Scaffolds are only effective if the student has the correct background knowledge needed to then learn a new cognitive strategy. It is important to explain new ideas in the context of what students already know, so before beginning a new task the teacher must identify what the children will need to already know in order to do what is expected, then assess to find out if they have the necessary understanding and plug any gaps that may exist.

Scaffolding needs to be temporary and adjustable. As the learner makes progress within the learning process the amount of scaffolding is reduced. In this way as the learning process progresses the difficulty of the task and the level of responsibility a student takes for the learning is increased. When a teacher feels the student is ready they need to carry out an assessment prior to independent practice taking place. Students should then be given several varied opportunities to apply the learning without the scaffolds.

This document has been created with ideas across the GSP schools

8. Provide scaffolds for different tasks.

The teacher provides temporary support and scaffolds to assist when they are doing a difficult task
A scaffold is a temporary support that is used to assist a learner.
These scaffolds are gradually withdrawn as learners become more competent, although students may continue to rely on scaffolds when they encounter difficult problems.
Providing scaffolds is part of guided practice
Scaffolds include: modelling the steps, thinking aloud by the teacher as they solve the problem, tools, prompts, cue cards check lists, or models. (Page 75-76 Barak Rosenshine's Principles of Instructions)

Scaffolding

Scaffolding is the support provided by the teacher and/or other students which allows a learner to bridge the gap between their current abilities and their intended learning goal. Scaffolds can be used in the teaching of all skills but are particularly useful or necessary when teaching higher level cognitive strategies. Scaffolding can be seen as a form of mastery coaching, where cognitive supports are given, then gradually withdrawn. It allows all students to gain access to the ideas being taught, to develop their expertise and to make steps towards increasing their fluency and understanding.

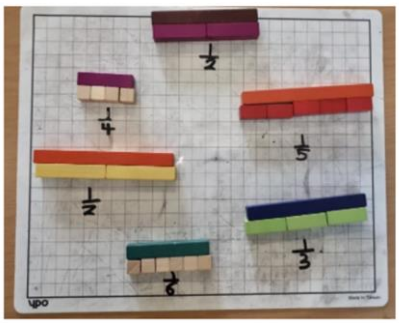
Scaffolding in Maths

Scaffolding in Maths can include:

- Working wall
- Key vocabulary
- Manipulatives
- Pre- teaching
- Scooping
- Modelled examples
- Paired partners
- Prepared templates (grids, bar models etc)
- Cream paper
- Enlarging learning/ activities
- Repetition
- Visuals
- Worked examples
- Thinking out loud
- Live marking/ helicopter marking
- Focused questioning
- Frames/templates
- Task agendas for individuals
- Targeted TA support-
- visual representations
- Stem sentences
- Enlarged texts
- Large squared books

Scaffolding in Maths- examples

Use of manipulatives







x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

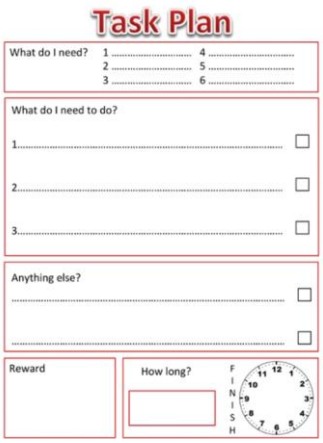


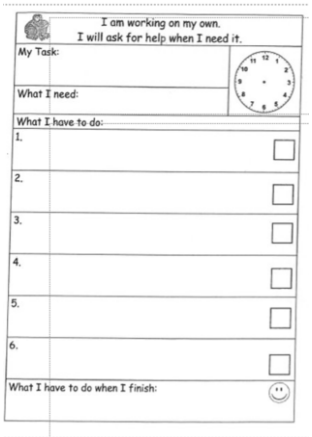






Task management boards



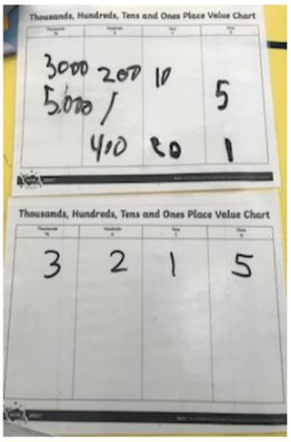


Reducing cognitive load

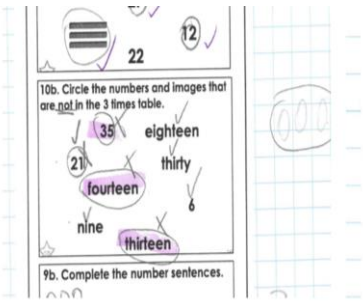
a)	H	T	O			b)	H	T	O			c)	H	T	O
	1	6	3				3	4	5				4	4	5
+	**2**	4	5			+	3	7	2			+	1	6	4
d)	H	T	O			e)	H	T	O			f)	H	T	O
	4	6	5				3	8	5				6	4	5
+	+	4	5			+	4	3	6			+	1	6	7
g)	H	T	O			h)	H	T	O			i)	H	T	O
	3	6	6				3	2	5				3	9	4
+	**1**	4	7			+	1	9	6			+	1	2	7

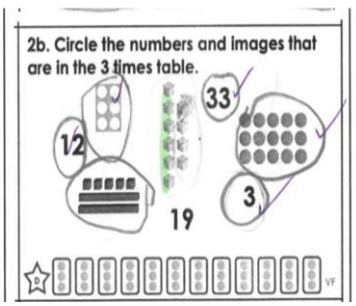
Adding Two 3-Digit Numbers - exchanging - revisit

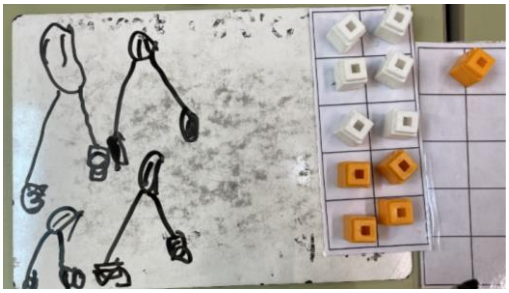
Some children have calculations set out for them already to allow them to focus more on the method/calculation at the start.

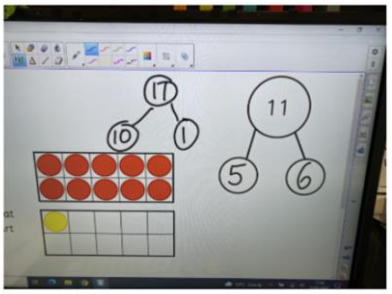


Showing the concept in different ways (visual)









Using working walls to support





Questioning

Questioning Techniques	
Cold Call	No hands up or calling out. Ask everyone → select who answers.
No Opt Out	If students get an answer wrong or don't know, go back to them to check that they now know the answer.
Check for Understanding	Ask a selection of students to relay back what they have understood about the question under discussion.
Probing Questioning	Make each question and answer exchange a mini dialogue, probing to explore student's understanding.
Think Pair Share	Allocate talk partners, set a question with a time limit , ask students to think, then discuss, then report back.
Say it again better	Accept students' first half-formed responses but then help them to reframe a better more complete response.
Whole Class Response	Use techniques like mini whiteboards or ABCD fingers to provide simultaneous responses from a whole class.