

## Knowledge Organiser


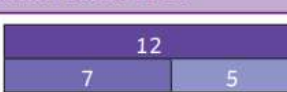


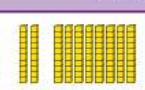

Year Group	Subject	Topic
Year 2	Maths	Number: Addition and Subtraction

### The Big Picture:

Addition helps master the relationship between numbers and understand how quantities relate to one another. Subtraction is a part of our daily lives and therefore it is important to understand how to subtract effectively for example money, time, cooking etc.

### Sequence of learning

- Fact families – addition and subtraction bonds to 20
- Check calculations
- Compare number sentences
- Related facts
- Bonds to 100 (tens)
- Add and subtract 1s
- 10 more and 10 less
- Add and subtract 10s
- Add a 2-digit and 1-digit number – crossing ten
- Subtract a 1-digit number from a 2-digit number – crossing ten
- Add two 2-digit numbers – not crossing ten – add ones and add tens
- Add two 2-digit numbers – crossing ten – add ones and add tens
- Subtract a 2-digit number from a 2-digit number – not crossing ten
- Subtract a 2-digit number from a 2-digit number – crossing ten – subtract ones and tens
- Bonds to 100 (tens and ones)
- Add three 1-digit numbers

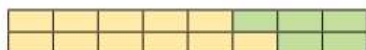
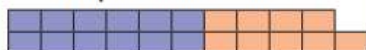
Addition and Subtraction		Knowledge Organiser	
<b>Key Vocabulary</b> Add Total Make Plus Sum More Altogether Difference Leave Subtract Difference between Less Minus Take away Mentally, Orally Column Addition Column Subtraction Estimate Inverse operation Solve problems Number facts Place Value	<div style="background-color: #d8bfd8; text-align: center; padding: 2px; margin-bottom: 5px;">Addition and Subtraction Bonds to 20</div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>15 + 5 = 20 20 - 5 = 15 20 - 15 = 5</p> </div> <div style="text-align: center;">  <p>7 + 5 = 12 12 - 5 = 7 12 - 7 = 5</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  <p>4 + 3 = 7      15 - 7 = 8</p> </div>		
	Methods		
	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p style="text-align: center; background-color: #d8bfd8; padding: 2px;">Add 2-digit and 1-digit</p>  <p>27 + 6 = 33</p> </div> <div style="width: 30%;"> <p style="text-align: center; background-color: #d8bfd8; padding: 2px;">Add 2-digit numbers</p> <p>34 + 28 = 62</p> <p>3 tens and 4 ones add 2 tens and 8 ones equals 5 tens and 12 ones becomes 6 tens and 2 ones</p> </div> <div style="width: 30%;"> <p style="text-align: center; background-color: #d8bfd8; padding: 2px;">Subtract 2-digit numbers</p> <p>62 - 28 = 34</p> <p>6 tens and 2 ones becomes 5 tens and 12 ones subtract 2 tens and 8 ones equals 3 tens and 4 ones</p> </div> </div>		
	Addition and Subtraction Bonds to 100		
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>2 + 8 = 10 so 20 + 80 = 100</p>  </div> <div style="text-align: center;"> <p>32 + 68 = 100</p> <p>3 tens and 2 ones + 6 tens and 8 ones = 9 tens and 10 ones = 10 tens = one hundred</p>  </div> </div>		

## Addition and Subtraction

## Knowledge Organiser

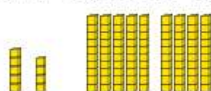
### Mental Methods

#### Compare Number Sentences

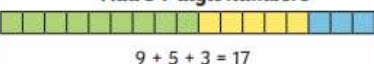


#### Related facts

$$5 + 4 = 9 \text{ so } 50 + 40 = 90$$



#### Add 3 1-digit numbers



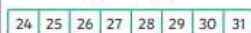
### More or Less/ Add and Subtract 1s and 10s

#### Add and subtract 1s

$$24 + 1 = 25$$

$$24 + 2 = 26$$

$$24 + 3 = 27$$



$$37 - 1 = 36$$

$$37 - 2 = 35$$

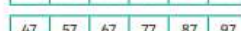
$$37 - 3 = 34$$



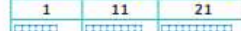
There are 7 flowers in a vase. One more is added. Now there are 8 flowers.



#### 10 More or Less



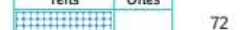
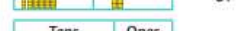
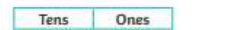
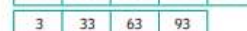
The ones digit stays the same.



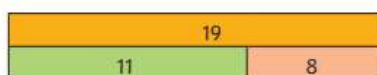
Take care when crossing hundreds:



#### Add and Subtract 10s



### Check Calculations



19 - 8 = 11 can be checked using 8 + 11 = 19



32 + 5 = 82 x Spot that 5 tens have been added not 5 ones

28 - 26 = 12 x Spot that 28 and 26 are very close together, so difference won't be 12.

37 - 4 = 41 x Spot that if subtracting 4 the answer will be smaller.

68 - 40 = 64 x Spot that 4 ones have been subtracted and not 4 tens.

Practise counting forwards and backwards in 2's, 3's and 5's everyday.

Count in 2's	2	4	6	8	10	12	14	16	18	20	22	24
Count in 3's	3	6	9	12	15	18	21	24	27	30	33	36
Count in 5's	5	10	15	20	25	30	35	40	45	50	55	60

### 5 times table

5x1=5	5x4=20	5x7=35	5x10=50
5x2=10	5x5=25	5x8=40	5x11=55
5x3=15	5x6=30	5x9=45	5x12=60

### How to help

Work regularly on simple addition and subtraction facts within 10  
Add and subtract physical objects at home eg at dinner time  
Help your Year 2 child with their mental maths homework  
Practice times tables facts for 2,3,5, and 10 times tables

### Useful links

**Top Marks Website-** <http://www.topmarks.co.uk/maths-games/5-7-years> maths games to play with your child  
**ICT Games Website**  
<http://www.ictgames.com/resources.html> maths games to play with your child

