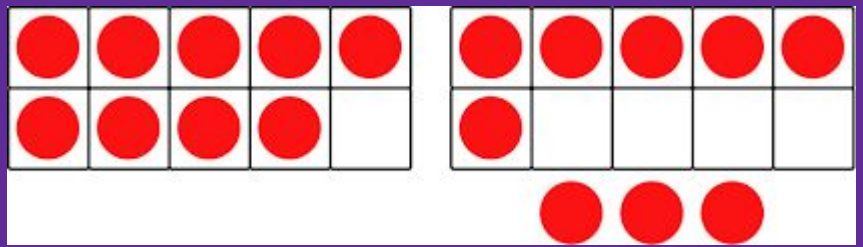
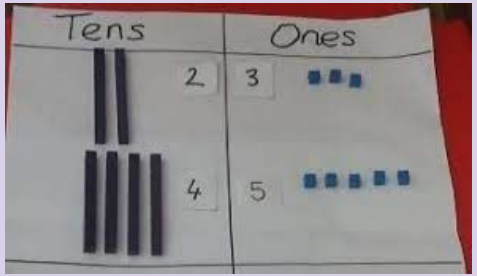
Maths at Duncombe

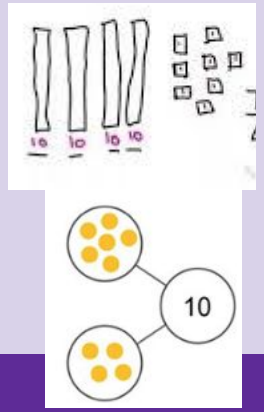


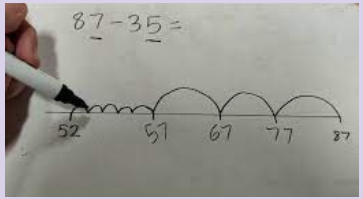
How do we teach maths at Duncombe?

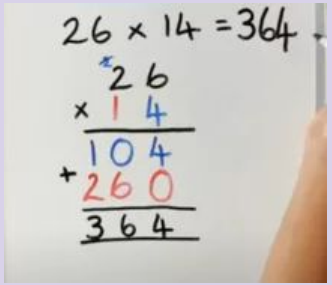
- We follow a mastery approach - teaching in small steps to help children learn new concepts

- Concrete → pictorial → abstract



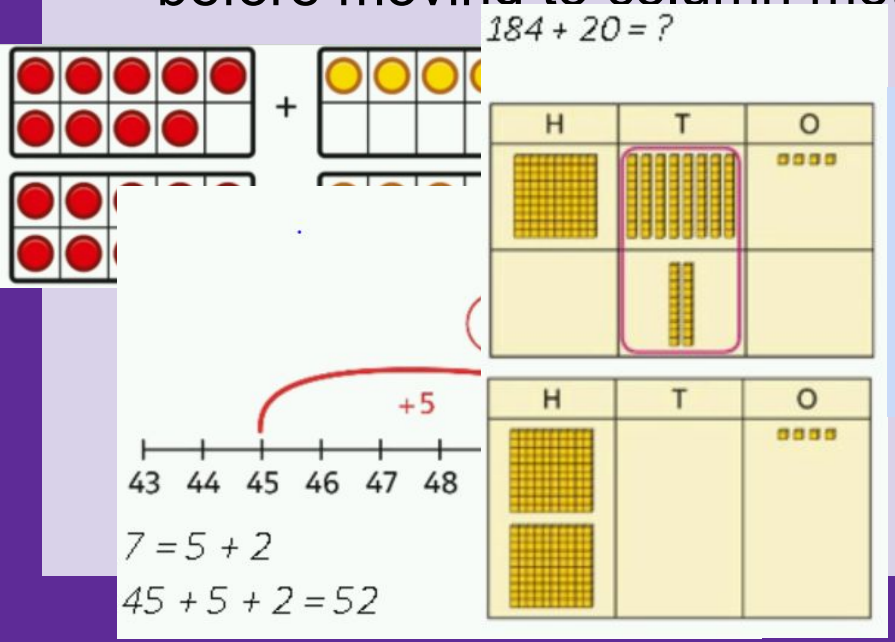




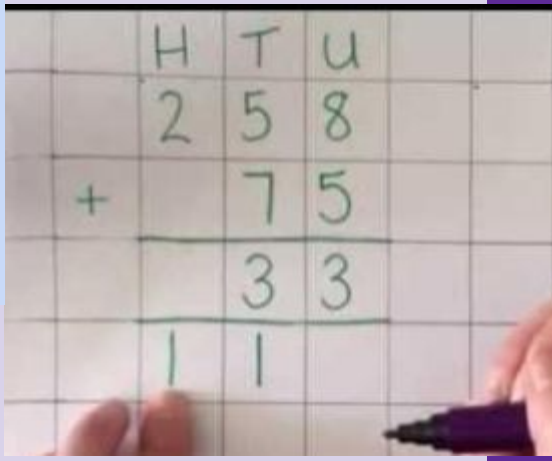


Methods

- Formal methods are only taught when children are secure with their understanding. Other methods can support their learning before moving to column methods.



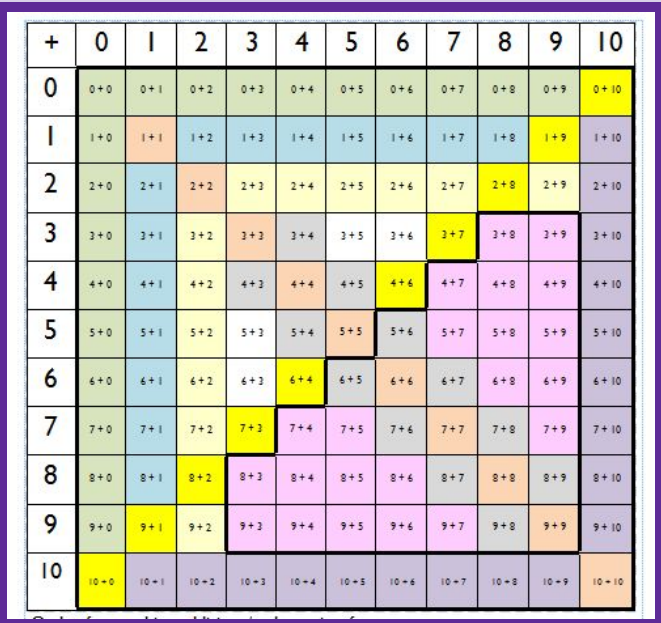
They will be using methods like these. Before moving on to formal methods like this:



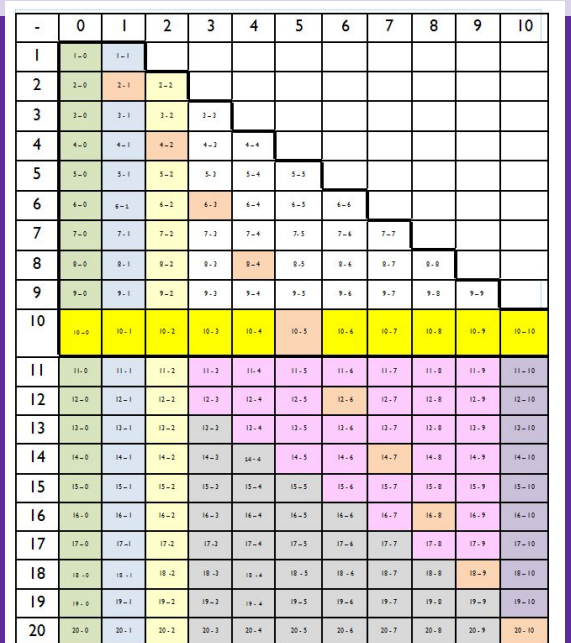
Number Facts - Addition and Subtraction bonds

Your child needs to be able to recall number facts to help them with calculating and problem solving

- By the end of year 2 children are expected to know all their number bonds to 20.
  E.g. quickly recall 12 + 3 and 9 – 7. These are taught gradually and then there is lots of practice. You can help at home practising with quick questions and games.
- Lots of children in KS2 have gaps, so you can still work on these!



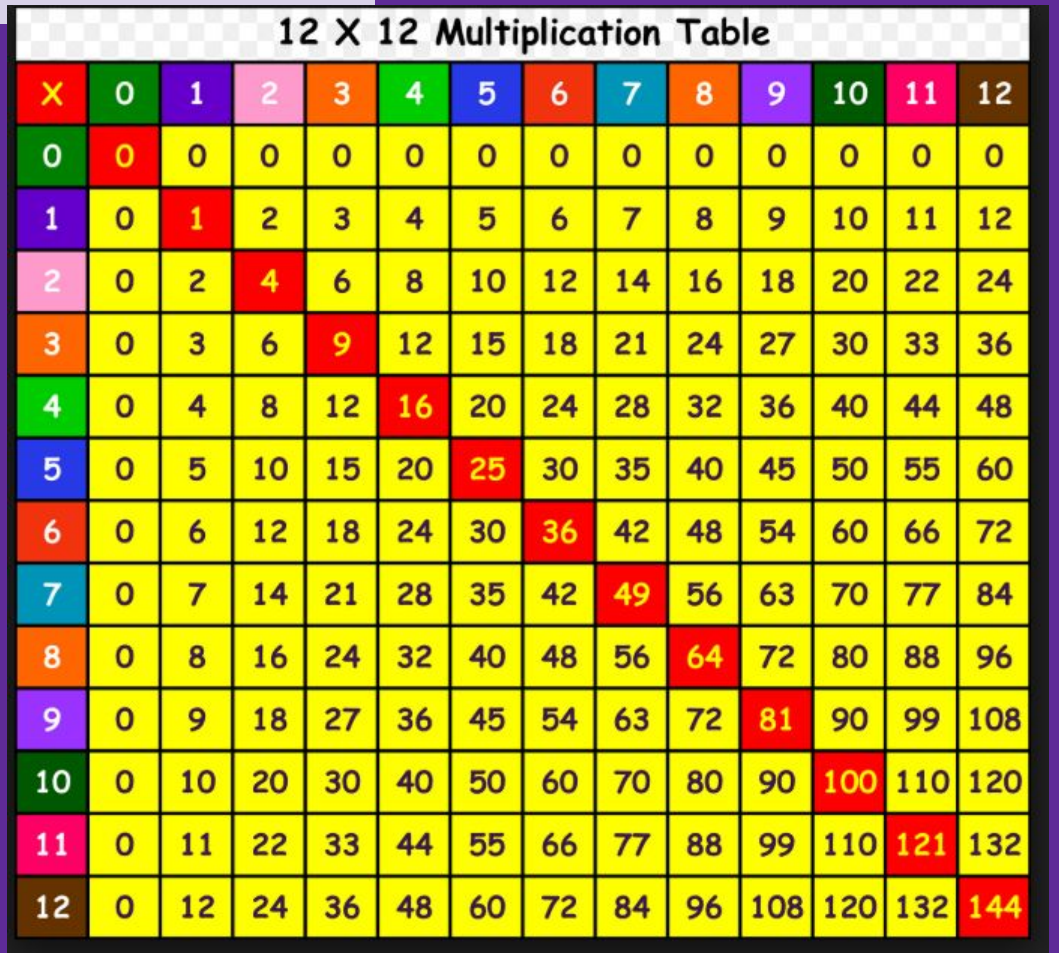
+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10



-	0	1	2	3	4	5	6	7	8	9	10
1	1–0	1–1									
2	2–0	2–1	2–2								
3	3–0	3–1	3–2	3–3							
4	4–0	4–1	4–2	4–3	4–4						
5	5–0	5–1	5–2	5–3	5–4	5–5					
6	6–0	6–1	6–2	6–3	6–4	6–5	6–6				
7	7–0	7–1	7–2	7–3	7–4	7–5	7–6	7–7			
8	8–0	8–1	8–2	8–3	8–4	8–5	8–6	8–7	8–8		
9	9–0	9–1	9–2	9–3	9–4	9–5	9–6	9–7	9–8	9–9	
10	10–0	10–1	10–2	10–3	10–4	10–5	10–6	10–7	10–8	10–9	10–10
11	11–0	11–1	11–2	11–3	11–4	11–5	11–6	11–7	11–8	11–9	11–10
12	12–0	12–1	12–2	12–3	12–4	12–5	12–6	12–7	12–8	12–9	12–10
13	13–0	13–1	13–2	13–3	13–4	13–5	13–6	13–7	13–8	13–9	13–10
14	14–0	14–1	14–2	14–3	14–4	14–5	14–6	14–7	14–8	14–9	14–10
15	15–0	15–1	15–2	15–3	15–4	15–5	15–6	15–7	15–8	15–9	15–10
16	16–0	16–1	16–2	16–3	16–4	16–5	16–6	16–7	16–8	16–9	16–10
17	17–0	17–1	17–2	17–3	17–4	17–5	17–6	17–7	17–8	17–9	17–10
18	18–0	18–1	18–2	18–3	18–4	18–5	18–6	18–7	18–8	18–9	18–10
19	19–0	19–1	19–2	19–3	19–4	19–5	19–6	19–7	19–8	19–9	19–10
20	20–0	20–1	20–2	20–3	20–4	20–5	20–6	20–7	20–8	20–9	20–10

Number Facts - Times Tables

- By the end of year 4 children are expecting to know all their times tables up to 12 x 12. They also need to know the related division facts. Most children still need practise on many of their quick recall of tables.
- MTC check is in June for Year 4 children.
- We start learning times tables in Year 2.
- Children who don't know their times table struggle in maths lessons and assessments.



12 X 12 Multiplication Table

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

How can you help at home?

-Maths in everyday life
-Asking your child to show you the methods they have learnt
-Games
-Homework - Doodle Maths

How can I help my child with maths?

- Tell them you love maths (even if you don't!) A positive mindset is so important. It doesn't mean you can't say that you find it a bit tricky.
- Research shows that children who are not secure in their maths skills at the end of Year 2 and primary will find their maths education much more challenging as they get older.
- Giving them the best support at home now will give them the best chance of being successful in the future.
- You have a great opportunity to develop their children's maths skills at home by involving them in everyday activities. For example, involving them in shopping or cooking can develop their basic maths and problem solving skills, which are really important in the UK primary curriculum. Talk about maths, spot it around you and play games together – it will really help!
- Our aim at Duncombe is to give children a solid foundation in key maths concepts and skills on which to build throughout their school life.

Maths in Everyday Life

Cooking:
Weighing, measuring, timing

Time:
What time do we need to wake up? How long until dinner?
Talking about times of the day and also looking at clocks together.

Spotting maths outside:
Door numbers - odd and evens, can you spot a door with a multiple of 10? E.g. 50
How many red cars can we see on the way to school?

Shopping and Money:
What can you buy with £1?
How much would 3 apples cost?

Games

Dice games:
10 Nice Things
First to 21
Snakes and Ladders
Dicey Doubles
‘Where shall I put the number?’ game!

Card Games:
Pick a card - double it (keep the card)

Walking Games
What’s my number? (20 questions)
Maths chat - Start at 3… add 4… multiply by 10….take away 2 etc.
21

Dicey Doubles

Roll a dice, double it. Put your symbol (x or o) / colour / object on the number. Try to get 4 in a row!	

8	2	4	10	6	12
12	10	6	8	12	2
12	4	10	2	8	4
6	8	4	8	10	12
10	8	6	12	4	6
10	2	12	4	6	8

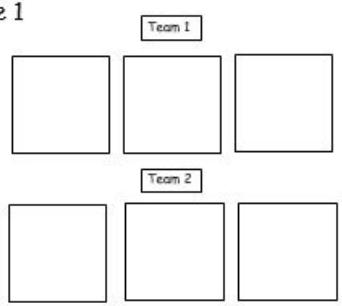
'Where shall I put the number?' game!

Roll the dice and take in turns to put a number in your team's square or the other team's square. Whoever makes the biggest total wins!

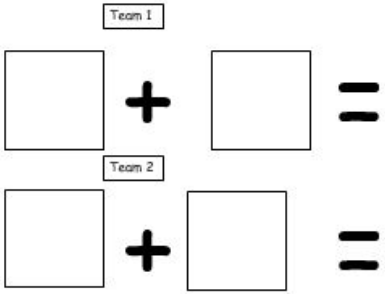
TEAM 1:

TEAM 2:

Game 1



Game 2



'Where shall I put the number?' game!

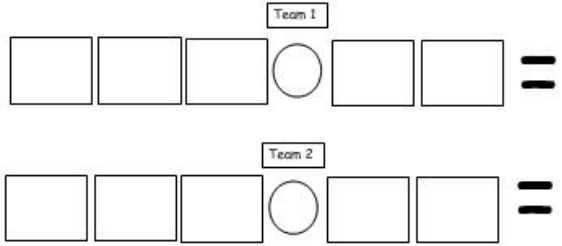
Roll the dice and take in turns to put a number in your team's square or the other team's square. Whoever makes the biggest total wins!

TEAM 1:

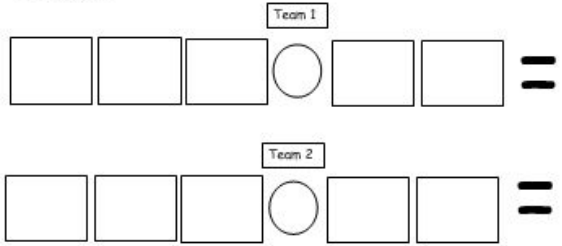
TEAM 2:

Write in whether you are x, + or – in the ◯

Game 1



Game 2



Helpful Websites:

Family maths toolkit

Lots of ideas for maths at home

Hit the Button

Online game to help practise number bonds / times tables.

Homework - Doodle Maths

Why did we choose Doodle for our homework?

DoodleMaths and DoodleEnglish create learning programmes which teach the key areas of maths and English. They automatically pitch the level to how your child is working but we can also set them assignments.

✔️Their programmes reward effort rather than ability
✔️ Easy for children to use on different devices.
✔️Children discover that working with Doodle little and often helps them to succeed
✔️This not only raises standards, but also children's confidence!

How does it work?

🚀All children take baseline assessment, usually each term.
This will identify the approximate level at which the child is working.

🚀If your child is finding the questions too easy or difficult then please let the teacher know, they may need to retake the baseline quizzes. Please **do not help** them on these (and they are the only ones that don't show if they have it right or wrong, as this is how the programme sets the level for your child!)

🚀Subsequent questions are used to understand more specific strengths and areas for development.

🚀The more Doodling a child enjoys, the better the programme will support their learning journey, understanding their needs.

https://students.doodlelearning.com/

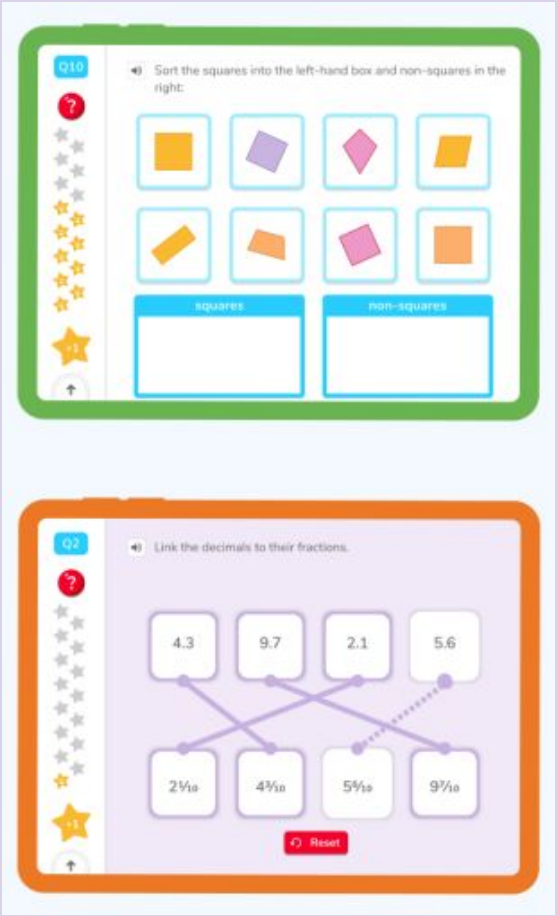
Children learn by doing

✏️Children do quick fire exercises, receiving instant feedback

✏️The questions maximise the full potential of touchscreen technology

✏️Every question has a hint and an explanation if they need it.

✏️For children, the increase in difficulty is gradual and subtle.

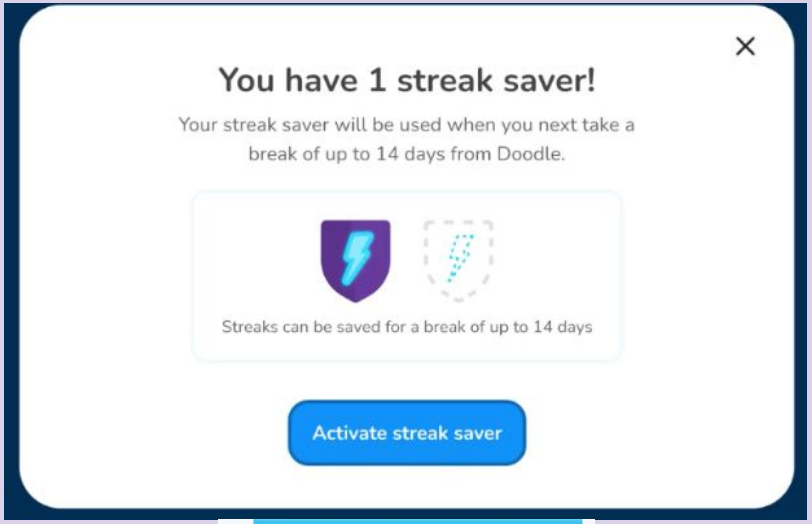


How often?

The programmes are designed to be used for 10 minutes, 4-5 times a week. Short regular sessions but can still be in green zone if do once a week!

Help your child to create a ‘10 minutes a day’ routine: before breakfast, after tea or before other screen time.

We give certificates in phase assemblies for children with more than 7 days streaks. They do not need to do it every day for this, they can use ‘streak savers’ if miss a few days.



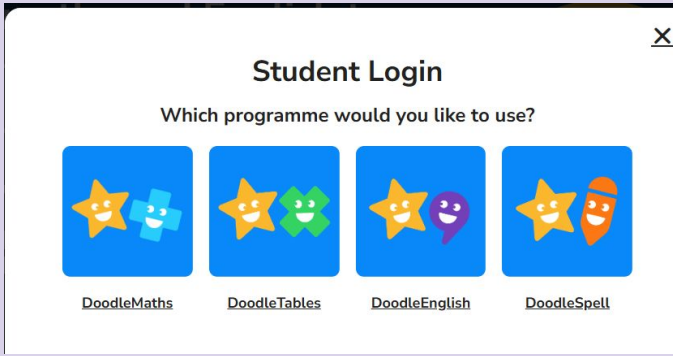
https://students.doodlelearning.com/

Doodle Spellings, English and Tables

We will be gradually introducing Doodle Spellings this year so that children can keep practicing key spelling patterns as we know this is an area some children have difficulty with.

Children can also practice their grammar and times tables using Doodle Tables and English as the school as paid for all of them. They are not compulsory!

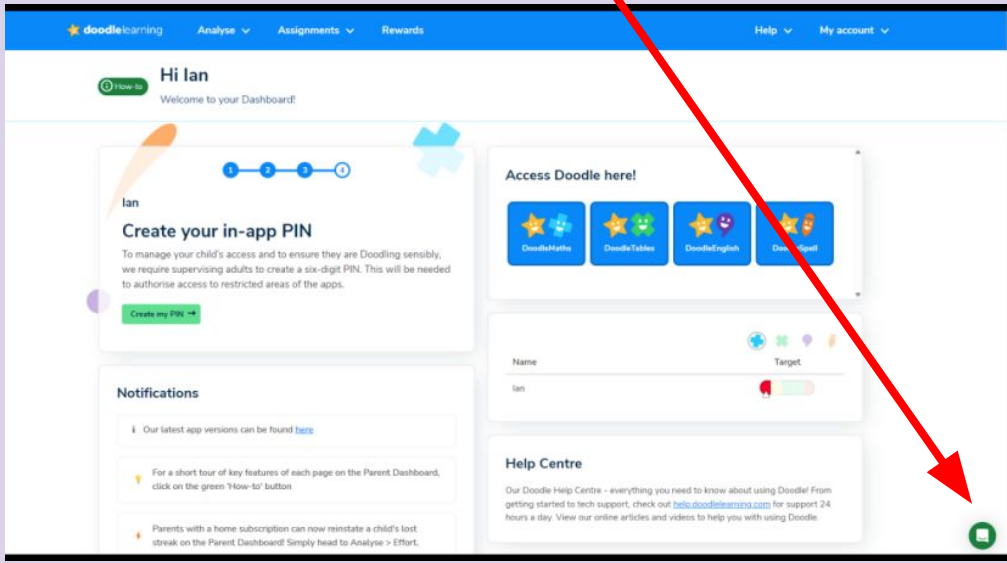
They can select which one they want to use on a laptop login but you will need to download a separate app on an ipad / tablet or phone.



How can you see how your child is doing?

There is a Parent Dashboard with an overview of usage, stars earned, strengths and areas for development. There is also a very good help function!

Parents can also download the DoodleConnect app.

https://parents.doodlelearning.com

Don’t worry too much about the ‘age’ your child is given but if it seems really wrong please do come speak to me / your child’s teacher - they may need to do their baseline again.