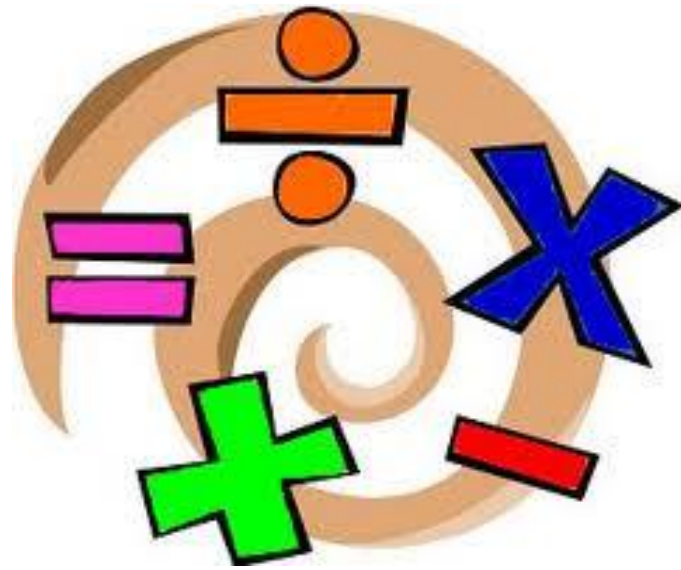


Basic Facts



Parent handbook



Basic facts

Basic facts is **one** area of Maths and is part of the many areas that contribute to each stage in Maths. By the end of year 2 the national expectation is that children are working at stage 4.

For basic facts children are required to **instantly recall** a range of facts.

Children need to be able to instantly recall the appropriate facts for their stage in **any order**.

Regular practice will help children to **retain** this knowledge. After introducing a topic ask your child to recall these facts at monthly intervals to ensure that they have retained this knowledge.

It is also important to use different mathematical language e.g. when asking an addition problem vary the language that you use e.g. 5 plus 2, 5 and 2, 5 add 2.

In the earlier stages when introducing a new concept start with materials. This helps children visualise it. Use materials until you feel your child is confident with imaging the materials in their head but bring the materials back if necessary.

Knowledge required before learning basic facts

- ✓ Read any number up to 20
- ✓ Count forwards and backwards from any number between 0-20
- ✓ Say the number before and after any number between 0-20
- ✓ Order numbers to 20

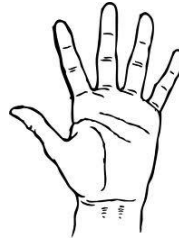
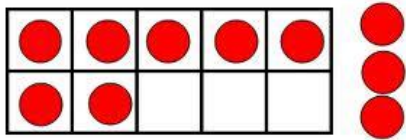
Stage 2

Counting on Materials

Learning Intention: I am learning to instantly recognise patterns to 5

Materials:

- ✓ **Fingers:** Hold up four fingers (on one hand) and ask "how many more fingers do you need to make 5?"



$2 + 3 = 5$

$1 + 4 = 5$

$3 + 2 = 5$

$5 + 0 = 5$

$0 + 5 = 5$

$4 + 1 = 5$

$5 - 3 = 2$

$5 - 4 = 1$

$5 - 2 = 3$

$5 - 0 = 5$

Learning Intention: I am learning to instantly recognise groups with 5

- ✓ Fingers: Hold up 5 fingers (on one hand) and ask "how many more fingers do you need to make 6?"
- ✓ Tens frames: For $5 + 1$, give the students a pre-printed frame with 5 dots on it. Get the students to add one more counter, first by completing a five then putting the other two counters in the blank column. Expect the children to recognise this as totalling to seven without counting. Repeat with a variety of addition facts, getting the children to visualise the answer before they put the counters on.
- ✓ For subtraction use a blank tens frame. Visualise the counters being removed
- ✓ Use food colouring to dye pieces of pasta. Thread 5 blue ones on the string then add one 1 red piece on e.g. $5 + 1 = 6$.

$$5 + 0 = 5 \quad 5 + 1 = 6 \quad 5 + 2 = 7$$

$$5 + 3 = 8 \quad 5 + 4 = 9 \quad 5 + 5 = 10$$

(Try reversing it e.g. $1 + 5 = 6$, $2 + 5 = 7$)

$$6 - 1 = 5 \quad 7 - 2 = 5 \quad 8 - 3 = 5$$

$$9 - 4 = 5 \quad 10 - 5 = 5 \quad 5 - 0 = 5$$

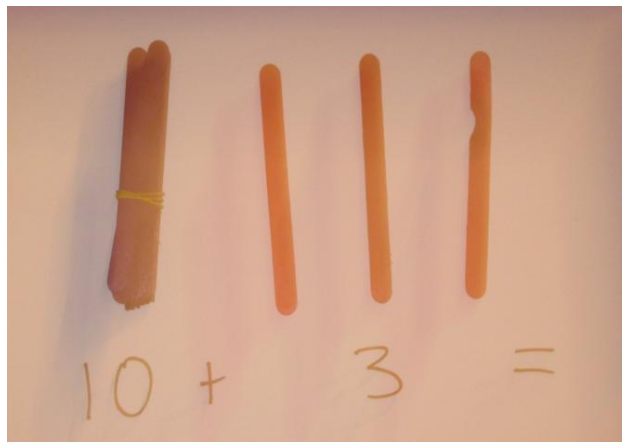
Stage 3

Counting from one by imaging

Learning Intention: I am learning the teen number facts

Materials:

- ✓ Lollysticks: A bundle of 10 lollysticks (bound together with a rubber band so you always have 10) then add one more e.g. $10 + 3 = 13$



$10 + 1 = 11$

$10 + 2 = 12$

$10 + 3 = 13$

$10 + 4 = 14$

$10 + 5 = 15$

$10 + 6 = 16$

$10 + 7 = 17$

$10 + 8 = 18$

$10 + 9 = 19$

$10 + 10 = 20$

(Try reversing it e.g. $2 + 10 = 12$)

$11 - 10 = 1$

$12 - 10 = 2$

$13 - 10 = 3$

$14 - 10 = 4$

$15 - 5 = 5$

$16 - 6 = 6$

$17 - 7 = 10$

$18 - 10 = 8$

$19 - 9 = 9$

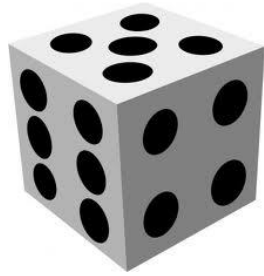
$20 - 10 = 10$

(Try reversing it e.g. $11 - 1 = 10$, $12 - 2 = 10$ etc)

Learning Intention: I am learning doubles to double 5

Materials:

- ✓ Draw a line down the middle of a piece of paper ask your child to draw 2 apples on one side, 2 on the other then ask for the total altogether. So double 2 is 4. Continue and vary how to do it e.g. use playdough balls, make ladybirds (equal dots on both sides) make butterfly, equal shapes or dots on both sides.
- ✓ Roll a dice and double the number on the dice.



$$1 + 1 = 2$$

$$2 + 2 = 4$$

$$3 + 3 = 6$$

$$4 + 4 = 8$$

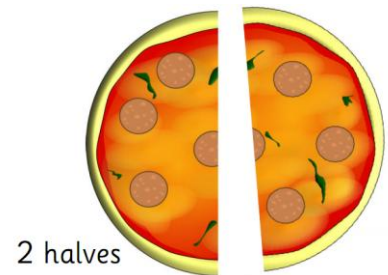
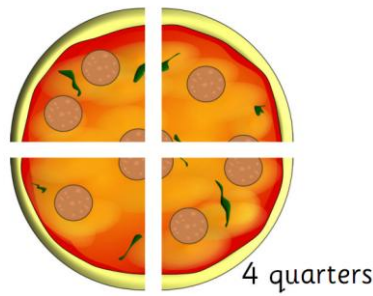
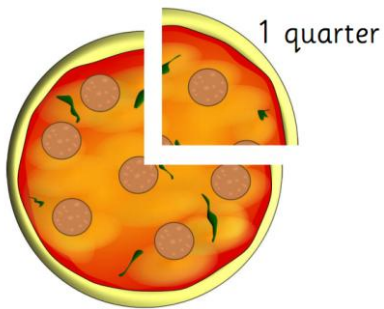
$$5 + 5 = 10$$

Learning Intention: I am learning to read symbols for halves and quarters

$$\frac{1}{4} \quad \frac{1}{2}$$

Materials:

- ✓ Match symbols with drawings of shapes with halve and quarter
- ✓ Find half of 6 by equal sharing.
- ✓ Have 8 lollies "how can you share these so 4 people have the same amount?"
- ✓ "Can you cut the pizza in half?"



Stage 4

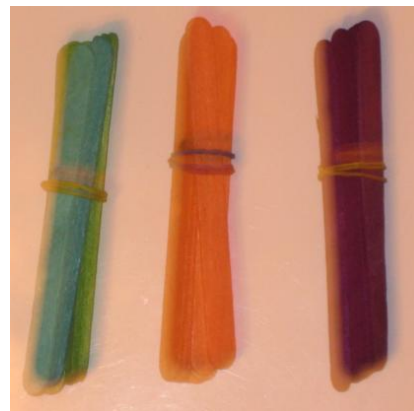
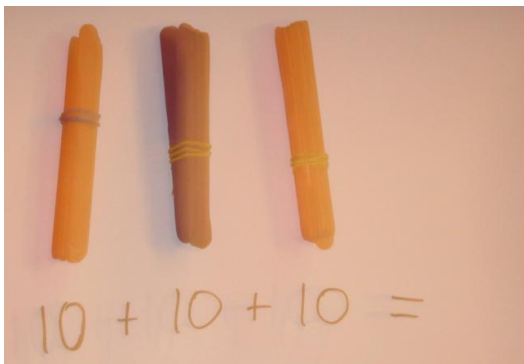
Counting on from the largest number

Learning Intention: I am learning to say the number of 10's in decades

How many 10's in 30?

Materials:

- ✓ Bundles of lollysticks in groups of 10 e.g. 6 groups of 10 is 60 so how many 10's are there in 60?



How many 10's in:

10 20 30 40 50 60 70
80 90 100

Learning Intention: Know groupings within 20

Materials

- ✓ Use a hundreds square and put a counter on 17 and ask how many more to make 20? Or $17 + 3$ makes...
- ✓ Make a memory pairs game

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



$20 + 0 = 20$

$17 + 3 = 20$

$14 + 6 = 20$

$11 + 9 = 20$

$8 + 12 = 20$

$5 + 15 = 20$

$2 + 18 = 20$

$20 - 19 = 1$

$20 - 16 = 4$

$20 - 13 = 7$

$20 - 10 = 10$

$20 - 7 = 13$

$20 - 4 = 16$

$20 - 1 = 19$

$19 + 1 = 20$

$16 + 4 = 20$

$13 + 7 = 20$

$10 + 10 = 20$

$7 + 13 = 20$

$4 + 16 = 20$

$1 + 19 = 20$

$20 - 18 = 2$

$20 - 15 = 5$

$20 - 12 = 8$

$20 - 9 = 11$

$20 - 6 = 14$

$20 - 3 = 17$

$20 - 20 = 0$

$18 + 2 = 20$

$15 + 5 = 20$

$12 + 8 = 20$

$9 + 11 = 20$

$6 + 14 = 20$

$3 + 17 = 20$

$20 - 17 = 3$

$20 - 14 = 6$

$20 - 11 = 9$

$20 - 8 = 12$

$20 - 5 = 15$

$20 - 2 = 18$

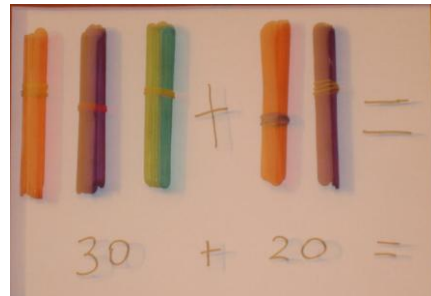
$20 - 0 = 20$

Learning Intention: I am learning the multiples of 10 that add to 100

$$70 + 30 = 100$$

Materials:

- ✓ Use bundles of 10 to solve questions such as $60 + 40$
- ✓ Make a pairs memory game



$10 + 90 = 100$

$20 + 80 = 100$

$30 + 70 = 100$

$40 + 60 = 100$

$50 + 50 = 100$

$60 + 40 = 100$

$70 + 30 = 100$

$80 + 20 = 100$

$90 + 10 = 100$

$100 + 0 = 100$

$0 + 100 = 100$

$100 - 10 = 90$

$100 - 20 = 80$

$100 - 30 = 70$

$100 - 40 = 60$

$100 - 50 = 50$

$100 - 60 = 40$

$100 - 70 = 30$

$100 - 80 = 20$

$100 - 90 = 10$

$100 - 100 = 0$

$100 - 0 = 100$

Learning Intention: I am learning doubles and halves to 20

Ask $3 + 3 =$

$6 - 3 =$

$\frac{1}{2}$ if $6 =$

Materials:

- ✓ Draw a line down the middle of a piece of paper ask your child to draw 2 apples on one side, 2 on the other then ask for the total altogether. So double 2 is 4. Continue and vary how to do it e.g. use playdough balls, make ladybirds (equal dots on both sides) make butterfly, equal shapes or dots on both sides.
- ✓ For halves have a ladybird with 6 dots, take 3 away how many are left? So $\frac{1}{2}$ of 6 is 3.
- ✓ Roll a dice and double the number on the dice.
- ✓ For halves put a blank sticker on each side of the dice have numbers that you can halve e.g. 12, 20, 8 etc



$1 + 1 = 2$

$2 + 2 = 4$

$3 + 3 = 6$

$4 + 4 = 8$

$5 + 5 = 10$

$6 + 6 = 12$

$7 + 7 = 14$

$8 + 8 = 16$

$9 + 9 = 18$

$10 + 10 = 20$

$2 - 1 = 1$

$4 - 2 = 2$

$6 - 3 = 3$

$8 - 4 = 4$

$10 - 5 = 5$

$12 - 6 = 6$

$14 - 7 = 7$

$16 - 8 = 8$

$18 - 9 = 9$

$20 - 10 = 10$

Fractions

Learning Intention: I am learning to read unit fractions

$1/2, 1/4, 1/3, 1/5, 1/10$

Materials:

- ✓ Cut a cake into 4/5/10 etc parts ask your child to give you $\frac{1}{4}$ etc
- ✓ Share a bag of lollies so 10 people get the same amount. Then ask how many 10^{ths} do you have?



Stage 5

Early Additive Part Whole (using known facts to solve calculations)

Learning Intention: I am learning multiples of 100 that add to 1000

400 and 600 = 1000

300 and what make 1000

Use known facts to e.g. $4 + 6 = 10$, $40 + 60 = 100$ etc

$$100 + 900 = 1000$$

$$200 + 800 = 1000$$

$$300 + 700 = 1000$$

$$400 + 600 = 1000$$

$$500 + 500 = 1000$$

$$600 + 400 = 1000$$

$$700 + 300 = 1000$$

$$800 + 200 = 1000$$

$$900 + 100 = 1000$$

$$1000 + 0 = 1000$$

$$1000 - 900 = 100$$

$$1000 - 800 = 200$$

$$1000 - 700 = 300$$

$$1000 - 600 = 400$$

$$1000 - 500 = 500$$

$$1000 - 400 = 600$$

$$1000 - 300 = 700$$

$$1000 - 200 = 800$$

$$1000 - 100 = 900$$

$$1000 - 0 = 1000$$

Learning Intention: Know addition facts to 20

Materials

- ✓ Use a hundreds square and ask put a counter on 17 and ask how many more to make 20? Or $17 + 3$ makes...
- ✓ Make a memory pairs game

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



$20 + 0 = 20$

$17 + 3 = 20$

$14 + 6 = 20$

$11 + 9 = 20$

$8 + 12 = 20$

$5 + 15 = 20$

$2 + 18 = 20$

$20 - 19 = 1$

$20 - 16 = 4$

$20 - 13 = 7$

$20 - 10 = 10$

$20 - 7 = 13$

$20 - 4 = 16$

$20 - 1 = 19$

$19 + 1 = 20$

$16 + 4 = 20$

$13 + 7 = 20$

$10 + 10 = 20$

$7 + 13 = 20$

$4 + 16 = 20$

$1 + 19 = 20$

$20 - 18 = 2$

$20 - 15 = 5$

$20 - 12 = 8$

$20 - 9 = 11$

$20 - 6 = 14$

$20 - 3 = 17$

$20 - 20 = 0$

$18 + 2 = 20$

$15 + 5 = 20$

$12 + 8 = 20$

$9 + 11 = 20$

$6 + 14 = 20$

$3 + 17 = 20$

$20 - 17 = 3$

$20 - 14 = 6$

$20 - 11 = 9$

$20 - 8 = 12$

$20 - 5 = 15$

$20 - 2 = 18$

$20 - 0 = 20$

Learning Intention: Know multiplication & division facts for 2, 5 and 10 times tables

Then multiplication facts for 3 and 4 times tables

Materials:

- ✓ Get groups of objects then ask your child to put them into groups e.g. 20 objects into groups of 2. Then skip count e.g. 2, 4, 6, 8, 10. So 2 groups of 2 is 4 etc
- ✓ Make a bingo game of the multiplication or division facts that you are working on
- ✓ Make flashcards

$5 \times 2 =$	$2 \times 7 =$	$9 \times 4 =$
$6 \times 3 =$	$10 \times 10 =$	$4 \times 1 =$



$1 \times 2 = 2$

$4 \times 2 = 8$

$7 \times 2 = 14$

$10 \times 2 = 20$

$2 \times 2 = 4$

$5 \times 2 = 10$

$8 \times 2 = 16$

$11 \times 2 = 22$

$3 \times 2 = 6$

$6 \times 2 = 12$

$9 \times 2 = 18$

$12 \times 2 = 24$

$1 \times 5 = 5$

$4 \times 5 = 20$

$7 \times 5 = 35$

$10 \times 5 = 50$

$2 \times 5 = 10$

$5 \times 5 = 25$

$8 \times 5 = 40$

$11 \times 5 = 55$

$3 \times 5 = 15$

$6 \times 5 = 30$

$9 \times 5 = 45$

$12 \times 5 = 60$

$1 \times 10 = 10$

$4 \times 10 = 40$

$7 \times 10 = 70$

$10 \times 10 = 100$

$2 \times 10 = 20$

$5 \times 10 = 50$

$8 \times 10 = 80$

$11 \times 10 = 110$

$3 \times 10 = 30$

$6 \times 10 = 60$

$9 \times 10 = 90$

$12 \times 10 = 120$

$0 \div 2 = 0$

$6 \div 2 = 3$

$12 \div 2 = 6$

$18 \div 2 = 9$

$2 \div 2 = 1$

$8 \div 2 = 4$

$14 \div 2 = 7$

$20 \div 2 = 10$

$4 \div 2 = 2$

$10 \div 2 = 5$

$16 \div 2 = 8$

$0 \div 5 = 0$

$15 \div 5 = 3$

$30 \div 5 = 6$

$45 \div 5 = 9$

$5 \div 5 = 1$

$20 \div 5 = 4$

$35 \div 5 = 7$

$50 \div 5 = 10$

$10 \div 5 = 2$

$25 \div 5 = 5$

$40 \div 5 = 8$

$0 \div 10 = 0$

$30 \div 10 = 3$

$60 \div 10 = 6$

$90 \div 10 = 9$

$10 \div 10 = 1$

$40 \div 10 = 4$

$70 \div 10 = 7$

$100 \div 10 = 10$

$20 \div 10 = 2$

$50 \div 10 = 5$

$80 \div 10 = 8$

$0 \times 3 = 0$

$3 \times 3 = 9$

$6 \times 3 = 18$

$9 \times 3 = 27$

$1 \times 3 = 3$

$4 \times 3 = 12$

$7 \times 3 = 21$

$2 \times 3 = 6$

$5 \times 3 = 15$

$8 \times 3 = 24$

$0 \times 4 = 0$

$3 \times 4 = 12$

$6 \times 4 = 24$

$9 \times 4 = 36$

$1 \times 4 = 4$

$4 \times 4 = 16$

$7 \times 4 = 28$

$2 \times 4 = 8$

$5 \times 4 = 20$

$8 \times 4 = 32$

Learning Intention: Groupings within 100 Using 5s

$5 + 95 = 100$

$15 + 85 = 100$

$25 + 75 = 100$

$35 + 65 = 100$

$45 + 55 = 100$

$55 + 45 = 100$

$65 + 35 = 100$

$75 + 25 = 100$

$85 + 15 = 100$

$95 + 5 = 100$

$100 - 95 = 5$

$100 - 85 = 15$

$100 - 75 = 25$

$100 - 65 = 35$

$100 - 55 = 45$

$100 - 45 = 55$

$100 - 35 = 65$

$100 - 25 = 75$

$100 - 15 = 85$

$100 - 5 = 95$

Learning Intention: Doubles & Halves to 100

1	+	1	=	2	2	+	2	=	4
3	+	3	=	6	4	+	4	=	8
5	+	5	=	10	6	+	6	=	12
7	+	7	=	14	8	+	8	=	16
9	+	9	=	18	10	+	10	=	20
11	+	11	=	22	12	+	12	=	24
13	+	13	=	26	14	+	14	=	28
15	+	15	=	30	16	+	16	=	32
17	+	17	=	34	18	+	18	=	36
19	+	19	=	38	20	+	20	=	40
21	+	21	=	42	22	+	22	=	44
23	+	23	=	46	24	+	24	=	48
25	+	25	=	50	26	+	26	=	52
27	+	27	=	54	28	+	28	=	56
29	+	29	=	58	30	+	30	=	60
31	+	31	=	62	32	+	32	=	64
33	+	33	=	66	34	+	34	=	68
35	+	35	=	70	36	+	36	=	72
37	+	37	=	74	38	+	38	=	76
39	+	39	=	78	40	+	40	=	80
41	+	41	=	82	42	+	42	=	84
43	+	43	=	86	44	+	44	=	88
45	+	45	=	90	46	+	46	=	92
47	+	47	=	94	48	+	48	=	96
49	+	49	=	98	50	+	50	=	100

2	-	1	=	1	4	-	2	=	2
6	-	3	=	3	8	-	4	=	4
10	-	5	=	5	12	-	6	=	6
14	-	7	=	7	16	-	8	=	8
18	-	9	=	9	20	-	10	=	10
22	-	11	=	11	24	-	12	=	12
26	-	13	=	13	28	-	14	=	14
30	-	15	=	15	32	-	16	=	16
34	-	17	=	17	36	-	18	=	18
38	-	19	=	19	40	-	20	=	20
42	-	21	=	21	44	-	22	=	22
46	-	23	=	23	48	-	24	=	24
50	-	25	=	25	52	-	26	=	26
54	-	27	=	27	56	-	28	=	28
58	-	29	=	29	60	-	30	=	30
62	-	31	=	31	64	-	32	=	32
66	-	33	=	33	68	-	34	=	34
70	-	35	=	35	72	-	36	=	36
74	-	37	=	37	76	-	38	=	38
78	-	39	=	39	80	-	40	=	40
82	-	41	=	41	84	-	42	=	42
86	-	43	=	43	88	-	44	=	44
90	-	45	=	45	92	-	46	=	46
94	-	47	=	47	96	-	48	=	48
98	-	49	=	49	100	-	50	=	50

