

Unit 3 Money and 'real life' problems

Five daily lessons

Primary
National Strategy

Year 3
Spring term

Unit Objectives

Year 3

- **Choose and use appropriate operations (including multiplication and division) to solve word problems**, and appropriate ways of calculating: mental, mental with jottings, pencil and paper.
- **Explain methods and reasoning** orally and, where appropriate, in writing.
- Solve word problems involving numbers in 'real life', money and measures, using one or more steps, including finding totals and giving change, and working out which coins to pay. Explain how the problem was solved.

Page 61

Page 65

Pages 67 and 69

Link Objectives

Year 2

- **Choose and use appropriate operations and efficient calculation strategies** (e.g. mental, mental with jottings) **to solve problems**.
- **Explain how a problem was solved** orally and, where appropriate, in writing.
- Use mental addition and subtraction, simple multiplication and division, to solve simple word problems involving numbers in 'real life', money or measures, using one or two steps. Explain how the problem was solved.
- Recognise all coins and begin to use £.p notation for money (for example, know that £4.65 indicates £4 and 65p). Find totals, give change, and work out which coins to pay.

Year 4

- **Choose and use appropriate number operations and appropriate ways of calculating (mental, mental with jottings, pencil and paper) to solve problems**.
- Explain methods and reasoning about numbers orally and in writing.
- Use all four operations to solve word problems involving numbers in 'real life', money and measures (including time), using one or more steps, including converting pounds to pence and metres to centimetres and vice versa.

This Unit Plan is designed to guide your teaching.

You will need to adapt it to meet the needs of your class.

Resources needed to teach this unit:

- Resource sheet 3.1 and an OHT made from it.
- Resource sheet 3.2
- OHT 3.1
- Activity sheet 3.1
- Activity sheet 3.2
- Activity sheet 3.3
- Red and blue OHP pens
- Red and blue pencils/highlighter pens
- Glue and scissors
- A purse with £1.00 inside made up of all silver coins.
- £1 coin
- Mega Money and a pot to put it in.
- 1–20 number cards
- Individual number lines
- Individual hundred squares
- Whiteboards


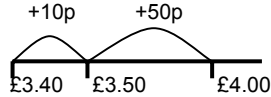
Also see models and Images Charts:

- Counting on and back in ones and tens;
- Addition and subtraction facts to 20;
- Understanding addition and subtraction.

(Key objectives in bold)

Planning sheet	Day One	Unit 3 Money and 'real life' problems		Term: Spring	Year Group: 3																																
Oral and Mental		Main Teaching			Plenary																																
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions																																	
<p>Recall addition and subtraction facts for numbers up to 20.</p> <p>VOCABULARY add subtract number fact</p> <p>RESOURCES Whiteboards</p>	<ul style="list-style-type: none">Draw this addition grid on the board.<table><tr><td>+</td><td>7</td><td>11</td><td>4</td></tr><tr><td>5</td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td></tr></table><p>Demonstrate how to fill in the top row, adding 5 to each number.</p>Draw this subtraction grid on the board.<table><tr><td>-</td><td>17</td><td>19</td><td>16</td></tr><tr><td>3</td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td></tr></table><p>Demonstrate how to fill in the top row.</p>Ask the children to complete both squares on their whiteboards. <div><p>Q Which were the easiest boxes to fill in? How many did you know? How many did you have to work out? Can you use another row to help you?</p></div>	+	7	11	4	5				8				6				-	17	19	16	3				4				8				<p>Choose the appropriate number operations and ways of calculating to solve word problems involving one step.</p> <p>Write a number sentence to explain how a problem was solved.</p> <p>VOCABULARY addition subtraction calculation number sentence mental jottings total more left altogether</p> <p>RESOURCES Resource sheet 3.1 An OHT of Resource sheet 3.1 Red and blue OHP pens Red and blue pencils or highlighter pens Glue Whiteboards</p>	<ul style="list-style-type: none">Explain that today's lesson is all about making decisions.Read through the first problem on the OHT of Resource Sheet 3.1. <div><p>Q What is this problem asking us to work out?</p><p>Ring the question in blue.</p><p>Q What is the important information to help us solve this problem?</p><p>Ring the two facts in red. Discuss the fact that these two important parts to the problem could be given in a different order, e.g. the question could be asked first, then the facts could follow.</p><p>Q Which calculation would you use to solve this problem?</p><p>Allow several minutes for the children to discuss this in pairs. Take responses and draw out their reasoning.</p><p>Q Why not 60 + 36?</p><p>Q Which words were important in identifying the calculation needed?</p><p>Identify the correct calculation and complete it to form a number sentence.</p><p>Q How will you calculate the answer? What is the answer to the problem?</p><p>Model the recording to accompany their verbal explanation underneath the number sentence, e.g. using a number line or listing the steps during partitioning.</p><ul style="list-style-type: none">Give out Resource sheet 3.1 and repeat with a different problem, this time asking children to find the calculation and write their jottings on the board.Ask the children to choose a problem and highlight on it the information in red and the question in blue. Then ask them to select the calculation which would be used to solve the problem and to stick both together in their books.<p>Finally, ask them to make jottings to show how the calculation would be worked out and to answer the problem.</p></div>	<div><p>Q Which was the most difficult calculation to match and why?</p></div> <ul style="list-style-type: none">Ask the class to find the word problem for the plenary from Resource sheet 3.1. Explain that this problem does not have a number sentence written for it and that they will be writing one. <p>Read the problem together. Ask the class to write the number sentence needed to solve the problem on their whiteboards.</p> <div><p>Q Which part of the question gives you important information?</p></div> <div><p>Q What are the key words?</p><p>Take responses and reasons.</p></div> <div><p>Q What is the correct number sentence?</p></div> <div><p>Q What would the number sentence be if Nikki had lost 27 marbles?</p></div> <div><p>By the end of the lesson, children should be able to:</p><ul style="list-style-type: none">choose and use appropriate number operations and ways of calculating to solve a given word problem;explain and record how the problem was solved;write a number sentence to show how a problem was solved.<p>(Refer to supplement of examples, section 5, pages 61 and 67.)</p></div>	
+	7	11	4																																		
5																																					
8																																					
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Planning sheet	Day Two	Unit 3 <i>Money and 'real life' problems</i>	Term: <i>Spring</i>	Year Group: 3
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
<p>Choose appropriate operations to solve problems.</p> <p>VOCABULARY addition subtraction operation number sentence</p> <p>RESOURCES Whiteboards</p>	<ul style="list-style-type: none"> Write several number sentences on the board in which the operation is missing: Explain that the missing operation is either + or – $32 * 17 = 49$ $150 * 21 = 129$ $97 * 6 = 103$ $85 * 21 = 64$ <p>Take each sentence in turn.</p> <p>Ask the children to write what they think the missing sign is on their whiteboards.</p> <p>Q What made you think that it was an addition sign?</p> <p>Q How could you check that with that sign the number sentence is correct?</p> <ul style="list-style-type: none"> Discuss strategies for adding or subtracting the numbers to confirm that the number sentence is true. 	<p>Choose the appropriate number operations and ways of calculating to solve word problems involving two steps.</p> <p>VOCABULARY addition subtraction calculation number sentence mental jottings total more left altogether</p> <p>RESOURCES OHT 3.1 Activity sheets 3.1 and 3.2 Glue and scissors Blue and red OHP pens</p>	<ul style="list-style-type: none"> Show the first word problem from OHT 3.1. <p>Q How many pence are there in £1.00?</p> <p>Highlight the question in the problem in blue.</p> <p>Q What important information have you been given to solve the problem?</p> <p>Highlight this in red. Demonstrate the two steps to the problem.</p> <p>Step 1 → Find the total amount of money that Sara and Karen have. Write $45 + 25 = 70p$ on the OHT. Remind the children of number bonds to 100.</p> <p>Step 2 → Work out how much more they need to make 100p. Write $70 + \square = 100$ on the OHT. (Show jumps on a number line from 70 to 100 if necessary.)</p> <p>Answer → Write as a sentence 'Sara and Karen will need another 30p', on the OHT.</p> <p>Q Did we need to use pencil and paper to work out either of these steps? Why not?</p> <p>Emphasise that the numbers involved were easy to deal with mentally.</p> <p>Q For the last step, could we have written $100 - 70 = 30$?</p> <p>Emphasise that counting on in tens from 70 to 100 or counting back in tens from 100 to 70 would be a good way of calculating the answer or they might remember that $70 + 30 = 100$ and use this fact.</p> <p>Q Is it useful to jot down the answers for each step?</p> <p>Stress that this is useful for problems with more than one step, as it is often difficult to keep track of the numbers that you are working with.</p> <ul style="list-style-type: none"> Work through the second example together, inviting children to write the sentences for each step. Demonstrate the writing of sentences for each step, but show how the answers are calculated mentally. Ask the children to work in pairs to: <ol style="list-style-type: none"> select the problems which will take two steps from the list on Activity sheet 3.1 and stick them onto Activity sheet 3.2 solve those problems using the step 1, step 2 writing frame. 	<p>Q Which were the one-step problems? What calculations would you do to solve those?</p> <ul style="list-style-type: none"> Invite one of the children to ask the class a 'story' problem which might involve adding and/or subtracting, and two steps. Suggest that it might involve amounts of money, points, toys, sweets or fruit. <p>Q What will you calculate first?</p> <ul style="list-style-type: none"> Record the number sentences needed and any jottings needed to work out the answer. <p>HOMEWORK- To write a two-step story problem to be collected on a large poster for the rest of the class to try to solve. Solve the problem you write.</p> <p>By the end of the lesson, children should be able to:</p> <ul style="list-style-type: none"> use addition and subtraction to solve 'story' problems involving one or two steps about numbers in 'real life', choosing the appropriate operation and calculation method; write a number sentence to show how a problem was solved. <p>(Refer to supplement of examples, section 5 pages 61 and 67.)</p>

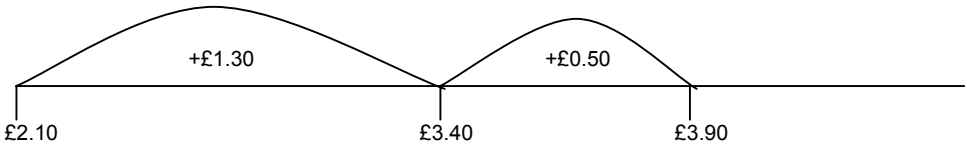
Planning sheet	Day Three (page 1 of 2)	Unit 3 <i>Money and 'real life' problems</i>		Term: <i>Spring</i>	Year Group: 3
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions	
<p>Know that 100p equals £1.00.</p> <p>Use decimal notation for money.</p>	<ul style="list-style-type: none"> Show the class a £1 coin. <div>Q How many 10p coins make £1?</div> <p>Repeat this activity with £1 and 1p.</p> <ul style="list-style-type: none"> Write the following amounts randomly on the board. <p>145p 321p 167p</p> <p>705p 520p 989p</p> <ul style="list-style-type: none"> Choose one to demonstrate how to write the amounts in pounds. <p>Ask the class to write the amounts using the pound sign properly on their whiteboards.</p> <div>Q Which is the largest amount?</div> <div>Q Which amount was the tricky one?</div> <p>Draw attention to</p> <p>705p = £7.05.</p>	<p>Solve problems which involve finding totals, giving change and working out which coins to pay.</p>	<ul style="list-style-type: none"> Have the children's homework 'story' problems stuck onto a large poster – draw attention to this and challenge the class to solve any of their friends' problems throughout the day. Choose one to discuss in this lesson. Remind the children of how to count on to find the change using the following example: I have spent £3.67. How much change will I have from £4.00? Use the number line to count on:  <ul style="list-style-type: none"> Show the plant stall price list in table form from Resource sheet 3.2. Read through together. Ensure that the children know how to read the table. <div>Q How much does it cost to buy a small cabbage plant?</div> <p>Set a context for the problem by explaining that three plants are needed to brighten the window sill.</p> <div>Q You have £5.00 to spend. Which three plants could you buy? What would they cost altogether and how much change would you have from £5.00?</div> <p>Invite the children to work in pairs, to choose three plants and write the prices of each on their whiteboards. Share one selection with the whole class.</p> <div>Q Why did you choose those three?</div> <p>Draw out any estimation to ensure that the total does not exceed £5.00.</p> <div>Q What are the two steps in this problem?</div> <ul style="list-style-type: none"> Elicit that step 1 would be to calculate the total, then step 2 would be to see what the change from £5.00 would be (by counting on). <div>Q Would you change the order of how you add these amounts? Why?</div> <p>Draw on last week's work.</p> <div>Q How could you split these amounts to make the calculation easier?</div> <p>£2.10 + £1.30 + 50p = £2 + £1 + 10p + 30p + 50p = £3 + 90p = £3.90</p>	<ul style="list-style-type: none"> Tell the class that they have been working out totals and giving change in the way that most shopkeepers used to work before electronic tills. Invite a child to be 'shopkeeper' and to hold the pot of Mega Money. Write £3.40 on the board and explain that it is the total of your shopping. Hand the 'shopkeeper' two £2.00 Mega Money coins. <div>Q What change should you get?</div> <p>Encourage them to hand you 10p and say 'that makes £3.50', then a 50p saying 'and another 50p makes £4.00. So your change is 60p'.</p> <p>Draw these steps on a number line.</p>  <ul style="list-style-type: none"> Repeat with a different child, a total spent of £2.80 and paying with £4.00 again. Finish by encouraging the class to look out for shopkeepers who count back the change as in this lesson. 	

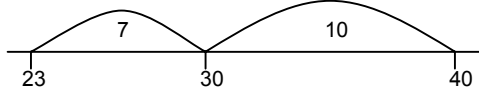
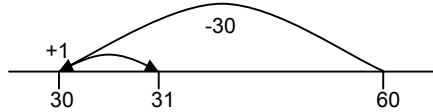
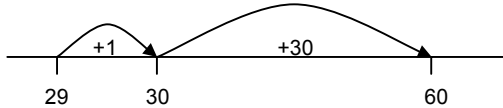
VOCABULARY
pound
pence
amount
total
coin
£

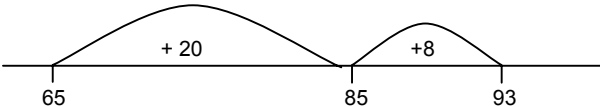

RESOURCES
£1 coin
Whiteboards

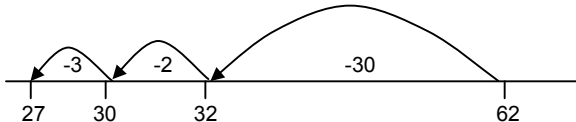
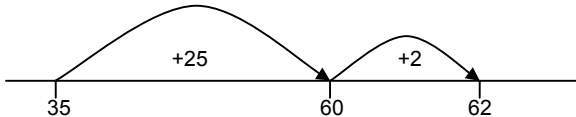
VOCABULARY
total
amount
value
how much
pay
change

RESOURCES
Resource sheet
3.2
A pot
Mega Money
(large coins)
Whiteboards

Planning sheet	Day Three (page 2 of 2)	Unit 3 <i>Money and 'real life' problems</i>	Term: <i>Spring</i>	Year Group: 3
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
			<p>Q How could you work out the total without splitting the amounts into pounds and pence?</p> <ul style="list-style-type: none"> Demonstrate counting using a number line.  <p>Q How could you calculate the change?</p> <p>Use a different colour to mark £5.00 on the number line then count on 10 from £3.90 to £4.00 and £1.00 to £5.00. Establish that the answer is £1.10.</p> <p>Emphasise that this is the change by crossing out the amount spent on the number line and showing that this is what is left.</p> <p>Q How does the number line help you?</p> <p>Elicit that recording the steps on a number line helps to keep track of the steps in the calculation.</p> <ul style="list-style-type: none"> Set the children the problem to work out the total and change given from £5.00 for other choices of three plants from Resource sheet 3.2. 	<p>By the end of the lesson, children should be able to:</p> <p>Solve money problems which involve:</p> <ul style="list-style-type: none"> finding totals and giving change; deciding what to buy given a certain amount to spend. <p>(Refer to supplement of examples, section 5, page 33.)</p>

Planning sheet	Day Four	Unit 3 <i>Money and 'real life' problems</i>	Term: <i>Spring</i>	Year Group: 3
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
<p>Choose appropriate operations to solve problems.</p> <p>VOCABULARY addition subtraction operation equal number sentence</p> <p>RESOURCES Whiteboards</p>	<ul style="list-style-type: none"> Write the following on the board: $5 + 3 = 6 \square 2$ <p>Ask the children to write the missing sign on their whiteboards.</p> <p>Q How did you decide on that sign?</p> <ul style="list-style-type: none"> Repeat with the sentence: $19 - 7 = 3 + 9$, covering a sign or number. <p>Q What do you know about each side of the equals sign?</p> <p>Establish that what is on one side is equal to what is on the other, rather like a balance.</p> <ul style="list-style-type: none"> Ask the children to work in pairs. One child should write an addition or subtraction e.g. $5 + 9$, on a whiteboard and their partner should respond by making an addition or subtraction with the same answer to go on the other side of the equals sign. <p>Demonstrate this as a whole class first.</p>	<p>Explain methods used to solve a problem orally and in writing.</p> <p>VOCABULARY add subtract method jottings number line counting on partition</p> <p>RESOURCES Whiteboards</p>	<ul style="list-style-type: none"> Show the class the number sentence $23 + 17 = \square$ <p>Explain that you have written down how you calculated the answer in your head, but have covered it with a piece of paper.</p> <p>This might include $23 + 10 = 33$ or $20 + 10 = 30$ $33 + 7 = 40$ $3 + 7 = 10$ $30 + 10 = 40$</p> <p>or</p>  <p>Ask the class to record how they think you worked it out on their whiteboards before you reveal your recording. Take responses and compare the children's methods.</p> <p>Q Can you explain your recording?</p> <p>Explain to the children why some of those recordings are efficient and make good use of number facts, place value or the number line.</p> <p>Uncover the hidden recording and explain each method. Compare them with the children's methods.</p> <ul style="list-style-type: none"> Repeat for the subtraction $60 - 29 = \square$ <p>Prepare these methods: $60 - 30 = 30$ $30 + 1 = 31$</p>  <p>and $29 + 1 = 30$ $30 + 30 = 60$ $60 - 29 = 31$</p>  <ul style="list-style-type: none"> Ask the class to record how they would solve the following calculations. <div style="display: flex; justify-content: space-around;"> <div> $45 + 23 = \square$ $45 + \square = 91$ $45 + 17 = \square$ </div> <div> $68 - 47 = \square$ $90 - \square = 71$ $95 - 18 = \square$ </div> </div>	<ul style="list-style-type: none"> Take feedback from several children to assess how well they can explain their recording. <p>Q Was there a more efficient way to work out the answer? Did you count on or back? Did you partition? Could you have recorded fewer steps?</p> <p>Uncover your recordings and ask the children to discuss these and their own recordings with a partner.</p> <p>Q Did you and your partner record the calculation differently? How was it different? Can you explain how your partner worked out the calculation?</p> <p>By the end of the lesson, children should be able to:</p> <ul style="list-style-type: none"> explain orally, or write that for $23 + 17$, I added 17 and 3 to get 20, then 20 more to get 40. <p>(Refer to supplement of examples, section 5, page 65.)</p>

Planning sheet	Day Five (page 1 of 2)	Unit 3 <i>Money and 'real life' problems</i>	Term: <i>Spring</i>	Year Group: 3
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
<p>Recall addition facts for numbers up to 20.</p> <p>Add several numbers.</p> <p>VOCABULARY total add together</p> <p>RESOURCES Whiteboards</p>	<ul style="list-style-type: none"> Write the following numbers on the board: 12, 3, 6, 8, 7, 5, 11, 2 and 9. Ask the children to choose three numbers which have a total of 20. They can use the same number more than once. They should record their number sentences on their whiteboards, e.g. $7 + 7 + 6 = 20$ or $6 + 2 + 12 = 20$ <div>Q What does total mean?</div> <ul style="list-style-type: none"> Remind them of some of the strategies taught last week to help them work out the totals e.g. starting with the largest number. <p>Explain that there are ten different ways to total 20.</p> <p>Tell the class they have five minutes to list as many as they can.</p>	<p>Choose the appropriate number operations and ways of calculating to solve problems.</p> <p>Explain methods used to solve a problem orally and in writing.</p> <p>VOCABULARY: addition subtraction calculation number sentence mental jottings</p> <p>RESOURCES: Activity sheet 3.3 Whiteboards</p>	<ul style="list-style-type: none"> Explain that today's lesson is about choosing the best way to work out calculations. Write the calculation $6 + 5$ on the board. <div>Q What's the answer?</div> <div>Q Did you have to work anything out in your head, or did you just know this as a fact?</div> <ul style="list-style-type: none"> Write $65 + 28 =$ on the board <div>Q What's the answer?</div> <div>Q Did you just know this or did you work it out? How did you work it out?</div> <p>Take verbal responses, showing how to record each on the board:</p> <ol style="list-style-type: none"> By partitioning $60 + 20 = 80$ $5 + 8 = 13$ $80 + 13 = 93$ By counting on in 10s and 1s: $65 + 20 = 85$ $85 + 8 = 93$  <ol style="list-style-type: none"> By partitioning, to bridge through a multiple of 10 $65 + 25 + 3 = 93$  <p>Explain that such jottings are important, not only to explain how you worked something out, but also to help keep track of your calculation.</p> <ul style="list-style-type: none"> Write $62 - 35 =$ on the board. <div>Q What's the answer?</div> <div>Q How did you work this out?</div>	<ul style="list-style-type: none"> Compare solutions from different children, focusing on how they decided they solved each problem. <div>Q Which calculations did you just know the answers to? Which did you work out in your head? For which did you use jottings to help you?</div> <ul style="list-style-type: none"> Invite children to record on the board how they worked out a calculation in their heads without talking. See if the other children can guess how they worked it out by looking at their recording. <p>By the end of the lesson, children should be able to:</p> <ul style="list-style-type: none"> choose and use appropriate ways of calculating to solve a given problem; decide whether the calculation can be done mentally or needs the use of apparatus such as a number line or hundred square; explain and record how the problem was solved. <p>(Refer to supplement of examples, section 5, pages 61 and 65.)</p>

Planning sheet	Day Five (page 2 of 2)	Unit 3 Money and ‘real life’ problems		Term: Spring	Year Group: 3								
Oral and Mental		Main Teaching			Plenary								
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities		Teaching Activities/ Focus Questions								
			<p>Ask the children to show their method on their whiteboards. Draw out the following:</p> <p>1. On a number line counting back, $62 - 30 = 32$, $32 - 2 = 30$, $30 - 3 = 27$</p>  <p>2. Counting on from 35 to 62 on a number line $35 + 25 = 60$, $60 + 2 = 62$</p>  <ul style="list-style-type: none">Explain that the jottings help to keep an accurate track of what you are working out in your head.Write the following calculations on the board, and ask the class to record them along with any jottings on Activity sheet 3.3 under the appropriate heading, depending on how they decided to work them out. <table><tr><td>1. $17 - 5$</td><td>5. $87 + 8$</td></tr><tr><td>2. $56 + 37$</td><td>6. $84 - 56$</td></tr><tr><td>3. $76 - 54$</td><td>7. $43 + \square = 85$</td></tr><tr><td>4. $50 + 30$</td><td>8. $73 - \square = 65$</td></tr></table>		1. $17 - 5$	5. $87 + 8$	2. $56 + 37$	6. $84 - 56$	3. $76 - 54$	7. $43 + \square = 85$	4. $50 + 30$	8. $73 - \square = 65$	
1. $17 - 5$	5. $87 + 8$												
2. $56 + 37$	6. $84 - 56$												
3. $76 - 54$	7. $43 + \square = 85$												
4. $50 + 30$	8. $73 - \square = 65$												

<p>60 children were in the school play.</p> <p>36 were boys.</p> <p>How many were girls?</p>	<p>When David last counted his pocket money he had 40p. Grandad gave him another 25p.</p> <p>How much does he have now?</p>	<p>Sinead had a ribbon 86cm long. She cut it into 2 pieces.</p> <p>One piece is 9cm</p> <p>How long is the other?</p>
<p>9 days ago Misty the dog was 86 days old.</p> <p>How old is she now?</p>	<p>There were 40 people on the bus.</p> <p>25 people got off at one stop.</p> <p>How many people are left on the bus?</p>	<p>Raj scored 60 points on his computer game. He then scored a further 36 before he finished. What is his total score?</p>





$60 - 36$	$40 + 25$	$86 - 9$
$86 + 9$	$40 - 25$	$60 + 36$

Problem for the plenary:

Nikki had 65 marbles. She won a further 27 in one afternoon. How many does she have now?



Here is a price list for the plants on sale at George's plant stall:

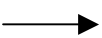
	Small	Medium	Large
 Cabbage plant	60p	£1.30	£2.10
 Sunflower	40p	£1.10	£2.40
 Rose	50p	£1.20	£2.30
 African violet	80p	£1.50	£2.60

Which three plants can you buy for £5.00?

How much change would you have?

<p>Lucy is sending out 34 party invitations. She has written 18 of them.</p> <p>How many more does she have to write?</p>	<p>There are 18 apples, 21 pears and 19 bananas in the fruit bowl.</p> <p>How many pieces of fruit are there altogether?</p>
<p>Sita scored 19 points on her computer game on Monday, and she scored 32 on Tuesday.</p> <p>On Wednesday she lost 24 points.</p> <p>What is her total score now?</p>	<p>We are visiting Grandad. Grandad lives 65 miles away. After 40 miles we stop for a rest.</p> <p>How much further is there to go?</p>
<p>Jack has 58p left after buying a pencil for 24p and a sharpener for 15p.</p> <p>How much did he have before he bought the pencil and sharpener?</p>	<p>Abdul is reading a book which has 95 pages. He read 15 pages in the morning and 25 pages in the evening.</p> <p>How many more pages has he left to read?</p>

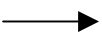
**Stick your problem
here**

Step 1 

Step 2 

Answer

**Stick your problem
here**

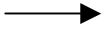
Step 1 

Step 2 

Answer

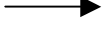
**Stick your problem
here**

Step 1 

Step 2 

Answer

**Stick your problem
here**

Step 1 

Step 2 

Answer

I just knew:

I worked it out in my head like this:

**How did you
solve the
calculation?**

I worked it out in my head with these jottings to help.

Sara has 45p and Karen has 25p.

How much more do they need between them to buy a magazine which costs £1?

Step 1 **————→**

Step 2 **————→**

Answer

The bus was carrying 58 passengers.

At the bus stop 14 people got off, then 7 people got on.

How many passengers were on the bus as it drove away from the bus stop?

Step 1 **————→**

Step 2 **————→**

Answer

Year 3 Unit 3 (Spring) Support Session 1

Money and 'real life' problems

Objectives

Make up 'number stories' reflecting number statements to choose the appropriate number operation to solve word problems involving one step.

Vocabulary

addition
subtraction
calculation
number sentence
total
altogether

Resources

0-20 number cards
Whiteboards

Oral and Mental Starter

Show the group two numbers from the 0-20 cards. e.g. 7 and 11. Ask them to write a number sentence using addition or subtraction with the two numbers, $7 + 11 = 18$ or $7 + 4 = 11$.

Q Can you make a different number sentence?

Q Can you make a sentence with one of the numbers after the equals sign?

Repeat for other pairs of cards.

Main Activity

Take one of the last number sentences written e.g. $12 + 5 = 17$

Make up a story reflecting that sentence e.g. there were 12 chickens in the farmer's yard. Another 5 hatched on Monday, so there were 17 chickens in total.

Q Can you make up a different number story?

Take responses, encouraging the children to use correct vocabulary such as total or altogether. Illustrate with pictures, diagrams, jottings or number lines.

Repeat for a subtraction sentence, e.g. $12 - 7 = 5$

Write two more number sentences on the board, one subtraction and one addition. Ask the children to work in pairs, choose one number sentence and make up a number story to tell the group.

Take feedback.

Plenary

Say the following number story:

'There were 19 people on the bus. 6 got off at the bus stop. How many were left on the bus?'

Ask the children to write down the number sentence which you were thinking of when you made up the story.

Q Why did you choose the subtraction sign? What is the answer?

Repeat with the following story:

'Joel had collected 17 stickers. Owen had collected 8. How many did they have between them?'

Q What number sentence was I thinking of? What is the answer?

Year 3 Unit 3 (Spring) Support Session 2

Money and 'real life' problems

Objectives

Understand and use decimal notation for money.

Find change by counting on.

Vocabulary

pound
pence
change
count on
coin
£

Resources

Mega Money, or real coins
P.E. bag or similar
Whiteboards
A tray with several priced items using the labels from Resource sheet S3.1

Oral and Mental Starter

Put a selection of Mega coins or real coins into a P.E. bag. Invite the children to come and pick two coins out of the bag e.g. a £1 coin and a 20p coin.

Q What amount have you got altogether?

Ask the children to record in pounds the amount correctly, i.e. £1.20.

Q How many pence are there in £1.00? And in £1.20p?

Ask the children to write how many pence the amount is, i.e. 120p.

Repeat several times with different children choosing the coins.

Main Activity

Show the group the tray with the items priced using tags from Resource sheet S3.1.

Give each child £2 (either as a £2 coin or two x £1 coins).

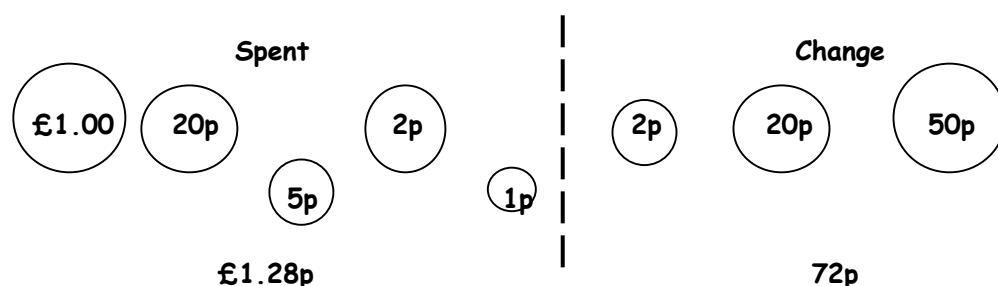
Play the part of a shopkeeper and ask each child to choose an item to buy.

Demonstrate how to count on to calculate the change from £2.00 using a number line:



Count out the coins for change as a child gives you £2.00. Establish that the change is 72p.

Show them $£1.28 + 72p = £2.00$ by adding up the two amounts on your whiteboard.



Repeat for a different item, working out the change given from either £1.00 or £2.00.

Q 47p and what make 50p? 50p and what make £1.00?

Ask the children to draw the steps on their whiteboards.

Plenary

Q How might you work out the change from £2.00 when you have spent some money?

Q What are the good landmarks to count on to?

Establish that counting to multiples of 10p and £1 are useful.

Cut for labels



£1.20	85p	£1.55	£1.05
75p	£1.39	47p	£1.28