Parents' Information Session

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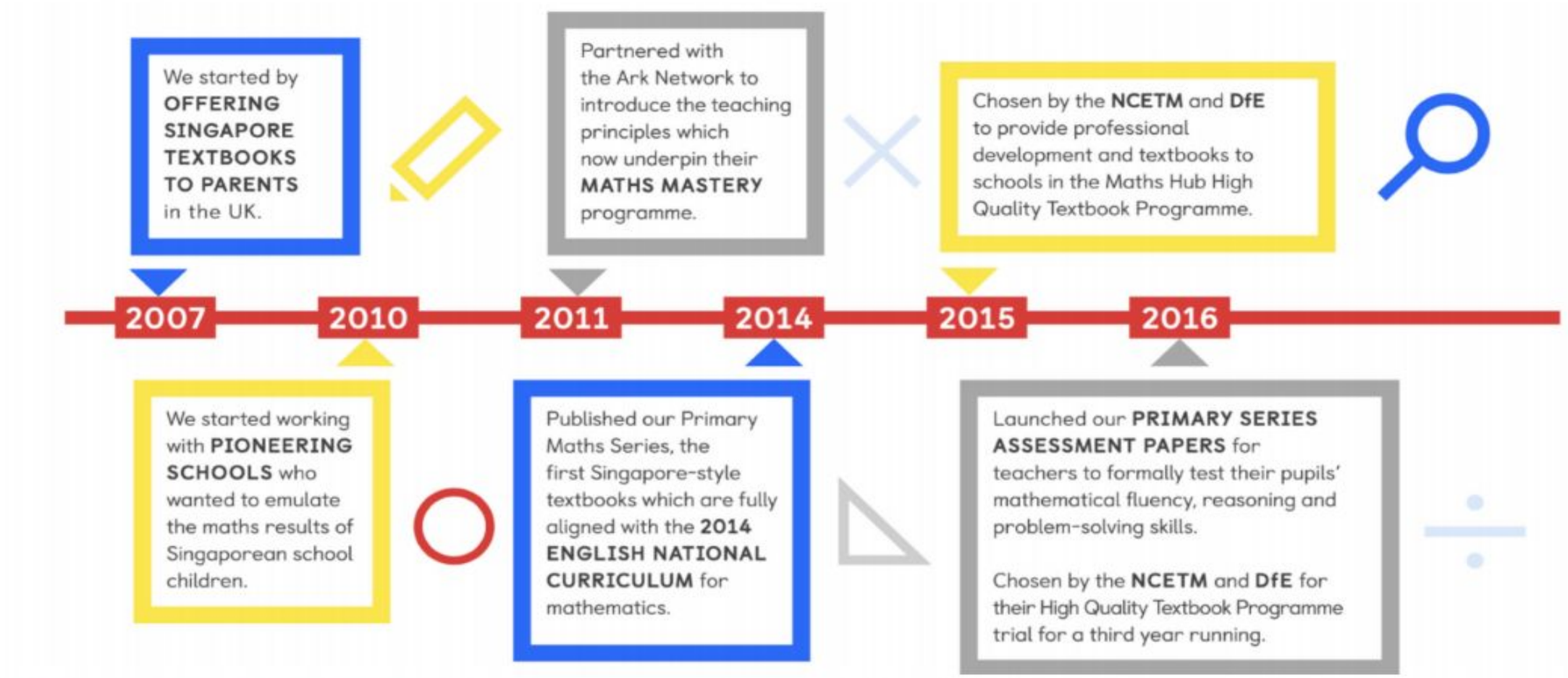
'If we teach today's students as we taught yesterday's we rob them of tomorrow.'

John Dewey

23 20 15 25

Which is the odd one out?

TIMELINE


We started by **OFFERING SINGAPORE TEXTBOOKS TO PARENTS** in the UK.
2007
We started working with **PIONEERING SCHOOLS** who wanted to emulate the maths results of Singaporean school children.
2010
Partnered with the Ark Network to introduce the teaching principles which now underpin their **MATHS MASTERY** programme.
2011
Published our Primary Maths Series, the first Singapore-style textbooks which are fully aligned with the **2014 ENGLISH NATIONAL CURRICULUM** for mathematics.
2014
Chosen by the **NCETM** and **DfE** to provide professional development and textbooks to schools in the Maths Hub High Quality Textbook Programme.
2015
Launched our **PRIMARY SERIES ASSESSMENT PAPERS** for teachers to formally test their pupils' mathematical fluency, reasoning and problem-solving skills.
Chosen by the **NCETM** and **DfE** for their High Quality Textbook Programme trial for a third year running.
2016

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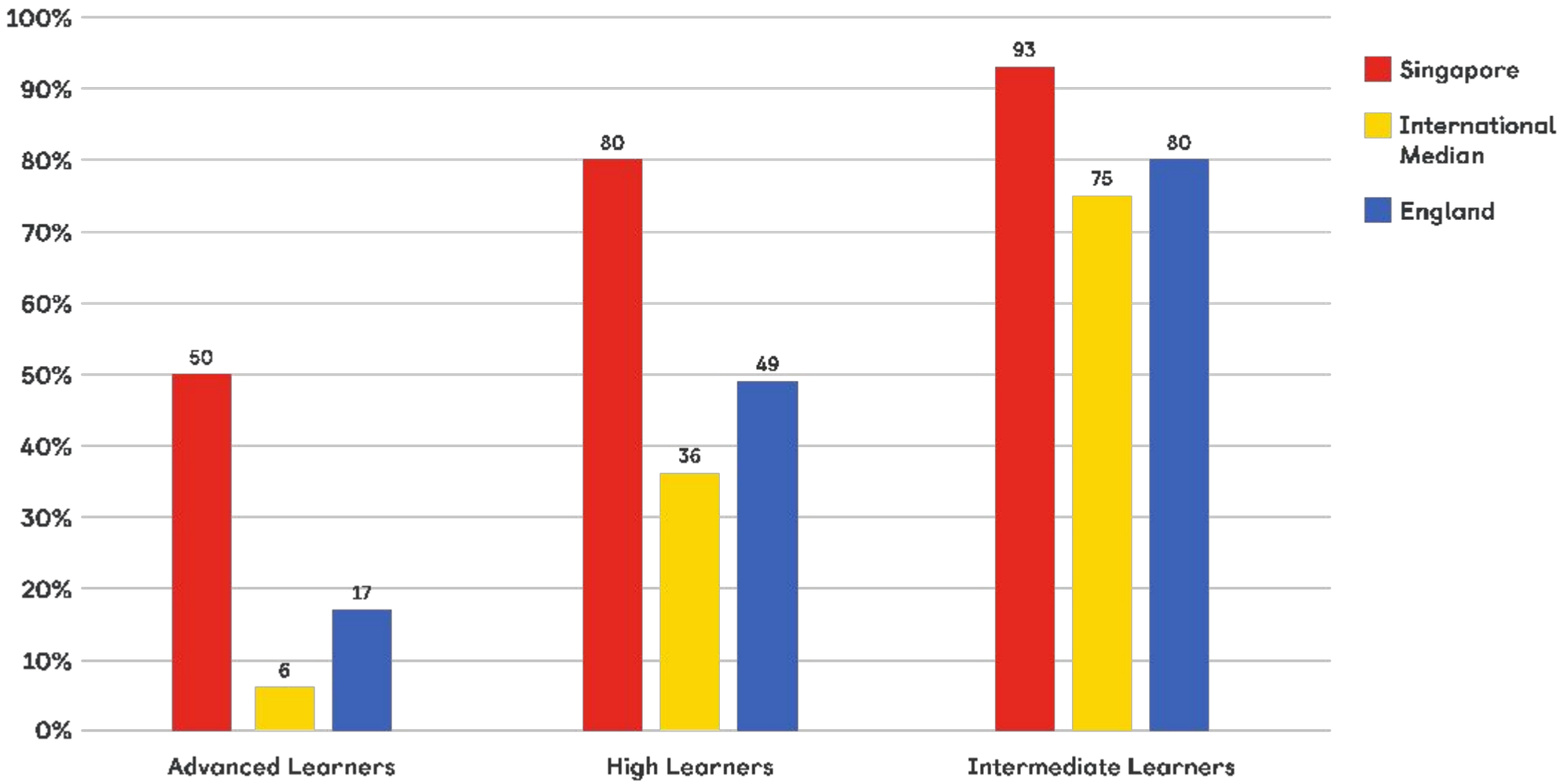
TIMSS 4TH GRADE MATH 2015: PERCENTAGE OF STUDENTS AT EACH PROFICIENCY BENCHMARK



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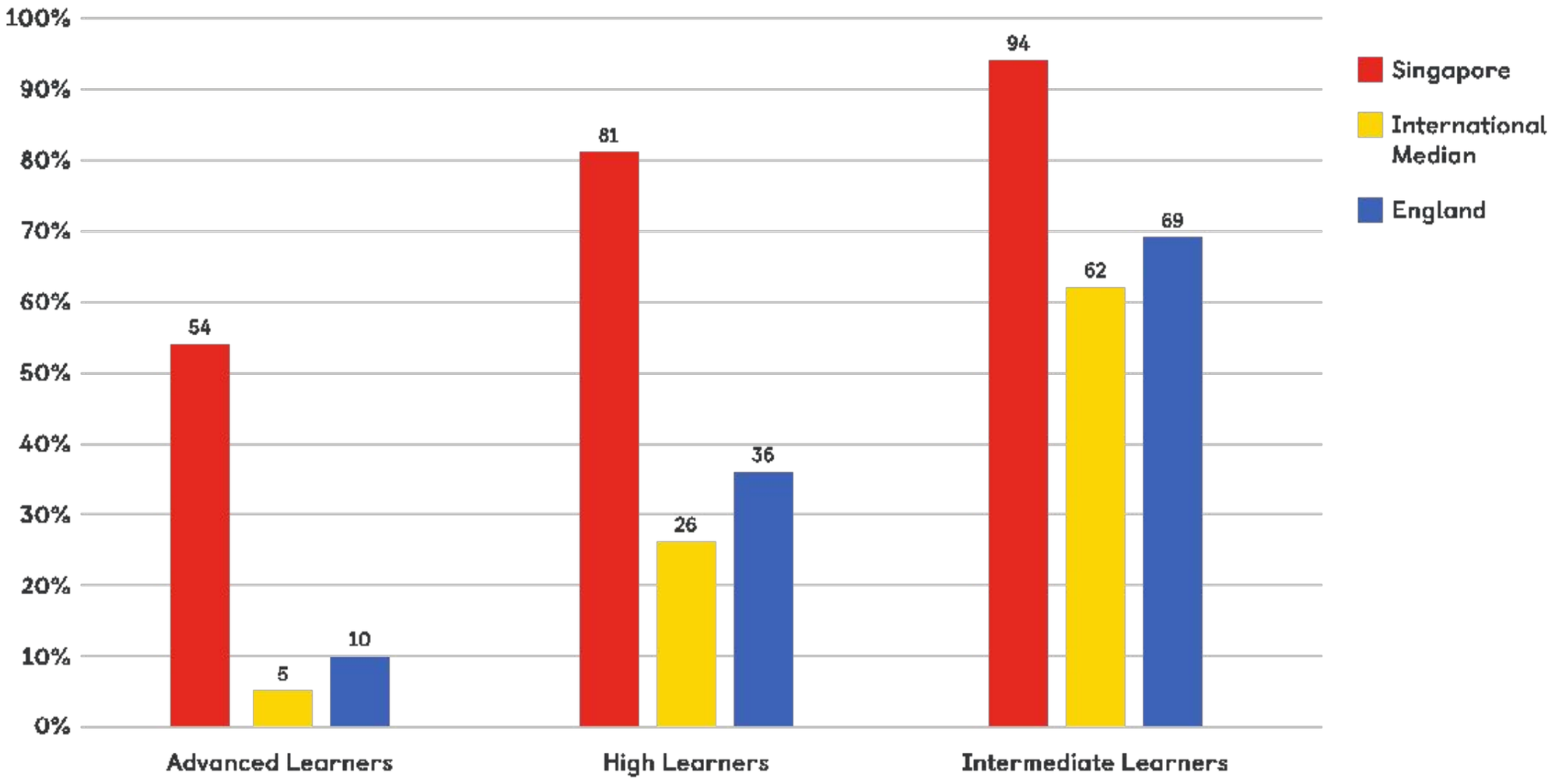
TIMSS 8TH GRADE MATH 2015: PERCENTAGE OF STUDENTS AT EACH PROFICIENCY BENCHMARK



Singapore Education

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HISTORY OF SINGAPORE MATHEMATICS

UNTIL THE 1980S, SINGAPORE STUDENTS PERFORMED POORLY IN MATHEMATICS

	1970s	1980s	1990s	2000s
500s	Japan	Hong Kong Japan Korea	Hong Kong Japan Korea Singapore	Hong Kong Japan Korea Singapore
400s	Thailand	Philippines Singapore Thailand	Malaysia Thailand	Malaysia Thailand
300s			Indonesia Philippines	Indonesia Philippines

Source | Hanusek, Jamison, Jamison & Woessmann

Singapore has not always performed well in mathematics.

It was ranked 16th out of the 26 countries participating in the 1983 SIS study.

The government recognised this was not good enough for an economy entirely dependent on its human resources, so they started examining leading teaching concepts in the early 1980s.

Mastery – Deep structural understanding

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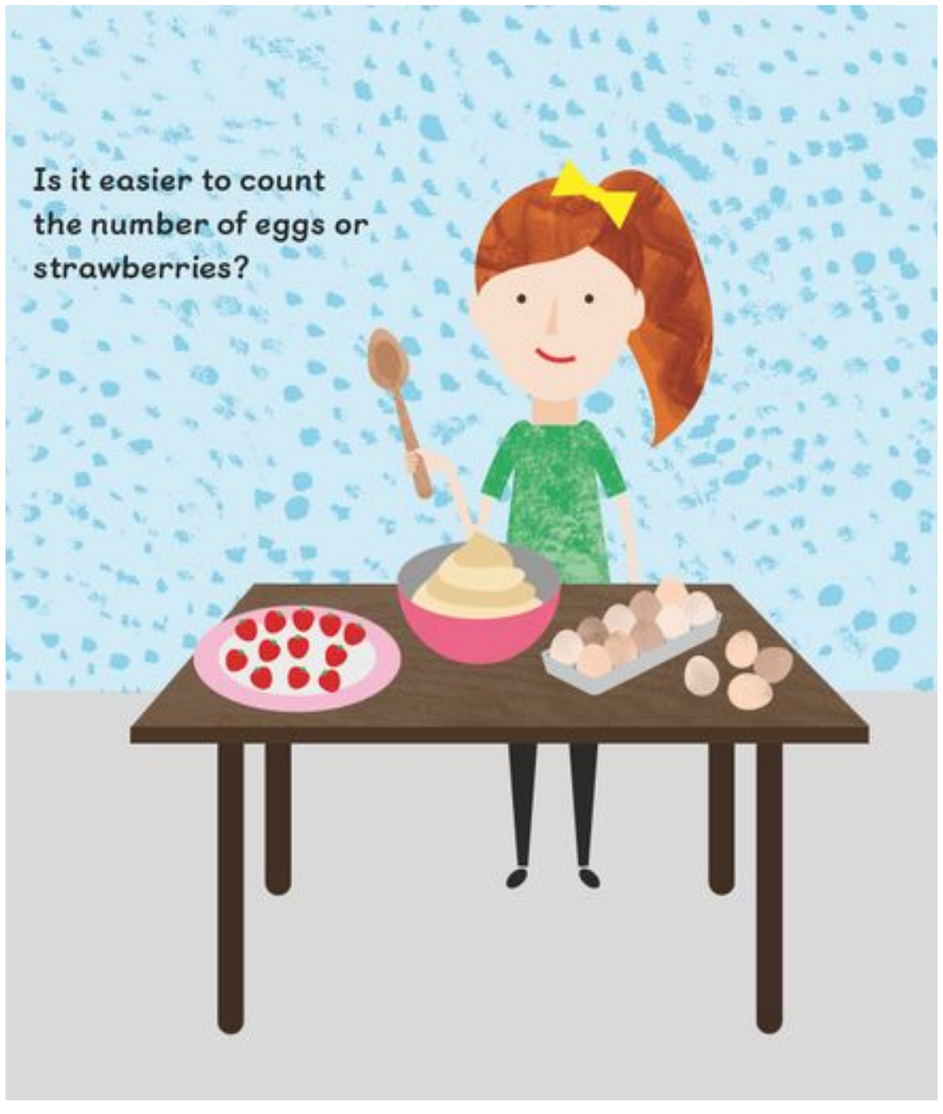

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Basics Explained

Number bonds are often used in Singapore-style maths lessons. In this video for parents, Maths — No Problem! series consultant, Dr Yeap Ban Har, explains how we teach number bonds.

Can you add to find out how many flowers there are in total?

Making number bonds

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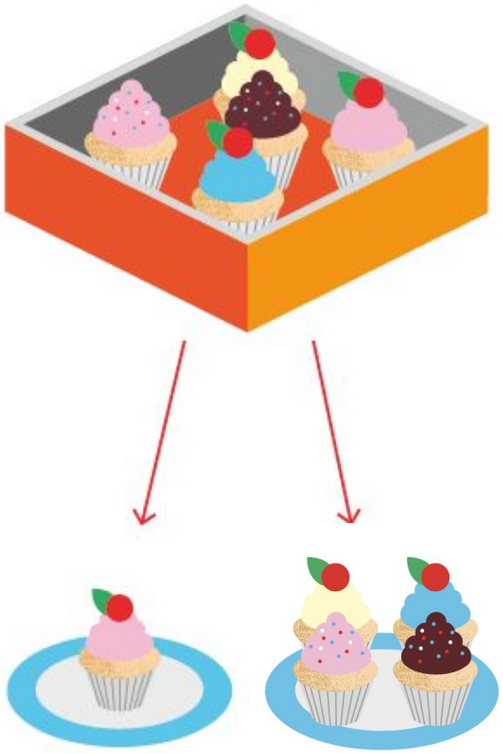
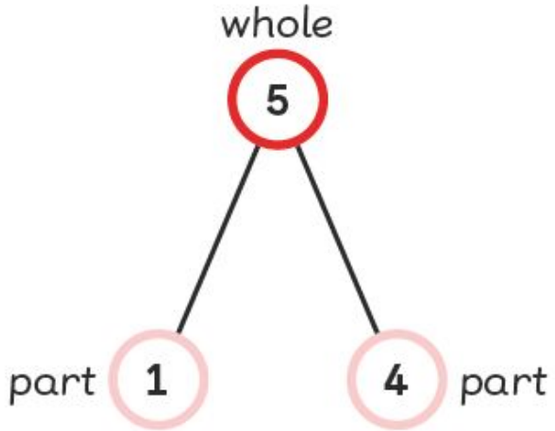
2 There are other ways to make 5.





1 and 4
make 5.

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Can you add to find out how many flowers there are in total?

$$8 + 5 + 9 =$$

$$\square + \square + \square = 17$$

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Please remember this number.
(You are not allowed to write it down!)

2581141720

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1 × 2

2 × 2

5 × 2

1 × 2

2 × 2

5 × 2

10 × 2

1 × 2

2 × 2

5 × 2

10 × 2

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Can you remember the number you were given?

2 5 8 11 14 17 20

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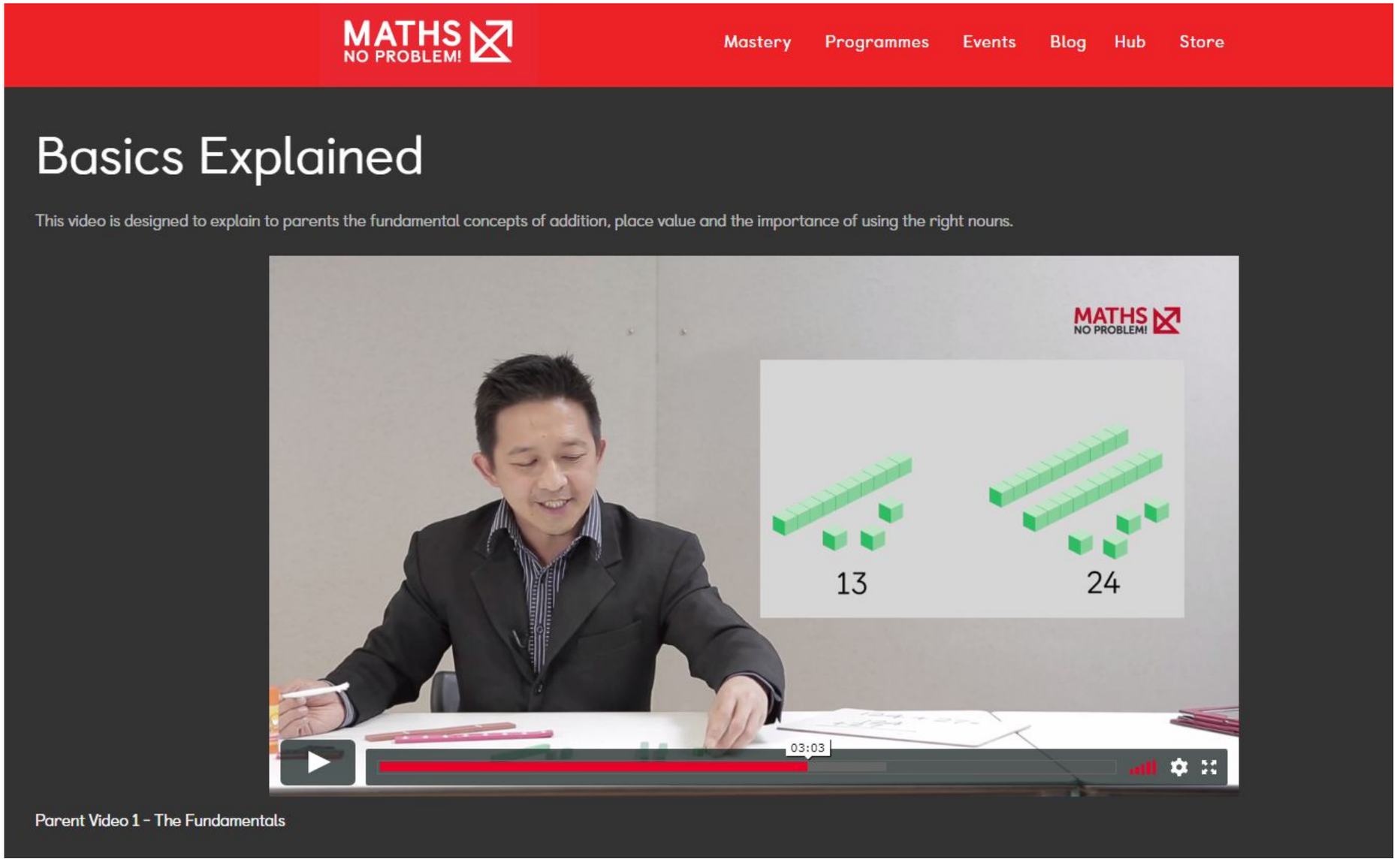

3×3 apples $= 9$

3×3 tens $= 9$

3×3 tenths $= 9$

3×3 quarters $= 9$

3×3

3×30

3×0.3

$3 \times \frac{3}{4}$

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Lesson 6

Adding with Renaming

In Focus

8 children joined a group of 236 children.

How many children are there altogether?

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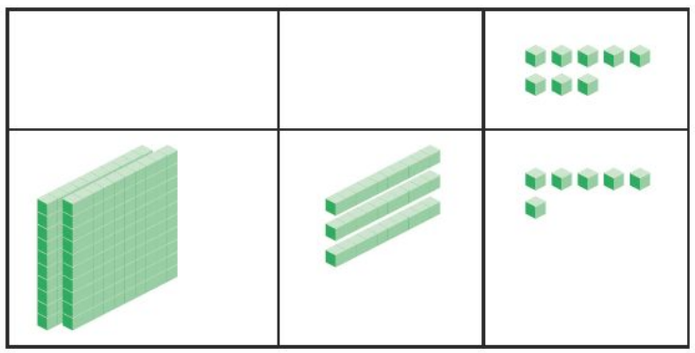
Let's Learn

Add 8 and 236.

Method 1



Step 1 Add the ones.

$8 + 6 = 14$

	h	t	o
			8
+	2	3	6
		1	4

Step 2 Add the tens.

$0 + 30 = 30$

	h	t	o
			8
+	2	3	6
		1	4
+		3	0

Step 3 Add the hundreds.

$0 + 200 = 200$

	h	t	o
			8
+	2	3	6
		1	4
		3	0
+	2	0	0
	2	4	4

Step 4 Add 14, 30 and 200

$8 + 236 = 244$

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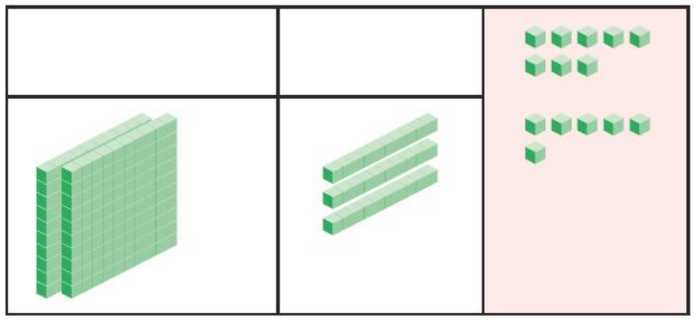
Method 2

Step 1 Add the ones.

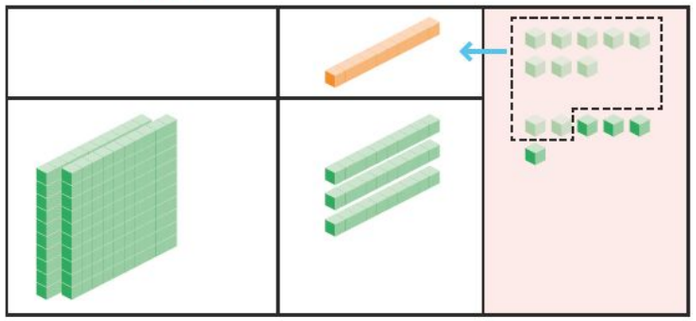
8 ones + 6 ones = 14 ones

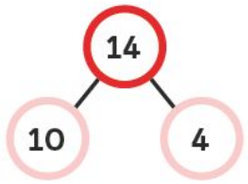


	h	t	o
			8
+	2	3	6
			4

Step 2 Regroup the ones.

14 ones = 1 ten + 4 ones



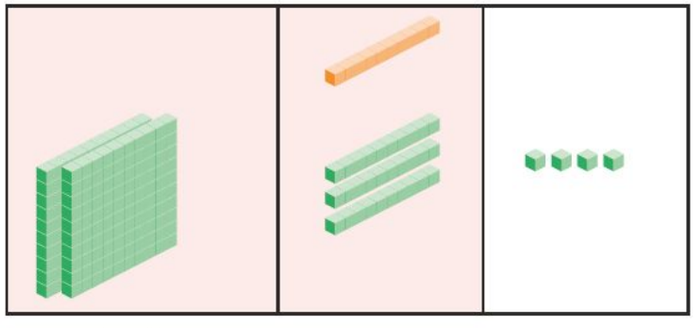


	h	t	o
			8
+	2	1 3	6
			4

Step 3 Add the tens.

1 ten + 3 tens = 4 tens

Add the hundreds.

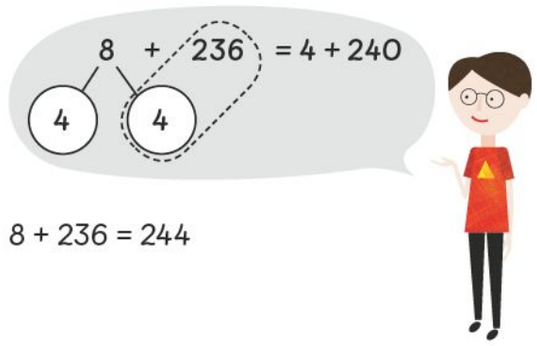


	h	t	o
			8
+	2	1 3	6
	2	4	4

8 + 236 = 244

There are 244 children altogether.

Method 3



8 + 236 = 244

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Name: _____ Class: _____ Date: _____

Worksheet 6

Adding with Renaming

1 Fill in the blanks.

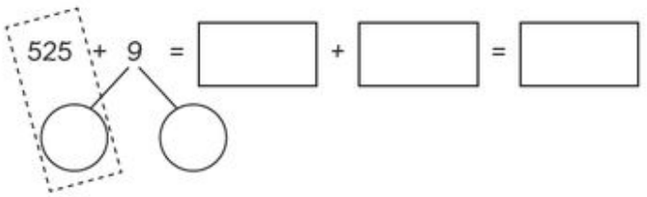
(a) Add 147 and 8.

□ + □ = □

(b) Add 364 and 7.

□ + □ = □

(c) Add 525 and 9.



2 Add.

(a)

	h	t	o
	1	4	9
+			3

(b)

	h	t	o
	3	6	5
+			5

(c)

	h	t	o
	7	5	6
+			7

(d)

	h	t	o
	4	8	8
+			6

(e)

	h	t	o
	5	4	6
+			9

(f)

	h	t	o
	3	8	9
+			2

Focus on the ‘Why?’ and not just the ‘How?’

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Instrumental Learning
‘A mechanical, rote or “learn the rule/method” kind of learning.’

Relational Learning
‘A more meaningful learning in which the pupil is able to understand the links and relationships which give mathematics its structure.’

Richard Skemp

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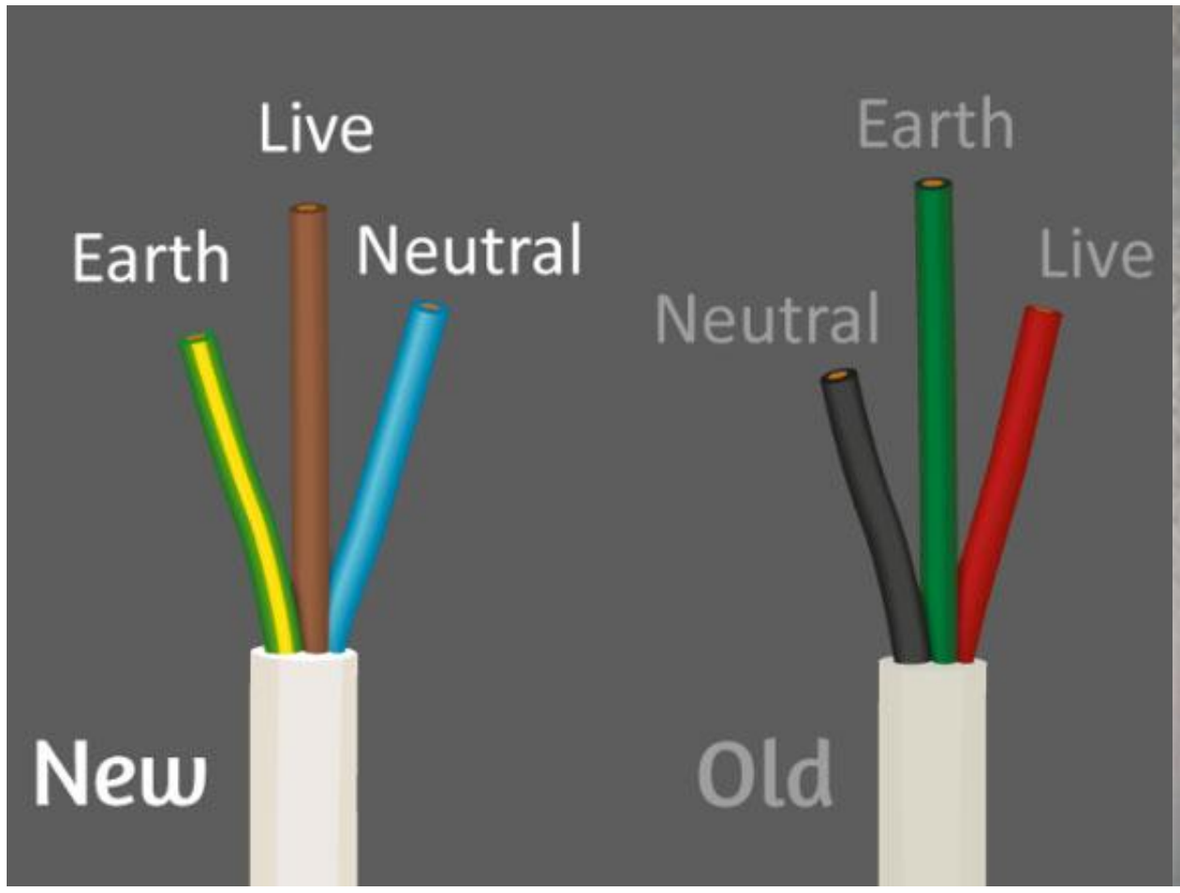

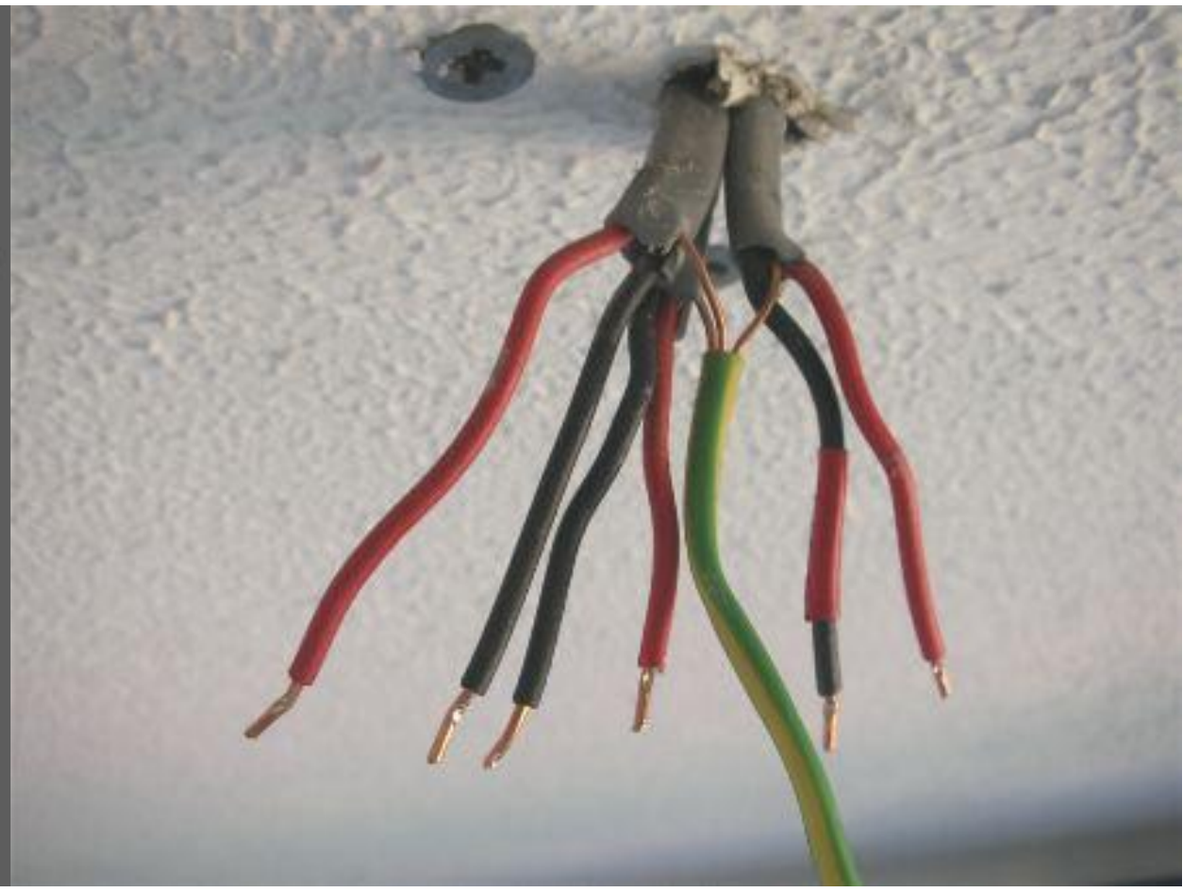

Mastery
Key Idea 2 - Keep up NOT catch up

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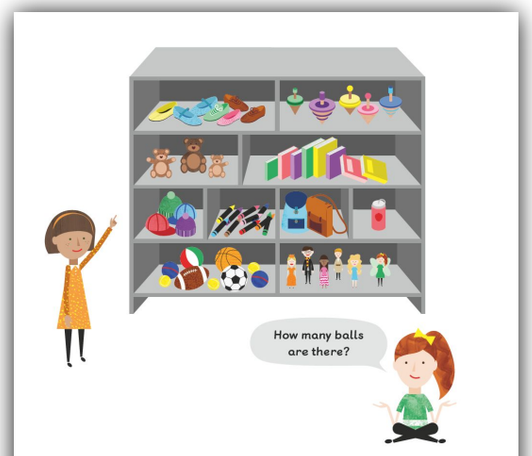
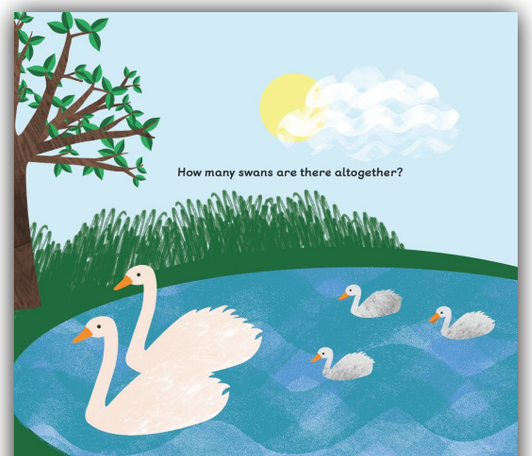
1. **Concepts will be fully developed before moving on. Pupils will have plenty of practise to embed ideas.**

2. **Struggling learners are not left behind as there is ample time to remediate when necessary. Advanced learners have enough opportunities to deepen their understanding.**



Chapter 1
Numbers to 10

Chapter 2
Number Bonds



Chapter 3
Addition Within 10

Chapter 4
Subtraction Within 10

The Core Competencies Developing Deeper Thinking

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1. ***Metacognition***
2. ***Visualisation***
3. ***Generalisation***
4. ***Number Sense***
5. ***Communication***

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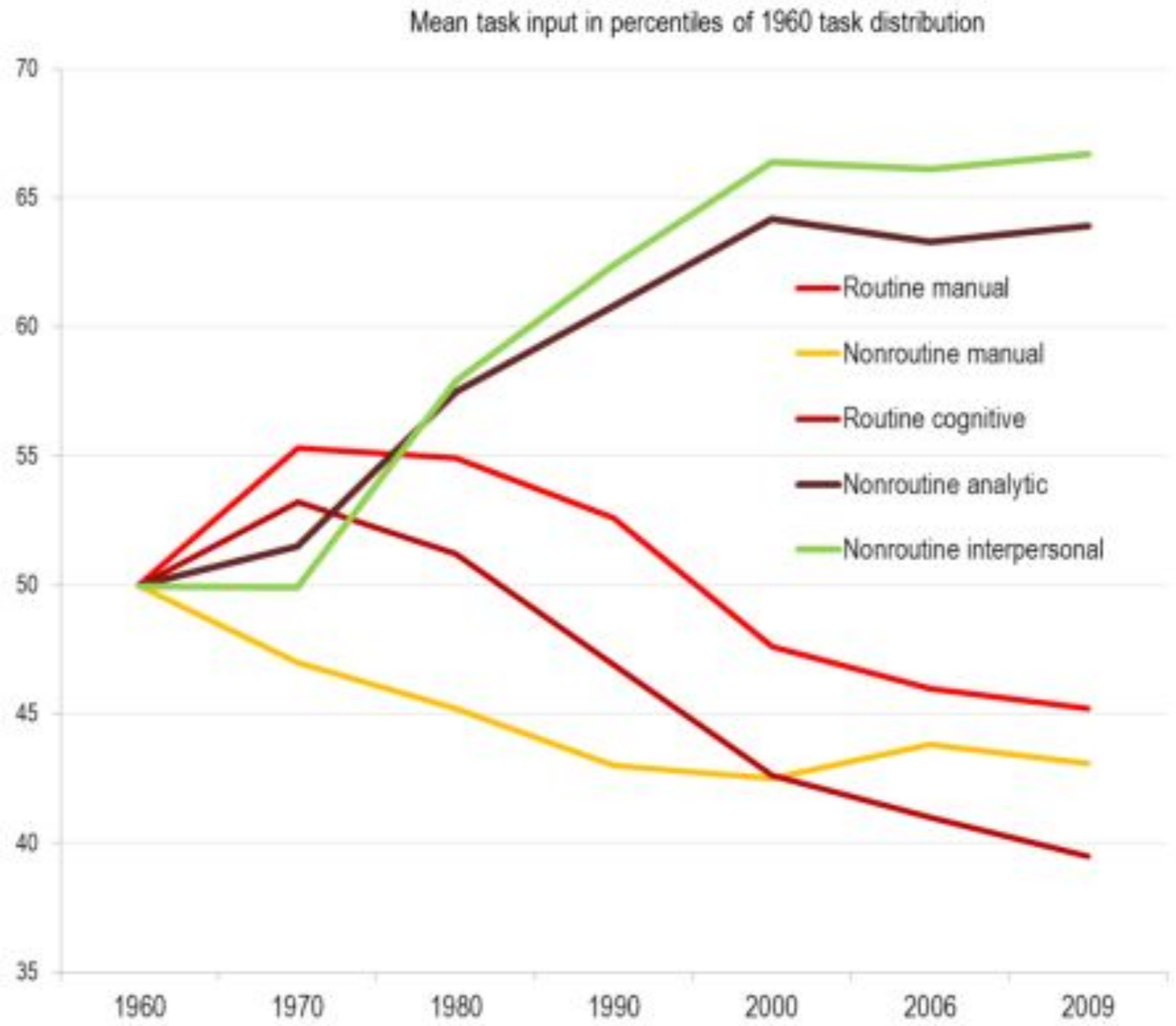

Source: Levy and Murnane (2013), *Dancing with Robots: Human Skills for Computerized Work*

Quoted in *Future of Work in figures* (OECD, 2016)

How Can I Help?

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Help children experience maths

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Recreational maths

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Can you help me?

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It's OK to struggle

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Children love it

Contact us:

hello@mathsnoproblem.com

Tunbridge Wells
01892 537 706

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