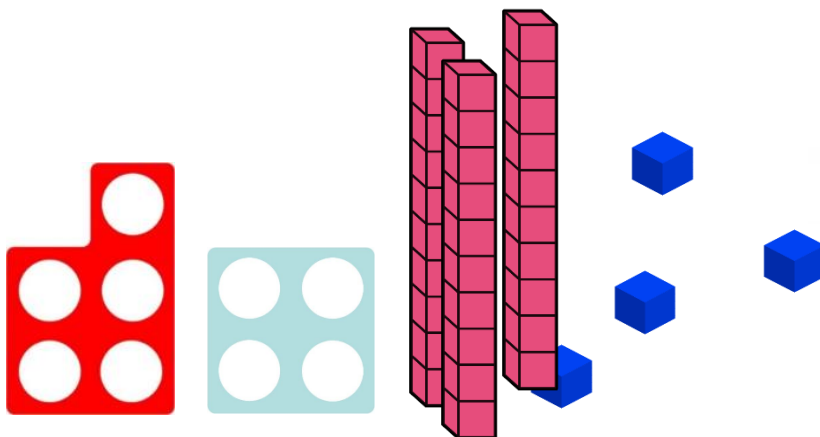




# Wester Overton Primary School

## Parents Guide to Addition



Your child is now learning about addition. In order for you to help at home it is important that you are familiar with the words and methods your child's teacher will be using in the classroom.

### Progression Through Addition

#### *Mental Calculations (on-going)*

These are some of the mental calculation strategies we use at Wester Overton:

#### *Mental recall of number bonds*

$$\begin{array}{ll} 6 + 4 = 10 & \square + 3 = 10 \\ 25 + 75 = 100 & 19 + \square = 20 \end{array}$$

#### *Use near doubles*

$$6 + 7 = \text{double } 6 + 1 = 13$$

#### *Addition using partitioning and recombining*

$$34 + 45 = (30 + 40) + (4 + 5) = 79$$

#### *Counting on or back in repeated steps of 1, 10, 100, 1000*

$$\begin{array}{l} 86 + 57 = 143 \text{ (by counting on in tens and} \\ \text{then in ones)} \\ 460 - 300 = 160 \text{ (by} \\ \text{counting back in hundreds)} \end{array}$$

#### *Add the nearest multiple of 10, 100 and 1000 and adjust*

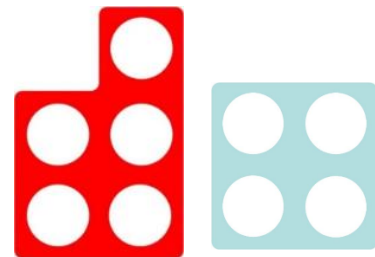
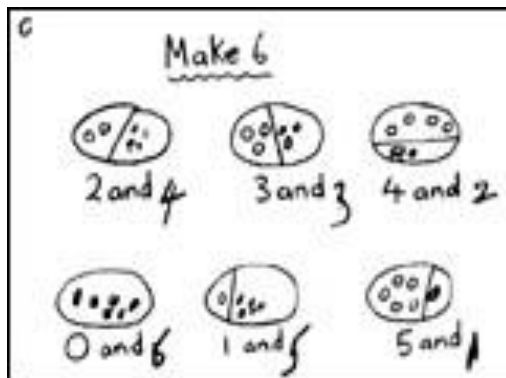
$$\begin{array}{l} 24 + 19 = 24 + 20 - 1 = 43 \\ 458 + 71 = 458 + 70 + 1 = 529 \end{array}$$

#### *Use the relationship between addition and subtraction*

$$\begin{array}{ll} 36 + 19 = 55 & 19 + 36 = 55 \\ 55 - 19 = 36 & 55 - 36 = 19 \end{array}$$

*These mental calculations are the foundations of your child's number knowledge, and will be continued to be used throughout their school career and in life.*

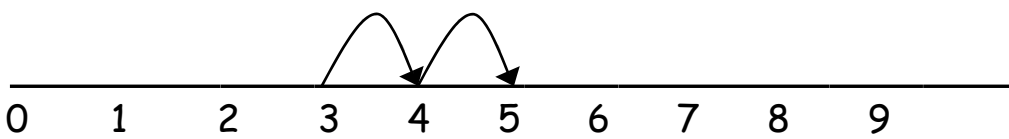
Children are encouraged to develop a mental picture of the number system in their heads to use for calculation. They develop ways of recording calculations using shapes and a variety of pictorial methods for children to develop an understanding of addition.



They use number lines and practical resources to support calculation and teachers demonstrate the use of the number line.

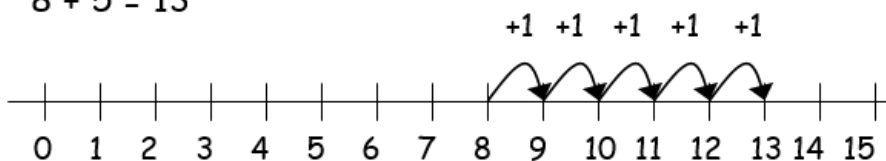
$$3 + 2 =$$

$$5 + 1 + 1$$

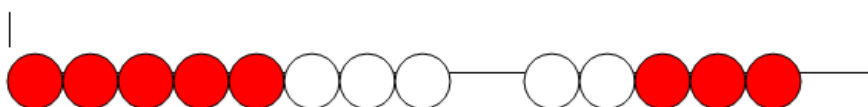


Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.

$$8 + 5 = 13$$



Bead strings or bead bars can be used to illustrate addition including bridging through ten by counting on 2 then counting on 3.



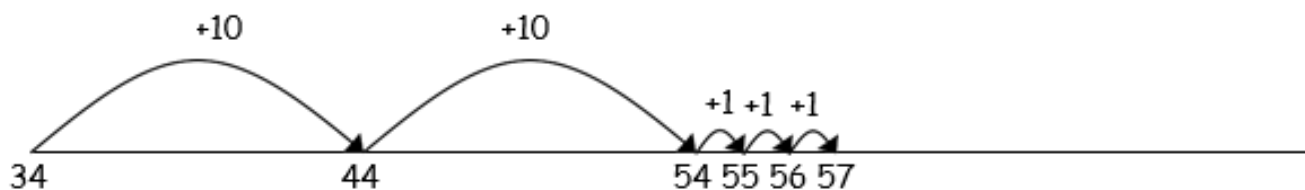
At first the addition will be simple eg:

$$5 + 4 = 9 \quad \text{or} \quad \begin{array}{r} 5 \\ + 4 \\ \hline \end{array}$$

Your child will then progress to more difficult examples eg: "Susan ate 34 jelly sweets and 23 strawberry laces. How many sweets did she eat altogether?"

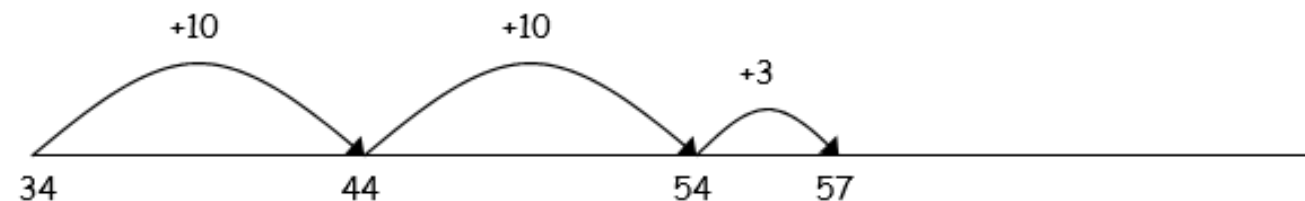
- ✓ First counting on in tens and ones.

$$34 + 23 = 57$$



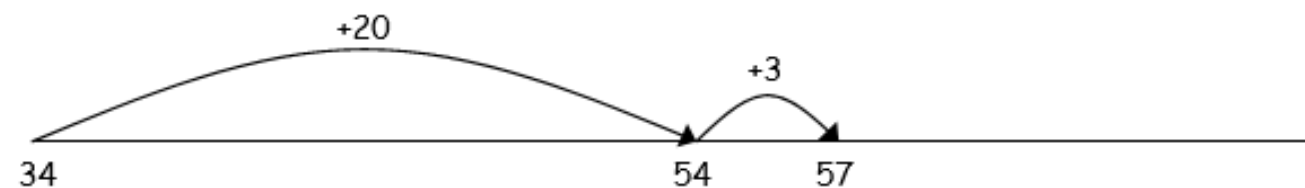
- ✓ Then helping children to become more efficient by adding the units in one jump (by using the known fact  $4 + 3 = 7$ ).

$$34 + 23 = 57$$



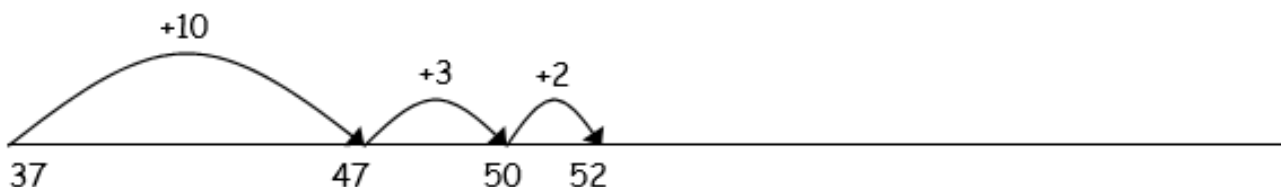
- ✓ Followed by adding the tens in one jump and the units in one jump.

$$34 + 23 = 57$$



- ✓ Bridging through ten can help children become more efficient.

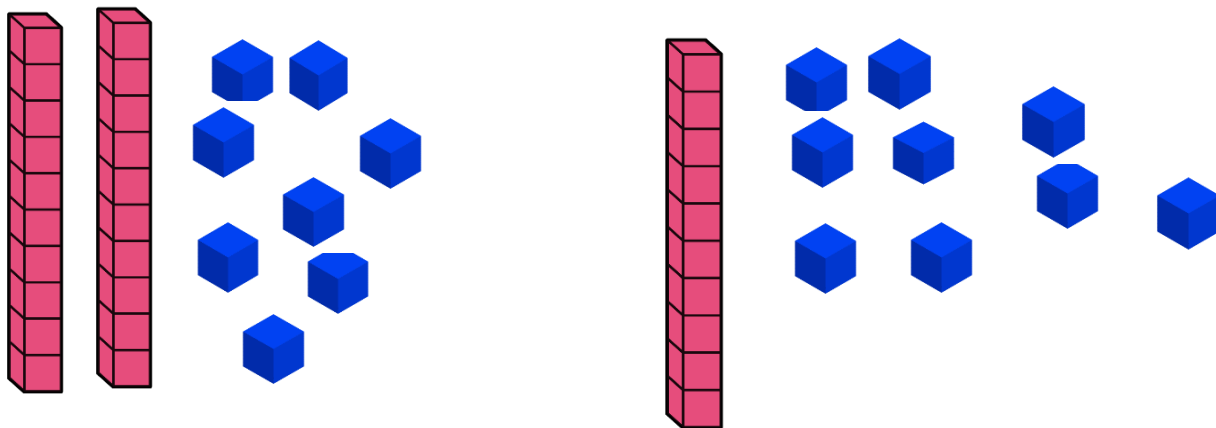
$$37 + 15 = 52$$



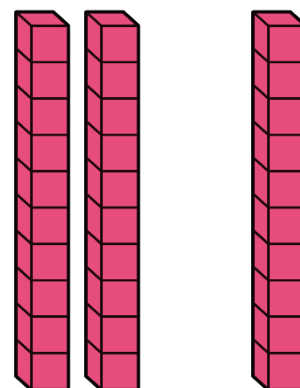
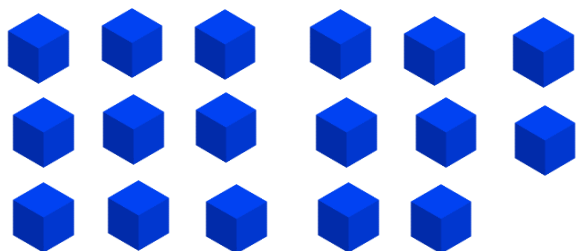
When progressing onto written calculations, using concrete materials such as Dienes cubes (1s or units) and rods (10s) to give a visual representation:

$$28 + 19$$

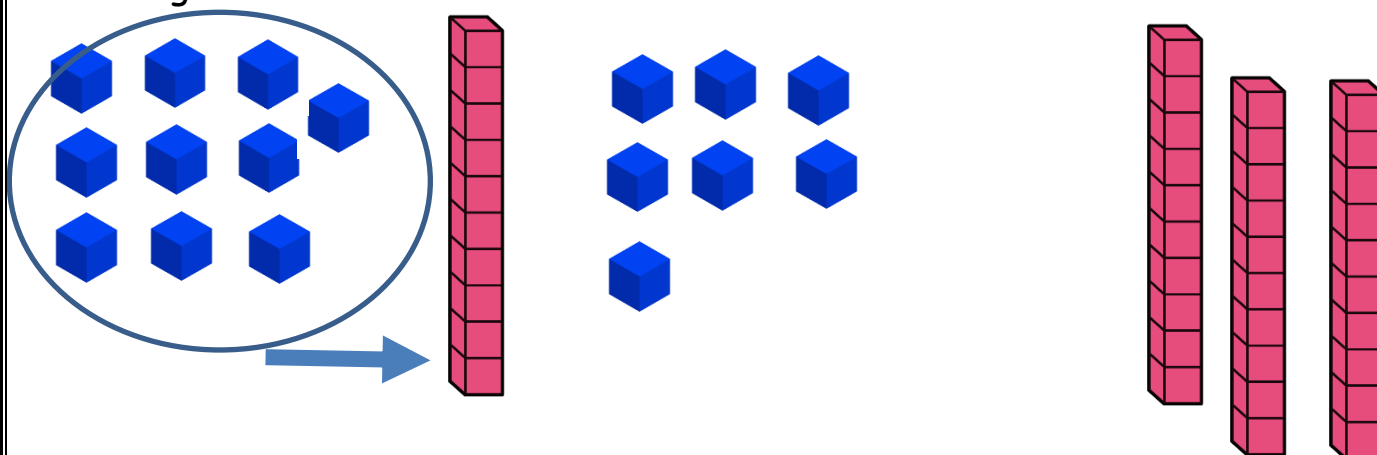
28 (2 tens and 8 units) add 19 (one ten and 9 units)



Add the units 8 units add 9 units = 17 units

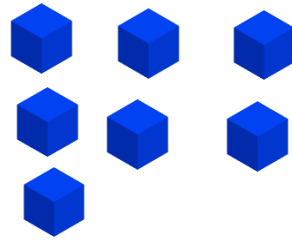
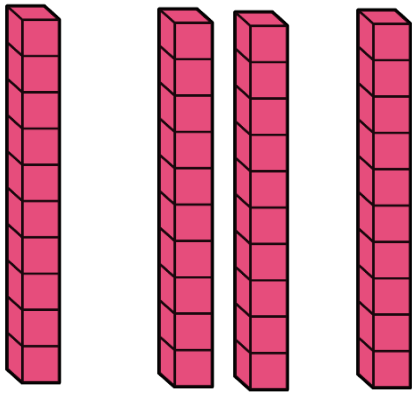


Exchange 10 of the units for a 10:



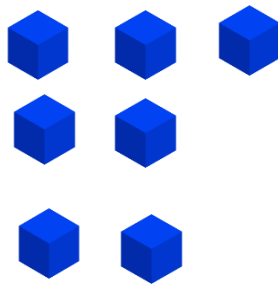
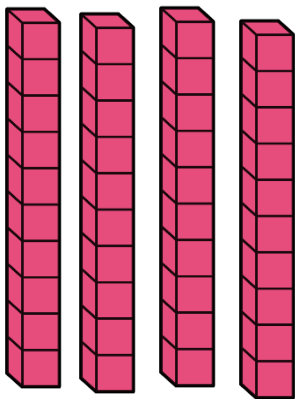
Now add the tens:

$$1 \text{ ten} + 2 \text{ tens} + 1 \text{ ten} = 4 \text{ tens}$$



Add the tens and the units together:

$$4 \text{ tens add } 7 \text{ units} = 40 + 7 = 47$$



Pupils then progress onto written techniques without the use of concrete materials. First, by partitioning the numbers:

$$28 \text{ add } 19 = 20 + 10 + 8 + 9 = 30 + 17 = 47$$

Then, they will progress onto formal written calculations:

Tens	Units	
T	U	28 add 19
2	8	
+ 1	9	

T	U	
2	8	
+ 1	9	
1	7	

Add the units. 9 and 8 units gives 17 units.

EXCHANGE 10 units for 1 ten

Write the 7 in the units

Column of the answer and 'carry'.

T	U
2	8
<u>+ 1</u>	<u>9</u>
4	7
<u>1</u>	

Add the tens. 1 ten and 1 ten gives 2 tens and another 2 tens gives 4 tens. Write the 4 in the tens column of the answer. The answer is forty seven.

Now try these with your child, using the guide to help you.

T	U
5	9
<u>+ 1</u>	<u>4</u>
<hr/>	

T	U
3	8
<u>+ 4</u>	<u>4</u>
<hr/>	



When your child has mastered these sums, they will move on to examples using hundreds, thousands and will apply this learning in length, money, weight etc.



This parent guide has been produced to help inform and involve you in the working of the school and in your child's learning.

Only when families and school work together in partnership can we ensure the best for your child. Information from the school is only one part of this, and our willingness to answer your questions and listen to suggestions provides the other crucial part of this partnership.

Should you wish further information, please contact me at the school.

**June Moir**  
**Head Teacher**

