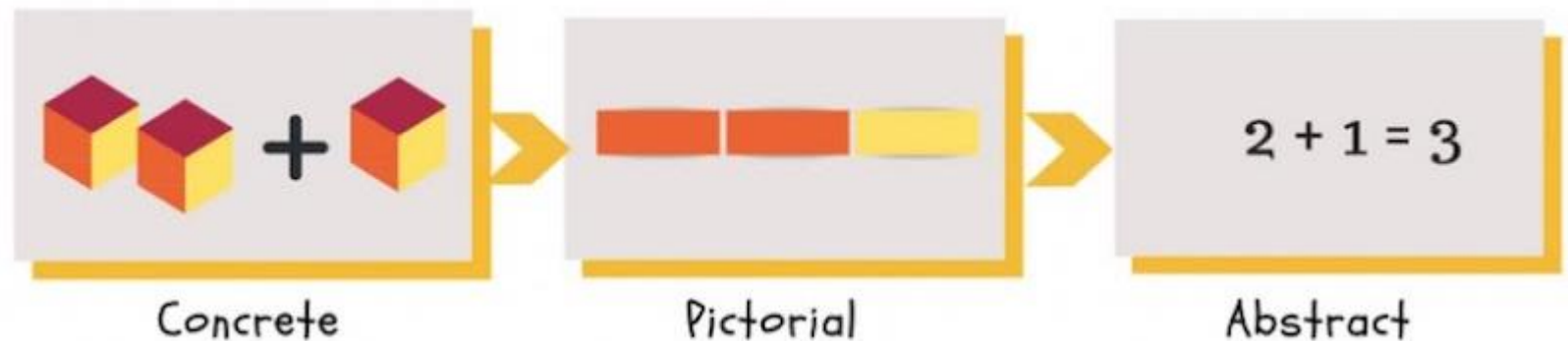




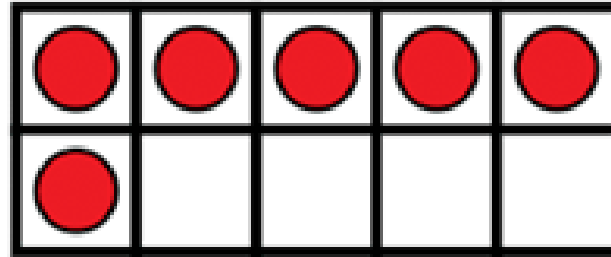
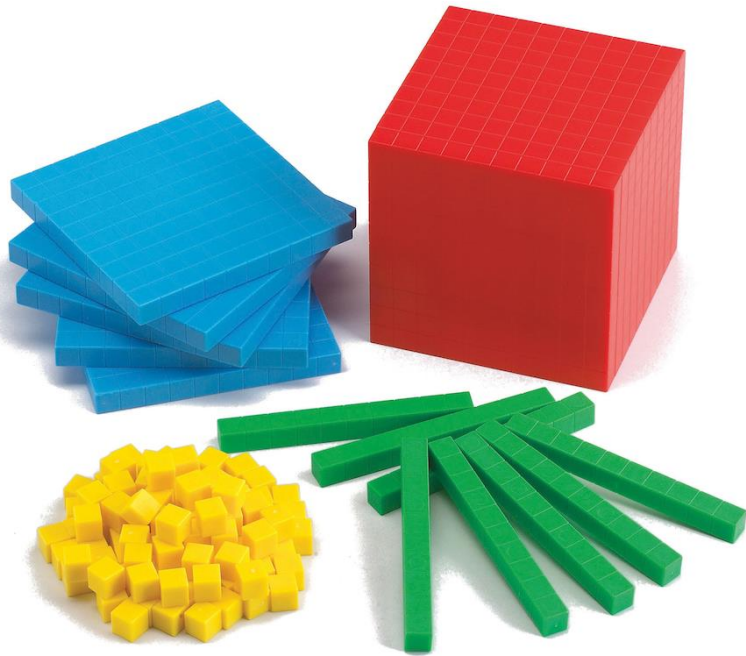
At Parley, we use a Mastery curriculum

- When taught to **master maths**, children develop their mathematical fluency **without resorting to rote** learning and are able to solve non-routine maths problems without having to memorise procedures.
- Students are **given time to think deeply** about the maths and really understand concepts at a **relational level** rather than as a set of rules or procedures. This slower pace leads to greater progress because it ensures that students are secure in their understanding.

- Maths teaching for mastery rejects the idea that a large proportion of people 'just can't do maths'.
- All pupils are encouraged by the belief that by **working hard at maths they can succeed**.
- Pupils are taught through **whole-class interactive teaching**, where the focus is on all pupils working together on the same lesson content at the same time. This ensures that all can **master concepts before moving on** to the next part of the curriculum sequence, allowing no pupil to be left behind.
- Children use objects and pictures to physically represent mathematical concepts alongside numbers and symbols – this helps them to visualise ideas.

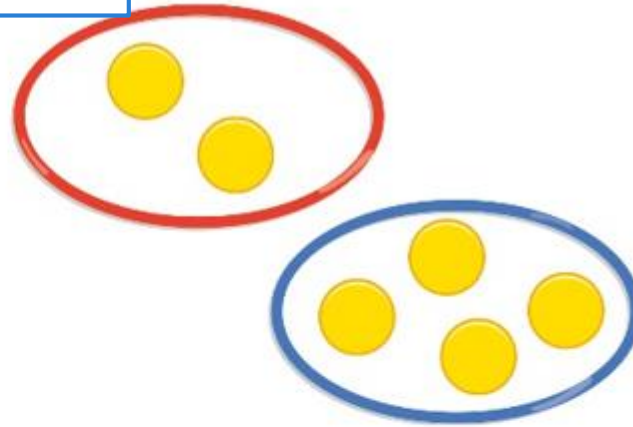


Classroom Resources and Physical Equipment



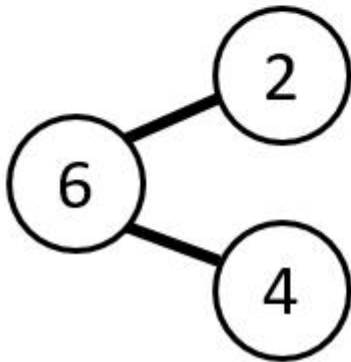
Models and Representations

Pictorial Representations



Th	H	T	O

Abstract Representations



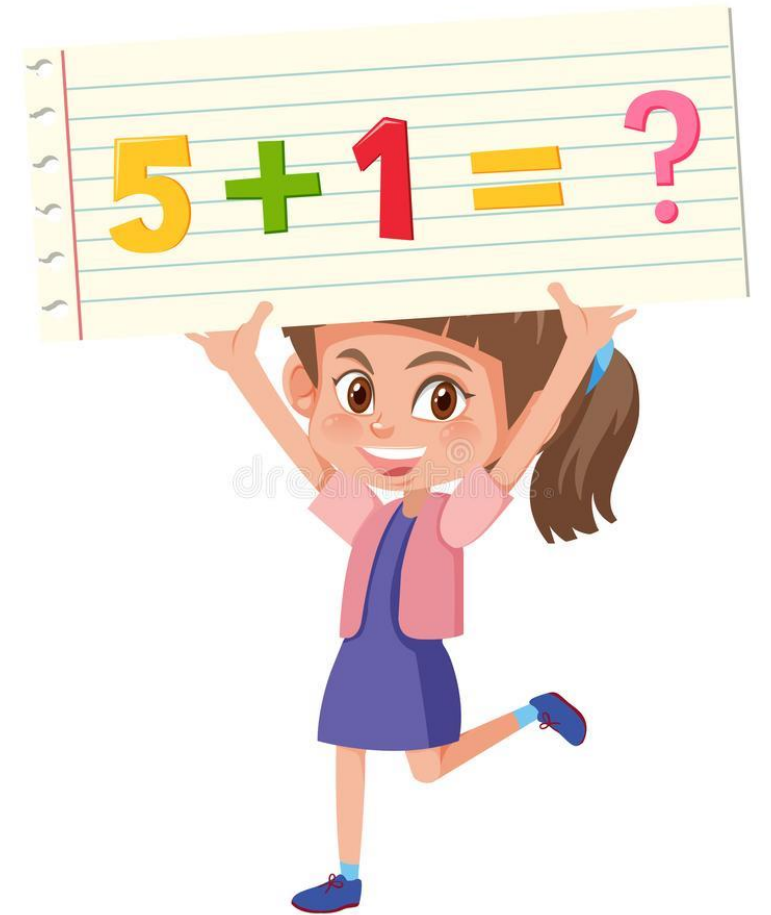
$$2 + 4 = 6$$

6	
2	4

The heart of maths is:

- **Fluency** – being able to answer questions quickly and correctly.
- **Problem solving** – often open-ended problems with multiple right answers. They will use a range of skills to solve. Problem solving is at the heart of mastering maths. It is an important skill for all ages and abilities and is taught explicitly.
- **Reasoning** – questions that allow the child to explain, justify and reason with their answers. A mastery classroom should never be a quiet classroom.

You can support your
children at home with
fluency



Multiplication tables check

Do you have a child in year 4 at primary school?

If so, they will have the opportunity to take the optional multiplication tables check (MTC), in June 2021.

The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics. It will also help your child's school to identify pupils who may need additional support.

What is the MTC?

The MTC is an on-screen check consisting of 25 times tables questions. Your child will answer 3 practice questions before moving on to the official check and will then have 6 seconds to answer each question. On average, the check should take no longer than 5 minutes to complete.

Year 2

In Year 2, children begin to learn their times tables in a rigorous way.

By the end of Year 2, children are expected to know their **2, 5 and 10** times tables.

There are **42** facts to learn.

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Year 3

In Year 3, the children build upon their times tables knowledge with their **3, 4 and 8** times tables.

Using the facts they already know, this is **21** new facts to learn.

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Year 4

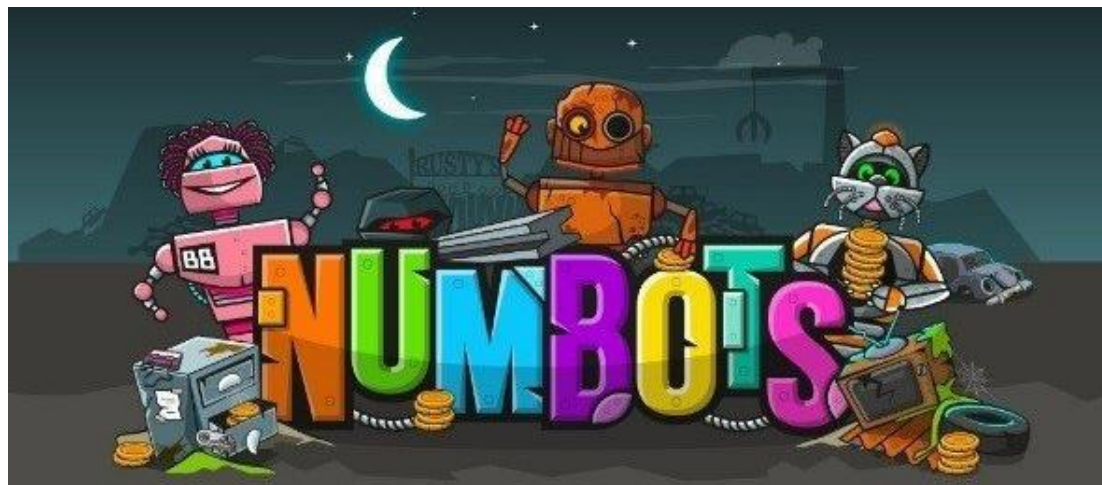
In Year 4, the children learn their **6, 7, 9, 11 and 12** times tables.

This is only **15** new facts!

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Now it's your turn to have a go....





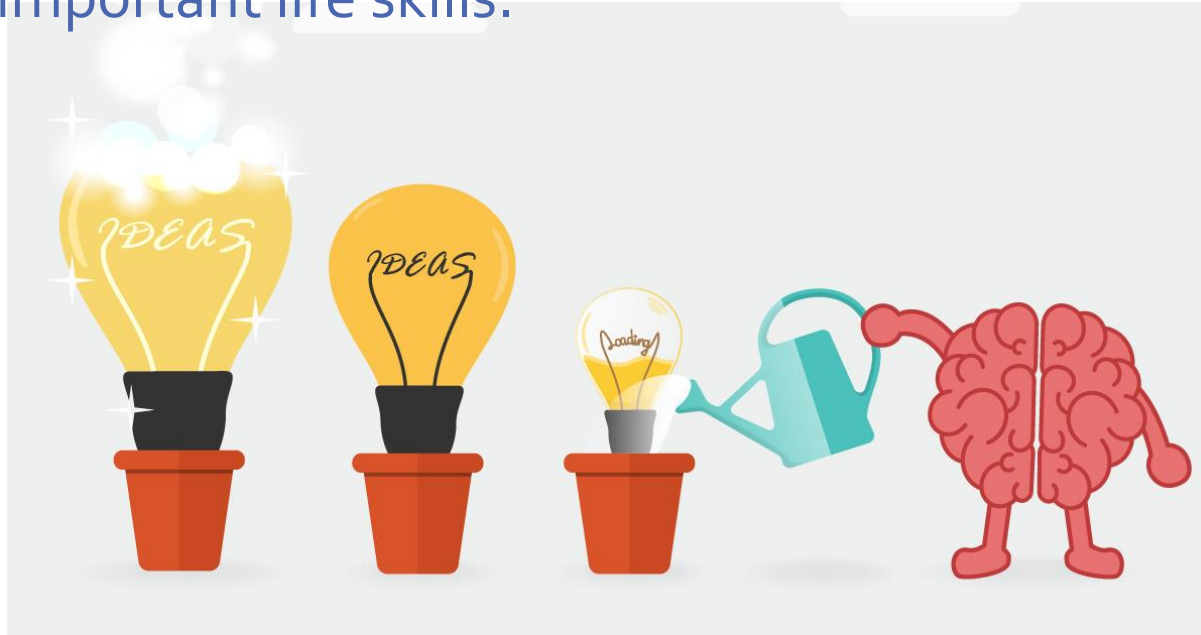
- For Reception (after Easter) and Year 1 and 2 children
- NumBots is all about every child achieving the “triple win” of understanding, recall and fluency in mental addition and subtraction, so that they move from counting to calculating.
- It focuses on automatic recall of number facts as well as developing conceptual understanding.



- For Year 2 (after Christmas), Year 3 and Year 4.
- TT Rockstars is a fantastic resource that encourages children to practise and rehearse their times table facts!
- It uses various games to improve their fluency, accuracy and speed!

Positive Mindset

You can help your child by talking about maths positively at home. Children are influenced by those around them - if they hear people say they can't do maths, or they hate maths, they may develop a more negative attitude towards the subject. This can negatively affect their performance in the subject and their development of important life skills.



A study has proved that if parents tell their children that they were bad at maths in school, the child's attainment can decrease. (Maloney, Ramirez, Gunderson, Levine, & Bullock, 2015)

It was not maths knowledge that harmed the students' performance in the study, but the parents' anxiety. We do not know what parents with maths anxiety say to their children but it is likely they communicate the negative messages we know to be harmful, such as "maths is hard" or "I was never good at maths in school."

It is critical that when parents interact with children about maths they communicate positive messages, saying that maths is exciting and it is an open subject that anyone can learn with hard work, that it is not about being "smart" or not and that maths is all around us in the world.



How you can help at home:

1. Play games at home that involve number! Snakes and ladders, card games, etc. often have links to number. Count cars as you pass them, count out change in the shop, spot shapes on walks – any small activity that refreshes a skill is very beneficial.
2. Talk about their learning after school. Ask them to explain the concept to you, and play along as if you are a student.
3. Incorporate mathematics into everyday routines and activities: tidying up and meal times in particular provide opportunities for conversations about counting, comparing, time, and sharing.
4. Don't associate maths with speed. It is not important to work quickly, and we now know that forcing children to work quickly can start maths anxiety in children
5. Celebrate mistakes! Research shows that making mistakes actually increase a child's capacity to learn (Boaler, 2016). The brain is like a muscle which gets stronger with exercise. Making a mistake and correcting it shows deep thinking.
6. Perhaps most important of all – encourage a "growth mindset". Let children know that they have unlimited maths potential and that being good at maths is all about working hard. When they tell you something is hard for them, or they have made a mistake, tell them: "That's wonderful, your brain is growing!"

Check out the website!

<https://www.parley.dorset.sch.uk/our-school/teachingcurriculum/maths>

Details of Year Group Objectives

Year 1 Objectives

Year 2 Objectives

Year 3 Objectives

Year 4 Objectives

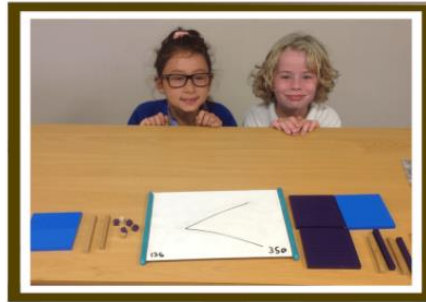
Key Instant Recall Facts per term

- Year 1 Instant Recall Facts
- Year 2 Instant Recall Facts
- Year 3 Instant Recall Facts
- Year 4 Instant Recall Facts

Useful Documents

- Ferndown Pyramid Calculation Policy
- Growth Mindset - A guide for parents and carers
- Maths Mastery - A guide for parents and carers

Maths Dictionary



Useful Links

Great Games

Top Marks has lots of brilliant games and activities. You can filter by subject area and age, and it works well on computers and tablets.

Useful YouTube Links:

KS1 - (Years 1 and 2)

BBC Bitesize videos and learner guides for every subject:

<https://www.bbc.com/bitesize/subjects/zjxhfg8>

Number Bonds to 10:

<https://www.youtube.com/watch?v=OvbWuiYn-Uk>

KS2 - (Years 3 and 4)

BBC Bitesize videos and learner guides for every subject:

<https://www.bbc.com/bitesize/subjects/z826n39>

Angle Song:

<https://www.youtube.com/watch?v=NVuMULQjB3o>

Column addition:

<https://www.youtube.com/watch?v=8MVneXbFE0s>

Column subtraction:

<https://www.youtube.com/watch?v=IzlyN2-uLSU>

Column multiplication expanded method: