

Unit 10
Understanding addition and subtraction

Five daily lessons

**Merseyside Consultants’
 Cluster Group**

Year 1
Spring term

This Unit Plan is designed to guide your teaching.

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

Unit Objectives

Year 1

- **Understand the operation of addition and subtraction (as how many more)**
- Partition into 5 and a bit when adding 6, 7, 8 or 9
- Bridge through 10 when adding single digit numbers
- Find totals
- Work out how to pay an amount by using smaller coins
- Solve simple mathematical problems or puzzles
- Explain methods orally
- Choose and use appropriate number operation and mental strategy to solve a problem

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Link Objectives

Reception

- Begin to use the language involved in addition and subtraction.
- **Begin to relate addition to combining 2 groups of objects, counting all the objects.**
- Relate subtraction to taking away, counting how many are left.
- Sort coins 1p, 2p, 5p

Year 2

- Add more than 2 numbers e.g. add 3 numbers by putting the largest first and/or finding a pair that make 10.
- Find totals of money and give change.
- **Choose and use appropriate number operation and mental strategy to solve money and real life problems.**
- Check results. Explain methods orally.

Resources needed to teach this unit:

- Washing line
- Pegs
- Socks
- Number fans
- Whiteboards
- Selection of items for sale
- Large coins
- Mathematical challenges for More Able Children Problem No. 2

(Key objectives in bold)

Planning sheet	Day One	Unit 10 <i>Understanding addition and subtraction</i>	Term: <i>Spring</i>	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
		<p>Understand the operation of addition and subtraction (as how many more)</p> <p>VOCABULARY Add Sum Equals</p> <p>RESOURCES Washing line Pegs Whiteboards</p>	<ul style="list-style-type: none"> Washing line with 10 pegs. Ask child to split pegs into 2 groups and children write sum to represent on whiteboard eg $7 + 3 = 10$. Repeat with 2 different groups. <p>Q What happens when we split into 3 groups - can we still make 10?</p> <ul style="list-style-type: none"> Children discuss this in pairs and suggest a calculation. Model example of calculation eg $3 + 5 + 2 = 10$ using pegs and written calculation. We can add more than 2 numbers together. Give children a number, eg 9, 12 or 15 (more able) ask them to find as many sums as possible to make that number. Provide multilink if necessary. Children to record calculation using notation/pictures. 	<ul style="list-style-type: none"> Look at children's solutions to make 15 - using 2 and 3 numbers. <p>Q Can we use different numbers?</p> <p>Q Can we make 15 using 4 or 5 numbers?</p> <p>Q What do we know?</p> <ul style="list-style-type: none"> We know we can add any number of numbers to make a given number. <p>By the end of the lesson children should be able to:</p> <ul style="list-style-type: none"> Add any number of numbers to make a given number. <p>(Refer to supplement of examples, section 5, page 27)</p>

Planning sheet	Day Three	Unit 10 <i>Understanding addition and subtraction</i>	Term: <i>Spring</i>	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
		<p>Understand the operation of addition and subtraction (as how many more).</p> <p>VOCABULARY Take away Subtract How many are left How many move to make Makes Equals Number sentence</p> <p>RESOURCES Washing line Number fans Socks Whiteboards</p>	<ul style="list-style-type: none"> Washing line with 10 socks. Teacher writes 10 on board. Ask child to remove some of the socks. Q How many have been taken away? Answers using fans. Record on board eg $10 - 3$ Q How many are left? Children again use number fans to show answer. Record on board eg $10 - 3 = 7$ Q How many socks did we start with? Q How many socks did we take away? If we put these numbers in a number sentence Q How would we say it? Q How could we write this? Show me on whiteboards. Record number sentence on board $10 - 3 = 7$ We have 7 socks left. Q How many more do we need to make 10? Children to show answers on number fans. Record numbers as before eg $7 - 3 = 10$ Q Can we make these numbers into another number sentence? Children to show calculation on whiteboards. Teacher to write calculation on board $7 + 3 = 10$ Repeat procedure taking away different number of socks and recording number sentences. Activities. Children use 10/20 objects to subtract followed by complimentary addition. Practically at first and, then record number sentence. 	<ul style="list-style-type: none"> If I tell you $3 + 4 = 7$ Q What other number sentence can you give me? Discuss with partner and write calculation on whiteboard. $4 + 3 = 7$ $7 - 3 = 4$ $7 - 4 = 3$ Collect answers and record on board. Ask for example of one of children's number sentences. As class record all possible calculations using these 3 numbers. <p>By the end of the lesson children should be able to:</p> <ul style="list-style-type: none"> Understand the relationship between addition and subtraction. <p>(Refer to supplement of examples, section 5, page 34)</p>

Planning sheet	Day Four	Unit 10 <i>Understanding addition and subtraction</i>	Term: <i>Spring</i>	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions
		<ul style="list-style-type: none"> ◆ Find totals ◆ Work out how to pay an amount using smaller coins <p>VOCABULARY Money Coin Total Cost</p> <p>RESOURCES Selection of items for sale priced up to 10p Coins - real coins if possible! Large magnetic coins Whiteboards</p>	<ul style="list-style-type: none"> • Put selection of items for sale at the front of the class where the children can see them. • Ask 2 children to come out and choose 1 item each. • Children then read out the cost of each item eg 6p + 3p. Teacher wants to buy both. Q How much will they cost? • Children to write number sentence on whiteboard to show this calculation eg $6p + 3p = 9p$. Children to explain methods. • Agree the answer and write this on the board. • Show children the large magnetic coins representing 10p, 5p, 2p and 1p. Q Which coins would I need to pay for these things? • Collect responses and show using coins the different way we could pay eg $5p + 1p + 1p + 1p + 1p$ or $2p + 2p + 2p + 2p + 1p$ etc. • Repeat procedure and extend for more able using 3 items from shop. • Activities. Children to work in pairs to buy 2/3 items from shop, record calculation and different ways to pay either in number sentences or by drawing coins 	<ul style="list-style-type: none"> • Put selection of coins on board. • Explain to the children that this is how much she/he spent on a visit to the shop. Q How much is this altogether? • Children to work in pairs and record on whiteboards. • Children to share methods used with rest of class eg starting with largest coin first or adding coins to make 5p or 10p first. <p>By the end of the lesson children should be able to:</p> <ul style="list-style-type: none"> • Work out how to pay an amount using smaller coins. <p>(Refer to supplement of examples, section 5, page 68)</p>

