Make 10 – teacher guidance

Key concept

In this sequence familiar models such as fingers and tens frames are used to secure all the different ways to make 10.

These models are linked to the calculation, the part whole model and the language of addition.

This learning builds to the calculation strategy of ***Make 10***.

Steps within this sequence

• Building bonds to 10
• Using familiar models to make 10
• Linking language, part, whole models and calculations to make 10

Facts built in this learning

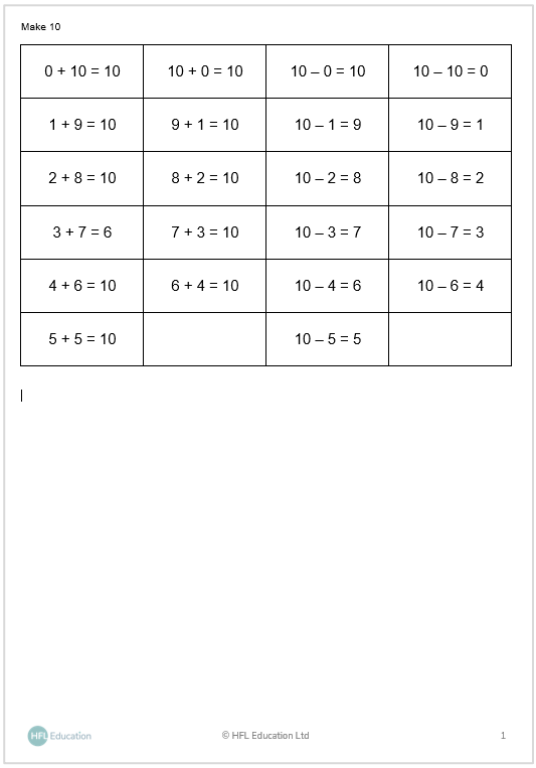
Strategy: ***Make 10***

+	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

Plus, inverse facts.

Ongoing practice opportunities

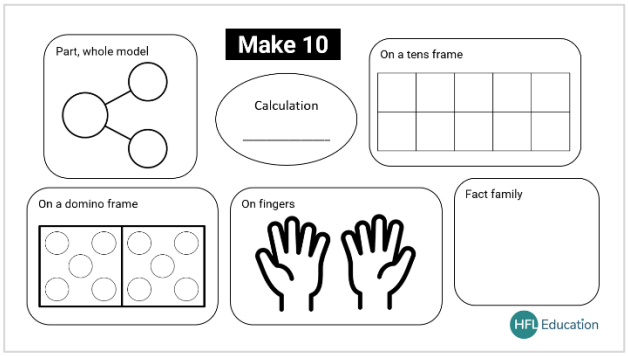
Practice cards



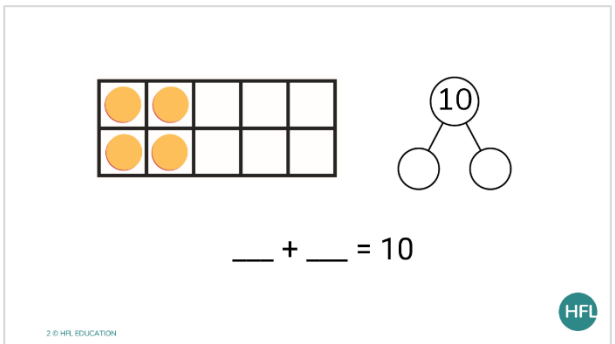
Make 10

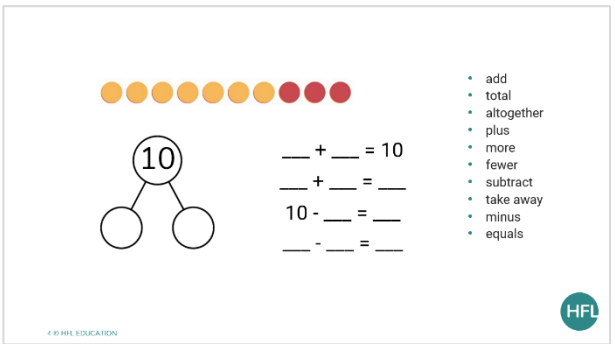
0 + 10 = 10	10 + 0 = 10	10 – 0 = 10	10 – 10 = 0
1 + 9 = 10	9 + 1 = 10	10 – 1 = 9	10 – 9 = 1
2 + 8 = 10	8 + 2 = 10	10 – 2 = 8	10 – 8 = 2
3 + 7 = 6	7 + 3 = 10	10 – 3 = 7	10 – 7 = 3
4 + 6 = 10	6 + 4 = 10	10 – 4 = 6	10 – 6 = 4
5 + 5 = 10		10 – 5 = 5	

Practice scaffolds



Fluency slides





Building bonds to 10

Teach and model

Show pupils a line of ten counters.

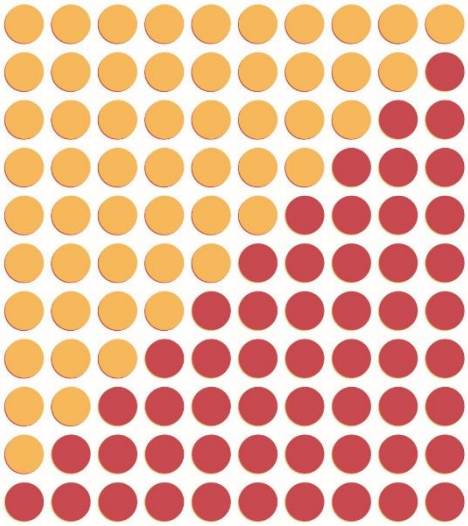
How many counters are there?
What number sentence could represent it?

There are 10 counters.
10 equals 10 plus 0.
10 = 10 + 0

Create another line of counters but make the last counter a different colour.

Agree that there are still 10 but this time there are 9 yellow and 1 red. 10 = 9 + 1.

Continue to make an array of counters turning another counter over in each row until there are 10 red counters.



Pupils record a number sentence for each row using Make 10 practice 1. Encourage pupils to notice that some sentences have the same numbers in. For example, 3 + 7 = 10 and 7 + 3 = 10. This can start conversations about order irrelevance in addition.

Discuss other patterns noticed.

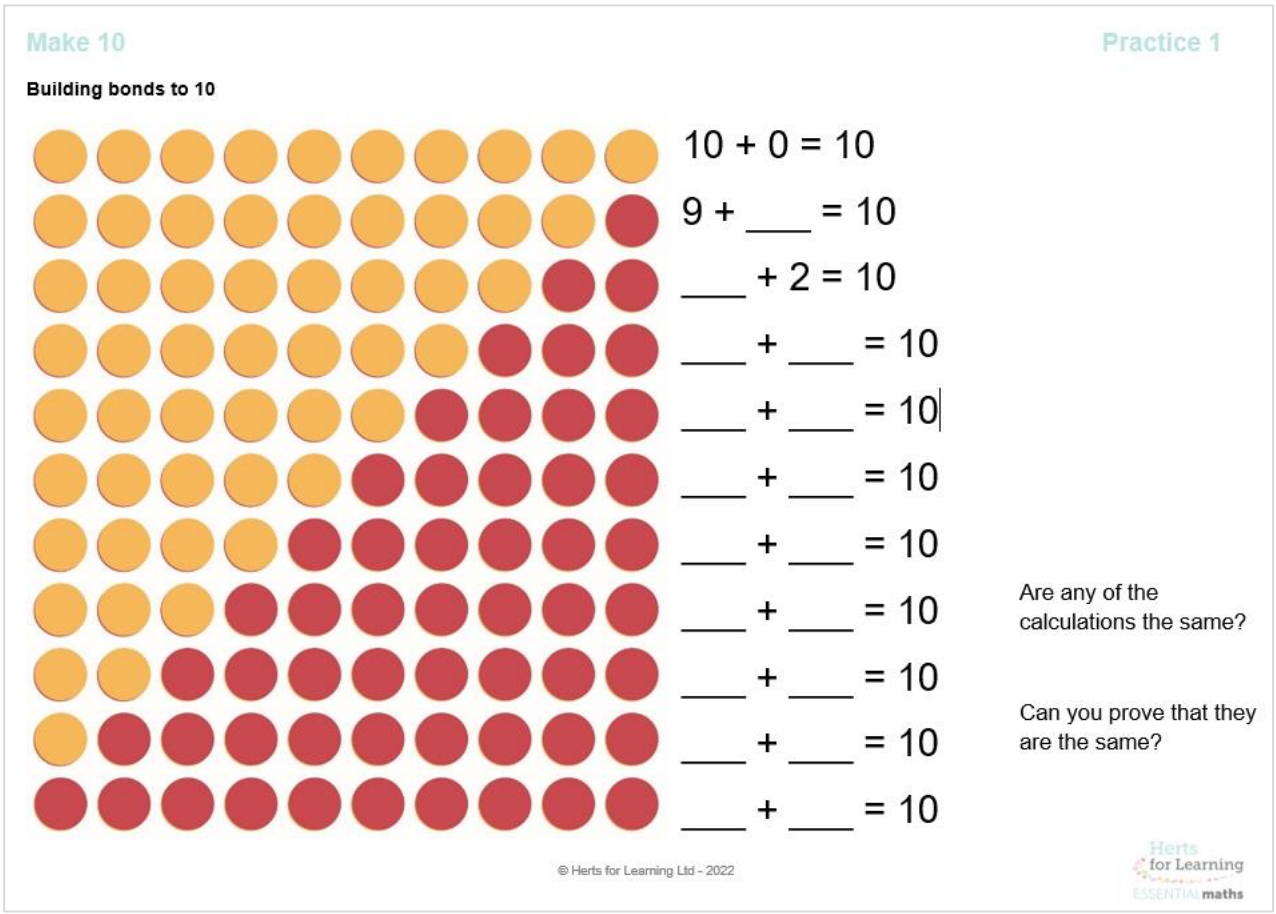
A further check

6 + 4 = 10 10 = 6 + 4
10 = 4 + 6 4 + 6 = 10

Are all these calculations the same?

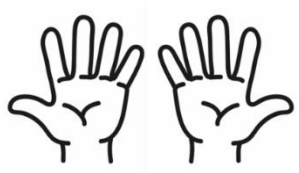
Practice

Make 10 practice 1



Using familiar models to make 10

Teach and model



Hold up all fingers and check that pupils know that there are ten altogether without counting them. Clarify that as long as we have all the fingers, there will be ten no matter how the fingers are grouped together.

Show both hands with five fingers up and five down.

What do you see now?

Five fingers are up and five are down.

There are still ten fingers altogether.

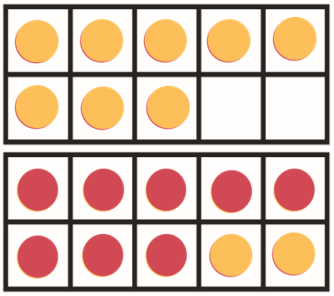
Write a calculation to match what is shown on the fingers 5 + 5 = 10

What do you see now?

Five fingers are up on one hand and three more on the other. That's eight up and two are down.

Write a calculation to match what is shown on the fingers 8 + 2 = 10.
Write the calculation in a different order 2 + 8 = 10.
Make clear that this still represents what is shown on the fingers two fingers down and 8 raised.

Show tens frames like these.



What's the same, what's different.

Both are tens frames that have 10 spaces in total.

One has 8 yellow counters and two empty spaces.

One has 8 red counters and two yellow.

They both show 8 and 2 makes 10.

Like with fingers, a tens frame always totals 10. Two different colours could be used to show the parts; 8 red + 2 yellow = 10, or the empty shapes could be used to show a part, 8 counters + two empty spaces = 10.

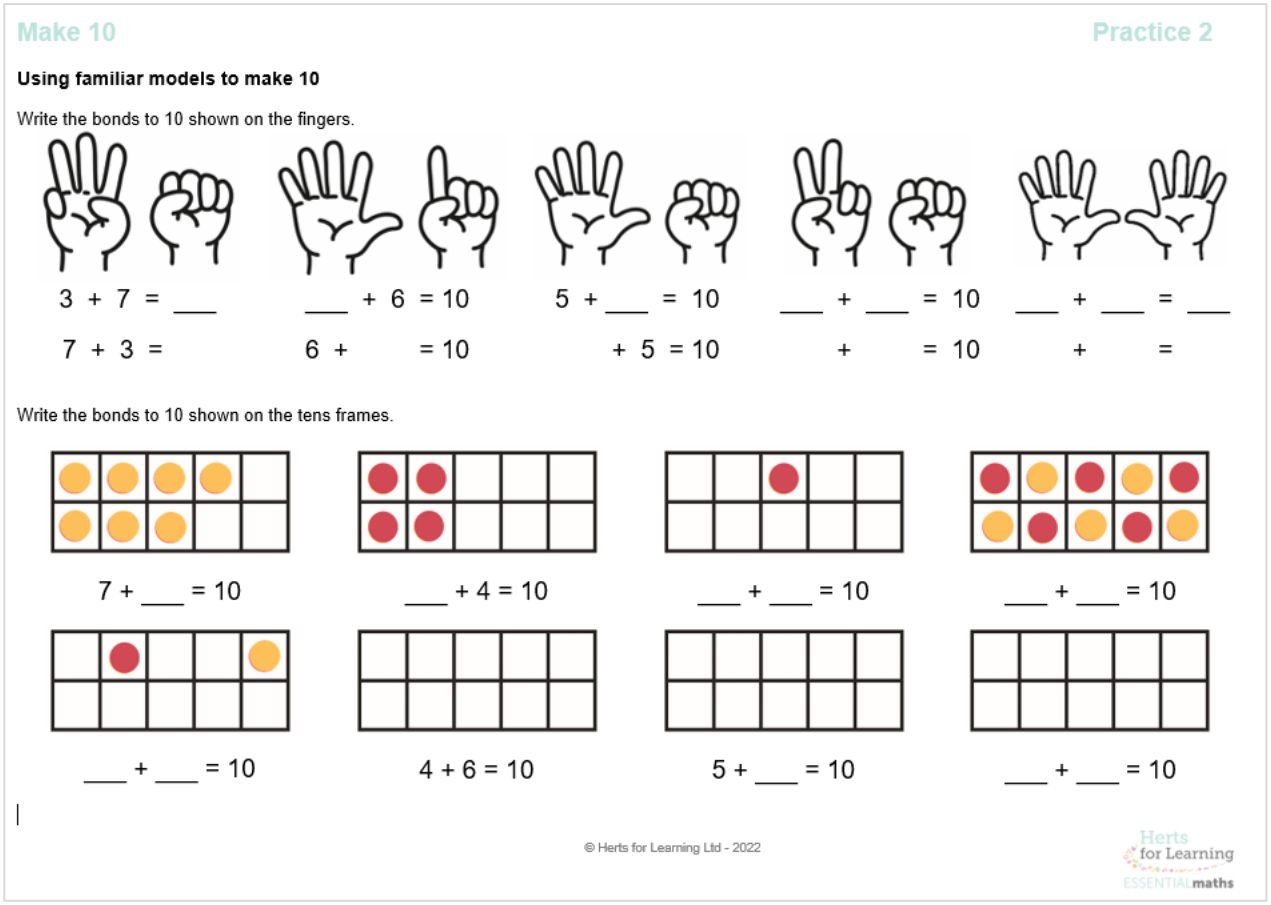
Continue to make bonds to 10 with fingers and tens frames. Other familiar models / resources could also be used. For each representation, write the calculation and identify the parts and wholes.

A further check

Write the calculations represented here.

Practice

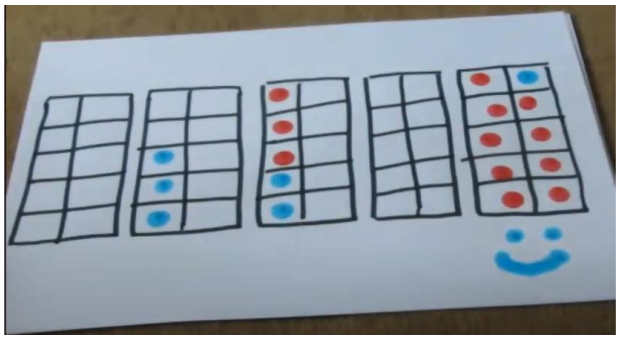
Make 10 practice 2



Game

Go fish (video)

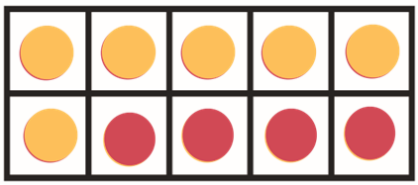
Make 10 (video) [Primary maths games: Developing number sense games - YouTube](#) (@11mins 46 seconds)



Linking language; part, whole models, and calculations to make 10

Teach and model

Show a bond to 10 using a familiar model and write a calculation.



$6 + 4 = 10$

How could the calculation be said?

4 more than 6 is 10

The total of 6 add 4 is 10.

The sum of 6 and 4 equals 10.

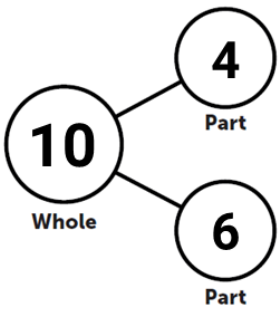
4 plus 6 is 10 altogether.

Ensure a variety of vocabulary is used to describe the calculation.

sum	plus	add
more	total	equal
altogether		

Continue to rehearse describing bonds to 10.

Show a part, whole cherry model.



How could the bond to 10 be represented on a part, whole model?

4 and 6 are the parts and 10 is the whole.

The whole is 10 because when the parts, 4 and 6, are added together they total 10.

Rehearse linking a bond to 10 to the language of addition and represent it on a part, whole model.

A further check

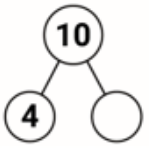
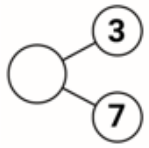
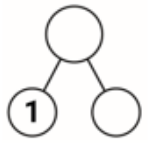
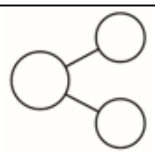
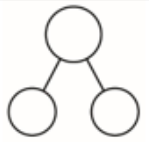
Write a calculation, describe it, and represent it in a part, whole model.

Practice

Make 10 practice 3

Make 10 Practice 3

Linking language; part, whole models; and calculations to make 10

I need to add ___ to 4 to make 10		4 + ___ = 10
7 and 3 more makes ___		3 + 7 = ___
Altogether 1 and ___ equals 10		1 + ___ = 10
In total 8 plus ___ is 10		___ + ___ = 10
		5 + ___ = 10