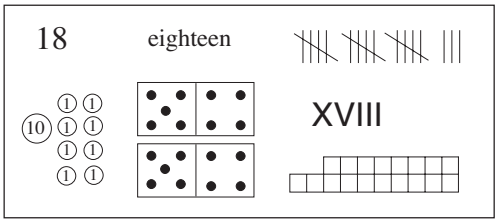
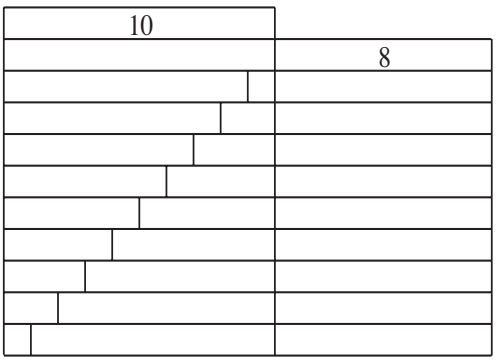
# Bk1

R: Mental counting
**C: Number bonds and sums to 18**
*E: Roman numerals*

## *Lesson Plan 113*

| *Activity* | | *Notes* |
|---|---|---|
| **1** | **Mental Counting**<br>a) On the posters find things which make 18 altogether.<br>*Poster 5*: e.g. 8 swallows, 4 frogs, 5 ducks and a pheasant<br>*Poster 6*: e.g. 13 bees and 5 ducks<br>b) Find things in the classroom which make 18 altogether.<br>*5 min* | Whole class activity<br>Counting, checking, e.g.<br>BB: 8 + 4 + 5 + 1 = 18<br>13 + 5 = 18<br>Ask several Ps |
| **2** | **Pictures of 18**<br>Look at the different pictures of 18. (T talks about each one.)<br>BB:<br>  <br><br>Tell me something about '18'. (2 digits: 1 ten and 8 units, even, 9 pairs)<br>**A**, come and point to 18 on the number line. Is he/she correct?<br>What is the number before (after) 18? (17, 19)<br>*10 min* | Drawn on BB or use enlarged copy master or OHP<br>Involve several Ps<br>Talk about whether 18 has any signficance for Ps (e.g. 18th birthday cards/ parties, voting age, etc.)<br>Checking, agreement |
| **3** | ***Book 1, page 113***<br>Q.1 Read: *Continue drawing the number strips for 18. Write down the additions.*<br>(Ps can make first on desks with number strips or Cuisenaire rods or plastic cubes stuck together).<br>BB:<br>  <br><br>10 + 8 = 18<br>9 + 1 + 8 = 9 + 9 = 18<br>8 + 2 + 8 = 8 + 10 = 18<br>7 + 3 + 8 = 7 + 11 = 18<br>6 + 4 + 8 = 6 + 12 = 18<br>5 + 5 + 8 = 5 + 13 = 18<br>4 + 6 + 8 = 4 + 14 = 18<br>3 + 7 + 8 = 3 + 15 = 18<br>2 + 8 + 8 = 2 + 16 = 18<br>1 + 9 + 8 = 1 + 17 = 18<br>*20 min* | Start as whole class activity, changing to individual work when T thinks Ps understand<br>Drawn on BB or use enlarged copy master or OHP.<br>T monitoring helping<br>Discussion<br>Checking, agreement<br>Class reads out equations together at speed |
| **4** | **Interlude**<br>Song or rhyme<br>*22 min* | Whole class in unison |
| **5** | ***Book 1, page 113***<br>Q.2 Read: *Fill in the missing numbers and signs.*<br>a) Everyone put your finger on '6' on your number line. Follow what the signs tell you and fill in the missing numbers.<br>Review orally with whole class.<br>Deal with part b) in similar fashion.<br>*28 min* | Individual work, monitored<br>Discussion, checking agreement<br>Mistakes corrected at number line |

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| **Bk1** | | *Lesson Plan 113* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page113***<br>Q.3 Read: *Fill in the missing numbers.*<br>a) What have the circles to do with the numbers?<br>(18 circles altogether; 10 in top row, 8 in bottom row;<br>9 white circles and 9 grey circles)<br>Use these circles to help you fill in the missing numbers.<br>Review with whole class. Use counters if there are difficulties.<br>BB: $9 + 9 = 18$ $18 - 9 = 9$<br>b) Repeat as above.<br>BB: $20 - 2 = 18$ $18 + 2 = 20$<br>Who can come and write another equation about these circles? | Individual work<br>Monitored, helped<br>Discussion<br>Checking, agreement<br>Mistakes reviewed<br>Self-correction at number line<br>As above<br>BB: $2 + 18 = 20$<br>$20 - 18 = 2$ |
| | *36 min* | |
| **7** | ***Book 1, page 113, Q.4***<br>Listen carefully and try to picture the story in your head. Show me the answer with a number card when I say.<br>*Sandra had 18 p. She bought sweets for 9 p and chewing gum for 3 p. How much money does she have left?*<br>Show me with a number card . . . now! (6)<br>**X**, tell us how you got your answer. Who agrees/disagrees?<br>Look carefully at the equations below. $x$ is the amount of money Sandra had left.<br>*Underline the equation which describes the story.*<br>Who drew a line under the 1st (2nd, 3rd) equation?<br>**Y**, tell us why you chose (did not choose) it. Who agrees/disagrees? | Whole class activity<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>Discussion, agreement<br>BB: $x = 6$<br>$\underline{18 - 9 - 3 = x}$ ✔<br>$18 - 9 + 3 = x$ ✕<br>$18 + 9 - 3 = x$ ✕<br>Discussion, agreement |
| | *42 min* | |
| **8**<br>**Extension** | ***Book 1, page 113***<br>Q.5 Read: *Write down what you think the answers might be.*<br>Review orally with whole class, Ps writing, explaining their answers.<br>*Solution:*<br>a) X + V + III = XVIII b) XII + VI = XVIII<br>c) XIV + IV = XVIII d) XV+ I = XVI<br>e) XV + II = XVII f) XVII + I = XVIII | Individual work, monitored<br>Discussion, checking agreement<br>Mistakes corrected at number line |
| | *45 min* | |

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| **Bk1** | R: Mental operations<br>**C: Operations and equations to 18**<br>*E: Rules* | *Lesson Plan*<br>*114* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Making 18 into equal groups**<br>• Put 18 items from your collection on your desk, laying them out in exactly 2 equal groups. How many are in each group? (9)<br>• Now lay them all out in exactly 3 equal groups. How many are in each group? (6)<br>• Try to find other ways of making equal groups from 18.<br>Review with whole class, writing additions on BB.<br>(Preparation for: $2 \times 9 = 3 \times 6 = 6 \times 3 = 9 \times 2 = 18 \times 1 = 18$)<br>Or use number strips (or Cuisenaire rods) as in *Lesson 103, Activity 3*.<br>*10 min* | Whole class activity<br>BB:<br>$9 + 9 = 18$<br>$6 + 6 + 6 = 18$<br>$3 + 3 + 3 + 3 + 3 + 3 = 18$<br>$2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 18$<br>$1 + 1 + 1 + 1 + 1 + \ldots + 1 = 18$<br>Discussion, agreement |
| **2** | ***Book 1, page 114***<br>Q.1 Read: *The animals start at 0 and jump the same each time. Draw the jumps.*<br>Talk about the animals first. Which animal has the longest (shortest) jump? (stag, squirrel)<br>Encourage Ps to draw the jumps carefully and accurately, counting the ticks with the point of a pencil and marking with a dot first.<br>Read: *Tick the animals which land on 18.*<br>Hands up those of you who ticked the squirrel (rabbit, frog, fox, deer, stag). T writes on BB. Let's check who is correct.<br>Review at BB with whole class. Ps choose the relevant equations in *Activity 1* to show the jumps of the animals.<br>*20 min* | Individual work<br>Monitored, helped<br>Discussion<br>Praising only<br>BB: *Sq R Fr Fo D St*<br>✔ ✔ ✔ ✔<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, agreement |
| **3** | **Interlude**<br>Relaxation<br>*22 min* | Whole class resting with music playing |
| **4** | ***Book 1, page 114***<br>Q.2 Read: *Fill in the missing numbers.*<br>Let's see how many you can do in 4 minutes!<br>You may use what you like to help you.<br>Review at BB with whole class. Mistakes corrected at number line.<br>*30 min* | Individual work, monitored<br>e.g. counters, number lines<br>Discussion, agreement, self-correction |
| **5** | **Problem**<br>Listen carefully and try to picture the story in your head. You can use what you like to help you. Show me your answer with number cards when I say.<br>*I am thinking of a number. When I take 5 away from it, I get 4 more than 9. What was the number I first thought of?*<br>Show me with number cards . . . now! (18)<br>**A**, come and explain to us how you worked out the answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (BB)<br>*Answer:* The number teacher first thought of was 18.<br>*34 min* | Whole class activity<br>(e.g. counters, number lines, drawing dots, etc.)<br>Repeat a few times.<br>Give Ps time to think.<br>In unison<br>Discussion, agreement<br>BB: $\square - 5 = 9 + 4$<br>$\square = 9 + 4 + 5 = 18$ |

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| **Bk1** | | *Lesson Plan 114* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 114, Q.3***<br>T explains task.<br>1. Let's all read the first statement. '*b* plus *b* equals eighteen'<br>**B**, come and write in the number you think *b* could represent.<br>Why did you write it? Who agrees? Let's check on the class number line. Is there another number that *b* could represent? (No)<br>Look at the two number lines shown. **C**, come and point to the one which matches our answer. Explain why you chose that one. Who agrees/disagrees with **C**? Join it up to the answer box.<br>2. Let's all read the 2nd statement: 'seventeen is less than *a*, *a* is less than nineteen' What number could be more than 17 and less than 19?<br>**D**, come and write in the number you think *a* represents. Who agrees? Let's check on the class number line. Is there another number that *a* could represent? (No)<br>Look at the two number lines shown. **E**, come and point to the one which matches our answer. Explain why you chose that one. Who agrees/disagrees with **E**? Join it up to the answer box.<br>3. Continue as above for remaining statements, demonstrating each on class number line. Check by replacing letters with numbers.<br>Or Ps can do remaining statements as individual work, reviewed with whole class.<br>*40 min* | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>BB: $b =$ 9<br>Check: $9 + 9 = 18$<br>Discussion, agreement, checking<br>In unison<br>BB: $a$: 18<br>Check: $17 < 18 < 19$<br>Discussion, agreement, checking<br>BB: $s$: 9<br>Check: $9 \leq 9 < 10$<br>$u$: 9<br>Check: $11 < \underbrace{9 + 3}_{12} < 13$<br>$u$: 9<br>Check: $20 - 9 = 11$ |
| **7** | ***Book 1, page 114, Q.4***<br>Listen carefully and try to picture the story in your head. Write down equations about each part of the story in your books.<br>Show me your final answer with a number card when I say.<br>*There are 18 tins of fruit on the shelf: 5 tins of cherries, 4 tins of plums and 3 tins of pears. The rest are tins of peaches. How many tins of peaches are on the shelf?*<br>Show me with number cards . . . now! (6)<br>**F**, come and explain to us how you worked out the answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (BB)<br>*Answer:* There are 18 tins of peaches left on the shelf.<br>*45 min* | Whole class activity<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>Discussion, agreement<br>BB: $5 + 4 + 3 = 12$<br>$18 - 12 = 6$<br>or $18 - 5 - 4 - 3 = 6$ |

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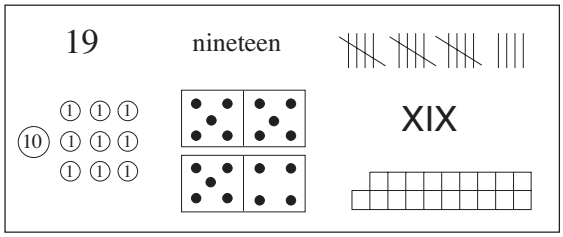
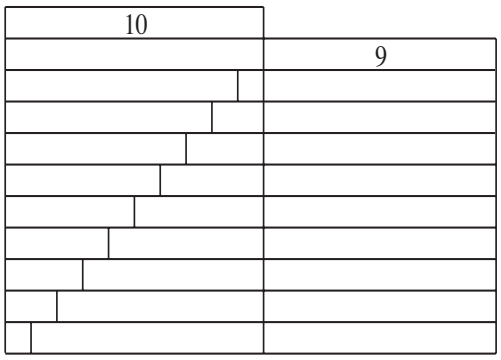
# Bk1

R: Mental counting
**C: Number bonds and sums for 19**
*E: Problem in context*

## *Lesson Plan 115*

| *Activity* | | ***Notes*** |
|---|---|---|
| **1** | **Mental Counting**<br>a) On the posters find things which make 19 altogether, e.g.<br>*Posters 9/10:* 6 mice, 9 ducks, 3 rabbits and a cockerel<br>*Poster 2:* 4 people, 3 flowers, 2 insects, 4 rolls, 5 apples and a ball<br>b) Find things in the classroom which make 19 altogether.<br>*5 min* | Whole class activity<br>Counting, checking, e.g.<br>BB: 6 + 9 + 3 + 1 = 19<br>4 + 3 + 2 + 4 + 5 + 1 = 19<br>Ask several Ps |
| **2** | **Pictures of 19**<br>Look at the different pictures of 19. (T talks about each one.)<br>BB:<br>  <br><br>Tell me something about '19'. (2 digits: 1 ten and 9 units, odd, can be made only with equal groups of 1)<br>**A**, come and point to 19 on the number line. Is he/she correct?<br>What is the number before (after) 19? (18, 20)<br>*8 min* | Drawn on BB or use enlarged copy master or OHP<br>Involve several Ps<br>Talk about whether 19 has any signficance for Ps (e.g. dates, lucky number, lottery, house number, etc.)<br>Checking, agreement |
| **3** | ***Book 1, page 115***<br>Q.1 Read: *Continue drawing the number strips for 19. Write down the additions.*<br>(Ps can make first on desks with number strips or Cuisenaire rods or plastic cubes stuck together).<br>BB:<br>  <br><br>10 + 9 = 19<br>9 + 1 + 9 = 9 + 10 = 19<br>8 + 2 + 9 = 8 + 11 = 19<br>7 + 3 + 9 = 7 + 12 = 19<br>6 + 4 + 9 = 6 + 13 = 19<br>5 + 5 + 9 = 5 + 14 = 19<br>4 + 6 + 9 = 4 + 15 = 19<br>3 + 7 + 9 = 3 + 16 = 19<br>2 + 8 + 9 = 2 + 17 = 19<br>1 + 9 + 9 = 1 + 18 = 19<br>*18 min* | Start as whole class activity, changing to individual work when T thinks Ps understand<br>Drawn on BB or use enlarged copy master or OHP.<br>T monitoring helping<br>Discussion<br>Checking, agreement<br>Whole class in unison<br>Class reads out equations together at speed |
| **4** | **Interlude**<br>Action song<br>*20 min* | Whole class in unison |
| **5** | **Matching Additions/subtractions**<br>△△△△△△○○○○<br>○○□□□□□□□<br>a) Look carefully at this picture. What shapes can you see?<br>Who can come and write an addition (subtraction) about it?<br>Explain why you chose those numbers. Who agrees/disagrees?<br>Who can think of another addition (subtraction)? | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>BB: e.g. 6 + 6 + 7 = 19<br>19 – 6 – 6 = 7<br>Discussion, agreement |

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| **Bk1** | | *Lesson Plan 115* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 115***<br>Q. 2 Read: *Join the equations to the correct pictures. Fill in the missing numbers*<br>Talk about the pictures first. Who can tell me something about the beads (cherries)? e.g.<br>*Beads:* 19 altogether – 4 grey, 7 white and 8 black; 12 on string and 7 fallen off;<br>*Cherries:* 19 altogether ( 9 pairs plus 1 single cherry) 7 on branch and 12 fallen off<br>Ps come out to BB in turn to choose equations to match a picture, explain their choice and fill in the missing numbers.<br>Who disagrees? Why? etc. (N.B. Some equations can match either picture if a reasonable explanation is given.)<br>Or done as individual work, reviewed at BB with whole class.<br>*35 min* | Whole class activity<br>Pictures from enlarged copy master and equations copied onto card, cut out and stuck to side of BB (in any order).<br>Discussion, agreement<br>Involve several Ps<br>BB:<br>$4+7+8=\mathbf{19}$ (B) $\mathbf{19}-7=4+8$ (B)<br>$19-4-7=\mathbf{8}$ (B) $19-12=\mathbf{7}$ (C)<br>$19-7=\mathbf{12}$ (C) $\mathbf{19}-4-8=\mathbf{7}$ (B)<br>$7+12=\mathbf{19}$ (C) $12+7=\mathbf{19}$ (C)<br>$\mathbf{8}+7=19-4$ (B) $\mathbf{19}-7=\mathbf{12}$ (C)<br>$7+\mathbf{8}+4=19$ (B) $19-\mathbf{12}=7$ (C) |
| **7** | ***Book 1, page 115***<br>Q.3 Read: *Betty had 19 p. She bought 2 bunches of snowdrops. How much money has she left? Complete the table.*<br>What does the 1st row in the table show? (Cost of 1 bunch in pence)<br>How do we work out the 2nd row? (Total cost of 1 bunch + 1 bunch)<br>How do we work out the 3rd row? (19 p – total cost, i.e. 2nd row)<br>Review orally or at BB with whole class, with Ps explaining solution.<br>(Or done as whole class activity)<br>*40 min* | Individual work<br>Monitored<br>Discussion, agreement, checking<br>Self-correction<br>Drawn on BB or use enlarged copy master or OHP |
| **8** | ***Book 1, page 115***<br>Q.4 Read: *Fill in the missing numbers.*<br>See how many of these you can do in 4 minutes!<br>Review orally round the class. Mistakes corrected at number line.<br>*45 min* | Individual work<br>Monitored<br>Discussion, agreement, checking, self-correction |

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| **Bk1** | R: Mental operations<br>**C: Operations, equations to 19**<br>*E: Problem solving* | *Lesson Plan*<br>*116* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Oral work**<br>Tell me different ways to describe the number '19'.<br>(e.g. 6 + 6 + 6 + 1, 29 – 10, 11 + 8, the 5th odd 2-digit number, the next number greater than 18, the next nearest number less than 20, etc.)<br>*5 min* | Whole class activity<br>Involve several pupils<br>Reasoning, checking, agreement |
| **2** | **Addition/subtraction relay**<br>T says, e.g. '4 + 3', $P_1$ says '7'. T says '+ 9'; $P_2$ says '16'. T says '– 3'; $P_3$ says '13', etc. (0 to 19)<br>*10 min* | Whole class activity<br>At speed<br>Involve many Ps |
| **3** | ***Book 1, page 116, Q.1***<br>Read: *Join up each label to the matching number line.*<br>**A**, read out the first label. '1-digit numbers greater than 5' Who can tell me what they are? (6, 7, 8, 9) **B**, which number line shows them? (3rd from top). Everyone join up the LHS of the number line to the RHS of the label. (Encourage Ps to use rulers to draw lines for neatness.)<br>Continue in this way for remaining 3 labels.<br>These number lines only show the numbers 0 to 20. Which labels describe numbers above 20 also? ('Even numbers greater than 5' and 'Odd numbers not smaller than 19') Ps give examples of each.<br>Who can come and write an example for each label as a true mathematical statement (using only numbers and signs)?<br>*18 min* | Individual work but class kept together.<br>Monitored<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, agreement, demonstration on class number line if problems<br>BB: e.g. $7 > 5$, $12 > 5$, $16 < 19$, $19 \not< 19$ or $19 \geq 19$ |
| **4** | **Interlude**<br>Song or rhyme<br>*20 min* | Whole class in unison |
| **5** | ***Book 1, page 116***<br>Q.2 Read: *Fill in the missing numbers.*<br>Review orally round class. Mistakes corrected at number line.<br>*25 min* | Individual work, monitored<br>Discussion, checking<br>Self-correcting |
| **6** | **Problem**<br>Listen carefully and try to picture the story in your head. You can use what you like to help you. Show me your answer with number cards when I say.<br>*I have 19 p in my two pockets altogether. I have 7p more in my right-hand pocket than in my left-hand pocket.*<br>a) *How much money is in my left-hand pocket?*<br>Show me with a number card . . . now! (6)<br>b) *How much money is in my right-hand pocket?*<br>Show me with number cards . . . now! (13)<br>**A**, come and explain to us how you worked out the answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (Put 7 p in right-hand pocket first, leaving 12 p to be shared equally between LH and RH pockets. )<br>Demonstrate with counters (collection items or real/play money) or drawings on BB.<br>*30 min* | Whole class activity<br>(e.g. counters, or items from Ps' collections)<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>In unison<br>Discussion, agreement<br>BB: $19 - 7 = 12$<br>$12 = 6 + 6$<br>LHS: 6<br>RHS: $7 + 6 = 13$ |

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# Bk1

*Lesson Plan 116*

| *Activity* | | *Notes* |
|---|---|---|
| **7** | ***Book 1, page 116, Q.3***<br>T explains task.<br>1. Let's all read the first statement. '16 is less than $n$, $n$ is less than 20'<br>**A** and **B**, come and point to 16 and 20 on the number line. (Ps also point to numbers on their individual number lines.)<br>Which numbers (more than 16, less than 20) could $n$ be ? (17, 18, 19)<br>**C**, come and write them in the answer box. (Ps write in their books)<br>Look at the two number lines shown. **D**, come and point to the one which matches our answer. Explain why you chose that one. Who agrees/disagrees with **D**? Join it up to the answer box.<br>2. Let's all read the 2nd statement: 'eighteen is greater than $a$ minus two, $a$ minus two is greater than 14' .<br>**E** and **F**, come and point to 18 and 14 on the number line. (Ps also point to numbers on their individual number lines.)<br>Which numbers could be more than 14 and less than 18? (15, 16, 17)<br>Are these the numbers $a$ could be? (No, these numbers are equal to $a - 2$, so $a$ must be 2 more than these numbers.)<br>**G**, come and write in the numbers you think $a$ could be. (17, 18, 19) Who agrees/disagrees? (Ps write in their books too.)<br>Look at the two number lines shown. **H**, come and point to the one which matches our answer. Explain why you chose that one. Who agrees/disagrees with **H**? Join it up to the answer box.<br>Ps can do remaining 3 statements as individual work (or a group could be responsible for each) and reviewed with whole class.<br>4. Revise meaning of sign for 'less than or equal to'. Make sure Ps realise that the numbers pointed to must also be included in the answer box.<br>5. Note that the initial numbers pointed to must also be included in the numbers for $u + 1$ and that $u$ represents these numbers **minus** 1. | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>Class in unison<br>BB: $n$: 17, 18, 19<br>Check: $16 < 17, 18, 19 < 20$<br>Discussion, agreement<br>In unison<br>In unison<br>BB: $a - 2$: 15, 16, 17<br>$a$: 17, 18, 19<br>Check: $18 > 15, 16, 17 > 14$<br>Discussion, agreement, checking<br>3. $b$: 14, 15, 16, 17<br>Check: $13 <$ 14, 15, 16 $< 18$<br>4. $s$: 14, 15, 16, 17<br>Check: $14 \leq 14, 15, 16, 17 \leq 17$<br>5. $u + 1$: 15, 16, 17, 18<br>$u$: 14, 15, 16, 17<br>Check: $15 \leq 15, 16, 17, 18 \leq 18$ |
| | *40 min* | |
| **8** | ***Book 1, page 116***<br>Q.4 Read: *Fill in the missing numbers and signs*.<br>T explains task. Different groups can be responsible for each square. Review at BB with whole class.<br>*Possible solutions* (but many more) starting from shaded number*:*<br>6 + 6 / = 19 + / 1 + 6<br>9 − 5 / = 19 + / 7 + 8<br>1 + 2 + 3 / − 1 + 9 − / 3 = 19 − 1 / − 9 + 8 − / 5 + 4 + 1<br>3 + 5 + 7 / + 3 − 4 + / 2 = 19 − 1 / − 9 + 4 + / 4 + 5 − 2 | Differentiated paired work<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, agreement, checking<br>Praising creativity<br>BB: $6 + 6 + 6 + 1 = 19$<br>$9 - 5 + 8 + 7 = 19$<br>$1 + 2 + 3 - 1 - 1 + 4 + 5 - 3 - 1 + 9 - 8 + 9 = 19$<br>$3 + 5 + 7 + 1 + 2 - 5 + 4 - 2 + 3 - 4 - 4 + 9 = 19$ |
| | *45 min* | |

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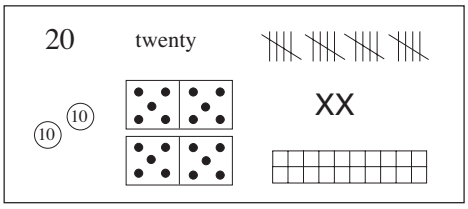
| **Bk1** | R: Mental counting<br>**C: Number bonds and sums to 20**<br>*E: Roman numerals* | *Lesson Plan*<br>*117* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Mental Counting**<br>a) On the posters find things which make 20 altogether, e.g.<br>*Poster 7*: 6 stripes on the zebra crossing, 4 people, 5 vehicles, 3 balls, a traffic light and a clock<br>*Poster 11*: 10 children standing on skiis and 10 children standing on skates<br>b) Find things in the classroom which make 20 altogether.<br>*5 min* | Whole class activity<br>Counting, checking, e.g.<br>BB: 6 + 4 + 5 + 3 + 1 + 1 = 20<br>10 + 10 = 20<br>Ask several Ps |
| **2** | **Pictures of 20**<br>Look at the different pictures of 20. (T talks about each one.)<br>BB:  <br><br>Tell me something about '20'. (2 digits: 2 tens and 0 units, even, 10 pairs)<br>• Let's count from 0 to 20 (from 20 down to 0) as fast as we can.<br>• Let's all clap our hands 20 times in unison.<br>• Let's all stand up and sit down 20 times (10 up and 10 down).<br>*10 min* | Drawn on BB or use enlarged copy master or OHP<br>Involve several Ps<br>Whole class discussion about what number 20 means to Ps<br>(dates, house numbers, ages, lengths, weights, money, etc.)<br>T checking who is having problems<br>In unison |
| **3** | **Mental Practice**<br>T says a number, e.g. '9', P says number to make 20 e.g.'11'<br>*15 min* | Whole class activity<br>At speed round the class |
| **4** | ***Book 1, page 117***<br>Q.1 Read: *Complete the table and write down the rule in different ways*.<br>T explains task. Review at BB with whole class.<br>Mistakes corrected by demonstration or at number line.<br>In how many columns are both numbers even (odd)?<br>In how many columns is there an even and an odd number?<br>(none – impossible because 20 is an even number)<br>*23 min* | Individual work, monitored<br>Draw on BB or use enlarged copy master or OHP<br>Discussion, checking, agreement<br>BB: $a + b = 20$<br>$a = 20 - b$<br>$b = 20 - a$ |
| **5** | **Interlude**<br>Song or rhyme<br>*25 min* | Whole class in unison |
| **6** | ***Book 1, page 117, Q.2***<br>Read: *Write down how much money is in each purse*.<br>Ps come out to BB to choose a purse and write in the amount, saying the addition. Is he/she correct? Who disagrees? Why? etc.<br>Read: *Join up the purses which together add up to 20 p*.<br>Ps come out to join up purses and write additions on BB.<br>(Or done as individual work, reviewed at BB with whole class.)<br>*30 min* | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, agreement<br>BB: 13 + 7 = 20<br>8 + 12 = 20<br>11 + 9 = 20<br>14 + 6 = 20 |

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| **Bk1** | | *Lesson Plan 117* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **7** | ***Book 1, page 117***<br>Q.3 Read: *Fill in the missing numbers*.<br>Deal with one column at a time. Review orally with whole class. Mistakes corrected at number line.<br>*35 min* | Individual work, monitored<br>Discussion, agreement<br>Checking, self-correction |
| **8** | ***Book 1, page 117, Q.4***<br>What do you think the answers might be to these sums?<br>T writes each on BB and Ps come out to complete, explaining solution.<br>Who disagrees? Why? etc.<br>*Solutions:*<br>a) X + V = XV b) XV + V = XX c) XVI + I = XVII<br>d) XVIII + I = XIX e) XIX + I = XX f) XX – X = X<br>*40 min* | Whole class activity<br>Discussion, reasoning, agreement<br>Ps can think up their own equations for fellow Ps to solve, based on those on BB |
| **9** | ***Book 1, page 117***<br>Q.4 Read: *Complete the table if triangle plus triangle equals the square*.<br>Review at BB with whole class. Mistakes corrected.<br>Who can think of another way to write the rule?<br>*45 min* | Individual work, monitored<br>Discussion, agreement, checking<br>△ = □ – △<br>(Or done orally round class) |

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| **Bk1** | R: Mental coperations<br>**C: Number bonds and sums to 20**<br>*E: Problem solving* | *Lesson Plan*<br>*118* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Shopping**<br>Ps come to front in pairs. **A** is the shopkeeper, **B** is the customer.<br>**B** buys e.g. 2 books @ 10 p each.<br>Role play: e.g. **A**: How can I help you?<br>**B**: Please could I have these 2 books?<br>**A**: That will be 20 p altogether.<br>**B**: Opens purse and takes out two 10 p coins (or one ten + two '5's, or four '5's, etc.)<br>**A**: Puts items in bag and says 'Here you are.'<br>**B**: Thank you. Goodbye!<br>Who can come and write an addition about the story?<br>Repeat for other pairs of Ps and different items (to make 20p).<br>*10 min* | Paired activity<br>T helping, encouraging<br>Praising<br>Use real purse and real or play money (1 p, 2 p, 5 p, 10 p and 20 p coins)<br>BB: 10 + 10 = 20<br>Encourage creativity |
| **2** | **Oral work**<br>a) Tell me different ways to describe the number '20'.<br>(e.g. 10 + 10, 30 – 10, 5 + 5 + 5 + 5, the 2nd whole ten, the number after 19, etc.)<br>b) T says correct/incorrect statements for 20. Ps agree (thumbs up) or disagree (thumbs down). If incorrect, Ps give reason.<br>***15 min*** | Whole class activity<br>Involve several pupils<br>Reasoning, checking, agreement<br>In unison |
| **3** | ***Book 1, page 118, Q.1***<br>a) Read: *Write the correct numbers in the number strips and boxes.*<br>What is special about the number strips shown in the picture? (Only equal strips used in each row.)<br>What strips have been used and how many of each? (1's, 2's, 4's, 5's, 10's)<br>Write additions about it in your books.<br>BB: 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 . . . + 1 = 20<br>2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 20<br>4 + 4 + 4 + 4 + 4 = 20<br>5 + 5 + 5 + 5 = 20<br>10 + 10 = 20<br>(Preparation for: $1 \times 20 = 2 \times 10 = 4 \times 5 = 5 \times 4 = 10 \times 2 = 20 \times 1 = 20$)<br>b) Make sure that Ps know what 'twice' and 'half of' means.<br>Ps read the statements forwards and backwards: '20 is twice 10, 10 is half of 20'; etc.<br>*23 min* | Individual work, monitored<br>Discussion, checking<br>Individual work, monitored, helped<br>Reviewed at BB with whole class.<br>Use large number strips stuck to BB or enlarged copy master in which Ps write the numbers.<br>Whole class activity<br>In unison |
| **4** | **Interlude**<br>Relaxing<br>*25 min* | Whole class resting<br>Music playing |
| **5** | ***Book 1, page 118***<br>Q.2 Read: *Fill in the missing numbers.*<br>Deal with one row at a time. Review orally with whole class. Mistakes corrected at number line.<br>*30 min* | Individual work, monitored, helped<br>Discussion, checking, agreement, self-correction |

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| **Bk1** | | *Lesson Plan 118* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 118***<br>Q.3 Read: *Divide 20 into 3 numbers. $a + b + c = 20$*<br>*Complete the table.*<br>T explains task. Review at BB (or orally) with whole class. Mistakes corrected at number line.<br>(Or done as whole class activity.)<br>*40 min* | Individual work, monitored, helped<br>Discussion, agreement, checking<br>Drawn on BB or use enlarged copy master or OHP |
| **7** | ***Book 1, page 118, Q.4***<br>Listen carefully and try to picture the story in your head. You can write an equation in your books to help you. Show me your answer with number cards when I say.<br>*There were some biscuits on a plate. Four children ate 3 biscuits each and there were 8 biscuits left.*<br>*How many biscuits were on the plate to begin with?*<br>Show me with number cards . . . now! (20)<br>**C**, come and explain to us how you got your answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (Add four lots of 3 and the number left on the plate to get the number at the beginning.)<br>If there are difficulties, clarify by demonstration with 4 Ps, a plate and 20 counters (or real biscuits!)<br>*Answer:* There were 20 biscuits on the plate to begin with.<br>*45 min* | Whole class activity<br>(or Ps can use counters, etc.)<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>Discussion, agreement<br>BB: $3 + 3 + 3 + 3 + 8 = 20$<br>or $3 + 3 + 3 + 3 = 12$<br>$12 + 8 = 20$ |

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| **Bk1** | R: Mental operations<br>**C: Operations and equations to 20**<br>*E: Problems in context* | *Lesson Plan*<br>*119* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Secret numbers**<br>I am thinking of a number. You have to guess what it is by asking me questions. I will answer only 'Yes' or 'No'. (18, 19, 20)<br>(e.g. 18: Ps: 'Does it have 1 digit?' T: 'No'. Ps: 'Is it even?' T: 'Yes'<br>Ps: 'Is it less than 16?' T: 'No'. Ps: 'Is it more than 20?' etc.<br>*5 min* | Whole class activity<br>Involve several pupils<br>Encourage Ps to ask logical questions/remember clues<br>Praise clever questions |
| **2** | **Logic set**<br>T hides a shape. Ps ask questions to determine which it is.<br>T can answer only 'Yes' or 'No' (with T's help). First P who identifies correct shape hides another shape, etc.<br>*10 min* | Whole class activity<br>T repeats unclear questions correctly. Keep a good pace.<br>Praising all contributions |
| **3** | ***Book 1, page 119***<br>Q.1 Read: *Colour in the points on the number line as shown.*<br>Ps draw dots as T reads out '1-digit, even is red' etc. Deal with one colour at a time. Review orally with whole class.<br>*15 min* | Individual work<br>Monitored, helped<br>Discussion, checking against class number line |
| **4** | ***Book 1, page 119***<br>Q.2 Read: *Fill in the missing numbers and signs.*<br>a) Everyone put your finger on '20' on your number line. Follow what the signs tell you and fill in the missing numbers.<br>Review orally with whole class.<br>Deal with parts b), c) and d) in a similar fashion.<br>*25 min* | Individual work, monitored<br>Discussion, checking agreement<br>Draw on BB or use enlarged copy master or OHP<br>Mistakes corrected at number line |
| **5** | **Interlude**<br>Song, rhyme, exercises<br>*27 min* | Whole class in unison |
| **6** | ***Book 1, page 119, Q.3***<br>T explains task.<br>1. Let's all read the first statement. '20 minus $s$ is greater than $9$'<br>**A**, come and point to 9 on the class number line.<br>Which numbers (more than 9) could '$20 - s$' be? (10, 11, 12, . . ., )<br>If $20 - s$ is 10 (11, 12, . . .). What will $s$ be? 10 (9, 8, . . .)<br>Look at the two number lines shown. **C**, come and point to the one which you think matches the numbers $s$ could be. Explain why you chose that one. Who agrees/disagrees with **C**? Join it up to the answer box and read out the numbers it shows.<br>2. Let's all read the 2nd statement: 'twenty minus $a$ is is less than 11' .<br>**D,** come and point to 11 on the class number line.<br>Which numbers (less than 11) could '$20 - a$' be ? (10, 9, 8, . . ., 0)<br>If $20 - a$ is 10 (9, 8, . . .). What will $a$ be? 10 (11, 12, . . .)<br>Look at the two number lines. **E**, come and point to the one which you think matches the numbers $a$ could be. Why did you choose it?<br>Who agrees/disagrees with **E**? Join it up to the answer box and read out the numbers it shows. | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>Class in unison<br>BB: $20 - s$: 10, 11, . . ., 20<br>$s$: 10, 9, . . ., 0<br>Check: e.g. Let $s = 10$<br>$20 - 10 = 10,\ 10 > 9$<br>Class in unison<br>BB: $20 - a$: 10, 9, . . ., 0<br>$a$: 10, 11, . . ., 20<br>Check: e.g. Let $a = 10$<br>$20 - 10 = 10,\ 10 < 11$<br>Discussion, agreement |

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# Bk1

*Lesson Plan 119*

| ***Activity*** | ***Notes*** |
|---|---|
| Ps can do remaining 3 statements as individual work (or a group could be responsible for each) and reviewed with whole class.<br><br>3. Revise meaning of sign for 'less than or equal to' and point out that $r + r$ should include 20, so numbers for $r$ should include 10. Elicit that $r + r$ can only be **even** numbers.<br><br>4. Elicit the biggest (smallest) number $z + 9$ could be. (19, 9)<br><br>5. Elicit the smallest number $k - 9$ could be. (1)<br><br>*Note:* The checks can be done using **any** of the possible numbers (chosen by the Ps or the smallest/biggest numbers).<br><br>*38 min* | 3. $r + r$: 20, 18, . . ., 0<br>$r$: 10, 9, . . ., 0<br>Check: e.g. Let $r = 10$<br>$10 + 10 = 20$, $20 \leq 20$<br><br>4. $z + 9$: 19, 18, . . ., 9<br>$z$: 10, 9, . . ., 0<br>Check: e.g. Let $z = 10$<br>$10 + 9 = 19$, $19 < 20$<br><br>5. $k - 9$: 1, 2, 3, . . .<br>$k$: 10, 11, . . .,<br>Check: e.g. Let $k = 10$<br>$10 - 9 = 1$, $1 > 0$ |
| **7**<br><br>***Book 1, page 119***<br>Q.4 Read: *Find the shapes in the grid.*<br>*Fill in the missing numbers which sum to 20.*<br><br>T explains task. Ps have to fill in the numbers in each shape and colour the shape and the numbers used in the large grid in the same colour.<br><br>Let's see how many you can find in 5 minutes!<br>Review at BB with whole class.<br><br>(Or done as a whole class activity.)<br><br>*Possible solution:*<br><br>3 8 **5** 9 2 **8** **4** 3 0 **9**<br>7 **4** **1** 7 1 **8** 6 9 7 **9**<br>**7** **3** 8 7 9 1 6 **9** **3** **2**<br>3 0 7 **9** **3** **8** **7** **1** 8 8<br>8 7 3 6 3 7 0 9 5 8<br>8 6 7 5 9 2 7 7 6 5<br><br>**9 3 8**<br>**5**<br>**4 1**<br>**7 3**<br>**8 4**<br>**8**<br>**9 3**<br>**7 1**<br>**9**<br>**9**<br>**2**<br><br>*45 min* | Individual work<br><br>Monitored, helped<br><br>Discussion, checking, agreement<br><br>Drawn on BB or use enlarged copy master or OHP<br><br>BB: 9 + 3 + 8 = 20<br>8 + 4 + 8 = 20<br>9 + 9 + 2 = 20<br>9 + 3 + 1 + 7 = 20<br>5 + 1 + 4 + 3 + 7 = 20 |

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| **Bk1** | R: Mental operations<br>**C: Operations to 20**<br>*E: Logic Puzzle* | *Lesson Plan*<br>*120* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Addition/subtraction relay**<br>T says, e.g. '8 + 3', $P_1$ says '11'. T says '+ 7'; $P_2$ says '18'; T says '– 5'; $P_3$ says '13', etc. (0 to 20)<br>***5 min*** | Whole class activity<br>At speed<br>Involve all Ps |
| **2** | **Chain operations**<br>Close your eyes and try to keep the numbers in your head.<br>Nod your head when you know the answer to each part.<br>Show me the final number with number cards when I say.<br>T says, e.g. '18 . . . + 2 . . . – 10 . . . + 2' (3 or 4 operations)<br>Show me the answer with number cards . . . now! (12)<br>Ask Ps who answered correctly to explain how they worked it out.<br>*10 min* | Whole class activity<br>Give Ps time to think<br>In unison<br>Checking, agreement |
| **3** | ***Book 1, page 120***<br>Q.1 Read: *The numbers always increase or decrease by the same amount. Fill in the missing numbers.*<br>Revise meaning of 'increase' and 'decrease'.<br>Deal with one row at a time. Review orally with whole class, with Ps demonstrating on class number line. Mistakes corrected.<br>*20 min* | Individual work<br>Monitored, helped<br>Ps may use individual number lines to help them<br>Discussion, checking agreement |
| **4** | **Interlude**<br>Song, rhyme, exercises<br>*22 min* | Whole class in unison |
| **5** | ***Book 1, page 120***<br>Q.2 Read: *Fill in the missing numbers.*<br>Let's see how many of these you can do in 10 minutes!<br>Deal with one column at a time. Review orally round class.<br>Mistakes corrected against class number line.<br>*30 min* | Individual work, monitored<br>Discussion, checking agreement<br>Self-correction |
| **6**<br><br><br><br><br><br><br><br><br><br><br><br>**Extension** | ***Book 1, page 120, Q.3***<br>Read: *Fill in the missing numbers.*<br>Look at part a). Let's read what it says: 'ten plus seven is three less than ten plus something'.<br>**X**, come and write in the missing number. (10)<br>Who agrees with **X**? Who thinks something else?<br>Let's check by adding each side of the inequality.<br>**Y**, come and write in the answer on the LHS and **Z**, come and write in the answer on the RHS. Are they correct? (Yes, 17 is three less than 20.)<br>Repeat in similar way for other parts.<br>(or done as individual work, monitored and reviewed at BB)<br>Do we need to work out '10 + 7' before we can find out what the 'something' is?<br>(No, the '10's are the same so the 'something' must be three **more** than the '7'.)<br>*38 min* | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP.<br>Discussion, agreement<br>BB:<br>a) $10 + 7 <_3 10 + 10$<br>$17 <_3 20$<br>b) $7 + 11 <_2 9 + 11$<br>$18 < 20$<br>c) $20 - 8 = 20 - 8$<br>$12 = 12$<br>d) $20 - 8 >_4 16 - 8$<br>$12 >_4 8$ |

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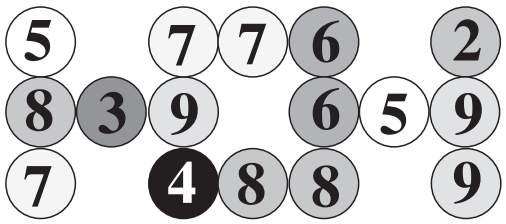
# Bk1

*Lesson Plan 120*

| *Activity* | | *Notes* |
|---|---|---|
| **7** | ***Book 1, page 120, Q.4***<br>T explains the task, pointing out that the three 1-digit numbers must be in circles touching each other in a row or column and that the same shading means the same number.<br>Where would it be easiest to start? (From the 4 which is given, along the row with 2 circles shaded the same.)<br>**A**, come and write in the numbers you think should go there. Explain why you wrote these numbers. Who agrees/disagrees?<br>Is there anywhere else we could write the number '8'? (1st column on left, middle circle) **B**, come and write it in.<br>What would be the next easiest numbers to find? (The column going up from the last '8' because there are 2 more circles with the same shading.)<br>**C,** come and write in the numbers you think should go there. Explain why you wrote these numbers. Who agrees/disagrees?<br>Is there anywhere else we could write the number '6'? (No)<br>Continue in this way until all circles are filled.<br>*Solution:*<br>  <br> | Whole class activity<br>Draw on BB or use enlarged copy master or OHP<br>Allow Ps time to think<br>BB: 4 + ◯ + ◯ = 20<br>so ◯ = 8<br>Allow Ps time to think<br>BB: 8 + ◯ + ◯ = 20<br>so ◯ = 6<br>BB: 6 + ◯ + ◯ = 20<br>so ◯ = 7<br>etc.<br>Involve as many Ps as possible |

*45 min*

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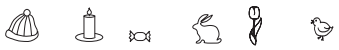
| **Bk1** | R: Sequences with shapes<br>**C: Revision and practice: numbers 0 to 20**<br>*E: Mixed problems* | *Lesson Plan*<br>*121* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Sequences with the Logic set**<br>T sticks shapes in a sequence on BB. Hold up the next shape when I say.<br>• Small white circle, small white triangle, small white square, . . .<br>Show me . . . now! (small white pentagon)<br>What was the rule? (increasing number of sides, size/colour the same)<br>• Large white hexagon, large black pentagon, large white square, . . .<br>Show me . . . now! (large black triangle)<br>What was the rule? (decreasing number of sides, colour: white-black, white-black, etc, same size)<br>Make this sequence on your desks and then add the next 2 shapes:<br>T: 'small white circle, large black triangle, small white square, . . ., . . .<br>**A**, what shapes did you put down? (large black pentagon, small white hexagon) Who agrees? Who had something else?<br>What was the rule? (increasing number of sides, size: small-large, small-large, etc.; colour: white-black, white-black, etc.)<br>*10 min* | Whole class activity<br>Drawn on BB or use enlarged logic set copy master<br>In unison<br>Discussion, agreement<br>Give Ps time to think.<br>In unison<br>Discussion, agreeement<br>Give Ps time to follow instructions and find the shapes<br>Ask several Ps<br>Discussion, agreement |
| **2** | **Secret numbers/shapes**<br>I am thinking of a number (shape). You have to guess what it is by asking me questions. I will answer only 'Yes' or 'No'.<br>*15 min* | Whole class activity<br>Repeat unclear questions correctly<br>Keep a good pace.<br>Ps can think of number/shape too. |
| **3** | ***Book 1, page 121***<br>Q.1 Read: *Which are there more of in the picture?*<br>*How many more?*<br>Talk about the various things in the picture.<br>Ps count the hats (candles, etc.) and write the numbers in the relevant boxes. (Ps can colour the various items – a different colour for each type of picture – or cross them off as they count.)<br>**B**, come and write in the number of hats you found and **C**, come and write in the number of candles you found. (3, 7)<br>Who agrees/disagrees? Which are there more of? (candles)<br>How many more? (4)<br>Who can come and write it using only numbers and signs?<br>Repeat for other two pairs of pictures.<br>*23 min* | Whole class discussion<br>Individual work, monitored<br>Discussion, agreement, checking<br>BB:<br>  <br>$4 < 3$ 7 12 $6 > 6$ $3 < 7$ 10<br>Enlarged copy master or OHP |
| **4** | **Interlude**<br>Song or rhyme<br>*25 min* | Whole class in unison |
| **5** | ***Book 1, page 121***<br>Q.2 Read: *Write in the total amount in each picture.*<br>*Compare the pictures. Write in the missing signs.*<br>Deal with one part at a time. First Ps count the money in each rectangle and write in the total. Review at BB with whole class.<br>T has sign cards stuck to side of BB. Ps come out to choose signs to put between each amount. Make sure that all possibilites are covered.<br>*33 min* | Individual work, monitored<br>Discussion, agreement, checking<br>Drawn on BB or use enlarged copy master or OHP<br>Whole class activity<br>BB:<br>$15 \overset{\geq}{>} 14 \overset{\leq}{<} 19 \overset{\leq}{<} 20 \overset{\geq}{>} 17 \overset{\leq}{<} 18$ |

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| **Bk1** | | *Lesson Plan 121* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | **Number line**<br>Let's all look at the class number line. Who can come out and show us the (e.g.):<br>• 1-digit even numbers greater than 7 ( 8)<br>• even numbers greater than 12 and less than 20 (14, 16, 18)<br>• odd numbers not smaller than 20 (21, 23, 25, . . .)<br>• 2-digit odd numbers smaller than 17 (15, 13, 11)<br>• 2-digit numbers not greater than 13 (10, 11, 12, 13)<br>*38 min* | Whole class activity<br>Ask several Ps<br>Class agrees/disagrees by clapping or shaking heads<br>Ps can give instructions too. |
| **7** | ***Book 1, page 121***<br>Q.3 Read: *Write in the answers.*<br>*Colour the parts of the hats as shown.*<br>T explains task. Ps write in the answers first.<br>**D**, what did you write in the 3rd hat from left in the first row? Who agrees? Who thinks something else?<br>**E**, what did you write in the 1st hat on the right in the 2nd row?<br>Repeat until all hats are dealt with. Mistakes corrected.<br>Ps then colour in the hats according to the instructions.<br>**F**, how many pop-poms did you colour red (yellow)?<br>**G**, how many brims did you colour red (blue)? Who disagrees?<br>Let's check. etc.<br>*45 min* | Individual work, monitored<br>Discussion, agreement<br>Ps can choose the hat they want to give the answer to but must tell the class orally which one they have chosen.<br>Discussion, agreement, checking |

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| **Bk1** | R: Mental operations<br>**C: Revision and practice (0 to 20)**<br>*E: Logic problem; ordinal numbers* | *Lesson Plan*<br>*122* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Addition/subtraction relay**<br>a) T says, e.g. '0 + 4', $P_1$ says '4'. T says '+ 5'; $P_2$ says '9'; T says '– 3'; $P_3$ says '6', etc. (0 to 10)<br>b) T says, e.g. '5+ 6', $P_1$ says '11'. T says '+ 9'; $P_2$ says '20'; T says '– 7'; $P_3$ says '13', etc. (0 to 20)<br>*5 min* | Whole class activity<br>At speed<br>Involve all Ps<br>Ps can give instructions too |
| **2** | **Oral work**<br>Tell me different ways to describe the number 7 (15, 19).<br>e.g. 15: 5 + 10, 20 – 5, 5 + 5 + 5, the next odd number smaller than 16; the next number greater than 14, etc.<br>*10 min* | Whole class activity<br>Involve several pupils<br>Reasoning, checking, agreement |
| **3** | ***Book 1, page 122***<br>Q.1 Read: *Colour in as much money as you need to pay for the sweets.*<br>T explains task. Review at BB with whole class.<br>Read: *Colour in the sweets which could be paid for using only 2 p coins.*<br>**A**, which pictures did you **not** colour in? (ice lolly and ice-cream)<br>Why are these numbers different from the others? (odd numbers)<br>What other ways could you have used to pay for them?<br>(e.g 15 p = 5 p + 5 p + 5 p; 19 p = 5 p + 5 p + 5 p + 2 p + 2 p)<br>*18 min* | Individual work, monitored, helped<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, agreement<br>Ask several Ps<br>Write responses on BB |
| **4** | **Logic problem**<br>Ps each have strips of paper (20 cm long) and rulers on desks.<br>How long are your strips of paper? Ps measure carefully. (20 cm)<br>Listen carefully to what I want you to do and show me the answer with number cards when I say. Draw lines on the paper to help you.<br>*You have a strip of paper 20 cm long. You have to cut it so that the first piece is 2 cm long and each of the next pieces is 2 cm longer than the piece before it. How many pieces can you cut from the strip?*<br>Show me with number cards . . . now! (4)<br>**B**, come and explain to us how you worked out the answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (BB) Demonstrate by drawing on BB.<br>*Answer:* 4 pieces can be cut from the strip: 2 cm, 4 cm, 6 cm and 8 cm.<br>(Ps can cut out strips and measure each as a check.)<br>*26 min* | Whole class activity<br>Ask several Ps before agreement<br>Repeat slowly a few times.<br>Give Ps time to think.<br>In unison<br>Discussion, agreement<br>BB: *1st piece*: 2 cm<br>*2nd piece*: 2 + 2 = 4 cm<br>*3rd piece*: 4 + 2 = 6 cm<br>*4th piece*: 6 + 2 = 8 cm<br>2 + 4 + 6 + 8 = 20 |
| **5** | **Interlude**<br>Relaxation<br>*28 min* | Whole class resting with music paying |

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| **Bk1** | | *Lesson Plan 122* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 122***<br>Q.2 Read: a) *Colour red the shape which is 10th from the left.*<br>**C**, what position is it from the right? (11th)<br>Read: b) *Colour green the shape which is 3rd on the left of the red shape.*<br>**D**, what position is it from the right? (14th)<br>Read: c) *At which place from the left is the green shape?* (7th)<br>Read: d) *Colour blue every 5th shape from the right.*<br>**E**, how many shapes did you colour blue? (4)<br>What do you notice about the shapes? (All the same shape but pointing in 4 different directions: right, up, left, down; pattern of 4 shapes repeated 5 times)<br>(Demonstrate with shape drawn on card, cut out and rotated.) | Individual work, but class kept toegether<br>Discussion, checking, agreement for each part<br>Discussion, agreement<br>Praise clever responses |
| | *35 min* | |
| **6** | ***Book 1, page122***<br>Q.3 Read: *I am thinking of two numbers.*<br>*a)* ***1st number****: The next biggest number to it is 2 less than 20.*<br>Mark it on the number line in your books.<br>*b)* ***2nd number****: It is the same distance from 6 as it is from 14.*<br>Mark it on the number line in your books.<br>Review orally with the whole class, demonstrating on class number line if there are problems. | Individual work<br>Discussion, checking, agreement<br>BB:<br>a) 20 – 2 = 18<br>next smallest number: 17<br>b) 6 + 4 = 10; 10 + 4 = 14 |
| | *40 min* | |
| **7** | ***Book 1, page 122, Q.4***<br>Listen carefully and try to picture the story in your head. Write down equations about each part of the story in your books.<br>Show me your final answer with a number card when I say.<br>*Paul spent 12 p. He paid with three 5 p pieces.*<br>*How much change was he given?*<br>Show me with a number card . . . now! (3)<br>**F**, come and explain to us how you worked out the answer.<br>Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (BB)<br>*Answer:* Paul was given 3 p change. | Whole class activity<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>Discussion, agreement<br>BB: 5 + 5 + 5 = 15<br>15 – 12 = 3 |
| | *45 min* | |

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| **Bk1** | R: Mental operations<br>**C: Revision and practice (0 to 20)**<br>*E: Problem solving* | *Lesson Plan*<br>*123* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Oral work**<br>a) Tell me different ways to describe the number 16 (19).<br>(e.g. 11 + 5, 19 – 3, 8 + 8, the 4th even 2-digit number, the next number after 15, the next even number less than 17, etc.)<br>b) T says correct/incorrect statements for 15 (20). Ps agree (thumbs up) or disagree (thumbs down). If incorrect, Ps give reason.<br>*5 min* | Whole class activity<br>Involve several pupils<br>Reasoning, checking, agreement<br>In unison |
| **2** | **Secret numbers**<br>Listen carefully, and show me the answer with number cards when I say.<br>a) I am thinking of a number. I add 8 to it, then take away 5 and I am left with 15. What was the number I first thought of?<br>Show me with number cards . . . now! (12)<br>**A**, tell us how you worked out the answer. Is he/she correct? etc.<br>b) I start with the number 11. I add 3 to it, take away 5 and add 9. What is the number I end up with?<br>Show me with number cards . . . now! (18)<br>B, tell us how you worked out the answer. Is he/she correct? etc.<br>*12 min* | Whole class activity<br>Repeat a few times<br>Give Ps time to think<br>In unison<br>BB: 15 + 5 – 8 = 12<br>Ps nod heads when they have worked out each part.<br>In unison<br>BB: 11 + 3 – 5 + 9 = 18 |
| **3** | ***Book 1, page 123***<br>Q.1 Read: *Complete the table.*<br>*Write down the rule in different ways*<br>T explains task. Look carefully at the first 3 columns to find the rule. **C**, come and write what you think the rule is. (BB)<br>e.g. 1st row *(a)* + 2nd row *(b)* = 3rd row *(c)*<br>Who agrees/disagrees with **C**?<br>Let's check it using the first 2 columns. (6 + 2 = 8, 16 + 2 = 18)<br>Now complete the table and write down the rule in different ways.<br>Review at BB with whole class. Mistakes corrected at number line.<br>*20 min* | Individual work, monitored<br>Drawn on BB or use enlarged copy master or OHP<br>Give Ps time to think<br>Discussion, checking<br>BB: $a + b = c$<br>$a = c - b$<br>$b = c - a$<br>Involve several Ps at BB |
| **4** | **Interlude**<br>Physical exercises<br>*22 min* | Whole class in unison |
| **5** | ***Book 1, page 123, Q.2***<br>Revise right/left, odd/even and usual convention for house numbering.<br>Listen carefully and try to picture the story in your head. You can use what you like to help you. Show me the answer with a number card when I say.<br>*In Flower Street, the even numbers are on the left-hand side and the odd numbers are on the right-hand side.*<br>*Jeremy lives at number 8 and Andrew lives at number 18.*<br>*How many houses are between them?*<br>Show me . . . now! (4)<br>**D**, come and show us on the BB how you worked out your answer. Who agrees/disagrees?<br>What numbers do you think the houses opposite Jeremy and Andrew might be? Demonstrate with Ps at front of class. or draw on BB.<br>*28 min* | Whole class activity<br>e.g. counters, number lines, number cards, drawing, writing<br>Repeat slowly a few times<br>Give Ps time to think.<br>In unison<br>Discussion, agreement, checking<br>LHS: 2 4 6 8 10 12 14 16 18<br>RHS: 1 3 5 7 9 11 13 15 17 |

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| **Bk1** | | *Lesson Plan 123* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 123, Q.3***<br>Talk about a race and how runners enter for it and are given a number (e.g. 1st to enter is No. 1, 2nd is No. 2, etc.) which is written on a card and pinned to their vests so that the judges know easily who has won.<br>Read:. *12 boys take part in a race.*<br>*Albert has made the entry-number for each of them.*<br>Act out the story, with a P as Albert who hands out number cards to 12 pupils (1, 2, 3, . . ., 12). They stand in row facing class.<br>Lift up your card if you are holding a 1-digit (2-digit) number<br>Read: *How many digits did Albert have to write down?*<br>Show me with a number card . . . now! (15)<br>Let's check . (9 1-digit numbers and 3 2-digit numbers)<br>*35 min* | Whole class activity<br>Discussion, involving several Ps<br>Rest of class makes sure they are all correct and in order.<br>Class checks they are correct<br>Discussion, agreement<br>Rest of class in unison<br>BB: 9 + 3 + 3 = 15 |
| **8** | ***Book 1, page 123***<br>Q.4 Read: *Fill in the missing numbers.*<br>See how many you can do in 4 minutes!<br>Review orally round the class. Correct mistakes at number line.<br>*40 min* | Individual work, monitored<br>Discussion, agreement, self-correction |
| **9** | ***Book 1, page 123***<br>Q.5 Read: *Fill in the missing numbers.*<br>T points out that operations involving '+' and '–' should be done in order from left to right.<br>e.g. 16 – 13 + 11 = ☐☐ 16 – 13 = 3; 3 + 11 = 14<br>See how many you can do in 4 minutes! (Ps may use number lines.)<br>Review orally round the class. Mistakes corrected at number line.<br>*45 min* | Individual work, monitored, helped<br>Demonstration on BB<br>Discussion, agreement, self-correction<br>Praising |

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| **Bk1** | R:<br>**C: Trial test (0 to 20)**<br>*E:* | *Lesson Plan*<br>*124* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| | This lesson will be a test to see what you have learned. | |
| **1** | ***Book 1, page 124***<br>Q.1 Read: *Fill in the missing numbers.*<br>1st column: (3)<br>2nd column: (3)<br>3rd column: (3)<br>4th column: (3)<br>*8 min* | Individual work (6 min)<br>Checking (2 min)<br>*12 marks* |
| **2** | ***Book 1, page 124***<br>Q.2 Read: *Fill in the missing numbers.*<br>1st column: (3)<br>2nd column: (3)<br>3rd column: (3)<br>*14 min* | Individual work (4 min)<br>Checking (2 min)<br>*9 marks* |
| **3** | ***Book 1, page 124***<br>Q.3 Read: *Do the additions. Draw them on the number line.*<br>T explains task.<br>(a) Correct numbers (2)<br>(b) Correct numbers (2)<br>Correct drawing (2)<br>(c) Correct number (1)<br>(d) Correct numbers (2)<br>Correct drawing (2)<br>*30 min* | Individual work (12 min)<br>Checking (4 min)<br>Ps may use number lines<br>*11 marks* |
| **4** | **Chain operations**<br>Nod your heads when you have done each part.<br>Write down the final answer at the top of your books.<br>a) 6 + 4 + 10 – 3 = ? 17 (1)<br>b) 12 + 3 – 4 + 0 + 1 = ? 12 (1)<br>*34 min* | Individual work (3 min)<br>Checking (1 min)<br>(T reads very slowly)<br>*2 marks* |
| **5** | ***Book 1, page 124***<br>Q.3 Read: *Fill in the missing numbers.* 1st column: (3)<br>(Use only 1st and 2nd columns) 2nd column: (3)<br>*40 min* | Individual work (4 min)<br>Checking (2 min)<br>*6 marks* |
| **6** | ***Book 1, page 124***<br>Q.4 Read: *What could the rule be? Complete the table.*<br>*Write the rule in different ways.*<br>Correct numbers in table *(8)*<br>□ = △ – 6 (1)<br>△ = □ + 6 (1)<br>*45 min* | Individual work (4 min)<br>Checking (1 min)<br>*10 marks* |

**TOTAL: 50 *marks***

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| **Bk1** | R: Mental counting<br>**C: Measurement (up to 20 cm)**<br>*E: Logic problem* | *Lesson Plan*<br>*125* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Mental Counting**<br>• Let's say the even numbers up to 20. (2, 4, 6, . . ., 18, 20)<br>• Let's count in 3's from 2 to 20. (2, 5, 8, . . ., 17, 20)<br>• Let's count in 4's from 20 to 0. (20, 16, . . ., 4, 0)<br>*5 min* | Whole class activity<br>In unison<br>At speed |
| **2** | **Addition/subtraction Practice**<br>Ps come out to front of class in groups of 5.<br>T says an addition or subbtraction (0 to 20). First P to answer correctly sits down. When one P is left, another group of 4 come out.<br>*10 min* | Whole class activity<br>Encourage speedy response and quick exchange of Ps.<br>Differentiated questions |
| **3** | **Measuring**<br>Talk about measuring (lengths, weights, capacity, time) and tools used for measuring (rulers, tape measures, scales, cups, jugs, clocks, etc.)<br>Talk about pupils' heights (**A** is smallest, **B** is tallest in class).<br>**A**, stand up against this wall and see how many steps you take to reach the opposite wall (e.g. 15 steps) Let's all keep count. (BB)<br>Repeat for **B**, encouraging him/her to take big steps. (e.g. 10) (BB) (Class counts.)<br>Why are the number of steps not the same when the length of the room has not changed? (**A** takes smaller steps because shorter legs.)<br>What could we all use to measure the length of the room so that it would be the same for everyone? (metre rule or tape measure in standard units: metres)<br>**C** and **D**, (**E** and **F**, **G** and **H**) come and measure the length of the room in metres (using a metre rule or tape measure). (Each length is (or should be) the same.)<br>If we wanted to measure smaller lengths, we could use a smaller standard unit (cm). Who knows how many cm are in 1 metre? (100)<br>What can we use to measure lengths in cm? (rulers) Ps hold up.<br>*20 min* | Have several of these to show.<br>Discussion. Involve several Ps.<br>Compare Ps if heights uncertain<br>Counting in unison. BB:<br>Length of room: 15 A steps<br>10 B steps<br>Discussion, agreement<br>Discussion<br>Compare measurements<br>Length of room: e.g. 12 m<br>BB: 1 m = 100 cm<br>Each P has one already on desk |
| **4** | ***Book 1, page 125***<br>Q.1 Read: *Three different paths lead from the ant's nest to the grains of wheat.*<br>Everyone put one finger on the nest and one on the wheat.<br>What kind of paths are there? (1 straight solid line, 2 dotted lines, 3 dashed lines)<br>Read: *Measure each line and write its length in the box beside it.*<br>Make sure you have the tick for zero on your ruler lined up exactly with the beginning of each line.<br>How can we find the total length of the dotted path? (Add the two lengths together.) **I**, come and write the addition. (BB) Who agrees? Who thinks something else?, etc.<br>Repeat for the dashed and solid lines.<br>Read: *Draw over the path which is shortest in green.*<br>**J**, come and point to the line you coloured green. (solid line) Who coloured a different line? Why? etc.<br>*30 min* | Individual work, but kept together<br>Make up a story about the different paths, using enlarged copy master or OHP<br>Monitored, helped<br>Discussion, agreement<br>BB:<br>. . . path: 9 + 5 = 14 cm<br>– – path: 7 + 2 + 6 = 15 cm<br>___ path: 12 cm<br>BB: 12 cm < 14 cm < 15 cm |

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| **Bk1** | | *Lesson Plan 125* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **5** | **Interlude**<br>Song, rhyme (about umber 20)<br>*32 min* | Whole class in unison |
| **6** | ***Book 1, page 125***<br>Q.2 Read: *We want to cut this 16 cm strip of paper into 2 cm strips. Draw the cuts we will have to make.*<br>T explains task. Ps can first check strip is 16 cm (using rulers). Put a dot at every 2 cm along the top of the strip first, then the along bottom Use your ruler to join the pairs of dots.<br>Show me with a number card<br>• the number of 2 cm strips you made. Show me . . . now! (8) Ps write in books too.<br>• the number of cuts you drew. Show me . . . now! (7) Ps write in books too.<br>Why is the number of cuts one less than the number of strips? (If there are problems, show by cutting up strips of paper.<br>*38 min* | Individual work<br>Monitored, helped<br>Ps have rulers on desks<br>In unison<br>In unison<br>Discussion, checking<br>Demonstration |
| **7** | ***Book 1, page 125***<br>Q.4 Read: *Measure the length and width of the classroom in steps and metres.*<br>Make sure Ps know which is the length and which is the width.<br>Deal with one part at a time. Can be done either as whole class activity with class counting and two Ps stepping and measuring, or as paired (group) work, but well supervised!<br>Point out that Ps should write in the nearest step (metre) smaller and larger than the actual length (width). Most classrooms will not be an exact number of steps/metres but if yours is, then Ps can also write an equation (e.g. 18 steps = length)<br>Review at BB with whole class, with pairs of Ps coming out to write in their results. (T has BB prepared beforehand.)<br>*45 min* | Whole class activity or paired work<br>Ps can estimate lengths first<br>BB: e.g.<br>a) 18 steps < length < 19 steps<br>9 m < length < 10 m<br>b) 15 steps < length < 16 steps<br>8 m < length < 9 m<br>Discussion<br>Agreement, checking |

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| **Bk1** | R: Mental counting<br>**C: Measurement (0 to 20)**<br>*E: Problems in context* | *Lesson Plan*<br>*126* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Addition and subtraction relay (with units)**<br>T says, e.g. '8 cm + 11 cm', $P_1$ says '19 cm'; T says '– 5 cm, $P_2$ says '14 cm'; T says '– 8 cm', $P_3$ says '6 cm', etc. (0 to 20)<br>(Use metres, kilograms, minutes or hours, etc.)<br>Insist on unit name in answer.<br>*5 min* | Whole class activity<br>At speed<br>Involve several Ps<br>Also gives practice in saying units of measurement |
| **2** | ***Book 1, page 126, Q.1***<br>Talk about what each picture on LHS shows and what kind of measurements could be done with them. (e.g. cheese: weight, length, height, width, amount of space it takes up (volume).<br>Talk about the measuring tools on the RHS of the picture and what kind of measures they are used for. Some of the pictures could be measured by more than one of these, e.g. desk could be weighed or its height measured. Discuss standard units which might be used. (BB)<br>Listen carefully to the question I ask and decide which measuring tool to use. Join up the picture to what you think is the correct measuring tool in your books.<br>Read: *How heavy is the cheese?* (scales)<br>Ask several Ps what they think and why. What units might you use?<br>(e.g. grams, oz, lbs) Repeat for other questions.<br>*15 min* | Whole class activity<br>Use enlarged copy master or OHP or real objects and mesasuring tools.<br>Involve many Ps in discussion<br>Individual work, monitored<br>Discussion, agreement, checking |
| **3** | **Capacity**<br>Have ready a cup, a 1 litre jug, a 2 litre plastic bottle and a bucket of water.<br>How many cups do you think will fill this jug?<br>Let's check. Class counts as T pours. e.g. BB: 5 cups = 1 jug<br>How many jugs do you think will fill this bottle?<br>Let's check. Class counts as T pours. BB: 2 jugs = 1 bottle<br>How many cups do you think will be needed to fill the bottle?<br>Show me with number cards . . . now! (10)<br>A, come and explain how you got your answer. Who agrees? etc.<br>Check by demonstration if there are problems.<br>*25 min* | Whole class activity<br>Ask several Ps<br>(Or P can pour)<br>Ask several Ps<br>(Or P can pour)<br>In unison<br>BB:<br>1 bottle = 2 jugs = 5 + 5 cups<br>= 10 cups |
| **4** | **Interlude**<br>Relaxation<br>*27 min* | Class resting, with music playing |
| **5**<br><br><br><br><br><br><br><br>**Extension** | ***Book 1, page 126***<br>Q.2 Read: *We put one brick on top of another.*<br>T demonstrates with 2 cuboids.<br>Read: *How high is the tower if the bricks are:*<br>*a) 10 cm and 5 cm high*<br>*b) 6 cm and 7 cm high*<br>*c) 12 cm and 8 cm high?*<br>Review at BB with whole class. Mistakes corrected at number line.<br>Who can come and write a mathematical statement (using numbers and signs) on the BB comparing the heights of all the towers.<br>*33 min* | Individual work<br>Monitored<br>BB:<br>a) 10 + 5 = 15 cm<br>b) 6 + 7 = 13 cm<br>c) 12 + 8 = 20 cm<br>BB: 13 cm < 15 cm < 20 cm<br>Praising |

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| **Bk1** | | *Lesson Plan 126* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | **Problem**<br>Listen carefully and try to picture the story in your head. You can use what you like to help you. Show me your answer with number cards when I say.<br>*Ann posted 2 parcels. One parcel weighed 1 kg more than the other. If the total weight of both of them was 11 kg, what did each parcel weigh?*<br>Show me with number cards (one in each hand) . . . now! (5, 6)<br>**A**, come and explain to us how you worked out the answer. Is he/she correct? Who thinks something different? etc.<br>Discuss strategy for solution. (BB)<br>*Answer:* One parcel weighed 5 kg and the other weighed 6 kg.<br>*38 min* | Whole class activity<br>(e.g. counters, number lines, drawing dots, etc.)<br>Repeat a few times.<br>Give Ps time to think<br>In unison<br>Discussion, agreement<br>BB: $P + P + 1 = 11$ kg<br>$P + P = 11 - 1 = 10$ kg<br>Parcel 1 = 5 kg<br>Parcel 2 = 5 + 1 = 6 kg |
| **7** | ***Book 1, page 126***<br>Q.3 Read: *Measure the sides of the rectangle.*<br>Point to the side called $a$. Measure it carefully with your cm ruler and write it in the box for $a$.<br>Repeat for other 3 sides. Review measurements on BB.<br>What do you notice? ($a = c$ and $b = d$) T tells Ps that in any rectangle, the **opposite** sides are always equal.<br>Write down an addition for the total length of the 4 sides.<br>**B,** come and write on the BB what you put. Who agrees?<br>Who wrote something else? etc.<br>*45 min* | Individual work<br>Monitored<br>BB:<br>$a = 6$ cm<br>$b = 7$ cm<br>$c = 6$ cm<br>$d = 7$ cm<br>Total length:<br>6 + 7 + 6 + 7 = 26 |

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| **Bk1** | R:<br>**C: Shapes and reflections**<br>*E:* | *Lesson Plan*<br>*127* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Mirror Images**<br>T holds up a large mirror. **A**, come to the front of the class and stand facing to the right (sideways on) in front of the mirror. Hold up your right hand. Which hand is raised in the mirror image? (hand furthest away) Now hold up your left hand. Which hand is raised in the mirror? (hand nearest the mirror)<br>**A**, now turn and face the opposite way. Which hand should **A** hold up if we want to see the furthest away hand raised in the mirror? (left)<br>**B**, come and face the mirror. If **B** held up his left hand, which side of the mirror image would show it? (Ask several Ps) Let's check.<br>Repeat with other Ps showing other characteristics (e.g holding a toy, raising a leg, inclining their heads to left/right, wearing a ring, etc.) . Class has to guess **beforehand** which side of the mirror it will appear.<br>Make sure Ps realise that:<br>• points nearest (furthest away) in the mirror will also be nearest (furthest way) in the reflection;<br>• Points to the left (right) will be on the same side in the reflection.<br>*10 min* | Whole class activity<br>Involve several Ps<br>Give Ps time to think.<br>Discussion<br>Class shouts out<br>Discussion, agreement, checking |
| **2** | ***Book 1, page 127***<br>Q.1 Read: *How would you see Bernard the dog in the mirror? Colour the picture which is correct.*<br>T explains that the line drawn between the dogs represents a mirror and is called a **mirror line**. (BB) You must think very carefully before you choose the picture to colour.<br>Hands up those of you who coloured the pair of dogs on the left (right).<br>Q.2 Read: *The boat is reflected in the water. Colour in the drawing which is correct.*<br>Where do you think the mirror line will be in this picture? C, come and show us. Is he/she correct? etc.<br>Hands up those of you who coloured the 1st (2nd) boats from the left (right). (T writes number of Ps for each beneath the pictures)<br>How could we check which dogs and boats are correct? (Use a mirror) Let's check. (T uses large mirror or Ps can check with small mirrors.)<br>So these pupils (T points to number on pictures) were correct!<br>*20 min* | Individual work<br>Monitored<br>BB: mirror line<br>Use enlarged copy master or OHP for whole class discussion and review (or toy dog/mirror)<br>Individual work<br>Monitored, helped<br>Use enlarged copy master or OHP<br>Discussion about the surface of the water acting like a mirror.<br>Praising |
| **3** | **Interlude**<br>Physical exercises<br>*22 min* | Whole class in unison |

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| **Bk1** | | *Lesson Plan 127* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **4** | **Mirror Images**<br>On each desk T has put scissors, a square of coloured paper, a larger sheet of white paper and a mirror.<br>Everyone show me your coloured square of paper. (Ps hold up)<br>Fold it in half like this and draw a 'x' in the other 2 corners . <br>Now cut along the fold. What shapes have you made? (2 triangles)<br>Fold your white sheet in half like this and crease the fold. <br>Now unfold it again. This crease will be your 'mirror line'.<br>Put one of your coloured triangles on the left half of the white sheet, with the corner with the x pointing towards the mirror line.<br>Lay your other triangle down on the right side as you think the mirror image would be. Draw round both triangles and draw in the dot in the correct corner.<br>Now turn over your white sheet of paper. This time lay one of your triangles with the dot facing **away** from the crease. Repeat as above.<br>*32 min* | Desks prepared before lesson<br>Individual work, but together<br>Make sure Ps know which paper to cut and which to fold<br>T demonstrates<br>Individual work, monitored, helped<br><br>T demonstrating<br>Ps should be encouraged to use rulers to draw round triangles.<br>Choose Ps to come out to show their drawings.<br>Discussion, checking, agreement |
| **5** | ***Book 1, page 127***<br>Q.3 Read: *Colour the gloves to make 2 pairs, one green and one red.*<br>Join up the pairs. Review at BB with whole class.<br>Where could you draw a mirror line?<br>If there are problems, demonstrate with 2 pairs of real gloves.<br>*37 min* | Individual work, monitored<br>Discussion, checking, agreement, self-correcting<br>Ps check with mirrors |
| **6** | ***Book 1, page 127***<br>Q.4 Read: *What can we see if we unfold the paper? Complete these drawings.*<br>Review with whole class. Deal with one part at a time.<br>Colour in the shape you have drawn.<br>*45 min* | Individual work<br>Monitored, helped<br>Ps can check with mirrors, or<br>T unfolds large copy masters to confirm correct solutions |

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| **Bk1** | R:<br>C: **Shapes and reflections**<br>*E:* | *Lesson Plan*<br>*128* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Mirror images**<br>T faces class and raises right arm (left leg), looks to right (left), touches left (right) ear with right (left) hand, etc.<br>Ps copy as exact **mirror images**.<br>Ps can come to front and do actions too for other Ps to mirror.<br>*5 min* | Whole class activity<br>Checking, correcting<br>Praising |
| **2** | ***Book 1, page 128***<br>Q.1 Read: *Draw around the correct mirror image of the snowdrop in the water.*<br>Talk about snowdrops first. When do they flower? (early spring). Where would you find them? (grow wild in woods or planted in gardens). What colour are they? (white). Who has snowdrops in their garden? etc.<br>Review at BB with whole class. If problems, demonstrate with 2 plastic (or real) flowers and mirror.<br>T holds the flower in other positions and Ps come out to show mirror image.<br>*13 min* | Whole class introduction<br>Involve several Ps<br>Individual work, monitored<br>Use enlarged copy master or OHP<br>Discussion, checking, agreement |
| **3** | ***Book 1, page 128***<br>Q.2 Read: *Circle each picture which can be folded so that both halves are the same.*<br>*Draw a line to show where you would fold them.*<br>Review with whole class. T holds up large individual pictures one at a time. Who circled this picture? Where did you draw the mirror line? Who agrees? Who thought something else?<br>Let's check by folding.<br>*20 min* | Individual work, monitored<br>Cut out from enlarged copy master<br>Discussion, checking, agreement |
| **4** | **Interlude**<br>Song, rhyme, exercises<br>*22 min* | Whole class in unison |
| **5** | **Reflections**<br>Ps each have sheet of blank grids, each grid with a mirror line drawn in.<br>Ps work in pairs. They each draw a shape (sticking to the grid lines) on one side of the line. Then they swap over and complete the mirror image of their partner's picture.<br>They then swap back and check each other's work.<br>*30 min* | Paired work<br>T can demonstrate first on BB using enlarged copy master or OHP<br>Discussion<br>Praising |
| **6** | ***Book 1, page 128***<br>Q.3 Read: *We have drawn one half of some letters. Complete the drawings.*<br>Let's all say the alphabet quickly. 'A, B, C, . . ., Z'<br>Look at the pictures and think what letter it could be.<br>Think where the mirror line should be and draw it in red (use your rulers).<br>Then complete the other half of the letters.<br>Review at BB with whole class.<br>Or done as whole class activity, with Ps coming to front to complete.<br>*38 min* | Individual work, monitored<br>In unison<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion, checking, agreement |

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| **Bk1** | | *Lesson Plan 128* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **7** | ***Book 1, page128*** | |
| | Q.4 Read: *Find different ways to fold these shapes so that both halves are the same.*<br>*Show the fold by drawing a line.* | Individual work<br>Monitored, helped, corrected |
| | T explains task and encourages Ps to find as many different ways as they can. If there are problems, give Ps cut out shapes to experiment with or to check their drawings. | Use enlarged copy master or OHP<br>or<br>Ps have enlarged individual shapes, copied onto coloured paper and cut out. |
| | Review at BB with whole class. What other things in the classroom have one half exactly the same as the other half?<br>Where would you draw the mirror line? | Discussion, agreement, checking, self-correction |
| | Read: *Colour one half red and the other blue.*<br>Are the two halves of each picture mirror images now? | |
| | (No, they are different colours now – mirror images are exactly the same colour as the original.) | Discussion, agreement |
| | *45 min* | |

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| **Bk1** | R: Mental operations<br>**C: Time: hours, days, months**<br>*E: Problem solving* | *Lesson Plan*<br>*129* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Addition and Subtraction** (hours)<br>Talk about time (12 hour clock: hours/minutes; am: before12 mid-day; pm: after 12 mid-day) and clocks (hour and minute hands, o'clock)<br>BB: *Hours in a day*<br>1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12<br>am pm am<br>T: It is 7 o'clock in the morning. What time will it be in 2 hours?<br>$P_1$: 9 o'clock in the morning (9 am). What time will it be 4 hours after that? $P_2$: 1 o'clock in the afternoon (1 pm); etc.<br>Done mentally but checked on clock or hours line if there are problems.<br>*6 min* | Whole class activity<br>Discussion about what Ps do at different times of the day:<br>e.g. waking up, meal times, start/end of school, favourite tv programmes, etc.<br>Use enlarged copy master<br>At speed, in relay<br>Involve several Ps<br>Discussion, using hours line or model clock with moving hands |
| **2** | ***Book 1, page 129***<br>Q.1 Read: *Write down the time shown by each clock.*<br>Review at BB with whole class.<br>If the 1st clock shows 7.00 am, what time of the day is it? (morning) Repeat for the other times shown on the clocks.<br>*12 min* | Individual work<br>Discussion, checking on model clock (or use copy master)<br>Ps point to time on hours line. |
| **3** | **Setting a time**<br>Let's set the clock to (e.g. 6 o'clock, 1 o'clock, 11 o'clock).<br>P sets clock and if correct says another hour for next P to set.<br>Class show 'thumbs up' if correct and 'thumbs down' if wrong.<br>*16 min* | Whole class activity<br>At speed, in relay<br>Involve several Ps |
| **4** | ***Book 1, page 129***<br>Q.2 Read: *a) It is 7 am. What time will it be in 7 hours?*<br>Think about:<br>• What time of day is it?<br>• How many hours will take the time to 12 o'clock?<br>• How many more hours after that?<br>Ps write in books and underline whether 'am' or 'pm'.<br>Remind Ps that numbers with 1 digit should be written in RH (units) box.<br>Read: *b) It is 4 pm. What time was it 6 hours ago?*<br>Think about:<br>• What time of day is it?<br>• How many hours back is it to 12 o'clock?<br>• How many more hours before that?<br>Read: *c) It is 8 am. What time will it be in 12 hours?*<br>Think about:<br>• What time of day is it?<br>• How many hours will it be to 12 o'clock?<br>• How many more hours after that.?<br>Review orally with the whole class. Mistakes corrected.<br>*22 min* | Individual work, but class kept together<br>Monitored, helped<br>Repeat questions slowly a few times<br>Give Ps time to think<br>Ps sit up and fold arms when done.<br>Discussion, agreement<br>BB:<br>a) 7 am + 5 hours: 12 pm<br>12 pm + 2 hours: 2 pm<br>b) 4 pm – 4 hours: 12 pm<br>12 pm – 2 hours: 10 am<br>c) 8 am + 4 hours: 12 pm<br>12 pm + 8 hours: 8 pm<br>Demonstrate on model clock or hours line if there are difficulties. |
| **5** | **Interlude**<br>Song or rhyme<br>*24 min* | Whole class in unison |

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| **Bk1** | | *Lesson Plan 129* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 129, Q.3***<br>Let's say the days of the week, starting from Monday (Thursday).<br>Let's say the days of the week backwards from Saturday. (Sat, Fri . . .)<br>How many days are there in 1 week (2 weeks, 3 weeks)? (7, 14, 21)<br>Listen carefully to the clues, picture the days of the week in your head, and write down in your books the day you think I am describing.<br>Read: *What day will it be:*<br>*a) tomorrow if it was Wednesday yesterday?* (Friday)<br>*b) in 2 days' time if it was Wednesday 2 days ago?* (Sunday)<br>*c) in 2 days' time if it was Saturday yesterday?* (Tuesday)<br>Review orally with whole class. Ps explain solutions to rest of class.<br>Or can demonstrate with 7 Ps, each holding a card showing a day of the week, standing in order at front of class.<br>*32 min* | Whole class in unison<br>BB: 7 + 7 = 14<br>7 + 7 + 7 = 21<br>Individual work but class kept together<br>T repeats each question slowly. Give Ps time to think.<br>Ps nod when done<br>Discussion, agreeement, checking on calendar<br>(Use copy master from *LP 75/3b*) |
| **7** | ***Book 1, page 129***<br>Let's all say the months in a year, starting with January (June).<br>Let's all say the months in a year backwards from December.<br>How many months are there in 1 year? (12)<br>What other measure of time uses the numbers 1 to 12? (clock – hours)<br>Q.3 Read:<br>*a) How many months are there in 1 year and 3 months?*<br>*b) How many months are there in 2 years?*<br>*c) How many months more than 1 year are 18 months?*<br>*d) How many months less than 1 year are 8 months?*<br>*e) How many months less than 2 years are 15 months?*<br>*f) How many months are there in half a year?*<br>Remind Ps that 1-digit answers should be written in RH (units) box. Deal with one question at a time. Ps may use the calendar on page 92 to help them. Review at BB with whole class.<br>Use class number line to demonstrate if there are problems.<br>e.g. b) 12 + 12 = 12 + (8 + 4) = 20 + 4 = 24<br>Or can demonstrate with 12 (24) Ps each holding a card showing a month and standing in a line (in order) around the classroom.<br>*40 min* | Whole class in unison<br>(Use calendar on page 73)<br>Discussion<br>Ps can read aloud too<br>Individual work, but class kept together<br>BB: a) 12 + 3 = 15<br>b) 12 + 12 = 24<br>c) 18 – 12 = 6, or<br>18 $\overset{6}{>}$ 12<br>d) 12 – 8 = 4, or<br>8 $\overset{4}{<}$ 12<br>e) 24 – 15 = 9, or<br>15 $\overset{9}{<}$ 24<br>f) 12 = 6 + 6<br>12 – 6 = 6<br>(Use copy master from *LP 75/3a*) |
| **8** | ***Book 1, page 129***<br>Q.5 T explains task. Can first demonstrate with own age on BB, using calendar to count number of months since last birthday.<br>T chooses pairs of Ps to report their conclusion to the class.<br>*45 min* | Paired work<br>Monitored, helped<br>Discussion, agreement checking |

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| **Bk1** | R: Mental counting<br>**C: Ordering; sets**<br>*E: Problem in context* | *Lesson Plan*<br>*130* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Problem**<br>Listen carefully and show me the answer with number cards when I say. You may use what you like to help you.<br>*Alice is knitting a scarf as a birthday present for her Granny. She has already spent 8 hours on this work and has completed half of the scarf.*<br>*a) How many more hours will she need to finish the scarf?*<br>Show me with number cards . . . now! (8)<br>**A**, tell us how you got the answer. Who agrees/disagrees? etc.<br>*b) When Alice has finished the scarf, how many hours will it have taken her altogether?*<br>Show me with number cards . . . now! (16)<br>**B**, tell us how you got the answer. Who agrees/disagrees? etc.<br>*8 min* | Whole class activity<br>Talk about knitting – needles and wool (show samples)<br>T repeat s slowly a few times<br>In unison<br>Discussion, agreement<br>T repeat s slowly a few times<br>In unison<br>Discussion, agreement<br>BB: 8 + 8 = 16 |
| **2** | **Ordering of time**<br>Look at these cards. Let's all read them together. e.g.<br>breakfast \| tea \| waking up \| going to bed \| at school<br>We want to put them in time order. Who can come and choose the first card? (waking up) What do you think of when you see this card?<br>Who can come and choose the next card? etc. Talk about each one and the approximate time they would occur in the day.<br>T puts the cards back as they were. How could we put them in order without moving them? (numbering the cards) Ps come to front to put the correct number card beside each label.<br>2. breakfast 4. tea 1. waking up 5. going to bed 3. school<br>If we wanted to put the cards into sets, which cards would go together?<br>(e.g. waking up/going to bed - actions; breakfast/tea - meals; waking up/breakfast - morning; etc.)<br>Insist on Ps giving reason for their choice<br>*18 min* | Whole class activity<br>T has cards stuck to side of BB (choose from enlarged copy masters)<br>Discussion, agreement<br>Ps put cards in order on BB<br>T has number cards 1 to 5 stuck to side of BB.<br>Discussion, agreement<br>Point out that there could be more than one way of putting into sets. |
| **3** | **Interlude**<br>Exercises or action song<br>*20 min* | Whole class in unison |
| **4** | ***Book 1, page 130***<br>Q.1 Read: *Put these labels in the correct order by numbering them.*<br>Deal with one part at a time. Review orally round the class.<br>*Solution:* time order from beginning of year (day) to end<br>a) 1. New Year's day 2. Easter 3. Summer holiday 4. Christmas<br>b) 1. morning 2. noon 3. afternoon 4. evening 5. night<br>Which label is different from the others?<br>a) Summer holiday (not a definite date in the calendar).<br>b) noon (the only definite time – 12 o'clock)<br>Or done as a whole class activity using cards from Activity 2.<br>*26 min* | Individual work<br>Discussion, agreement<br>Ps should give reason for their choice<br>Talk about the times of year (day) and what they mean to Ps<br>Discussion, agreement<br>Enlarged copy masters from *LP130/2a* and *LP130/2b* |

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| **Bk1** | | *Lesson Plan 130* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 130***<br>T talks first about different standard units used to measure liquids. (litres, pints, gallons) and demonstrates (e.g. a pint bottle, a litre jug, a gallon bucket) Which is bigger? Let's see. (T demonstrates by pouring water from one to another assisted by Ps.)<br>Who buys milk in cartons at the supermarket?<br>Who has milk delivered in bottles by the milkman?<br>Which is the most popular way for us to buy milk? (e.g. cartons)<br>Q.2 Read: *How much milk do you have in 1 week if you drink 2 pints every day?*<br>Review with whole class. Mistakes corrected at number line.<br>*34 min* | Whole class discussion as introduction<br>Ps can estimate first<br>T writes numbers on BB<br>e.g. litre cartons: 16<br>pint bottles: 10<br>BB:<br>2 + 2 + 2 + 2 + 2 + 2 + 2 = 14<br>(7 lots of 2) |
| **7** | ***Book 1, page 130***<br>Q.3 Read: *When did Mary start working today if she has already worked for 2 hours and it is now 11 o'clock?*<br>*Draw the hands on the clock.*<br>Review at BB with whole class. Discuss whether am or pm.<br>*Solution:* Time now: 11 am, Time Mary started: 9 am<br>*40 min* | Individual work<br>Monitored, helped<br>Drawn on BB or use enlarged copy master or OHP or use model clock<br>BB: $\square + 2 = 11$<br>$11 - 2 = \underline{9}$ |
| **8**<br><br><br>

| **Bk1** | R: Mental counting<br>**C: Number sequences; tables**<br>*E: Number line (real model or imaginery)* | *Lesson Plan*<br>*131* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Oral practice (Relay)**<br>a) • Let's say the days of the week around the class.<br>• Let's say the months of the year around the class.<br>b) • Monday is the first day of the week. What is the 2nd, 5th, etc.?<br>• January is the first month of the year. What is the 6th (9th, 11th) month, etc.?<br>c) What day is today? (e.g. Wednesday) What day will it be in 3 (4, etc.) days' time? What day was it 3 (7, etc.) days ago?<br>*10 min* | Whole class activity<br>At speed in relay, involving all Ps<br><br>In relay round class<br>Involve several Ps<br>Ps can ask questions too! |
| **2** | **Additions, subtractions**<br>T says addition/subtraction using minutes, hours, days, weeks, months, years, etc.<br>Check against clock, calendar or number line if problems.<br>*15 min* | Whole class activity<br>At speed round class<br>Ps should say the units too. |
| **3** | ***Book 1, page 131***<br>Q.1 Read: *Fill in the missing numbers. . . . .*<br>Remind Ps that 1-digit numbers should be written in RH (units) box. Do 1st sequence with whole class, then the rest can be individual work. Deal with one sequence at a time.<br>Review with whole class. Mistakes corrected at number line.<br>How could we put the 4 sequences into sets? (e.g. odd/even, increasing/decreasing) How could we make a sequence containing both odd and even numbers? (Add or subract an odd number.)<br>*25 min* | Whole class introduction, then rest as individual work<br>Use enlarged copy master or OHP<br>Self-correction<br>Discussion<br>Demonstration (BB) |
| **4** | **Interlude**<br>Relaxation<br>*27 min* | Whole class resting with music playing |
| **5** | ***Book 1, page131***<br>Q. 2 Read: *Complete the table.*<br>T explains task. Practice with several numbers orally first.<br>Review at BB with whole class. Mistakes corrected at number line.<br>*32 min* | Individual work<br>Discussion, checking,<br>Drawn on BB or use enlarged copy master or OHP |
| **6** | **Sequences**<br>Let's practice counting in our heads.<br>• starting at 1, let's count forwards in 2's (4's. 8's)<br>• starting at 0, let's count forwards in 3's (6's, 5's, 7's, 9's)<br>• starting at 20, which numbers could we count back in to reach zero? **A**, what do you think? Who thinks something else? Let's check.<br>• starting at 11, which numbers could we count back in to reach zero? Let's check! (only 1's and 11's)<br>*38 min* | Whole class activity<br>In unison<br>T takes note of how far Ps get to and which Ps are struggling<br><br>Discussion, checking<br>Demonstration,checking<br>Agreement |
| **7** | ***Book 1, page131, Q.3***<br>T explains task. Two Ps come to front to draw their jumps.<br>If **C** jump 3 units and **D** jumps 6 units at a time, who will land on 18? Who will take more jumps? etc. (or as individual work, reviewed)<br>*45 min* | Whole class activity<br>Drawn on BB or use enlarged copy master or OHP<br>Ps estimate first, then check. |

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| **Bk1** | R: Mental counting<br>**C: Number sequences**<br>*E: More difficult sequences* | *Lesson Plan*<br>*132* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Sequence**<br>Let's continue the seuqnece (e.g. by 2, 3, 4, 5, . . .)<br>• 0. 5. 10, . . . Ps: . . ., 15, 20, (25, . . .)<br>• 1, 6, 11, . . . Ps: . . ., 16, 21, (26, . . .)<br>• 2, 7, 12, . . . Ps: . . ., 17, 22, (27, . . .)<br>• 3, 8, 13, . . . Ps: . . ., 18, 23, (28, . . .)<br>• 4, 9, 14, . . . Ps: . . ., 19, 24, (29, . . .)<br>What was the rule for all these sequences? (Each number is 5 more than number before it **or** each number is 5 less than number after it).<br>*10 min* | Whole class activity<br>In relay, involving all Ps<br>At speed<br><br>Praising if P continues in a different way and gives valid rule:<br>e.g. 0, 5, 10, 0, 5, 10<br>(Rule: + 5, + 5, – 10) |
| **2** | **Odd/even numbers**<br>Let's all say the odd (even) numbers, forwards from zero (backwards from 20).<br>*15 min* | Whole class in chorus<br>At speed<br>T notes Ps in difficulty |
| **3** | ***Book 1, page 132***<br>Q.1 Read: *Continue the pattern. Write the numbers and signs in the boxes.*<br>Deal with one part at a time. Review orally with whole class. Remind Ps tto write 1-digit numbers in the RH (units) boxes. Point out that there could be different rules fom the obvious ones:<br>e.g. a) + 3, + 3, – 2 – 2, + 3, . . . etc.<br>b) – 2, – 2, + 3, + 3, – 2, . . . etc.<br>Demonstrate on BB or use enlarged copy master or OHP.<br>*25 min* | Individual work, monitored, helped<br>Discussion, checking<br>Mistakes corrected against the class number line<br>Praising if P thinks of a different (valid) way of continuing the sequence. |
| **4** | **Interlude**<br>Physical exercises<br>*27 min* | Whole class in unison<br>(to music?) |
| **5** | ***Book 1, page 132***<br>Q.2 Read: *Continue the sequence in different ways.*<br>Let's see if you can start with the same 3 numbers but continue each sequence in a different way using a different rule.<br>You have 3 minutes to think about it!<br>Ps come to BB to write their sequences and explain the rule.<br>e.g. 1, 2, 4, 7, 11, 16, 22, . . . (+ 1, + 2, + 3, etc.)<br>1, 2, 4, 8, 16, 32, . . . (+ 1, + 2, + 4, + 8, etc.)<br>1, 2, 4, 2, 1, 2, 4, . . . (+ 1, + 2, – 2, – 1, + 1, etc.)<br>*32 min* | Individual work<br>Encourage creativity<br><br>Whole class discussion<br>Checking, agreement<br>Praising for clever sequence and rule. |
| **6** | ***Book 1, page 132***<br>Q.3 Read: *Continue the pattern.*<br>Look carefully at the patterns. What do you think the number underneath represents (difference between the 2 numbers above).<br>Deal with one part at a time. Review at BB with whole class.<br>*40 min* | Individual work<br>Monitored, helped<br>Discussion, checking, agreement |
| **7** | ***Book 1, page 132, Q.4***<br>T explains task. Ps write in order, underlining after choosing for part a), then crossing through after choosing for part b).<br>Review at BB with whole class. Mistakes corrected.<br>*45 min* | Individual work, onitored<br>Discussion, chcking<br>(Or 11 Ps hold number cards and class puts them in order) |

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| **Bk1** | R: Mental counting<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*133* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Oral Practice**<br>a) Tell me different ways to describe this number. (e.g. 0, 3, 10, 17)<br>b) T says correct/incorrect statements. Ps agree (thumbs up) or disagree (thumbs down). If incorrect, Ps give reason.<br>*5 min* | Whole class activity<br>Involve several pupils<br>Reasoning, checking, agreement |
| **2** | ***Book 1, page 133***<br>Q.1 Read: *At which numbers have we drawn the pictures? Write them in.*<br>Talk about the different animals in the picture first. e.g. Which animals are furthest away from (nearest) each other?<br>Review at BB with whole class: **A,** which number did you write beneath the pig? Who agrees? etc.<br>Similarly for the other pictures.<br>What kind of sets could we put these animals in? (e.g. 4-legs / 2-legs; furry coat/smooth coat; ears/no ears, bird/animals.)<br>*15 min* | Individual work, monitored<br>Use enlarged copy master or OHP<br>Discussion, checking, agreement<br>Mistakes corrected<br>Can use enlarged, cut-out animals<br>Discussion, encourage creativity |
| **3** | ***Book 1, page 133, Q.2***<br>T explains task. Have beads (with numbers) stuck to side of BB.<br>Ps come out to front, choose a number and put it in the correct necklace, explaining the reason for their choice.<br>Class agrees/disagrees. Who likes this necklace best? (T points to each in turn and Ps count and write number of votes underneath.)<br>Which is the most popular necklace?<br>*23 min* | Whole class activity<br>Use enlarged copy master or OHP, with beads cut out and coloured<br>Discussion, agreement<br>Preparation for data handling |
| **4** | **Interlude**<br>Song or rhyme<br>*25 min* | Whole class in unison |
| **5** | ***Book 1, page 133***<br>Q.3 Read: *Judy, Andy, Terry and Gary have been shopping. They each had 11 p. How much money do they each have left when they arrive home?*<br>T explains task. **B**, come and point to Judy's bag. What did she buy? (an apple and a banana) Write down an equation about how much money she had left from 11 p. Is B correct? Who thinks something else? etc.<br>Now see if you can do the same for Andy, Terry and Gary.<br>Review at BB with whole class. Mistakes corrected.<br>Who has the most (least) money left? (Andy, Terry)<br>*35 min* | Start as whole class activity<br>Drawn on BB or use enlarged copy master or OHP.<br>Discussion, agreement<br>Ps copy in their books too.<br>Individual work, monitored<br>BB: Judy: 11 – 4 – 6 = 1<br>Andy: 11 – 5 – 2 = 4<br>Terry: 11 – 5 – 6 = 0<br>Gary: 11 – 8 – 2 = 1 |
| **6** | ***Book 1, page 133, Q.4***<br>Which numbers could I be thinking of? Look at your number lines.<br>a) More than 9 and less than 13. (BB: 10, 11, 12)<br>b) Not less than 9 and not more than 13. (BB: 9, 10, 11, 12, 13)<br>What do you notice about the two lists? (10, 11, 12 in both; 9 and 13 not in a) ). Demonstrate on class number line.<br>*40 min* | Whole class activity<br>Ask several Ps<br>T writes responses on BB<br>Discussion, agreement<br>(Or done as individual work) |

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| **Bk1** | | *Lesson Plan 133* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **7** | **Addition/subtraction practice** (with units)<br>All Ps in one row stand up.<br>T says an addition or subtraction (0 to 20) using units. (km, m, cm, kg, g, £, pence, hours, minutes, litres, pints, gallons)<br>First P to answer correctly (including units) sits down (or leaves class early if break time).<br>*45 min* | Whole class activity<br>At speed, encouraging quick response<br>Differentiated questions<br>Ps can ask questions too! |

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| **Bk1** | R: Mental operations<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*134* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Mental operations**<br>Listen carefully, nod your head when you have done each step in your head and show me the final answer with number cards when I say.<br>a) 3, add 2, add 5, take away 1. Show me . . . now! (9)<br>b) 5, add 4, take away 3, add 4. Show me , , , now! (10)<br>c) 10, add 10, take away 2, add 0. Show me . . . now! (18)<br>d) 17, take away 3, add 4, take away 9. show me . . . now! (9)<br>*8 min* | Whole class activity<br>T says each part slowly and waits until most Ps nod their heads before proceeding<br>In unison<br>Ps who answer incorrectly should go through it again with help of class/number line |
| **2** | **Secret numbers/shapes**<br>I am thinking of a number (shape). You have to guess what it is by asking me questions. I will answer only 'Yes' or 'No'.<br>*12 min* | Whole class activity<br>Repeat unclear questions correctly<br>Keep a good pace. |
| **3** | ***Book 1, page 134***<br>Q.1 Read: *How much money did we spend on stamps if we paid with:*<br>*a) three 5 p coins and were given 2 p change?*<br>T has play coins stuck to BB (10 p's, 5 p's, 2 p's and 1 p's).<br>**A** and **B** come to front of class. **A** is the customer, **B** is the shopkeeper. **A** chooses the coins to give **B**.<br>How much are you paying altogether? (5 p + 5 p + 5 p = 15 p)<br>**B** chooses the correct coins to give as change. What did **A** spend on the stamps? (15 p – 2 p = 13 p)<br>Repeat with 2 other Ps for part b).<br>Rest done as individual work.<br>(Or complete as whole class activity, with different pairs of Ps coming to front.)<br>Ps can create own scenarios!<br>*20 min* | Start as whole class activity changing to individual work when T thinks Ps understand<br>BB:<br>a) *Paid:* 5p + 5p + 5p = 15p<br>*Spent:* 15p – 2p = **13 p**<br>b) *Paid:* 10p + 10p = 20p<br>*Spent:* 20p – 3p = **17 p**<br>c) *Paid:* 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p + 2p = 18p<br>*Spent:* 18p – 1p = **17 p**<br>d) *Paid:* 5p + 5p + 2p + 2p + 2p = 16p<br>*Spent:* **16p**<br>e) *Paid:* 5p + 10p = 15p<br>*Spent:* **15p** |
| **4** | **Interlude**<br>Action song<br>*22 min* | Whole class in unison |

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| **Bk1** | | *Lesson Plan 134* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **5** | ***Book 1, page 134***<br>Q.2 Read: *Measure the distances. 1 cm on the drawing is 10 cm in real life. Complete the table.*<br>Talk about the picture first. Discuss the types of flowers (daisy, rose, snowdrop). Would they all bloom at the same time in real life? (No, snowdrop in spring, daisy and rose in summer)<br>Talk about the standard units to be used (cm) and about the need for scale drawings (to save space).<br>Where else are scale drawings used? (maps, plans for houses, etc.)<br>Draw a 1 cm and a 10 cm line on BB to show the scale.<br>Demonstrate how to measure accurately first, with the zero on the first point of the line and the ruler exactly along the line.<br>P to front to draw a 20 cm line (with ruler). Other Ps come out to check its accuracy. What would this line measure in our scale drawing? (2 cm) What would a 30 cm (40 cm) line in real life be in our scale drawing? (3 cm, 4 cm)<br>T explains all rows/columns in the table. How would we get the total length of the paths in the scale drawing? (Add the 3 rows above.)<br>How could we get the total length of the paths in reallife? (e.g. add the 3 columns before it) Is there another way? (Change the scale drawing total to what it would be in real life.)<br>Let's all measure the distance from the rose to the daisy. **C**, what did you measure? Who agrees/disagrees? Who can come out and write it in the table? Is he/she correct? etc.<br>Similarly for the other measurements. Review totals.<br>*35 min* | **NB: Ps have rulers on desks**<br>Whole class introduction<br>Discussion, involve several Ps<br>Demonstration, showing real maps, plan of school, etc.<br>Ps can practice measuring<br>BB: *Scale Drawing Real life*<br>1 cm : 10 cm<br>2 cm : 20 cm<br>3 cm : 30 cm<br>4 cm : 40 cm<br>Drawn on BB or us enlarged copy master or OHP<br>Discussion<br>Individual work, but class kept together<br>Discussion, agreement |
| **6** | ***Problem***<br>Listen carefully and try to picture the story in your head. Show me the answer with a number card when I say You may use what you like to help you.<br>*Some people get on an empty bus at the railway station to travel into town. There are 2 stops between the station and the town centre.*<br>*At the first stop, 6 people get off and none get on. At the second stop, 5 people get off and none get on. If there are 9 passengers still on the bus when it reaches the town centre, how many passengers got on the bus at the railway station?*<br>Show me with number cards . . . now! (20)<br>Who can come and write an equation about the story? Who agrees?<br>*40 min* | Whole class activity<br>T repeats slowly<br>Give Ps time to think<br>In unison<br>BB: $\square - 6 - 5 = 9$<br>or $9 + 5 + 6 = 20$ |
| **7** | ***Book 1, page 134***<br>Q.4 Read: *Divide 19 into 3 numbers. $a + b + c = 19$ Complete the table.*<br>T explains task. Review at BB (or orally) with whole class. Mistakes corrected at number line.<br>(Or done as whole class activity.)<br>*45 min* | Individual work, monitored, helped<br>Discussion, agreement, checking<br>Drawn on BB or use enlarged copy master or OHP |

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| **Bk1** | R:<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*135* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Number relays**<br>a) T says an addition/subtraction (0 to 20). Ps give answers.<br>e.g. '6 + 4', $P_1$ says '10'. T says '+ 5'; $P_2$ says '15'; T says '– 4'; $P_3$ says '11', etc.<br>b) T gives first 3 terms in a sequence, Ps continue.<br>e.g. T says ' 1, 4, 7, . . .,' $P_1$ says '10', $P_2$ says '13', $P_3$ says '16', etc. | Whole class activity<br>At speed<br>Involve all Ps<br>Ps can start sequences too<br>Ask for rule after each one |
| | *10 min* | |
| **2** | **Number cards**<br>Listen carefully and show me the answer with number cards when I say.<br>• What is the smallest 2-digit number? Show me . . . now! (10)<br>• What is the largest 1-digit number? Show me . . . now! (9)<br>• What is their sum? Show me . . . now! (19)<br>• What is their difference? Show me . . . now! (1)<br>• Which number is smaller than 10 and greater than or equal to 9? Show me . . . now! (9)<br>• Which number is greater than 9 and less than or equal to 10? Show me . . . now! (10) | Whole class activity<br>In unison<br>Ps who are correct asked to explain reason for choice<br>Demonstrate on number line<br>Praising |
| | *15 min* | |
| **3** | ***Book 1, page 135***<br>Q. 1 Read: *Use one operation instead of two.*<br>*Fill in the missing numbers and signs on the arrows.*<br>a) **A**, come and put your finger on '5'. Fill in what you think are the missing numbers along the straight arrows. Is **A** correct?<br>Let's check on the number line. How many jumps did **A** take to get from 5 to 15? (2)<br>**B**, come and put your finger on the '5' again. Write in the missing number and sign on the curved arrow.<br>Is **B** correct? Let's check on the number line. How many jumps did **B** take to get from 5 to 15? (1)<br>b) As above with Ps **C** and **D**.<br>Parts c), d) and e) and f) as individual work, dealt with one at a time and reviewed at number line with whole class. | Start as whole class activity,<br>Drawn on BB or use enlarged copy master or OHP.<br>Discussion, checking, agreement<br>BB:<br>a) $5 \underbrace{+7+3}_{+10} = 15$<br>$5 + 10 = 15$<br>b) $12 \underbrace{-7-3}_{-10} = 2$<br>$12 - 10 = 2$<br>Individual work, monitored, helped. Mistakes corrected at number line |
| | *23 min* | |
| **4** | **Interlude**<br>Song, rhyme, exercises | Whole class in unison |
| | *25 min* | |
| **5** | ***Book 1, page 135, Q.2***<br>Listen carefully and try to picture the story in your head. Write the answer in the box in your books and show me with a number card when I say. Cross out the cabbages in your book as Rabbit eats them.<br>How many cabbages were in Rabbit's garden? Ps count in books. (16)<br>*On Monday, he ate 8 of them.*<br>*On Tuesday, he finished half of the remaining cabbages.*<br>*How many cabbages were left for Wednesday?*<br>Show me with number cards . . . now! (4)<br>Who can come and write an equation about the story? Who agrees? | Whole class activity<br>Class shout out in unison<br>T repeats each part slowly<br>Give Ps time to think/cross out<br>In unison<br>BB: $16 - 8 - 4 = \underline{4}$<br>(Demonstrate with Ps as cabbages) |

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| **Bk1** | | *Lesson Plan 135* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| | *30 min* | Individual work |
| **6** | ***Book 1, page 135*** | Monitored, helped |
| | Q.3 Let's see how many of column a) you can do in 2 minutes. Sit up and fold your arms when you have finished it. If you have time, check your answers. | Discussion, checking |
| | Review orally with whole class. Mistakes corrected at number line | Self-correction |
| | Deal with columns b) and c) in similar way. | |
| | *38 min* | |
| **7** | **Logic set** | Whole class activity |
| | P chooses a shape from the set and comes to the front of the class, hiding the card against his/her chest. | Encourage creativity |
| | a) Rest of class asks questions. P with card can answer only 'Yes' or 'No' (e.g. Is it white (small)? Are its edges straight lines? Does it have more than 3 sides?) | T repeats inaccurate questions correctly |
| | P who guesses shape correctly chooses another card. | Involve several Ps |
| | b) T (P) chooses a shape (shapes) from set and gives 3 clues about it (them) (e.g. not big, not black, more than 4 sides) | T repeats clues correctly |
| | If P is giving clues, T keeps note of clues and repeats them. | In unison |
| | Show me . . . now! (e.g. small white pentagon and hexagon) | Discussion, agreement |
| | Why is **X**'s shape wrong? | |
| | *45 min* | |

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| **Bk1** | R:<br>**C: Trial test**<br>*E:* | *Lesson Plan*<br>*136* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| | This lesson will be a test to see what you have learned. | |
| **1** | ***Book 1, page 136***<br>Q.1 Read: *Complete the picture to make 16.* (2)<br>*3 min* | Individual work (2 min)<br>Checking (1 min)<br>*2 marks* |
| **2** | ***Book 1, page 136***<br>Q.2 Read:<br>*a) Join the sums to the correct point on the number line.* (3)<br>*b) Fill in the missing numbers below the dots already drawn on the line.* (3)<br>*10 min* | Individual work (6 min)<br>Checking (1 min)<br>*6 marks* |
| **3** | ***Book 1, page 136***<br>Q.3 Read: *Fill in the missing numbers* 1st row: (3)<br>2nd row: (3)<br>*18 min* | Individual work (6 min)<br>Checking (2 min)<br>Ps may use number lines<br>*6 marks* |
| **4** | ***Book 1, page 136***<br>Q.4 Read: *Fill in the missing signs.* 1st column: (3)<br>2nd column: (3)<br>3rd column: (3)<br>*30 min* | Individual work (10 min)<br>Checking (2 min)<br>*9 marks* |
| **5** | ***Book 1, page 136***<br>Q.5 Read: *Which two numbers do you think come next?*<br>*a)* *3, 5, 7, 9, . . ., . . .* [11, 13] (2)<br>Write down the rule beside it. (+ 2) (1)<br>*b)* *16, 14, 12, 10, . . ., . . .* [8, 6] (2)<br>Write down the rule beside it. (– 2) (1)<br>(Ps can write above part b) ) *c)* *1, 6, 5, 10, 9, 14., . . ., . . .* [13, 18] (2)<br>Write down the rule beside it. (+ 5, – 1) (2)<br>*38 min* | Individual work (6 min)<br>Checking (2 min)<br>*10 marks* |
| **6** | ***Book 1, page 136***<br>Q.6 Read: *Put these numbers in decreasing order.* (2)<br>*Write the correct signs between them.* (2)<br>*42 min* | Individual work (3 min)<br>Checking (1 min)<br>*4 marks* |
| **7** | ***Book 1, page 136, Q.3***<br>a) Measure the width (from left to right) of the table. (T demonstrates)<br>Write the measurement above it in the form:<br>BB: [ ] < width of table < [ ] (2)<br>standard unit : cm (1)<br>*45min* | Individual work (2 min)<br>Checking (1 min)<br>*3 marks* |

**TOTAL: 40 *marks***

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| **Bk1** | R:<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*137* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Number line**<br>Who can come and point to these numbers on the number line?<br>• even numbers greater than 15 and less than 20 (16, 18)<br>• 1-digit odd numbers greater than 7 (9)<br>• 2-digit even numbers less than 14 (12, 10)<br>• numbers smaller than 13 and greater than or equal to 10 (10, 11, 12)<br>*5 min* | Whole class activity<br>Involve several Ps<br>Ps can describe numbers too. |
| **2** | ***Book 1, page 137***<br>Q.1 Read: *a) Mark the even numbers in red on the number line.*<br>*b) Mark with a blue star the numbers which are smaller than 12.*<br>*c) Circle in green the numbers greater than 8.*<br>Deal with one part at a time. Review orally with whole class.<br>Show me with number cards the number you marked in red, blue and green. Show me . . . now! (10)<br>*10 min* | Individual work<br>Monitored<br>Discussion, agreement, checking on number line.<br>In unison. Checking |
| **3** | ***Book 1, page 137***<br>Q.2 Read: *Fill in the missing numbers*<br>Ps may use their number lines to help them if in difficulty.<br>a) See how many of this column you can do in 4 minutes! Review orally with whole class, using number line if problems.<br>b) As part a).<br>Work through problem questions on BB with whole class.<br>*20 min* | Individual work<br>Monitored, helped<br>Discussion, agreement, checking<br>Ps explaining to class |
| **4** | **Interlude**<br>Song, rhyme, exercises<br>*22 min* | Whole class in unison |
| **5** | **Problem**<br>Listen carefully and try to picture the story in your head. Use what you like to help you. Show me the answer with a number card when I say.<br>*There were 12 forks in the drawer. Sarah used some to set the table for dinner. How many forks did Sarah use if 5 forks were left in the drawer?*<br>Show me with number cards . . . now! (7)<br>Who can come and write an equation about the story? Who agrees?<br>Who knows another name for 12 of something? (a dozen) What are sold in dozens? (e.g. eggs) What is half a dozen? (6)<br>*28 min* | Whole class activity<br>T repeats slowly a few times<br>Give Ps time to think<br>In unison<br>BB: $12 - 5 = \underline{7}$<br>or $12 - \underline{7} = 5$<br>Discussion, T showing egg-boxes if possible. |
| **6** | ***Book 1, page 137***<br>Q.3 Read: *Put a mirror on the line. What does the picture look like? Draw what you see in the mirror.*<br>Remind Ps about properties of mirror images.<br>Review at BB with whole class.<br>3 Ps each draw half a funny face on BB. They choose another 3 Ps to draw the mirror image. Class criticises results.<br>*34 min* | Individual work<br>Monitored<br>Use enlarged copy master or OHP<br>Praising |

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| **Bk1** | | *Lesson Plan 137* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | **Ordinal numbers**<br>13 Ps come out and stand in line facing class.<br>• Who is 4th from the left? What is he from the right?<br>• Who is 7th from the right? What position is he from the left?<br>• **X**, choose a P and tell us in which position he/she is standing.<br>• The 2nd (5th, 11th, etc.) on the right (left), sit down (turn around, touch your nose, etc.)<br>40 min | Whole class activity<br>Involve several Ps<br>At speed<br><br>Ps can give instructions too! |
| **7** | ***Book 1, page 137***<br>Q.4 Teacher explains task. Deal with one part at a time.<br>Review with whole class.<br>Demonstrate with real pennies and Ps at front of class.<br>*45 min* | Individual work, monitored<br>BB: T: 4 p<br>E: 4 p + 2 p = 6 p<br>P: 6 p + 2 p = 8 p<br>Total: 4 p + 6 p + 8 p = 18 p |

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| **Bk1** | R:<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*138* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Oral practice**<br>Tell me different ways to describe this number. (e.g. 1, 4, 7, 20)<br>*5 min* | Whole class activity<br>Involve several Ps |
| **2** | **Secret numbers/shapes**<br>I am thinking of a number (shape). You have to guess what it is by asking me questions. I will answer only 'Yes' or 'No'.<br>*10 min* | Whole class activity<br>Repeat unclear questions correctly<br>Keep a good pace. |
| **3** | **Problem**<br>Listen carefully and try to picture the story in your head. Use what you like to help you. Show me the answer with a number card when I say.<br>*Tom had 16 pencils. He gave the same number of pencils each to Leslie and to Sarah and had 8 left for himself.*<br>*How many pencils did he give to Leslie?*<br>Show me with number cards . . . now! (4)<br>**A**, come and explain to us how you worked out the answer.<br>Who agrees? Who can write an equation about the story?<br>*Strategy*: Work out how many pencils Tom gave away, then half it.<br>*Answer:* Tom gave 4 pencils to Leslie.<br>(Demonstrate with 16 pencils and 3 Ps at front of class if problems.)<br>*16 min* | Whole class activity<br>T repeats slowly a few times<br>Give Ps time to think<br>In unison<br>BB: T has: $16 - \square - \square = 8$<br>L+S have: $16 - 8 = 8$<br>$8 = 4 + 4$<br>L has 4, S has 4 |
| **4** | ***Book 1, page 138***<br>Q.1 Read: *Half of the apples, plus 3 more apples, are red and the others are yellow.*<br>*Colour the picture to show this.*<br>Elicit strategy for colouring. (Colour one row, i.e. half of the apples, and then another 3 apples red first, then colour the rest yellow.)<br>Write the answers in the boxes and then show me with number cards when I say.<br>a) Read: *How many red apples are there?*<br>Show me . . . now! (11)<br>Who can come and write an equation about it? (BB)<br>b) Read: *How many yellow apples are there?*<br>Show me . . . now! (5)<br>Who can come and write an equation about it? (BB)<br>c) Read: *How many more red apples than yellow apples are there?*<br>Show me . . . now! (6)<br>Who can come and write an equation/inequality about it? (BB)<br>*22 min* | Individual work, but class kept together<br>Monitored, helped<br>Discussion using enlarged copy master or OHP<br>Ps colour in apples<br>In unison<br>BB: $16 = 8 + 8,\ 8 + 3 = 11$<br>In unison<br>BB: $16 - 11 = 5$<br>In unison<br>BB: $11 - 5 = 6,\ 11 \overset{6}{>} 5$ |
| **5** | **Interlude**<br>Song, rhyme, exercises<br>*24 min* | Whole class in unison |

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| **Bk1** | | *Lesson Plan 138* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 172***<br>Q.2 T (or a P) reads each question aloud. Ps write answer in books.<br>a) *What is the largest 1-digit number?* (9)<br>b) *What is the smallest 2-digit number?* (10)<br>c) *What is the largest 1-digit even number?* (8)<br>d) *What is the smallest 2-digit odd number?* (11)<br>Show me the answer to these questions with number cards when I say.<br>• Add the largest 1-digit even number to the smallest 2-digit odd number. Show me . . . now! (19)<br>Who can come and write an additon about it? Who agrees? etc.<br>• Take away the largest 1-digit odd number from the smallest 2-digit even number . Show me . . . now! (1)<br>Who can come and write a subtraction about it? Who agrees? etc.<br>*30 min* | Individual work but class kept together<br>T monitoring, correcting<br>Make sure all Ps have correct numbers before continuing<br><br>Repeat a few times<br>In unison<br>BB: 8 + 11 = 19<br>Repeat a few times<br>In unison<br>BB: 10 – 9 = 1 |
| **7** | ***Book 1, page 172***<br>Q.3 Read: *Measure the sides of the rectangle*.<br>Point to the side called $a$. Measure it carefully with your cm ruler and write it in the box for $a$.<br>Repeat for other 3 sides. Review measurements on BB.<br>What do you notice? ($a = c$ and $b = d$) T reminds Ps that in any rectangle, the **opposite** sides are always equal.<br>Write down an addition for the total length of the 4 sides.<br>**B,** come and write on the BB what you put. Who agrees?<br>Who wrote something else? etc.<br>*38 min* | Ps have rulers on desks<br>Individual work<br>Monitored<br><br>BB:<br>$a$ = 6 cm<br>$b$ = 3 cm<br>$c$ = 6 cm<br>$d$ = 3 cm<br>Total length:<br>(6 + 3 + 6 + 3 = 18) cm |
| **8** | ***Book 1, page 172***<br>Q.4 Class is divided into 3 groups. Each group is given one of the grids to work on (Ps who find this difficult have largest grid).<br>T explains task and demonstrates meaning of arrows on BB.<br>Either:<br>i) Ps follow arrows themselves,<br>ii) T gives instructions (start on dot, move 1 up to right, move 1 across, move 1 down to right, move 3 straight down, etc.)<br>iii) Ps draw own **simple** shape on the grid (using only straight lines) and give instructions for other Ps to follow.<br>iv) done as whole class activity, with Ps from each group coming out to BB or OHP and rest of group giving instructions.<br>If i), ii) or iv): talk about the 3 different grids (end up with the same shape but in 3 different sizes).<br>*45 min* | Individual work<br><br>Drawn on BB or use enlarged copy master or OHP<br><br>T monitoring, helping, correcting<br><br>In groups or pairs<br><br>Ps from other groups point out errors<br><br>Discussion about enlargement |

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| **Bk1** | R:<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*139* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Group Race**<br>Class is divided into 3 groups, A, B and C. Each group is allocated a number and they have to write down as many different ways of describing it as they can. Ps from each group come out in relay.<br>e.g. BB: ***Group A*** ***Group B*** ***Group C***<br>**17** **14** **19**<br>Ps write, e.g. 16 + 1 7 + 7 10 + 9<br>17 + 0 2 + 6 + 6 20 – 1<br>. . . . . . . . . . . . .<br>The group with the most correct statements is the winner!<br>Let's say 3 'hip, hip hooray's for the winning team!<br>*10 min* | Whole class activity<br>2 or 3 groups<br>At speed<br>Under time limit (e.g. 6 min)<br>T claps hands to stop<br>Each group's responses checked by other 2 groups<br>Other 2 groups in unison |
| **3** | **Problem**<br>Listen carefully and try to picture the story in your head. Use what you like to help you. Show me the answer with a number card when I say.<br>*Mike had 6 p. His Granny gave him 9 p but he bought some chewing gum for 6 p. How much money does Mike have now?*<br>Show me with number cards . . . now! (9)<br>**A**, come and explain to us how you worked out the answer.<br>Who agrees? Who can write an equation about the story?<br>Who did it another way? (e.g. Mike paid for the chewing gum with the 6 p he had at the start, so he still has the 9 p from Granny)<br>*15 min* | Whole class activity<br>T repeats slowly a few times<br>Give Ps time to think<br>In unison<br>BB: e.g. 6 + 9 = 15<br>15 – 6 = 9<br>or<br>6 + 9 – 6 = 9 |
| **4** | ***Book 1, page 139***<br>Q.1 Read: *Each bottle contains enough for 20 cups of orange squash.*<br>T explains that each stripe on the bottles is 1 cupful. Ps check.<br>Read: *Colour how much is left if we pour out:*<br>*a) 10 cups b) 5 cups c) 12 cups d) 8 cups*<br>(• Ps count down number of stripes from the top of the bottle with the point of a pencil, then colour remaining stripes, or<br>• calculate the number of cups remaining and count up from the bottom)<br>Ps should write the number of cups left below each bottle.<br>Review at BB with whole class, Ps writing equations for each bottle on BB.<br>How many more people can be given a cup of orange squash from the fullest bottle than from the bottle with least left? (7)<br>*22 min* | Individual work<br>Monitored, helped<br>Discussion on best strategy<br>BB: a) 20 – 10 = <u>10</u><br>b) 20 – 5 = <u>15</u>*<br>c) 20 – 12 = <u>8</u>*<br>d) 20 – 8 = <u>12</u><br>15 – 8 = <u>7</u> |
| **5** | **Interlude**<br>Song, rhyme, exercises<br>*24 min* | Whole class in unison |

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| **Bk1** | | *Lesson Plan 139* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | **Number line**<br>Aunt May is making some pancakes. Who can come to the number line and show us how many pancakes she could be making?<br>• More than 9 pancakes but less than 13 (10, 11, 12)<br>• More than 9 pancakes but <u>not</u> more than 13 (10, 11, 12, 13)<br>• Mot less than 9 pancakes but less than 13 (9, 10, 11, 12)<br>• Mot less than 9 pancakes but <u>not</u> more than 13 (9, 10, 11, 12, 13)<br>***Book 1, page 139***<br>Q.2 Read: *Which numbers could I be thinking of?*<br>You may use your number lines to help you.<br>*a) More than 11 and less than 15:* (12, 13, 14)<br>*b) More than 11 and not more than 15:* (12, 13, 14, 15)<br>*c) Not less than 11 and less than 15:* (11, 12, 13, 14)<br>*d) Not less than 11 and not more than 13*: (11, 12, 13)<br>Review with whole class. Mistakes corrected at number line.<br>35 min | Whole class activity<br>Ps come out in pairs and one points to smallest number, while other points to largest number. Both read out possible numbers together.<br>Class agrees/disagrees<br><br>Individual work<br>Monitored<br><br>Deal with one part at a time<br><br>Discussion, agreement<br>Showing on class number line |
| **7** | ***Book 1, page 139***<br>Q.3 T explains task. Ps measure the length of Duck's step first (1 cm) then Cockerel's step (2 cm). Then they measure the length of the line between Duck and Cockerel (12 cm)<br>Talk about strategies for solution :<br>• measuring out each 1 cm and 2 cm and putting a mark on line, then counting number of steps;<br>• working out how many 1 cm's (2 cm's) in 12 cm.<br>Ps can choose. Review at BB with whole class.<br>How much bigger is Cockerel's step than Duck's step? (twice as big, 1 cm bigger).<br>• Which one will travel the shortest distance? (both the same)<br>• Which one will take the shortest time? (probably Cockerel)<br>*40 min* | Individual work<br><br>Drawn on BB or use enlarged copy master or OHP, with steps cut out<br><br>Discussion<br>T monitoring, helping, correcting<br><br>Discussion<br>Ask several Ps |
| **8** | ***Book 1, page 139***<br>Q.4 Read: *Measure the sides of the square*.<br>Point to the side called *a*. Measure it carefully with your cm ruler and write it in the box for *a*.<br>Repeat for other 3 sides. Review measurements on BB.<br>What do you notice? ($a = b = c = d$) T tells Ps that a square is a special rectangle which has all its sides equal.<br>Write down an addition for the total length of the 4 sides.<br>**B,** come and write on the BB what you put. Who agrees?<br>Who wrote something else? etc.<br>[Preparation for multiplication]<br>*45 min* | **Ps have rulers on desks**<br>Individual work<br>Monitored<br><br>BB:<br>$a$ = 3 cm<br>$b$ = 3 cm<br>$c$ = 3 cm<br>$d$ = 3 cm<br>Total length:<br>(3 + 3 + 3 + 3 = 12) cm<br>(or 4 lots of 3) |

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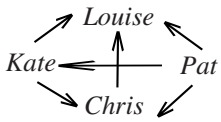
| **Bk1** | R:<br>**C: Revision and practice**<br>*E:* | *Lesson Plan*<br>*140* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **1** | **Number bonds**<br>T says a number and Ps complete it to make the total sum 19 (15, 20)<br>e.g. 19: T says '10', $P_1$ says '9'; T says '3', $P_2$ says '17'<br>*5 min* | Whole class activity<br>At speed<br>Involve all Ps |
| **2** | ***Book 1, page 140***<br>Q.1 Read: *The same letter stands for the same number.*<br>*A + N + N + A = 20*<br>*Which number could each letter stand for?*<br>*Write your answers in the table.*<br>T explains task. Ps work in pairs, trying out different pairs of numbers (can check with their number cards on their desks) before writing in the table.<br>Review at BB with whole class, Ps coming out to write different pairs of numbers in the table.<br>Did anyone notice something that would make the task easier? (*A + N* must equal 10)<br>*15 min* | Paired work<br>T monitoring, helping<br>Drawn on BB or use enlarged copy master or OHP<br>Discussion<br>Praising |
| **3** | ***Book 1, page 140, Q.2***<br>T calls out 4 Ps (roughly the same height) to hold the cards for Louise, Kate, Pat and Chris and stand in any order.<br>Class reads: *Kate is taller than Pat*. (Kate moves to left of Pat)<br>Class reads: *Kate is shorter than Chris* (Kate moves to right of Chris)<br>Class reads: *Pat is shorter than Louise*. (Pat moves to right of Louise.)<br>Class reads: *Louise is taller than Chris* (Louise moves to left of Chris)<br>How can we show it on the diagram?<br>(Arrows pointing to the taller one)<br>  <br><br>Who can come and draw in the arrow between Kate and Pat? etc.<br>Now everyone write out the names in *increasing* order of size.<br>Let's all say them together: Pat, Kate, Chris, Louise<br>*22 min* | Whole class activity<br>Use cards from enlarged, cut out copy master<br>In unison<br>Class checks that Ps in line are in correct positions<br>Discussion using uncut copy master<br>Agreement<br>Individual work<br>In unison |
| **4** | **Interlude**<br>Song, rhyme, exercises<br>*24 min* | Whole class in unison |
| **5** | **Problem**<br>Listen carefully and try to picture the story in your head. Use what you like to help you. Show me the answer with a number card when I say.<br>*Mum made 3 kinds of little cakes for tea – iced, currant and chocolate. She made 6 of each type. If the family ate 8 cakes at teatime, how many cakes were left?*<br>Show me with number cards . . . now! (10)<br>**A**, come and explain to us how you worked out the answer.<br>Who agrees? Who can write an equation about the story?<br>*30 min* | Whole class activity<br>T repeats slowly a few times<br>Give Ps time to think<br>In unison<br>BB: 6 + 6 + 6 = 18<br>18 – 8 = 10 |

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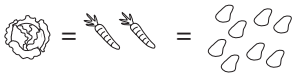
| **Bk1** | | *Lesson Plan 140* |
|---|---|---|
| ***Activity*** | | ***Notes*** |
| **6** | ***Book 1, page 140***<br>Q.3 T explains task, using real (or play) vegetables.<br>Ps complete the drawings. (Need only be rough shapes)<br>Review orally with whole class<br>*35 min* | Individual work<br>BB:<br>  |
| **7** | ***Book 1, page 140, Q.4***<br>Look at this picture. It has been cut up into pieces. (T has enlarged picture on BB and smaller pieces cut out and stuck to side of BB)<br>Let's count how many pieces. (16)<br>We have to find out where each piece belongs on the picture and then write its position underneath so that we know where to put it next time. T explains about coordinates (numbers and letters.)<br>Ps come to choose a piece, holds it against picture in correct place and writes in the correct number and letter.<br>Ps write in their books too as each piece is identified.<br>(Or done as individual work, reviewed with whole class)<br>*45 min* | Whole class activity<br>Use enlarged copy master and cut out parts<br>Discussion<br>T can do first piece to demonstrate<br>Class checks each part is annotated correctly |

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