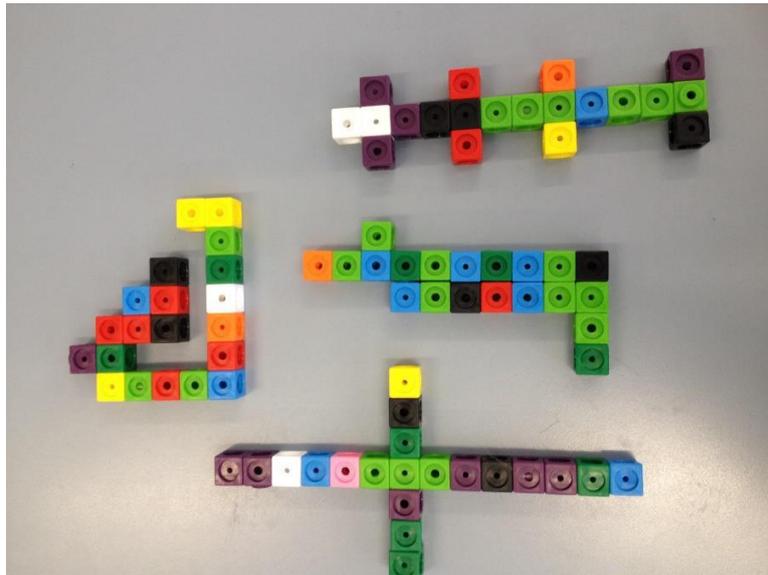


UNPLUGGED CODING YEAR 2

Materials

20 unifix blocks per student

Q: Using 20 blocks, can you make a model 1 block high that is not identical in shape to any other model in the class? This includes flips or turns.



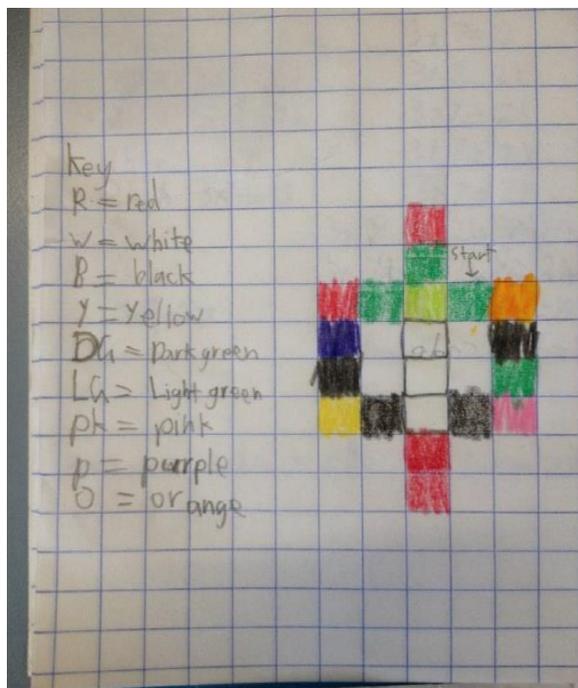
Outcome – all achieved, so second model was made (total of 44 different models on the day)

How can we code our models so that someone else may build them?

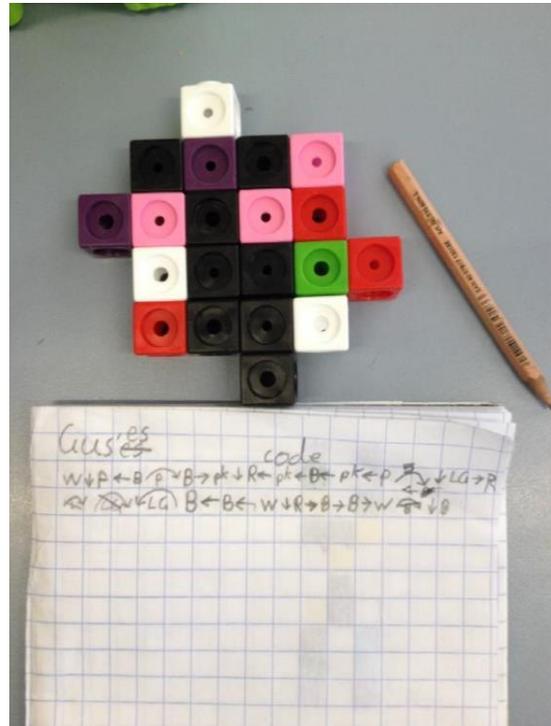
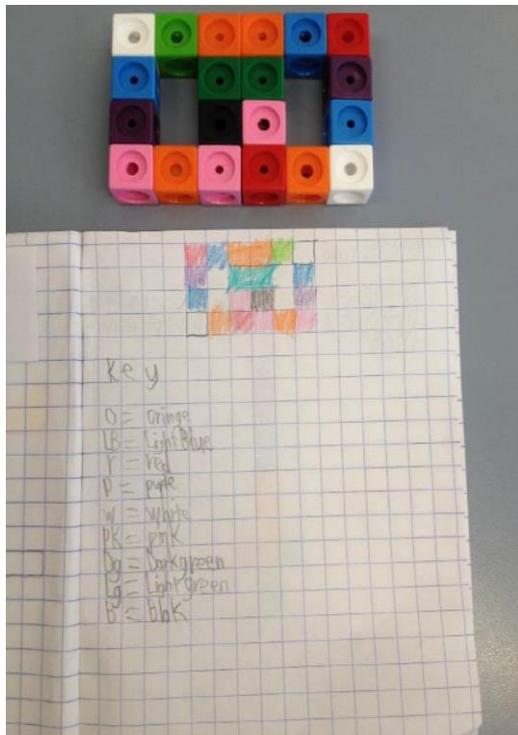
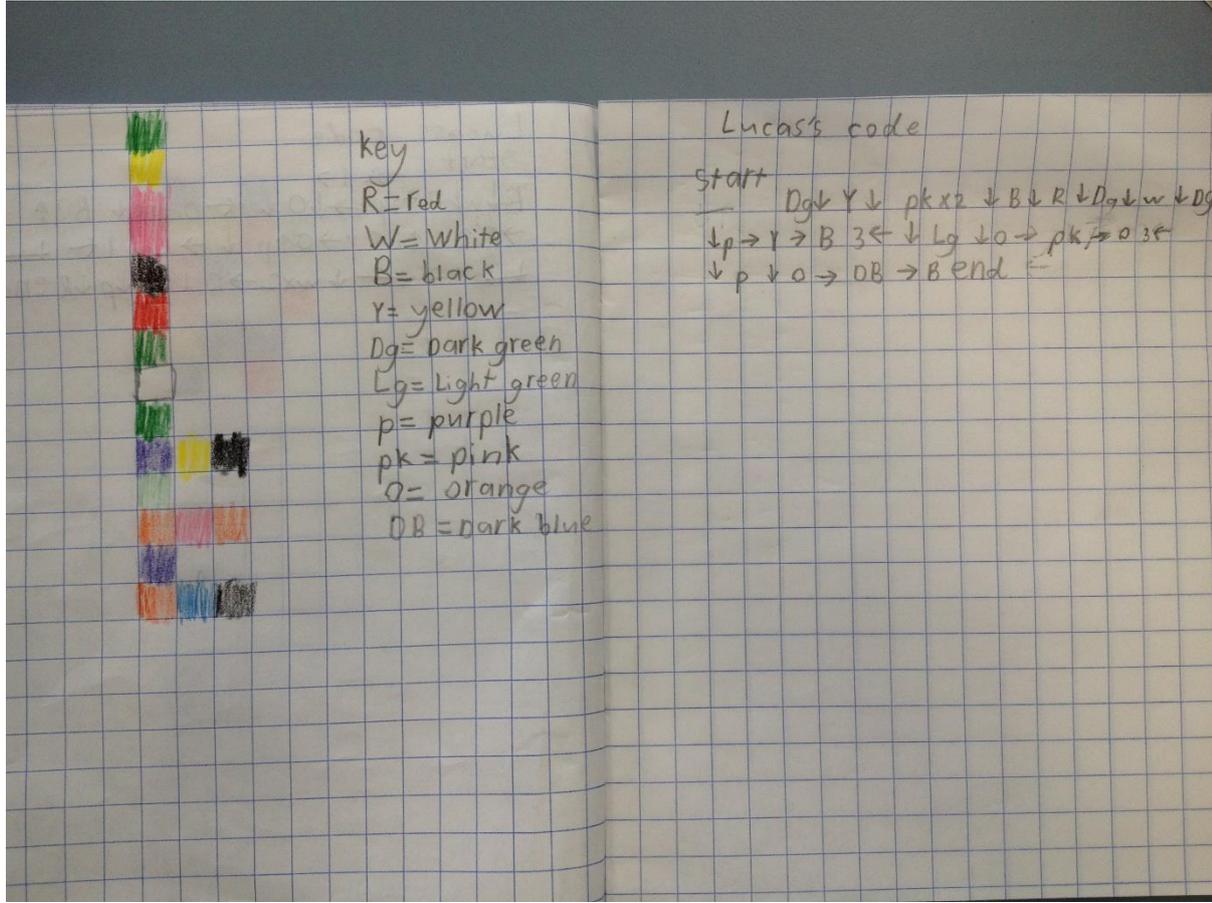
As a class, we worked on a colour code key and discussed directional arrows for coding. I trialled different ways to organise written coding and students made suggestions when ideas weren't working.

Students observed me failing and trying again. Students worked with me to refine coding and discussed alternative ways to rebuild our trial model.

Students recorded their model and key in their workbook.



Write a code to match your model.





Max's code

O ↓ DG ↓ DG ← R / DG / PK → B ↑ DG
 ↑ W / DG → R / B ↓ LB ↓ R ← P ←
 DG ↓ B ↓ DG (3) R / LB → Y ↓ R / R
 3 / 10 ↓ Y

1 DG ↓ IB ↓ 1 DG ↓ IPK ← IPK ↓ IPK ↓
 IR ← IR (IR) ↓ ↓ IPK ↓ ILG ← IDG (IPK)
 ↑ ILG IDG ↓ IG ↓ IPK ↓ IDG → ILB
 ↑ IDG ↓ ILB ↓ IR ↓ IP ↓ 2x LB

Key

DG = Dark green
 B = Black

Once models were drawn and buddy checked, they were dismantled. Students were then asked to find a partner to test each other's code. Students placed the drawing side of their work face down on the floor so only the code could be seen. Students constructed their buddy's model and when finished turned the drawing face up to compare. If the model was not the same, both students discussed the problem to work out whether there was an error in the code, a misunderstanding reading the code (missed step etc.) and together modified the code to iron out any bugs.

They had to keep trialling different codes until time was up.



Students reported back at the end of the session and I kept a class checklist of achievement. This shows:

- how many models the student made and recorded
- a tick for totally correct code
- an 'x' for a code fail (we celebrate failure in our class as our path to success!)
- a tick Adj for code success after joint discussion (student adjusted their written code)
- a dash for code not complete

This check list helped me see where kids were at with their learning, which kids needed help with coding next lesson, how many codes still needed testing, who the high fliers (and future mentors) were and for a few students these notes reflected their ability to focus and work productively during the session.

CODING.

	Yr			
	Year 2	2 models	✓	x
	Year 2			
	Year 2	2	x	-
	Year 2	2	-	-
	Year 2	2	✓	✓
	Year 2	2	x	-
	Year 2	2	✓	✓
y	Year 2	2	✓	Adj -
	Year 2	2	-	-
	Year 2	2	x	x
	Year 2	2	-	-
	Year 2	2	-	-
n	Year 2	2	-	-
	Year 2	2	-	-
	Year 2	2	✓	-
	Year 2	2	✓	Adj -
	Year 2	2	✓	-
	Year 2	2	✓	Adj -
	Year 2	2	✓	x
	Year 2	2	-	-
akis	Year 2	2	-	-
	Year 2	2	✓	✓
o	Year 2	N/A.		
	Year 2	2	✓	✓