Unit 3
Understanding addition and subtraction

Five daily lessons

Primary
National Strategy

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 of subtraction (as 'take away', 'difference'** and 'how many more to make?'**) and use the related vocabulary**. Begin to understand that addition can be done in any order. Begin to use the +, – and = signs to record mental calculations in a number sentence, and to recognise the use of symbols such as □ or Δ to stand for an unknown number. Pages 24–28
- Identify near doubles, using doubles already known (e.g. 6 + 5). Page 32

Link Objectives

Reception

- **Begin to use the vocabulary involved in adding and subtracting.**
- **Begin to relate addition to combining two groups of objects, counting all the objects.**
- Begin to relate addition to counting on.
- Begin to relate the addition of doubles to counting on.
- **Find one more or one less than a number from 1 to 10.**
- **Begin to relate subtractions to 'taking away' and counting how many left.**

(Key objectives in bold)

Year 2

- Extend understanding of the operations of addition and subtraction. Use and begin to read the related vocabulary. Use the +, – and = signs to record mental additions and subtractions in a number sentence, and recognise the use of a symbol such as □ or Δ to stand for an unknown number.
- **Use knowledge that addition can be done in any order to do mental calculations more efficiently.** For example: put the larger number first and count on in tens, or ones, and add three small numbers by putting the largest number first and /or find a pair totalling 10.
- Understand that subtraction is the inverse of addition.

Resources needed to teach this unit:

- Resource sheet 3.1
- Resource sheet 3.2
- OHT 2.1 (from Unit 2)
- ITP 'Number facts'
- Activity sheet 3.1
- Large 0–20 number line
- 0–20 number lines for each child
- 0–100 number line
- Counters
- Washing line and number cards 1–10
- Cubes to make towers
- 'Magic' box or bag
- Cards with addition and subtraction questions (up to 20) on them
- Three hoops
- Two beanbags
- Cards labelled 2, 4 and 6
- 100 bead string
- Coat hanger with 10 pegs
- Tea towel
- Puppet
- Large dice
- 10p coins
- Tin
- Whiteboards

Also use Models and Images charts:
- Addition and subtraction facts to 20;
- Understanding addition and subtraction.

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Planning sheet	Day One	Unit 3 *Understanding addition and subtraction*	Term: *Spring*	Year Group: *1*

Oral and Mental

Objectives and Vocabulary	Teaching Activities
Count on and back in ones. Begin to know addition facts for all pairs of numbers with a total up to at least 10, and the corresponding subtraction facts. VOCABULARY how many? add, plus, and total together makes take away subtract RESOURCES ITP 'Number facts' 100 bead string	• Count in ones from 20 to 30 on the bead string. Count back in ones from 30 to 20. **Q** Who can tell me a number that lies between 20 and 30? • Use the ITP 'Number facts' to practise addition facts for 8 (alternatively use counters on OHP or whiteboard). Start with eight counters, highlight the first one and ask children to say the number sentence 1 + 7 = 8. (If using counters on an OHP, move the first counter to one side) When they have done so click on number sentence box to display the sentence (or write it on the OHT). Highlight another counter to show 2 + 6 = 8 and so on. • Start with eight counters again. Select subtraction. Deselect the number sentence option and drag two counters into the bin on the screen. Ask the children to write the number sentence on their boards. Then select the number sentence option to display 8 – 2 = 6. **Q** What number sentence would you have written if I had put the red counters in the bin instead of the yellow counters? Draw out that this would be 8 – 6 = 2. • Invite children to explain a number sentence such as 8 – 3 = 5 as 8 counters, put 3 in the bin, 5 left. • Repeat for other subtraction facts about 8.

Main Teaching

Objectives and Vocabulary	Teaching Activities
Understand the operation of addition and use the related vocabulary. Begin to understand that addition can be done in any order. Begin to use the +, – and = signs to record mental calculations in a number sentence. VOCABULARY altogether count on RESOURCES Resource sheet 3.1 OHT 2.1 (from Unit 2) Counters	• Show OHT 2.1 of a bus with 20 windows. Say that 8 people will be getting on the bus. Show the 8 counters to represent people. Invite a child to come and arrange the counters on the bus. **Q** How many people has Rebecca put on the top deck of the bus? How many people has she put on the lower deck? So how many people altogether? Say, '6 on the lower deck, add on 2 more is 8'. Model holding up 6 fingers and counting on from 6 saying '7, 8'. Model the addition on a number line. Start on 6 and jump on 2. Write on board 8 = 6 + 2. • Invite another child to rearrange the 8 counters, saying that you and the class are going to try and find different ways of arranging the 8 people. **Q** How many people has Nazeem put on the top deck? (5) How many on the bottom? (3) How can we check that there are still 8 people on the bus? Point to the five on the lower deck, hold up three fingers, saying 'three more people, six, seven, eight'. **Q** If I put my finger on 5 on the number line and jump on 3 what number will I land on? Ask the children to look at the number line and invite a child to come and start on 5 and jump on 3. Write on the board 8 = 5 + 3. • Repeat the process for other arrangements. • Give each child a copy of Resource sheet 3.1 and 10 counters. Ask them to arrange the 10 counters on the bus in different ways and to write each different way as a number sentence in their books.

Plenary

Teaching Activities/Focus Questions

• Write on the board 7 + □ = 10.

Q What is the missing number?

Q Imagine 10 people on our bus, 7 are sitting on the bottom deck. How many would be on the top?

Q How can we work out what the missing number is? Can we use the strategy of counting on?

Put 7 counters on the OHT of the bus.

Model how to count on from 7 to 10 by holding up 7 fingers and holding up 1more finger at a time until you get to 10.

Say, '7… 8, 9, 10'.

Q How many fingers am I holding up? So what is our missing number?

• Put 3 more counters on the bus and count on from 7 to check that there are 10.

• Repeat for:
□ + 8 = 10
2 + Δ = 10

By the end of the lesson children should be able to:
- **record simple mental additions in a number sentence using + and =;**
- **understand addition as counting on.**

(Refer to supplement of examples, section 5, page 24.)

Planning sheet	Day Two	Unit 3 *Understanding addition and subtraction*	Term: *Spring*	Year Group: *1*

Oral and Mental

Objectives and Vocabulary	Teaching Activities
Count on and back in ones. Begin to know addition facts for all pairs of numbers with a total up to at least 10, and the corresponding subtraction facts. VOCABULARY add sum total altogether equals RESOURCES Whiteboards 0–20 number line	• Ask the class to join in with you as you establish a rhythm by clapping hands and tapping knees. When children are happy with the rhythm on the claps count from 0 to 30. Ask the children to count back from 30 to 0. • Write on board: 4 + 3 = □. **Q** What is the answer? How can we work out what 4 add 3 is? Ask a child to explain how they worked it out. • Now ask the class to work in pairs and to write down other additions that have a total of 7 on their whiteboards. • Share the different ways, checking each one by counting on using a number line.

Main Teaching

Objectives and Vocabulary	Teaching Activities
Understand the operation of subtraction (as take away) and use the related vocabulary. Begin to use the +, – and = signs to record mental calculations in a number sentence. VOCABULARY take away subtract count back how many left? RESOURCES OHT 2.1 (from Unit 2 or copy Resource sheet 3.1) 20 counters Resource sheet 3.2 0–20 number line	• Show OHT 2.1 of a bus. Put 7 counters on the bus to represent people. **Q** How many people are on the bus? Ask children to hold up that number of fingers. • Say that 2 people want to get off the bus at the next bus stop. **Q** How many people will be left on the bus? Encourage children to use their fingers to find out by holding up 7 fingers and bending down (taking away) 2 of their fingers. Model how to do this by saying, '7 take way 1 is 6' (as you bend down 1 finger) 'take away 2 is 5' (as you bend down the second finger). • On the OHT repeat the process, taking 1 counter away at a time and saying, '7 take away 1 is 6, take away 2 is 5'. Write on the board: 7 take away 2 is 5. Invite a child to come and write the number sentence on the board using the symbols – and = i.e. 7 – 2 = 5. • Put 10 counters on the bus. **Q** How many counters on the bus? Ask children to hold up that number of fingers. Say that 4 people want to get off the bus at the next bus stop. **Q** There are 10 people on the bus but 4 people want to get off. How many people will be left on the bus? Encourage children to use their fingers to find out by bending down (taking away) 4 of their fingers. Model how to do this by saying, '10 take way 1 is 9 (as you bend down 1 finger) take away 2 is 8 (as you bend down the second finger) take away 3 is 7, take away 4 is 6'. On the OHT repeat the process, taking 1 counter away at a time and saying, '10 take away 1 is 9, take away 2 is 8, take away 3 is 7, take away 4 is 6'. Write on board 10 take away 4 is 6. Invite a child to come and write the number sentence on the board using the symbols – and = i.e. 10 – 4 = 6. • Repeat for other subtraction calculations. • Give each child a copy of Resource sheet 3.2. Ask the children to copy and complete the calculations in their books. Encourage them to use their fingers to help them.

Plenary

Teaching Activities/Focus Questions

• Show OHT 2.1 and put 20 counters on the bus.

Q How many people on the bus?

Establish that there are 20. Say that at the next bus stop 2 people want to get off.

Q If 2 people get off the bus, how many people will be left on the bus?

Explain that to solve this problem with your fingers would be tricky, as you do not have 20 fingers. Explain that you can use a number line instead.

Show the 0–20 number line. Point to 20 saying, '20 people on the bus, but 2 want to get off, 20 take away 1 is 19 (as you jump back one) take away 2 is 18' (as you take a second jump).

Write on board 20 – 2 = 18.

• Repeat, taking away other small numbers from 20. Invite children up to use the number line.

HOMEWORK – Ask children to make up a story where you would need to take away to find the answer, e.g. Mrs Goode had 10 apricots and ate 5. How many are left? Ask them to ask someone at home to write the story on a piece of paper for them.

By the end of the lesson children should be able to:
- **record simple mental subtractions using the – and = signs;**
- **understand subtraction as taking away.**

(Refer to supplement of examples, section 5, page 28.)

Planning sheet	**Day Three**	**Unit 3** ***Understanding addition and subtraction***	**Term:** ***Spring***	**Year Group:** ***1***

Oral and Mental

Objectives and Vocabulary	Teaching Activities
Count on and back in ones. Begin to know addition facts for all pairs of numbers with a total up to at least 10, and the corresponding subtraction facts. VOCABULARY count on count back how many? add, plus, together makes lies between RESOURCES Coat hanger with 8 pegs on it Tea towel 0–100 number line	• Repeat the clap, tap, knee counting from yesterday but counting from 30 to 50 in ones on each clap. **Q** Who can tell me a number that lies between 30 and 50? Check their answers by checking they lie between 30 and 50 on the number line. • Show the children a coat hanger with 8 pegs on it. **Q** How many pegs on the coat hanger? Ask children to show you the answer using their fingers. • Cover up 5 of the pegs by sliding them to one end underneath a tea towel. **Q** How many pegs can you see? Ask children to show you with their fingers. **Q** So how many pegs are hidden under the tea towel? Ask children to show you with their fingers. Encourage them to count on from the number of pegs they can see to 8 keeping track of the count with their fingers to work out the answer. Say, '5 add 3 is 8'. • Repeat hiding different numbers each time.

Main Teaching

Objectives and Vocabulary	Teaching Activities
Understand the operation of subtraction (as take away) and use the related vocabulary. Begin to use the +, – and = signs to record mental calculations in a number sentence. VOCABULARY take away subtract count back how many left? RESOURCES 0–20 number lines for each child Large 0–20 number line Activity sheet 3.1	• Give each child a 0–20 number line. Tell the children that for your snack today you have a bunch of 20 grapes. Ask them to imagine 20 grapes. **Q** I have 20 grapes but I eat 2. How many grapes are left? Use a bead string, count out 20 beads, then take away 2, saying, '20 take away 1 is 19, take away 2 is 18'. Model how to solve the problem using the number line. Point to 20 and say, '20 grapes, eat one grape leaves 19' (as you count back one jump) 'eat two leaves 18' (as you count back a second jump). Ask children to use their number line and to count back 2 from 20. **Q** Imagine I have 20 grapes but I give 5 away to my friend. How many grapes have I got left? • Encourage children to find out by using their number lines. Collect some answers then check as a class using the large number line saying, '20 subtract 1 is 19, subtract 2 is 18, subtract 3 is 17, subtract 4 is 16 subtract 5 is 15'. Use bead string as a concrete image: count out 20 and take away 5, saying, '19, 18, 17, 16, 15' as you do so. **Q** Now I have 15 grapes and I eat 3. How many do I have left? **Q** Which number do I need to point to on my number line this time before I start? • Ensure the children start on 15 and then count back 3 saying 14,13,12. 12 left. • Repeat process for different calculations. • Give each child a copy of Activity sheet 3.1 to complete. They should draw the jumps on the number lines for each question. **Q** Which subtraction will need the biggest jump? Will that give the smallest answer?

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Teaching Activities/Focus Questions
• Look at two of the problems that the children made up for homework. Solve the problems by counting back on a number line. Ask the children to draw a number line for their own problem. • Take down the number line and explain that you are going to ask the class a subtraction problem to solve without a number line. **Q** Imagine I had 20 grapes and I ate 4 of them. How many grapes are left? Model counting back from 20 without a number line. Say, 'I have 20 grapes and I am going to eat 4 of them'. Hold up 4 fingers. 'I am going to subtract 4 from 20 by counting back'. Say, '20 grapes subtract 1 is 19' (as you bend down the first finger), 'subtract 2 is 18' (as you bend down the second finger) 'subtract 3 is 17' (as you bend down the third finger) 'subtract 4 is 16' (as you bend down the last finger). Hold up four fingers again. Fold down the first saying 19, the next saying 18, the next saying 17 and the fourth saying 16. **Q** Imagine I had 20 grapes and I eat 5 of them. How many do I have left? • Encourage children to use their fingers to count back. **By the end of the lesson children should be able to:** • **record simple mental subtractions using the – and = signs;** • **understand subtraction as taking away.** (Refer to supplement of examples, section 5, page 28.)

Planning sheet	**Day Four**	**Unit 3** ***Understanding addition and subtraction***	**Term:** ***Spring***	**Year Group:** ***1***

Oral and Mental

Objectives and Vocabulary	Teaching Activities
Count on and back in ones. Know by heart addition doubles of all numbers to at least 5 + 5. VOCABULARY count on/back next three numbers RESOURCES Puppet Large 1–6 dice	• Make the puppet say, '6, 7, 8'. Ask the children to say next three numbers. • Repeat using numbers up to 50, counting backwards as well as forwards. E.g. Puppet says, '29, 28, 27'. Children say, '26, 25, 24'. • Roll a large dice and ask children to double the number thrown. Ask them to show you the answer with their fingers. Encourage the children to use their fingers to help them work out the answer. To find double 4 hold up 4 fingers on one hand and 4 on the other. **Q** How can we work out double 6? Draw out that they could view this as double 5 and double 1 or they could imagine an extra finger on each hand.

Main Teaching

Objectives and Vocabulary	Teaching Activities
Identify near doubles, using doubles already known. VOCABULARY double add together near double RESOURCES Number cards 1–10 Washing line Cubes to make towers Bead string Whiteboards	• Hang the numbers 1–10 on to a washing line. Point to different numbers and ask the class to double each number. For each number make two towers of cubes to show the double fact. Use the ends of a bead string to show doubles (i.e. the same number from each end laid next to each other). • Take two consecutive numbers off the washing line, for example 3 and 4. **Q** What is 3 add 4? **Q** How can we use what we know about doubles to help us add these two numbers? • Hold up the two towers of 3, saying, 'double 3 is 6 but we need to add 3 and 4'. Add one more cube to a tower of 3 saying, 'now we have 3 add 4. We could add 3 and 3 and then 1 more. 3 add 3 is 6 and one more is 7'. Also model using the opposite ends of a bead string. Write on the board 3 + 4 = 3 + 3 + 1 = 7. • Repeat for other consecutive numbers, encouraging the children to see the calculation as adding one more to a double fact they already know. • Explain to the class that you are selecting numbers that are next to each other to provide near double questions. Emphasise that for any pairs of numbers next to one another, one is always one more than the other. Show this using pairs of towers. Ask the children for other examples of pairs of consecutive numbers. • Ask each child to write some near double calculations for their partner to solve. They should use doubles to at least 5 + 5.

Plenary

Teaching Activities/Focus Questions
• Give each child a whiteboard. Ask them to show you the answers to a selection of problems. **Q** I have 3p and 4p. How much do I have altogether? **Q** I had 4 sweets and I bought 4 more. How many do I have altogether? **Q** 5 people are sat on a bus. 6 more get on. How many people are on the bus now? **Q** Double 4 add 1 more? **Q** What is 7 add 7? • After each question, ask the children whether the question was a double or a near double. **By the end of the lesson children should be able to:** • **know by heart addition doubles from 1 + 1 to at least 5 + 5;** • **begin to know addition doubles from 6 + 6 up to 10 + 10;** • **work out mentally that 5 + 6 = 11 and explain that it is double 5 plus 1.** (Refer to supplement of examples, section 5, pages 30 and 32.)

Planning sheet	Day Five	Unit 3 *Understanding addition and subtraction*	Term: *Spring*	Year Group: *1*

Oral and Mental

Objectives and Vocabulary	Teaching Activities
Count on and back in tens. Begin to know addition facts for all pairs of numbers with a total up to at least 10, and the corresponding subtraction facts. VOCABULARY tens count on/back how many add together RESOURCES 100 bead string 10p coins Tin Coat hanger and 9 pegs Tea towel	• Count in tens on the 100 bead string. • Drop five 10p coins into a tin. **Q** How many 10p coins did I put into the tin? So how much money is in the tin? Collect answers and repeat dropping other amounts of 10p coins into the tin. • Show the children a coat hanger with 9 pegs on it. **Q** How many pegs are on the coat hanger? Ask the children to show you the answer using their fingers. • Cover up 5 of the pegs by sliding them to one end underneath a tea towel. **Q** How many pegs can you see? Ask children to show you with their fingers. **Q** So how many pegs are hidden under the tea towel? Ask children to show you with their fingers. Encourage them to count on from the number of pegs they can see to 9 to work out the answer. Say, '5 and 4 is 9'. • Repeat, hiding a different number each time.

Main Teaching

Objectives and Vocabulary	Teaching Activities
Understand the operation of addition, and of subtraction (as 'take away', 'difference' and 'how many more to make?') and use the related vocabulary. Begin to understand the addition can be done in any order. Begin to use the +, – and = signs to record mental calculations in a number sentence. Identify near doubles, using doubles already known. RESOURCES 'Magic' box or bag Cards with addition and subtraction questions (up to 20) on them Three hoops Cards labelled 2, 4 and 6 Two beanbags 0–20 number lines Whiteboards	Put the question cards into the 'magic' box or bag. Invite a child to pull out a question card from the bag, for example 10 – 4 = □ and read the question. **Q** Do we have to add or subtract? How do you know? **Q** How will you work out the answer? Encourage the children to use their whiteboards to show you the answer and any jottings that they used. • Model some different ways of solving the problem drawing on the children's strategies which might include: I held up 10 fingers and I took away 4, leaving me with 6. I looked at the number line and counted 4 jumps back from 10. I put 10 in my head and counted back 4. I drew a number line on my board and counted back 4 jumps from 10. (Draw the jumps on the number line where these have been used.) • Invite a child to come and pull another question from the bag, for example 5 + 6 = □. **Q** What do we have to do? How do you know? Ask children to use their whiteboards to show you their workings and answers. Highlight different strategies: Some of you saw that this was a near double and you worked out 5 + 5 + 1 more. Some of you held up 6 fingers and counted on from 5 some counted on from 6. Some of you used a number line; you started on 5 and counted on 6. Some of you put 5 in your head and counted on 6 or counted on from 6. • Repeat this process for different questions, use numbers beyond 10 so that children have to use strategies other than counting on their fingers. • Model drawing number lines and ask the children to try that strategy too. • Put a selection of questions face down on each table. Ask children to turn over a card and copy it into their book with the answer and any jottings that they used. Provide number lines.

Plenary

Teaching Activities/ Focus Questions

• Sit the class in a circle.

Put three hoops in the middle of the circle, put a card with number 6 on it in one hoop; a card with number 4 on in the second hoop; and finally a card with number 2 on in the third hoop.

Explain that you will be playing a game that involves throwing two beanbags into the hoops. Say that both beanbags can be thrown into the same hoop.

Ask the class to work out your score as you throw one beanbag into the 4 hoop and the other into the 2 hoop.

Ask children to explain their strategy.

• Ask individuals up to have a go. Can the rest of the class work out the score?

• Finally ask the following questions:

Q What is the highest score possible?

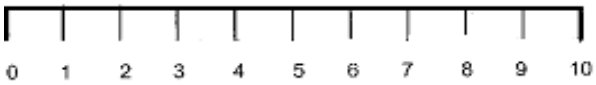
Q What is the lowest score possible?

Q How could I score 12?

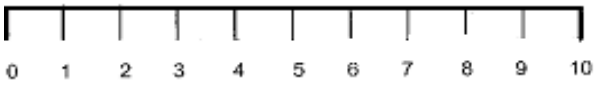
By the end of the lesson children should be able to:

- **explain orally and record the answers to a range of addition and subtraction calculations.**

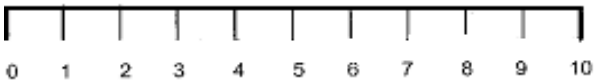
(Refer to supplement of examples, section 5, page 64.)



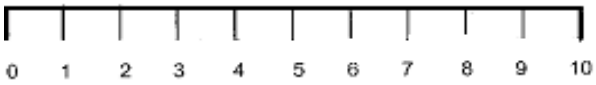
8 – 2 = ☐



6 – 2 = ☐



7 – 2 = ☐



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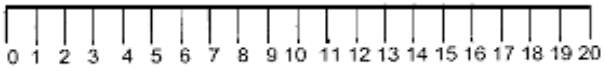
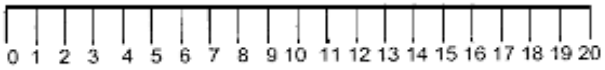
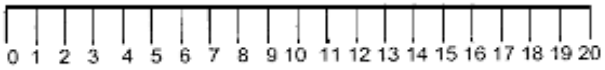


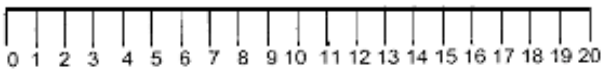
20 – 2 = ☐



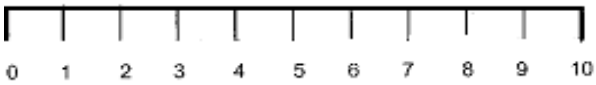
18 – 3 = ☐



15 – 4 = ☐



20 – 4 = ☐



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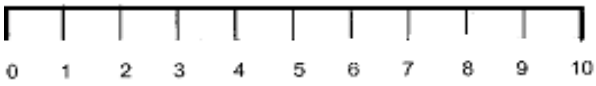
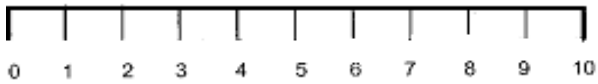
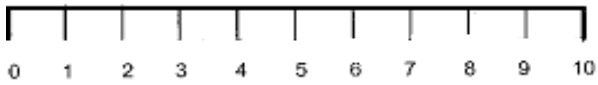


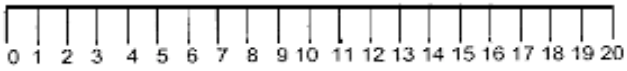
9 – 2 = ☐



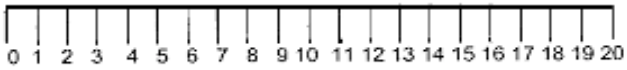
7 – 3 = ☐



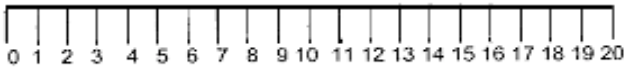
9 – 4 = ☐



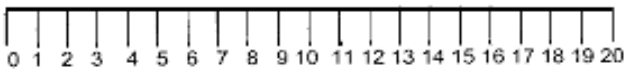
20 – 3 = ☐



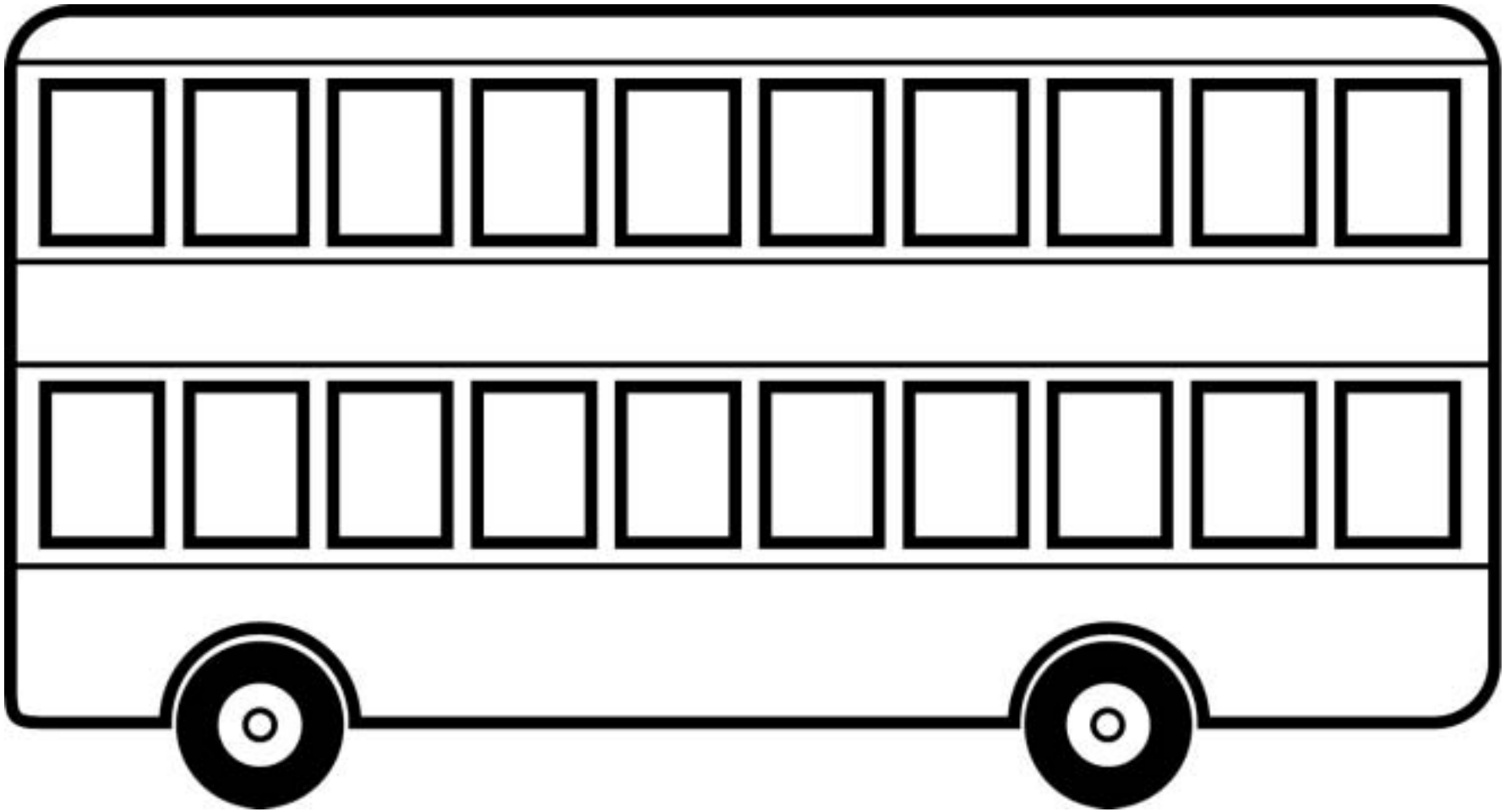
19 – 3 = ☐



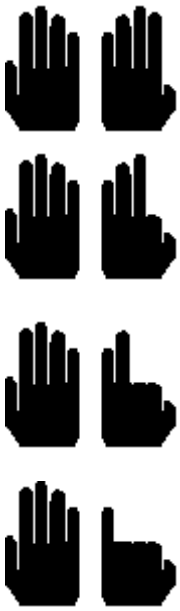
16 – 5 = ☐



17 – 4 = ☐



Taking Away



10 – 1 = ☐

10 – 2 = ☐

10 – 3 = ☐

10 – 4 = ☐

6 – 1 = ☐

6 – 2 = ☐

6 – 3 = ☐

6 – 4 = ☐

8 – 1 = ☐

8 – 2 = ☐

8 – 3 = ☐

8 – 4 = ☐

Year 1 Unit 3 (Spring) Support Session 1
Understanding subtraction

Objectives
Understand the operation of subtraction (as 'take away', 'difference' and 'how many more to make?') and use the related vocabulary. Begin to use the – and = signs to record mental calculations in a number sentence.

Vocabulary
how many?
take away
count back
subtract
less

Resources
Number cards 10 to 30
Bag
Large 0–10 number line
Large counters or large circles of card
Small 0–10 number lines
Counters
Subtraction questions on pieces of card.

Oral and Mental Starter
Sit the children in a circle. Put number cards 10–30 in a bag.

Invite a child to pull a number from the bag and identify the number.
Use this number as a starting number for counting back to 10 around in a circle.

Q If we are counting back what happens to the numbers. Do they get bigger or smaller?

Repeat for other numbers in the bag, using different types of voices when counting (e.g. like a mouse, like giants, whispering, singing).

Main Activity
Display a large 0–10 number line. Count from 0 to 10 and back from 10 to 0 on the line.
Say that you are going to be practising take-away questions using the number line.
Write 5 – 2 on the board.

Q Who can read this question?

Q Is there another way of saying it?

Draw out that we can say 'subtract' instead of 'take away'.

Q How can we find out the answer?

Ensure children understand that when we subtract 2 the answer will be smaller so that one way of solving subtraction questions is to count back.

Stick 5 large counters (or circles of card) above the numbers 1–5 (one above each number).

Q We have 5 counters. How many do we have to subtract?

Subtract the two counters one at a time starting at the right, saying, '5 take away 1 is 4, and take away another one leaves 3. We have 3 counters left' (these should be above numbers 1, 2 and 3).

Now ask the children to show you 5 fingers and to take away 2 by saying, '5 take away 1 is 4' (as you bend down 1 finger) and 'take away 2 is 3' (as you bend down the second finger).

Repeat for 8 – 3, using the number line and counters and then fingers, this time using the word 'subtract' instead of 'take away'.

Give each child a 0–10 number line and 10 counters. Write 10 – 3 on the board and ask the children to solve the question using their number line and counters.
Encourage them to subtract one counter at a time.

Give each child a card with a different subtraction question on it. Ask them to solve it using their number line and then to swap questions with a friend. As they do this work with each member of the group in turn to check their method is secure.

Plenary
Ask the children to imagine a 0–10 number line in their heads and then to imagine putting 6 counters on the number line. Ask them to subtract 2 counters.

Q How many are left?

Encourage the children to visualise the counters sitting on the number line. Repeat for 5 – 3.

Year 1 Unit 3 (Spring) Support Session 2
Understanding subtraction

Objectives

Understand the operation of subtraction (as 'take away', 'difference' and 'how many more to make?') and use the related vocabulary. Begin to use the – and = signs to record mental calculations in a number sentence.

Vocabulary

how many?

take away

count back

subtract

less

Resources

Puppet

0–20 number line

0–20 wipe clean number lines

Dry-wipe pens

Subtraction questions on pieces of card

Whiteboards

Oral and Mental Starter

Make the puppet say, '8, 7, 6'. Ask children to say the next three numbers in the sequence.

Repeat using numbers up to 20 and counting backwards.

Puppet says, '19, 18, 17'

Children say, '16, 15, 14'

Refer to a 0–20 number line if necessary.

Main Activity

Ask the children for some words that mean 'take-away', such as 'subtract' and 'difference'.

Remind the children that last time they were solving take away problems by counting back on a number line.

Give each child a wipe-clean 0–20 number line.

Write 12 subtract 3 on the board.

Q What does this say?

Q How can we solve this problem?

Say that you could put 12 counters on our number line and subtract 3 but that you could also do this without counters by jumping back on the number line.

Ask each child to put their finger on 12 and to jump back 3 saying, '12 count back 1 is 11, count back 2 is 10, count back 3 is 9'.

Repeat for 20 – 4.

Give children a dry-wipe pen and show them how to record their jumps on the number line.

Q For the problem 15 subtract 3, where do we start on our number line? How many are we counting back? How many jumps do we need to do?

Give each child a card with a different subtraction question on it. Ask them to solve it using their number line and then to swap questions with a friend. As they do this work with each member of the group in turn to check their method.

Plenary

Give each child a whiteboard.

Ask them to respond to questions such as:

Q What is 13 take away 2?

Q What is 10 count back 3?

Q What is 20 subtract 2?

Encourage the children to visualise the jumps on the number line without drawing them.