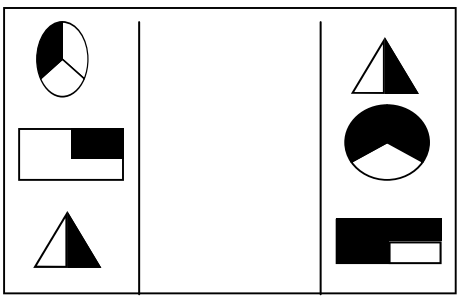
Fractions That Total 1

LO: To identify pairs of fractions that total 1.
Resources: Cards with equivalent fractions.

Activity: Pupil to link up the fractions that make 1
Pupil to link up the fractions that make 1

1/2
4/5
17/20
3/7
1/2

1/2	2/3
3/12	8/10
2/6	15/10
1/4	6/8
1/5	3/4



Up And Down

LO: To check calculations using rounding.
Resources: Whiteboards, Selection of sums e.g. 41
+ 41

and Selection of multiple choice answers e.g. 80, 75, 85, 82

Activity: Write a sum on the whiteboard and a selection of possible answers including multiples of 10. Pupil to pick the number that the answer rounds up or down to.

Inversing

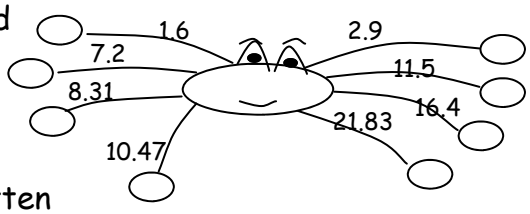
LO: To check calculations using inverses.
Resources: Selection of Sums, Whiteboard.

E.g. 42 73
+ 31 -

Activity: Pupil completes the addition sum and fills in the subtraction sum

Spider Spider

LO: Derive sums, differences, double + halves of decimals.
Resources: Large laminated decimal spider. ×2, ÷2, (Decimal) Cards for centre, Whiteboard Pen.
Activity: Show pupil the spider and explain that to start with they will double each leg and write the answer in the foot. Then repeat with halving (×2 and ÷2 can be written at middle of spider).



Then go on to place another decimal in middle and pupil should add it to each leg and write answer in foot. Then repeat with subtraction.

10 And 100

LO: Multiply pairs of multiples of 10 or 100, derive corresponding division facts.
Resources: Whiteboards

Activity: a)

What is 10 x 10?
What is 20 x 10?
What is 200 x 30?
What is 200 x 100?
What is 340 x 50?

b)

What is 240 ÷10?
What is 200 ÷ 10?
What is 900 ÷ 100?
What is 840 ÷ 20?
What is 950 ÷ 50?

Pupils to use jottings if necessary.

Factors And Multiples

LO: Identify factors and common factors.
Resources: .Whiteboard

Activity: Give pupil a 2 digit number and ask what its multiples are:

e.g. 48	2	24
	4	12
	3	16
	6	8

Give pupil two 1 digit numbers and ask what the common multiples are
e.g. 2 & 5 > 10 20 30

Estimate Check

LO: To estimate and check using rounding, inverse and place value.
Resources: . Whiteboard

Activity: Show pupil an addition sum and ask them to use an addition sum to make a subtraction sum (can do vice versa)

e.g.

$$\begin{array}{r} 345 \\ +\ \underline{222} \\ \underline{567} \end{array} \qquad \begin{array}{r} 567 \\ -\ \underline{222} \\ \underline{345} \end{array}$$

Show pupil an addition sum and ask them to pick a number closest to answer

e.g.

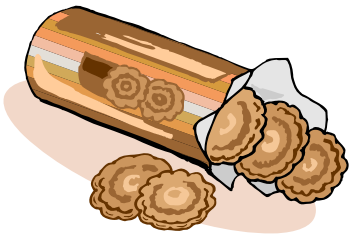
	472	(700)	73	(100)
+	300	(800)	+ 22	(50)
		(300)		(70)

Tea Time

LO: Understand subtraction.
Resources: Pretend food. e.g. Biscuits/Plate.

Activity: "There are 6 biscuits on a plate. We eat 2. How many are left?"

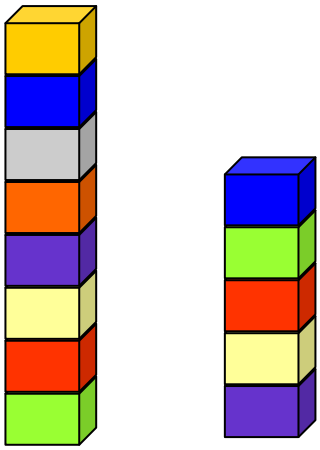
Repeat with different amounts.



Blocks

LO: Understand addition and subtraction. Use vocabulary of addition and subtraction.
Resources: Building blocks

Activity: Ask Pupil to make towers of 8 & 5.
What's the difference between the towers?



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Fruit Baskets

LO: To share objects into equal groups.
Resources: A variety of fruit, Baskets.

Activity: Show pupils the fruit. Ask them to count how many pieces of fruit there are. Ask them to share the fruit into 2 baskets. Extend to 3 or 4 baskets.

"Have all the baskets got the same amount of fruit?"
"How many are in each basket?"

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Bikes And Cars

LO: Count repeated groups of the same size.
Resources: Motorbikes, Cars.

Activity: Show pupil a car and a motor bike. "How many wheels has this car got? How many wheels has this motorbike got?"

"If I had two motorbikes, how many wheels would I have?" Repeat for different numbers of motorbikes.

"If I had two cars, how many wheels would I have?"
Repeat for different number of cars.

Snakes And Ladders

LO: Understand addition as counting on and can be done in any order.
Resources: Two dice. Simple game track (Snakes & Ladders).

Activity: Pupil to roll two dice, count the total number of spots, then move counter appropriate spaces.

Snakes And Ladders

LO: Understand addition as counting on and can be done in any order.
Resources: Two dice. Simple game track (Snakes & Ladders).

Activity: Pupil to roll two dice, count the total number of spots, then move counter appropriate spaces.

Rolling Dice

LO: Know + as counting on and can be done in any order.
Use vocabulary of addition.
Resources: Two dice numbered 1-6 or dots of 1-6.

Activity: Pupil throws both dice.

"Can you add the two dice together?"
"You can start with either dice"
"Can you count from the first dice?"
"How many altogether?"

Washing Line

LO: Find difference by counting up - More/less.
Resources: Washing line/String, Pegs, Number cards 0-10.

Activity: Cards get pegged on line in order.

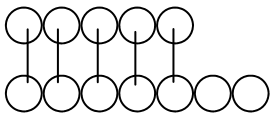
"How many more is…….than……?"

"Count on (3) more from (5). What number do you land on?"

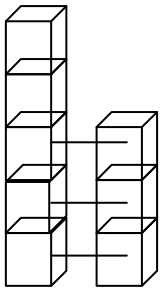
Finding The Difference

LO: Find difference by counting up—More/less.
Resources: Objects/Counters.

Activity: Two sets of objects. Pupil to count both sets (5) (7). What is the difference? How many more are there? Put objects in a line.



Match objects so pupil can see the difference.
Or you could do the same with cubes.



Missing Numbers

LO: +1 digit no or multiple of 10 to a 1 digit or 2 digit number.
Use large 100 square—demonstrate how to count on 1 more / 10 more (moving across + 1, down +10).
Resources: Large 100 square.

Activity: Find 10 more than 50.
Add 11 more to 20.

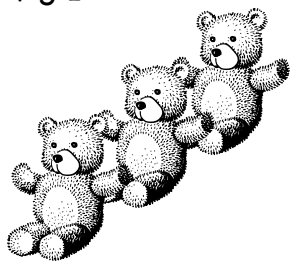
Ask pupil to find missing numbers in parts of 100 square .

	15	16

Adding 3 Numbers

LO: +/- mentally a 1 digit no or multiple of 10 to a 2 digit number.
Resources: Teddies.

Activity: Give pupil teddies and a sum. e.g. 6 + 4 + 3 =



Ask them to match the groups of teddies to the sum.
Can we make 10?

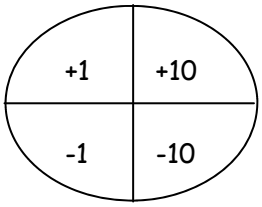
Can the pupil combine the two groups to add.
e.g. 6 + 4 = 10 + 3 = 13

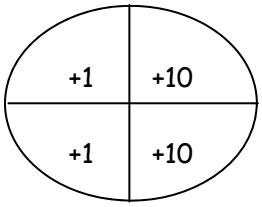
Down The Ladder

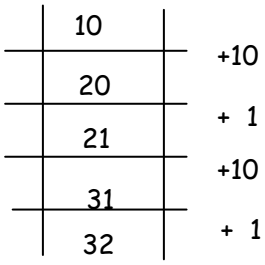
LO: +/- Mentally add 1 digit number or multiple of 10 to a 2 digit number.
Resources: Digit cards, Spinners.

Activity: Pupil to make a 2 digit number with digit cards e.g. 13
Use spinner—spin round to find out what they should do.
Extend to making a number ladder.

e.g.







How far can they go?

Coins

LO: Combine groups of 2, 5 or 10.
Resources: 2p, 5p, 10p coins.

Activity: Show pupil the coins—do they recognise each coin?

Put three 10p coins in your hand and say "I have three 10p coins. How much money do I have? How do you know?"
Put five 5p coins in your hand and say "I have five 5p coins. How much money do I have? How do you know?"
Put six 2p coins in your hand and say "I have six 2p coins. How much money do I have? How do you know?"

Sweets

LO: To share groups of 2, 5 or 10 into equal groups.
Resources: Bag of wrapped sweets or counters.

Activity: Show pupil sweets. "In this bag there are 14 sweets—can you share them between you and me?" Allow time for pupils to share sweets. "Have we got the same?" "How many have we got each?"
Repeat for multiples of 5 and 10.
"In this bag there are 25 sweets and we need to share them into these 5 pots. How many sweets would each pot have?"
"In this bag there are 40 sweets and we need to share them between 10 children. How many sweets would each child have?"

Bears

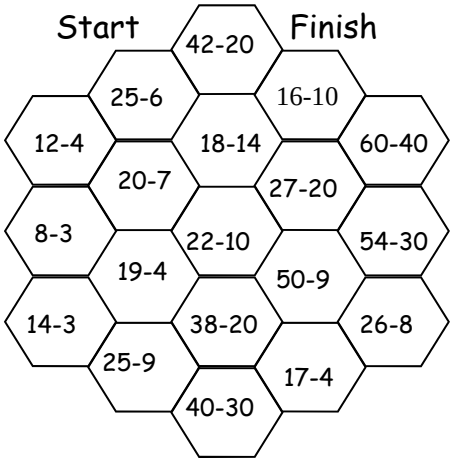
LO: Use addition and subtraction vocabulary and symbols to describe and record number sentences.
Resources: Bears/Cubes/Counters.

Activity: "Can you get 6 bears? Take 2 away.
How many have you got left?"
"Can you record it in a number sentence?" (6 - 2 = 4)

Tiles

LO: Subtract mentally a 1 digit number or multiple of 10.
Resources: Number Line.

Activity: Can you get across from the start to the finish by answering the subtractions? You can use a number line to help you.



Giving And Taking

LO: Understand—as the inverse of +
Resources: Counters (Cubes/Teddies), Whiteboard and Marker.

Activity: Place 20 cubes in a box.
Ask the pupil to take out 3.
How many now?
Can you write it on the whiteboard?
Give back the 3 cubes.
How many now?
Can you write it on a whiteboard?

Cover Up

LO: Use and interpret +, -, x, ÷, =, calculate value of an unknown in a number sentence.
Resources: Whiteboard, Blu-Tac, Square pieces of card.

Activity: Write a number sentence on the whiteboard. E.g. 24 + 12 = 36 or 14 ÷ 2 = 7
Cover one part of the sum up (number or symbol) with a piece of card. Can the pupil work out what is covered?
For every correct answer, pupil keeps the card.

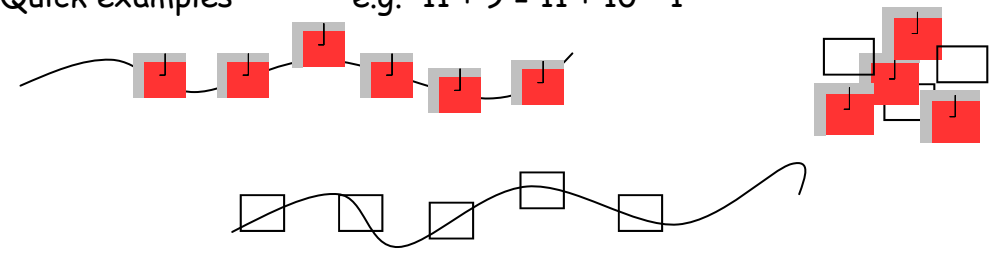
Repeat.

Calculating

LO: Informal written methods for +/-.
Resources: Beads, Strings - Red / White.

Activity: Show the pupil 10 - look at bead colour - can we add on 9?
Quicker to add 10– demonstrate + 10 - 1 (focus on bead colour).

Quick examples e.g. 11 + 9 = 11 + 10 - 1



Groups

LO: Understand x as repeated +.
Resources: Cubes, Number cards

Activity: Show pupil number card 2 and ask "What is 3 groups of 2?" allow pupil to use cubes if appropriate.

□□ □□ □□

2 + 2 + 2

"What is 4 groups of 5?"

□□□ □□□ □□□ □□□
□□ □□ □□ □□

5 + 5 + 5 + 5

Groups II

LO: Understand ÷ as repeated -.
Resources: Cubes.

Activity: Ask pupil to count out 6 cubes. "Can you group these in two's? How many groups of two have you made?"

□□□□□□

Count out 10 cubes "Can you group these in two's?"

□□□□□□□□□□

X And ÷

LO: Practical and informal methods for x and ÷.
Resources: Number line, Counters, Paper

Activity: Ask pupil to answer this question using their own strategies. e.g.:

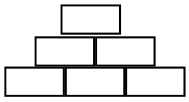
30 ÷ 2 =	20 ÷ 4 =
2 x 5 =	50 ÷ 2 =
3 x 10 =	8 x 2 =
16 ÷ 2 =	6 x 5 =

Pyramids

LO: +/- mentally combinations of 1 and 2 digit numbers.
Resources: Whiteboard, Squared Paper.

Activity: Draw a pyramid of bricks on whiteboard.

Write 6, 5 and 4 in the bottom row of bricks—show how to add adjacent pairs to complete 2nd row.
Ask pupil to draw own pyramids using their own 3 numbers (less than 10).



Target Number

LO: Written methods for +/- 2 and 3 digit numbers.
Resources: Whiteboard
Activity: Write some addition and subtraction sums on the whiteboard. Pupil to work out answer using own methods/jottings. Find the answer on target board below.

Repeat with other sums.

65	59	76	42	29	112
101	31	56	65	28	39
22	88	19	95	69	21

Getting Bigger

LO: Multiply 1 and 2 digit numbers by 10 or 100.
Resources: Place Value Cards.

Activity: Show the pupil a 1 or 2 digit number, using place value cards.
Ask the pupil to show you the number—10 times/100 times bigger using place value cards.

Repeat.

Round And Round

LO: Understand ÷ as the inverse of x and vice versa.
Resources: Number and Symbol Cards.

Activity: Ask the pupil to pick a number card.
Choose a 1-10 card and place next to the x symbol.
Pick the correct card to go at the bottom of the chart.
Choose the correct symbol and number to complete the chart.
e.g.

5 ↗ ↘

÷3 x3

15 ↖ ↙

2 Dice

LO: Informal methods for x and ÷. 2 digit numbers.
Resources: Counters, 2 Dice, (one marked 1-6 and one marked 7-12.)

Activity: Pupil rolls both dice. They divide number on the 7-12 dice by that on the 1-6 dice and agree any remainders.

Use counters to help with division.

Repeat for multiplication.

How Much?

LO: Find unit fractions of numbers and quantities.
Resources: Counters

Activity: Ask pupil to find 1/2 of a 1 or 2 digit number.
Ask pupil to find 1/4, 1/3 of a 1 or 2 digit number.

Pupils can use counters to help them.

Number Add

LO: a) To add mentally pairs of 2 digit numbers.
b) To subtract mentally pairs of 2 digit numbers.
Resources: a) Bag of 2 Digit Numbers
b) Bags: 1 Larger Numbers, 1 Smaller Numbers

Activity: a) Take out 2 numbers and add.
b) Take out number from each bag and subtract.

+/- 2 And 3 Digit Numbers

LO: To refine written methods to +/- 2 and 3 digit numbers.
Resources: Cards 1-9. Cards 50-100, 500-1000, (Selection of numbers in between) 10-49
Activity: 1) Stack of cards 1-9. Pupil picks 2/3 cards and makes 2/3 digit number e.g. 3, 2, 4 (324), does this again and then writes and add numbers together on paper.
2) 2 stacks of cards. 1st stack with high 2/3 digit numbers (50-100) (500-1000). 2nd stack with lower 2/3 digit numbers (10-49) (100-499). Pupil chooses 2 cards and completes the subtraction.

Rolling Dice

LO: To × and ÷ numbers 0 - 1000 by 10/100.
Resources: Dice

Activity: Roll dice 3 times to give a 3 digit number. Ask pupil to multiply number by 10/100.

Roll dice once—adult adds 0 or 00 to the number. Ask pupil to divide number by 10/100.

x/÷ 2 Digit Numbers

LO: Develop written methods to x/÷ 2 digit by 1 digit including remainders.
Resources: 2 Digit Cards and 1 Digit Cards, Whiteboard

Activity: Pupil chooses a 1 and 2 digit card and work out the multiplication sum on the whiteboards. Repeat, but this time complete a division sum with different cards (may include remainders).

Finding Fractions

LO: To find fractions of (a) shapes, (b) numbers.
Resources: (a) Pictures of Shapes with Fractions Shaded
(b) Number Cards

Activity: (a) Ask pupil to pick out picture that shows 1/2, 1/4, 1/3, 1/10 etc.
(b) Ask pupil to give fraction of number picked on card.
* Allow jottings.

Shopping

LO: Use calculator to solve 1 / 2 step problems.
Resources: Calculator, Pictures with Price Labels (some in pence, some in pounds and pence)

Activity: Verbally give the pupil some simple word problems <u>or</u> play 'shopkeeper' working out addition/subtraction/multiplication with items.

Cards And Dice

LO: Mentally multiply 2 digit numbers by a 1 digit number.
Resources: Number cards 1-10, 10 sided dice.

Activity: Spread cards out on table, face down.
Pupil to choose 2 cards to make a 2 digit number.
Pupil to roll dice (10 sided dice).
Pupil to multiply 2 digit x 1 digit and say the answer.

Repeat 5 times (allow jottings).

Card Multiply

LO: To mentally x 2 digit number by 1 digit number
Resources: A bag with 2 Digit Numbers, A bag with 0—9

Activity: Take out a number from each bag and multiply the two numbers together. Repeat. (Allow jottings)

Whole Numbers And Decimals

LO: To use written methods to +/- whole numbers and decimals.
Resources: Stack of cards with numbers and decimals.

Activity: Stack of cards with decimals. Pupil picks 2 cards, writes sum and adds them. e.g.

$$\begin{array}{r} 273.2 \\ \underline{+\ 32.5} \\ 305.7 \end{array}$$

273.2	32.5

Repeat using subtraction.

Fans

LO: x/÷ numbers and decimals by 10, 100, 1000.
Resources: Number Fans, Number Cards.

Activity: Pupil to turn over a card. Adult to ask them to x or ÷ by 10, 100 or 1000. Pupil to show correct answer on number fan.

Multiply And Divide

LO: Written methods for HTU x U, TU x TU, U.T x U, HTU ÷ U.
Resources: . 3 digit HTU cards, 1 digit U cards, 2 digit TU cards, 2 digit U.T cards, Whiteboard.

Activity: Stack of 3 digit cards and stack of 1 digit cards. Pupil to pick 1 of each and write x sum and work out answer.
Stack of 2 digit cards. Pupil to pick 2 and write x sum.
Stack of U.T cards and stack of 1 digit cards. Pupil to pick 1 of each and write x sum.
Stack of 3 digit numbers ÷ units. (3 digit numbers must be multiples of unit). Pupil to write down sum and ÷.
Repeat with different size numbers, including decimals.

Fractions

LO: To find fractions using division .
Resources: Whiteboard

Activity:
Pupil to find 2/3 of 27, 2/9 of 18, 3/5 of 45,
1/11 of 44 44 ÷ 11 = 4
e.g. 2/3 of 27 27 ÷ 3 = 9 9 x 2 = 18

Percentage Of Quantities

LO: Find percentages of quantities.
Resources: Whiteboard

Activity: What is 50% of 10?
10% of 90?
25% of 200?
30% of 120?
75% of 1000?

Cashier

LO: Use calculator to solve problems involving decimals.
Resources: Calculator, Coins, Items labelled with prices (or pictures), Price labels
Set items out and label with price (ie. £2.99 or £1.08)

Activity: Pupil to play shopkeeper, with calculator. Adult to play customer.
Pupil to use calculator to add up prices and work out change.
Customer to keep changing mind and vary 'purchases'.
Increase difficulty of prices as pupil gets quicker.

Penny Pot

LO: Count reliably up to 10 and recognise numerals.

Resources:

Activity 1:	Activity 2:
Pennies	'Special' Box/Bag
Pot	Number Cards
Number Fan	Objects

Activity:

1) Drop pennies into pot, one at a time. Pupil to count. "How many pennies are in the pot?" Can pupil find correct numeral using number fan?
2) Pupil to pick a number card. Can pupil find/count correct amount of objects from a 'special' box.

Count

LO: Count aloud in 1's, 2's, 5's and 10's.

Resources: Number cards

Activity: Can you count in 1's to 20?
Can you count in 2's to 20?
Can you order these number cards in 5's and then say them out loud.
Can you count in 10's to 100?

☆

Estimating 10

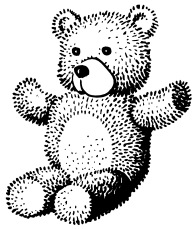
LO: Estimate the number of objects.
Resources: Teddies or Counters.

Activity: Place a number of items on the desk (1-10).

Ask pupil to guess the number of ……..

Repeat with different numbers up to 10.

Check by counting afterwards.



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Card Call

LO: To read and order numbers to 10.
Resources: Number cards 0—10.

Activity: Put number cards on table (numbers facing down).

Pupil to turn card over – "What number is it?"

Pupil to order numerals to 10.

☆

Shuffle

LO: Use more or less than to compare 2 numbers.
Resources: Number Cards, Number Line, 'Post-it's'.

Activity: Shuffle the cards.
Pick up 2 cards, say 4 and 8
"What card is the smallest/largest?" How do you know?
Place 'post it's' on 4 and 8 on number line.
Check that they agree that 8 is the bigger number.
Repeat with other cards.

☆

Where Are They?

LO: Use ordinal numbers.
Resources: Number cards 1 to 10.

Activity: Spread out the numbers 'in a mess'.
Ask pupil to arrange in order by asking questions "Which one will come first? Which one will come last? What number will be 2nd?"

2	8	3	4	6
10	7	5	9	1

Feely Bags

LO: Use numbers to identify how many in a set.
Resources: Feely bags and a variety of interesting objects (e.g. Shells, Coins, Buttons), Whiteboards.

Activity: Show pupils the feely bags. Ask them to find out how many objects are in each bag. Pupils to record answer verbally or write answer on individual whiteboards.

Counting

LO: Count reliably up to 20.
Resources: Number Cards 1-20.

Activity: Pick up a number card.
Count on to 20.
Repeat several times.

Estimating 20

LO: Estimate the number of objects.
Resources: Teddies or Counters.

Activity: Place a number of items on the desk (1-20).
Ask the pupil to guess the number of …….

Check by counting afterwards.

What Number?

LO: Use vocabulary to compare and order numbers. Read, write and order numbers to 20.
Resources: Number cards.

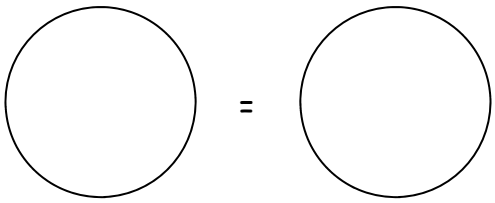
Activity: Deal out number cards so the pupil has 4—6 cards.
Ask questions about the numbers for the pupil to answer.
"Do you have a number bigger than 8?"
"Do you have a number between 12 and 16?"
"Do you have a number one less than 9?"

Pupil lays down the card in front of them if it matches criteria.
Once all cards laid down—can they place them in order?

Equal Sets

LO: Use the = sign.
Resources: Teddies, 2 Hoops, - Signs written on paper.

Activity: Place a number of objects/teddies in one hoop—ask pupil to put the correct number in the other hoop so they are the same. Use the vocabulary "equal".



What Number?

LO: Use vocabulary to compare and order numbers. Read, write and order numbers to 20.
Resources: Number cards.

Activity: Deal out number cards so the pupil has 4—6 cards.
Ask questions about the numbers for the pupil to answer.
"Do you have a number bigger than 8?"
"Do you have a number between 12 and 16?"
"Do you have a number one less than 9?"

Pupil lays down the card in front of them if it matches criteria.
Once all cards laid down—can they place them in order?

Dotty

LO: One More/OneLess/10 More/10 Less.
Resources: Dotty cards, Number cards, (including multiples of 100).

Activity: Each pupil matches a dotty card to a number card that is 1 more/less, 10 more/less.

e.g. 5 is ___ more than.

Halves And Quarters

LO: Use vocabulary of halves and quarters in context.
Resources: Card, Circles and Squares, Scissors, Counters.

Activity 1: Show pupils a circle. Ask them to cut the circle in half. "How many parts do you have?" Repeat with square. "Can you cut the square into quarters?" "How many parts do you have?"

Activity 2: (Number Based)
Show pupils 10 counters—"What is half of 10?"
Show pupils 12 counters—"What is a quarter of 12?"

Jump Along

LO: Count up to 100 by grouping in 2, 5, 10.
Resources: Number line, Counting stick.

Activity: Ask the pupil to jump along the number line, counting on in 2's, then 5's, then 10's until they reach 100.

The Disappearing Man

LO: Read, write 2 and 3 digit numbers. Recognise odd/ even.
Resources: Whiteboard.

Activity: Draw a stick man on the whiteboard.
Pupil writes a 2 or 3 digit number onto a piece of paper and keeps it a secret.
Ask the pupil a question to determine what the secret number is.
As each question is asked, rub a feature off the stick man.
To win—you must guess the number correctly before the stick man disappears!
e.g. Is it an even number? Is it more than ……..? Is it in the 5 times table? Is the tens digit even? Etc.

Crocodile Jaws

LO: To order 2 digit numbers. To use > <.
Resources: Pack of numbers to 100.

Activity: Pick two numbers from the pack. Position cards correctly.
Check using a number line.
Repeat.

Adding Two Digit Numbers

LO: Partition 2 digit numbers in different ways.
Resources: Place value cards.

Activity: Ask the pupil to make two digit numbers with partitioning cards—read numbers.
Arrange them in a sum with symbols. e.g.: 45 + 34 =
Partition numbers to add tens and units.

eg: 40 + 30 = 70

5 + 4 = 9 = 79

Then recombine to find the answer.

Rounding

LO: Round 2 digit numbers to the nearest 10.
Resources: Pack of number cards to 100.

Activity: Pick a card from pack, round to nearest 10.

Repeat several times.

Cut It Up

LO: Find 1/2, 1/4, 3/4 of shapes and sets of objects.
Resources: Counters, Whiteboards.

Activity: Give the pupil 24 counters.
Can they give you 1/2, 1/4 3/4?

Ask pupils to draw a rectangle/circle, etc.
Can they divide it into 1/4's, 1/2's etc.

Number Call

LO: Read, write and order numbers to 1000.
Resources: Number Cards, Blank Cards

Activity: Hold up a number 0—1000.
Ask the pupil to read it and then place in front of them.
Repeat.
Read out a number. Pupil to write it on a blank card and place in front of them.
Repeat.
Can they then order all the cards in front of them?.

Count, Count, Count

LO: Count in single digit steps or multiples of 10.
Resources: 100 Square

Activity: Give pupil a starting number.

Ask them to count up in 3's, 4's, 5's, etc or 10's.

Can use hundred square.

Change the starting number.

Break It Down

LO: Partition 3 digit numbers in different ways.
Resources: Place Value Cards.

Activity: Show the pupil a 3 digit number e.g. 123.
Ask the pupil to show how it can be broken down using place value cards.

100
20
3

or

50
50
10
10
3

Repeat.

Round

LO: Round 2 or 3 digit numbers to nearest 10 or 100.
Resources: 0-100 Number Cards, 0-9 Digit Cards, 100 Square, 0-100 Number Line.
Activity: Pupil to pick a number card. Round to the nearest 10.

Check using number square/number line.

Repeat.

Pupil chooses 3 digit cards to make a 3 digit number. Round to the nearest 100.

What Is It?

LO: Read, write fractions. Know denominator and numerator.
Resources: Fraction Cards, Whiteboard.

Activity: Hold up a fraction card. Can the pupil read it? e.g. 1/5—one fifth.

Repeat with different fractions.

Call out a fraction.

Pupil to write it on the whiteboard.

Shape Card

LO: Identify and estimate fractions of shapes.
Resources: Card 2D Shapes (on square paper), Shapes and parts of shapes 1/4, 1/2

Activity: Show pupil a square and a part (1/4). Ask pupil "How much is this?
Can you tell me the fraction?"

Show pupil simple 2D card shapes, circle, square, triangle, rectangle. Ask them to find 1/4, 1/2, 1/8, 1/3 of each shape.

Jumping

LO: To count on/back in steps of constant size.
Resources: Number cards, Feely bag..

Activity: Pupil to choose a card from the bag. From chosen number count on/back in constant size.

Highest

LO: To order and compare 4 digit numbers.
Resources: Selection of 4 Digit Numbers Cards.

Activity: Pupil to place the cards in correct order and indicate highest and lowest.

Nearest

LO: To round 4 digit numbers.
Resources: Selection of 4 digit number cards

Activity: Pupil selects a card—round to nearest 10, 100, 1000.

Negative Numbers

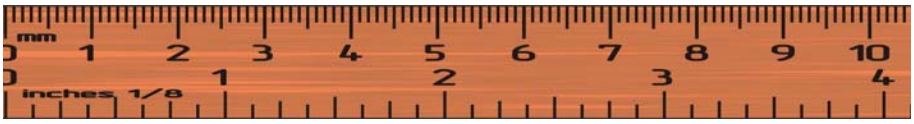
LO: Use negative numbers in context.
Resources: Picture of Thermometer with +/- °C marked.

Activity: Ask pupil questions,
e.g. 1) Show me –3°C.
2) Show me –7°C.
3) What is the temperature if it is –2°C and it becomes 7°C warmer?
4) What is the temperature if it is 3°C and it becomes 8°C colder?

Decimals

LO: Use decimals to 2 places and position on a number line.
Resources: . Number lines, Ruler

Activity: Identify 2. So where will 2.5 be on this line?
Identify 6. So where will 6.25 be on this line?
Continue with other decimals at end of activity.



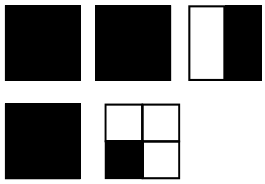
Decimally

LO: To recognise equivalence between fractions and decimals (1/2, 1/4) (tenths, hundredths).
Resources: Matching cards - fractions, decimals e.g. 1/2 = 0.5 0.25 0.3 multi choice.

Activity: Pick out matching fraction and decimal.

Mixed Up

LO: To interpret mixed numbers.
Resources: Cards showing shaded shapes
e.g.



Activity: Pupil writes shaded amount as a mixed number on whiteboard.

Matching Fractions

LO: To identify equivalent fractions (numbers).
Resources: Cards showing variety of fractions including equivalent cards.

e.g. 1/2, 2/4, 6/13, 6/10

Activity: Pupil matches cards that have the same value.

Equivalent Fractions

LO: To identify equivalent fraction (shape).
Resources: Cards Showing Shape (Circle?) Shaded into fraction

e.g., 1/3, 2/6,

1/5, 1/2

Activity: Pupil matches cards that show the same fraction.

Ratio

LO: Use the vocabulary of ratio.
Resources: .Apples, Pears, Cars, Bikes, Shapes

Activity: What is the ratio of apples compared to pears?

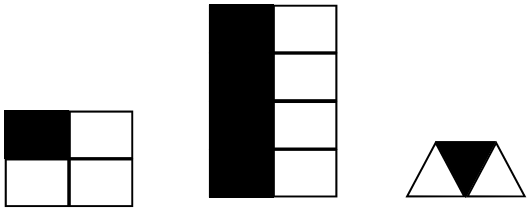
What is the ratio of cars to bikes?

What is the ratio of triangle to circle? △△△△△△ ○○○

Proportion

LO: Use the vocabulary of proportion.
Resources: Coloured shapes

Activity: What proportion of these balls are black?
What proportion of these shapes are shaded?

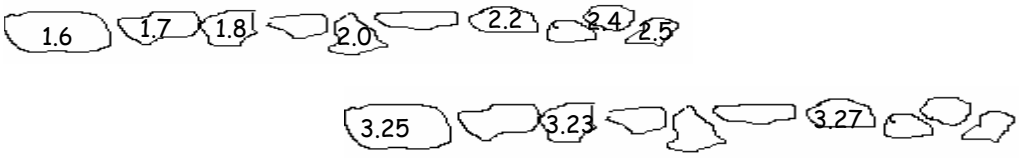


Stepping Stones

LO: Count on add back in decimal steps, including negatives.
Resources: Decimal cards.

Activity: Talk about decimals—can the pupil explain each digit?
Count in decimal steps with the pupil.
Provide decimal 'stepping stones' with gaps for pupil to fill with a choice (multiple choice for pupil) i.e. lay out on a table.

Repeat with more spaces and 2 dp's.



Decimal Read

LO: Explain what each digit is in whole numbers and decimals to 2 places, partition, round and order.
Resources: Selection of cards with decimals e.g. 1.3 1.13 3.72

Activity: Pupil reads number aloud.
Is the Pupil able to indicate tenths/hundredths?
Can they round the decimals and put them in order?

Stars

LO: Find fractions and % of quantities.
Resources: Number fans

Activity: Give the pupil a question.
e.g. "What is 1/4 of 16?"
Could be adapted to percentages. e.g. "What is 50% of 100?"

Stars II

LO: Express smaller number as a fraction of a larger number.
Resources: Fraction stars, list of questions.

Activity: Ask pupil a question like: "What fraction is 4 of 16?"
Pupil to point to or present the fraction star.

Repeat 5 times with other similar questions.
Could be adapted to percentages. "What percentage is 9 of 18?" (% stars as above)

Understand % As Parts In Every 100

LO: To understand % as parts in every 100.
Resources: Shapes divided into 100, Calculator.

Activity:
1) Shapes divided into 100, pupil says what % is shaded.
2) Ask pupil to find 20%, 50%, 17%, 34% ~ varied % of following numbers 100, 300, 500 ~varied multiples of 100.
3) Ask pupil to find % of number using calculator.

Proportions

LO: Solving problems using proportions of quantities.
Resources: Whiteboard

Activity:
What is 1/2 of 10?
What is 1/4 of 40?
What is 1/2 of 36?
What is 1/5 of 100?
What if 1/4 of 240?