Bk1	R: 'as many as' C: **Comparisons: To the right (left)** E:	*Lesson Plan* *1*
Activity		**Notes**

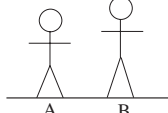| **1**	**Mathematics Resources** Let's look at resources we will be using in mathematics lessons. Look at *MEP Book 1*. T explains how each will be used: the book will be used for writing/ drawing/colouring. T holds up the other resources one at a time and explains how they will be used. Hold up different shapes (e.g. circle, square, triangle) and ask pupils to find a similar shape in their books. Do you like the resources? Do you want to say something about them? Encourage pupils to start collecting various items (e.g. buttons, pebbles, shells, sweets, beads) from home to put in a maths box (e.g. plastic ice-cream tub) to use in maths lessons. ———— *10 min* ————	*Resources on teacher's desk:* Number cards Shape cards Sign cards Number lines Coloured sticks/straws Coloured counters Number strips or stick-together plastic cubes *Resources on Pupils' desks:* MEP Book 1
2	**Poster 9** Look at these pictures. (T points to poster.). Which story do you know? Come to the front of the class and tell us the story about that picture. Discuss various parts of the pictures. Encourage use of words such as 'above', 'below', 'beside', 'next to', etc. ———— *20 min* ————	If any of these tales are not known, make up a story about the picture. Whole class discussion

3	**Counting Using the Pictures**
	• *The Little Cockerel's Golden Penny.*
	  Look at the first picture on the left-hand-side of the poster.
	  Teacher points to it and reads out the title.
	  Children point to picture in their books and repeat title.
	
	  How many living creatures can you see in the picture?
	  Come, **A**, and put a dot in a box for every creature.
	
	  How many dots had have been stuck on?
	
	Repeat the above for: *The Two Stubborn Goats, The Three Rabbits, The Carrot Comes Home, The Bird with Borrowed Feathers.*
	
	Use different pupils each time. Ask class if they agree.
	Display on BB, checking and praising after each.
	
	———— *30 min* ————
		Have ready black dots to stick on Poster 9.

4	**Physical Exercises** • Raise your left (right) hand. • Touch your right (left) shoulder with your left (right) hand. • Touch your left (right) knee with your left (right) hand. • Turn your head to the right (left). • Stand up (sit down). Turn to the left (right). ———— *35 min* ————	Whole class activity. At speed, but lighthearted. Check that each child is following instructions correctly.

5	***Book 1, page 1***
	• This shape is called a triangle.
	  Point to this shape in your book. Colour it (e.g. blue).
	  Put a dot in a box for every triangle you have coloured in.
	
	Repeat for the circles (e.g. red) and squares (e.g. yellow).
	———— *45 min* ————
		Hold up a triangle card.
		
		Show colour on board to familiarise pupils with colours.
		
		Close monitoring, checking and praising.

Bk1	R: 'as many as' **C: Comparisons: up, down; forwards, backwards; in front of, behind** *E:*	*Lesson Plan* *2*
Activity		***Notes***
1	**Counting mentally** Knock on your desk as many times as I knock on mine. (e.g. 4) ———— *10 min* ————	At speed. Ask individual pupils. Involve several pupils.
2	**Left and Right** Raise your left (right) hand. Lift up your left (right) foot. Only the girls stand up. ———— *15 min* ————	Class activity (seated). Take note of pupils who do not understand right/left.
3	**Interlude:** *Counting Song* ———— *18 min* ————	Whole Class
4	**Direction** What can you see when you look up (down)? What can you see in front of (behind) you? Let's all stand up. Take one step forward (backward). Point to the pupil in front of (behind) you. Take one step to the left (right). ———— *25 min* ————	Involve several Ps. Quick checking/ praising Whole class together. Quick checking/ praising
5	***Book 1, page 2*** Open your book at this page. (Show page.) Q.1 Read: *Draw lines to match up each pair of animals.* *Colour the animals from each pair in the same colour.* *Draw a dot in a box for every pair of animals* Discuss what to do with whole class. Come, **A**, and show us what you have done on the big picture. Who was correct? How many animals are there altogether? How many pairs of animals are there? Come, **B**, and draw a dot in a box for every pair of animals. How many dots has B drawn? Who was correct? Q.2 Read: *Colour the same vehicles in the same colours.* *Draw a dot in a box for every truck in the picture.* How many vehicles (cars, trucks) are there? How many vehicles are facing left (right)? Which type of cars are there most of? (If you know what these numbers look like, hold up the correct number card.) ———— *35 min* ————	Pupils repeat together, following words in their books. Individual work, monitoring Use enlarged photocopy Discussion Make sure that every child is in agreement. Praising only. Pupils repeat. Individual work, monitoring Class discussion. Take note of pupils who cannot do this.
6	**Poster 10** Look at this picture. (T points to *The Mouse Meeting*) Who would like to say something about the picture? **X**, squeak as many times as there are mice in the picture. Was he/she correct? (Show by nodding or shaking your head.) Come, **Y**, and stick as many dots in the boxes as there are animals in the pictures. Is he/she correct? Repeat for *The Ugly Duckling* picture (quacking). ———— *45 min* ————	Encourage pupils to use complete sentences. Ask pupils incorrect to do it again. Pupils to front to stick dots on poster. Discussion. Display on *BB*. Involve several pupils.

Bk1	R: Counting mentally with and without numbers **C: Comparisons: ordering; taller, smaller; longer, shorter** *E:*	*Lesson Plan* *3*
Activity		*Notes*
1	**Counting with fingers** Put up as many fingers on your left hand as the number of times I clap. Show me . . . **now**! (e.g. 2 1 4) Put up as many fingers on your right hand as the number of times I clap. Show me . . . **now**! (e.g. 3 5) *5 min*	Check each child. Take note of their number concepts, counting and concentrating abilities. Continually checking and praising.
2	**Counting with coins** Lay down as many (counters) on your desk as the number of times I jump. (e.g. 3) Everyone look at me! Show this number with the fingers of your right hand . . . .now! Come, **X**, and stick the same number of large circles on the BB. *BB:* Is he/she correct? Who agrees with him/her? How many circles are on the BB? (3) Let's count up to 3 from 1. Let's count down from 3 to 1, showing the numbers with the fingers on your left hand at the same time. *15 min*	Or pupils' own objects. Individual work, closely monitored. Checking and praising. Agreement. Discussion Whole class activity In chorus
3	**Drawing circles** Draw as many circles in your exercise book as I am showing with my fingers. (e.g. 6) Look at the BB. How many circles are on it? Let's count them loudly together. (1, 2, . . . 6) Count down from 6 to 1, showing the numbers with your fingers. *20 min*	Individual work, closely monitored by T. Displayed on BB. In chorus In chorus, using two hands for the number six.
4	**Interlude:** *Counting Song* *23 min*	Standing, with actions
5	**Comparison of two** **A** and **B**, come to the front of the class. Which child is taller? Don't tell me yet, just nod your head (with a smile) if you know. Listen, **A** and **B**! The taller of you has to say, 'Pom-Pom'. Was he/she correct? Class – shout 'Pom-pom' if you agree. Class – shake your head if you disagree with B. Listen **A** and **B**! The smaller of you must say 'Pow-wow'. Class – shout out 'Pow-wow' if you agree with **A**. Class – wag your finger if you disagree. *28 min*	Choose children with visibly very different heights. In chorus (Immediate feedback) In chorus (Immediate feedback) Discussion/agreement

Bk1		*Lesson Plan 3*

Activity		*Notes*
6	**Comparison of three** Bring three pupils, **A**, **B** and **C**, to front of class. Is **A** taller than **C**? Shout 'yes' and nod your head if you agree. Shout 'no' and shake your head if you disagree. Is **B** smaller than **C**? **Y**, tell the class using a complete sentence. Who is the tallest (smallest)? Who is taller than **C**? **Z**, say something true about **B** using a complete sentence. ———— *35 min* ————	Difference in heights should be obvious. If possible, choose children with names starting with A, B and C Comparison. Discussion. Practice in expressing relationships.

7	***Book 1, page 3***
	Open your books at this page (show page).
	
	Q.1 Read: *Colour the longest pencil yellow.*
	                    Colour the shortest pencil green.
	
	           Show me your yellow (blue) pencil. Colour in carefully.
	
	Q.2 T explains task. Review with whole class.
	
	Q.3 As above
	
	Q.4 As above
	———— *45 min* ————
		Pupils repeat together, following words in their books.
		
		Make sure pupils know which pencil to use.
		
		Individual work, closely monitored.
		
		Check each child.
		
		Class discussion about solutions. Praise.

Bk1	R: Counting mentally without and with numbers **C: Comparisons: ordering; e.g. above, below; in front of, behind, between; some combinatorial colouring** E: *Sequences*	*Lesson Plan* *4*

Activity		Notes
1	**Softball play** T throws soft ball to pupil. P throws ball back with correct response: • Repeat back to me what I say. e.g. tic-tic-tic; pom-pom; tic-tac; tic-tic-tac; too-too-too-too • Say back to me one more (less) than I say. *5 min*	At speed, involving several pupils. Repeat rhythms if necessary. Correct where necessary. Paise when deserved.

2	**Poster 3**
	• Let's count the squirrels in the forest.
	  (Show the number using your fingers too,)
	
	• Rabbits live in the forest too. How many are there?
	  Count aloud and clap the number.
	
	  Which is there more of? How many more?
	
	• Let's count the frogs and jump up for every frog we count.
	  There were five frogs. How many have jumped out of the water?
	
	Repeat for other things (trees, bushes, tortoises, hedgehogs)
	 10 min
		Whole class counting aloud, fingers raised.
		
		In chorus, clapping
		
		Ask several pupils what they think before agreeing on correct answer.
		
		In chorus, jumping.
		
		Up to five

3	**Hide and Seek** Your fingers are rabbits and the desk is the bush. Hide your rabbits under the bush. When I say, 'Let 1 (2, 4, 3, 5) bunnies jump out of the bush' show the number using your fingers. *15 min*	Whole class. At speed. Quick checking /praising.
4	**Interlude:** *Counting Song* Rolling up length of ribbon on desk at same time *20 min*	Fine motor movement as preparation for writing

5	**Book 1, page 4**
	Q.1 Read: *Draw around the car which does not match*.
	       Demonstrate on BB how to circle a picture.
	
	       Everyone stop what you are doing and listen.
	
	       A, which car did you draw around?
	
	       If you agree with **A**, raise your arms in a 'V' shape.
	
	       A, why do you think this car does not match?
	       Who has another reason?
	
	       Who thinks a different car? Why? Who agrees?
	 30 min
		Pupils repeat
		Individual work
		Monitoring closely
		
		Whole class discussion
		
		Quick checking and praising.
		
		Reasoning. Praising.

6	**Book 1, page 4**
	Q.2 Read: *Colour the same animals with the same colour.*
	       Stop and listen. Those who used two colours,
	       show the number 2 with your left hand.
	       Point to the rabbit *behind* the horse on the left.
	       Mark it with a tick.
	       Come to the front, **X**, and show us the rabbit in your book.
	       Shout 'Hurray' if you agree with **X** and hold up 5 fingers.
	       If you do not agree with **X**, show a fist (no fingers).
		Pupils repeat. Individual work. Monitoring closely.
		
		Quick checking and praising.
		
		(Show ✓ on BB).
		
		Quick checking and praising.
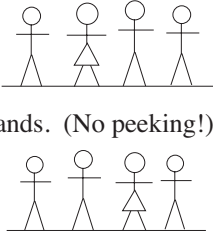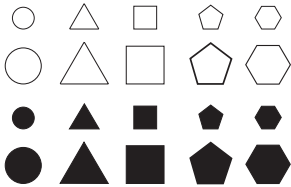
Bk1		*Lesson Plan 4*
Activity		***Notes***

Activity		***Notes***
	Lay a (stick) on your desk for every rabbit *in front of* the horse on the left.	Individual work, monitoring (or item from collection)
	Y, come to the front and show the class your sticks. Is he/she correct? Nod your heads if you agree.	
	Show the number of rabbits with your fingers.	Quick checking. praising.
	Show with your fingers the number of rabbits *between* the horses.	Quick checking. praising.

— 45 min —

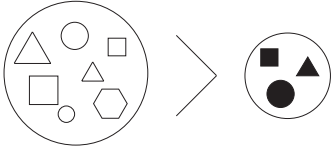| **Bk1**	R: Counting mentally: opposite concepts, learning about/writing numbers **C: Comparison of sets: more, less, equal** *E: Separating, sequences*	*Lesson Plan* *5*
Activity		***Notes***
1	**Counting Song** Or any song with counting or numbers which can have actions done to it. ——————— *5 min* ———————	Repeat two or three time, increasing speed each time.
2	**Soft ball play** T throws ball to pupil, saying one part of a pair of opposites. P throws ball back saying opposite concept. (e.g. short-long, tall-small, wide-narrow, left-right, above-below, high-low, little-large, few-many, great-tiny, lower-higher, out-in, etc.) ——————— *10 min* ———————	At speed, involving as many pupils as possible.
3	***Book 1, page 5*** Q.1 Put as many counters on your desk as there are dolls (bears, balls, etc) in this picture. Show with your fingers the number of counters or hold up the correct number card . . . **now**! Read out: *Colour the same toys in the same colour.* *Draw a line beneath the toy of which there is only one.* Ask pupil to show solution. Who agrees (does not agree)? ——————— *15 min* ———————	Individual work and whole class discussion in each case. Observe those children who already know the numbers 1, 3, 2 Use enlarged picture.
4	**Number ladder** (drawn on BB) Let's read the numbers from the bottom of the ladder to the top. If any of you don't know them, listen carefully. Now let's say the even numbers loudly and the odd numbers in your head. Let's step back down from the top. ——————— *20 min* ———————	In chorus. Try to note which children miss any of the numbers, are a little hesitant or get them wrong. (Almost) in chorus
5	**Drawing** Copy the figure from the BB. in your exercise books. Let's read the number of dots in each column from left to right. Write down the correct numbers under each column if you know them. ——————— *25 min* ———————	Individual work Monitoring, praising Whole class in chorus Closely monitored by T to assess pupils' knowledge of writing numbers.
6	**Counting coins** Put 5 coins on the paper on the left side of your desk and 3 coins on the right side. Point to the side which has more coins. **X**, come out to the front and show what you have done on the BB. Circle the coins which are more. If you agree with **X**, shout 'Yes' **Y**, say a sentence to me about the coins. If you think **Y**'s sentence is true, show me 'thumbs up'. You are all *very* clever! ——————— *30 min* ———————	Individual work, monitored Whole class discussion Or use pupils' collection Checking Quick checking/praising
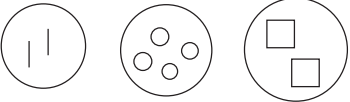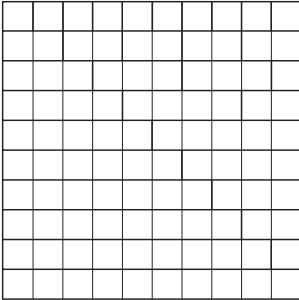
Bk1		*Lesson Plan 5*
Activity		***Notes***
7	***Book 1, page 5*** Q.2 Read: *Draw around the picture which has less ice-creams.* *Draw as many dots in the grid as there are icecreams.* Hands up if you were correct. Hands up if you made a mistake. What did you do wrong? Write the numbers under the grids if you know them. Who could do it? Who could not do it? ————— 35 min —————	Individual work, monitored Praise. Reassure pupils who cannot write numbers that they will learn how to do it soon.
8	***Book 1:* page 5** Q.3, Q.4 or Q.5 Choose what you like from these three exercises. ————— 45 min —————	Close monitoring. Ask pupils reason for their choice.

Bk1	R: Counting mentally: operations (written) **C: Comparison of sets: more, less, equal (logic set)** *E: <, = signs*	*Lesson Plan* *6*

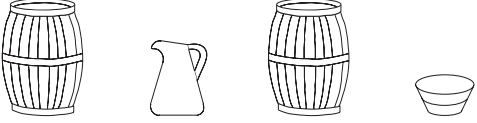| **Activity**		**Notes**
1	**Number ladder** (on BB) Let's climb up the number ladder, one step at a time, saying the numbers as we go. (1, 2, 3, . . ., 10) This time, some of the numbers will be *secret* numbers. Say 'one', then whisper 'two ', then say 'three', then whisper 'four' and so on. Let's count down from 10 by 2 steps at a time. 10, 8, 6, 4, 2, (0) ———————— *5 min* ————————	Whole class. In chorus. Whole class. In chorus. Whole class. In chorus. Note pupils having difficulty.
2	**Changing places** **A**, **B**, **C** and **D**, come to the front of the class and stand in a row. Watch them carefully! Now close your eyes and cover them with your hands. (No peeking!) Open your eyes. **X**, what has been changed? Was **X** correct? Who agrees ? How many girls (boys) are there? Which are there more of? How many children are there altogether? ———————— *10 min* ————————	Whole class activity Pupils change places. Checking/praising Repeat with other changes. Ask several pupils before agreement on answer.

3	**Number and Sign Card Sets** BB
	
	Look at what is on the BB. Make it on your desk with cards. 3 + 2 =
	Who can read it? (Hands up)
	Read it, **X.** (Three plus two equals) Who knows the answer?
	
	Now look at this on the BB. Make it on your desk with cards. 8 – 3 =
	Who can read it? (Hands up)
	Read it, **Y**. (Eight minus three equals) Who knows the answer?
	
	a) Those who know how to do it, make these with cards 1 + 2 =
	     and put in the correct answer. 4 – 3 =
	or
	b) the others do Book 1, page 6, Q.1 (Show page.)
	     Read: *Colour the longest kite red and the shortest kite blue*.
	
	Clear desks.
	
	———————— *15 min* ————————
		Individual work.
		
		Monitoring/praising
		
		Individual work.
		
		Monitoring/praising
		
		Discussion of both solutions with class.

4	**Interlude** Verse, song, physical exercises ———————— *18 min* ————————	Whole class in unison
5	**Getting to know the Shape Card Set** Hold up a shape (e.g. circle) and ask pupils to hold up the same shape and then lay it down on their desks. Would you like to say something about it? Can you find a shape which looks like it? How is it different? Repeat with other shapes. Ask pupil to hold up his/her favourite shape. Why do you like it? (Show/elicit that each shape is in 4 versions: 2 sizes and each size is in 2 colours.) ———————— *25 min* ————————	Whole class activity Monitoring praising Whole class discussion Encourage use of 'circle', 'square', 'triangle', 'black', 'white', 'small', 'large'.
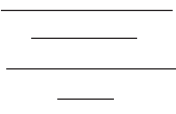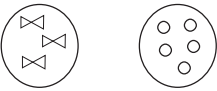
Bk1		*Lesson Plan 6*

Activity		*Notes*
7	**Comparing sets** Look at these sets on the BB.	Do not have '>' sign on yet.
	A, come and point to the left hand set. What kind of shapes are there? (white) How many shapes has the white set? Let's count together.. (Write 7 beneath the white set.)	Whole class together
	B, come and point to the right hand set. What kind of shapes are there? (black) How many shapes has the black set? Let's count. (Write 3 beneath the black set.)	Whole class together
	C, come and point to the set which has more elements. Join up the elements 1–1. How many more has the white set? (4)	Feedback (agreement)
	Who can say a number sentence about them? e.g. 7 is more than 3. 7 is 4 more than 3.	Checking, praising
	Explain that the sign > means 'more than'. 7 > 3 (BB)	Draw) the > sign between the sets.
	Who can say another number sentence about it? e.g. 3 is less than 7. Explain that the sign < means 'less than'. 3 < 7	T should repeat pupils' inexact answers correctly.
	Who can say it as an addition (subtraction)? e.g. 3 + 4 = 7; 7 – 3 = 4 (Write on BB). (Repeat the task with other sets of elements.) ————— *35 min* —————	T starts to use expressions such as addition, subtraction, sum, difference.

8	***Book 1, page 6***
	Q.2 Read: *Compare the pictures. Draw around the group which has more*.
	
	        Which set of objects are there more of?
	        Which are of the same amount?
	        Write down the numbers beside each group if you can.
	                                                  5 > 4
	        Review each solution and write on BB: 3 < 4
	                                                  4 > 2
	                                                  5 = 5
	————— *40 min* —————
		Individual work.
		Monitoring.
		Helping
		Praising
		
		Whole class discussion.
		Agreement

9	***Book 1, page 6*** Teacher explains: less < more, e.g. Q.3 Read: *Draw dots on the balls to make the signs correct*. Q.4 Extension for high attainers (if time). ————— *45 min* —————	Individual work Monitoring/helping/praising

Bk1	R: Identifying things **C: Comparison: more, less, equal (cuisenaire rods)** E: *The most, slowest, longest; measuring length*	*Lesson Plan* *7*

Activity		*Notes*
1	**Game: What is in your hand?** There are different objects in a bag (e.g. pencil, marble, pebble, matchbox, pen, etc.) Come, **X**, put your hand in the bag and take hold of one object. Let's ask **X** questions to find out what it is. e.g. Is it round, long, etc.? ———— *5 min* ————	Let several pupils do it. Whole class checking
2	**Making sets** Let's make some sets on your desk. T shows three sets on BB: Now you make the same sets on your desks. You can use what you like but the number of items must be the same as mine. Which shape has the most elements? ———— *10 min* ————	Individual work Monitoring, helping Checking/praising Whole class discussion
3	**Number strips** (*S*how demonstration set and have pupil sets on desks.) Take off BB and mix up the set. Ask pupils to come to BB, one at a time to put the strips in order of length. Pupils repeat with their own sets. Hold up the shortest (longest). How many '2' strips make up a '4' strip? Repeat for other strips. ———— *20 min* ————	Use enlarged copy master, cut out and strips stuck to board, or use with OHP. Or pupils could use cubes stuck together. Individual work. Monitoring, helping Class discussion
4	**Poster 4** Talk about the picture. How many people (toys, balls, dolls, etc.)? Encourage mathematical sentences: 'There are more . . .' How many people would there be if one leaves the room? etc. ———— *25 min* ————	Or talk about the classroom. Involve as many pupils as possible. Repeat correctly pupils' incorrect sentences.
5	**Interlude** Verse, song, physical exercises ———— *28 min* ————	Whole class in unison
6	*Book 1, page 7* Q.1 and Q.2 Show what to do on BB. Take your time and draw carefully ———— *35 min* ————	Individual work. Monitoring, helping Praising For Q.2 use enlarged copy master
7	*Book 1, page 7* Ps choose either Q.3 or Q.4 Review solutions with whole class. Who was correct? Who made a mistake? What kind of mistake? *Book 1, page 7* Q.5 for any Ps who have finished before the others. ———— *45 min* ————	Individual work. Monitoring, praising Note which exercise pupils choose, and how long they take to do them.
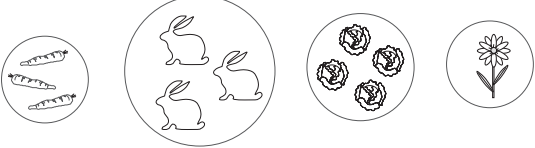
Bk1	R: Counting mentally (up to 20) **C: Comparison of sets: more, less, equal** *E: Not more, not less, not equal*	*Lesson Plan* *8*
Activity		*Notes*
1	**Counting to 10** Let's count down from 10. Let's try to count up to 20. *5 min*	In chorus, at speed. Take note of who can count correctly. Teacher helping.
2	**Sticks** Take the red sticks out of the envelope marked red and put them on the left side of your desk. Do the same with the blue sticks and put them on the right side of your desk. Which sticks are there more of, red or blue? (You could decide without counting.) Stop and listen. Which sticks are there more of? (Red) Who got the same answer? How did you get your answer? Who did the same? Who had the same answer but solved it in a different way? If nobody, ask, 'How could we solve it without counting?' (1–1 pairing) *12 min*	Prepare 2 envelopes (17 red sticks in one and 15 blue sticks in the other) before the lesson and lay on desks. Individual work, closely monitored. Take note of whether any pupil makes red-blue pairs. Discussion Checking. Praising Class solve it together using 1-1 correspondence.

3	*Book 1, page 8*
	
	Read: *Match up the elements as shown. Which has more?*
	      Write < or > in the boxes.
	Q.1a Who was correct?
	      How many more elements has (o)? (1)
	
	Q.1b Who was correct?
	      How many more elements has (Δ)? (1)
	 20 min
		Individual work
		Monitoring, helping
		
		Praising
		Discussion, agreement.
		
		Can show number cards.

4	**Interlude** Verse, song, physical exercises *22 min*	

5	*Book 1, page 8*
	
	Q.2 Read: *Match the pictures to the correct number of dots.*
	      All stop and let me see what you have done.
	      Come, **X**, and draw in a line on the big picture.
	      Who drew this connection?
	      Come, **Y**, and draw another line. Who drew this connection?
	      (Continue until all connections drawn.)
	      What can you notice about the pictures? (No 1; two 5's)
	
	      Look at the numbers below the grids.
	      Do they match the clothes above? (No, they match the dots.)
	 30 min
		Individual work
		Monitored.
		Use enlarged photocopy.
		
		Checking, praising
		
		Whole class discussion
		
		Agreement. Checking.

6	*Book 1, page 8*
	Q.3 Read: *Compare the pictures: use >, <, =, ≥, ≤*
	
	      Review solutions with whole class.
	
	Q.4 Read: *Complete the drawings to make the signs correct.*
	
	      Review solutions with whole class.
	 35 min
		Individual work
		Monitoring, helping
		Praising
		Discussion, agreement.

Bk1		*Lesson Plan 8*
Activity		***Notes***
7	**Which sign?** Ask (e.g. 4) girls to come to front of class and stand on right. Ask (e.g. 2) boys to come to front and stand on left.	Whole class activity
	A, come and stand in the middle showing the correct sign. Is he/she correct?	Checking, agreement, praise
	B, choose another sign and come and stand in the middle. (e.g. =) **C**, Is the sign correct now? (No) Who agrees (does not agree)? How can we change the groups to match the sign? (e.g. 2 girls sit down or 2 boys come out)	Checking, agreement, praise
	Repeat with other numbers and signs.	Let pupils choose.
	45 min	

Bk1	R: Mental counting and operations **C: Less than, more than, equal to , not equal to** *E:* **<, >, ≤, ≥, =, ≠**	*Lesson Plan* *9*

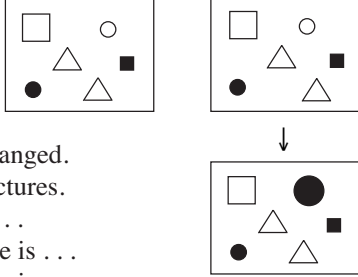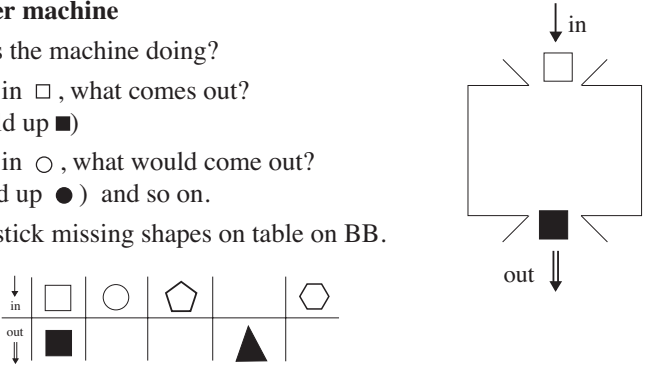| *Activity*		*Notes*
1	**Number Ladder** Let's climb up the ladder: 2. 4. 6. ... Let's climb down the ladder: 20, 19, 18, ... *2 min*	Whole class in unison. With T's help.
2	**Soft ball play** T throws the ball to pupil, saying an addition (subtraction), e.g. 2+1 P throws ball back to T saying the sum (difference) e.g. (3) *5 min*	At speed. Involve several pupils.
3	**Compare the pictures** What are the pictures on the BB? What might they be used for?. Which holds more (less, the same)? Draw arrows between them. This holds → less → than this one. Come, **A** , and draw an arrow pointing to the one which holds more. (Complete the arrows, moving the pictures around if necessary.) *15 min*	Use enlarged copy master, cut out and stuck on BB, or OHP. Whole class activity. Call out different pupils to draw (stick on) each arrow. Ask each pupil to say a sentence about what they are doing (with T's help). Discussion. Agreement

4	*Book 1, page 9*
	Q.1 Read: *Join up the trains which are the same length*.
	            Colour the longest train red and the shortest train blue.
	
	     Is what I say true or false? BB
	     4 is less than 5. (true) $4 < 5$
	     4 is less than or equal to 5. (true) $4 ≤ 5$
	     2 is greater than 3. (false) What should it be? $3 > 2$
	 25 min
		Individual work.
		Monitoring. praising.
		
		Agreement, checking
		
		Reasoning.

5	**Interlude** Singing, verse, physical exercises *28 min*	Whole class in unison.
6	*Book 1, page 9* Q.4 *Continue the pattern*. Show on BB first. Stress neatness/care. *35 min*	Individual work. Monitoring, helping, praising.
7	*Book 1, page 9* Q.2 Read: *Complete the drawing of the tree*. *Draw arrows towards the taller tree*. Who is the tallest in the classroom? (teacher) Who is the smallest? (**A**) **X,** come and stand between us and hold up the correct sign. (T > A) Who agrees with **X**? Who is equal in height to **B**? (**C**) **B** and **C**, come to front. **Z**, come and stand between them and hold up the correct sign. (=) Who is *not* equal in height to **B**? (**T, A**, etc.) Show sign on BB (≠). Who can find the correct sign and hold it between **A** and **B**? Repeat with other children if time. *45 min*	Individual work. Monitoring, praising. Use large sign cards. Agreement, checking Discussion. Pupils find correct signs in their packs and hold them up too.

Bk1	R: Mental counting and operations **C: Less, more, less than or equal to, more than or equal to** *E:*	*Lesson Plan* *10*

Activity		*Notes*
1	**Comparison** Look at these lines on the BB. Come, **A** and tick the longest line. (e.g. **A** ticks the first line.) Is he/she correct? Who thinks another line? What do you notice? (There are 2 longest lines.) *5 min*	Whole class activity Discussion, agreement Praising
2	**Number sequences** I will start a number sequence and you follow on. a) 1, 3, 5, . . . (7, 9,11, etc.) b) 20, 18, 16, . . . (14, 12, 10, etc.) *10 min*	Whole class in chorus With help of T
3	**Which has more?** BB Come, **X** and point to the one which has more. Come, **Y**, and draw the correct sign between them. How many more circles are there than bows? (2) Show it wih your fingers . . . now! Show it with a number card . . . now! Tell me a true sentence about the pictures. (e.g. There are less bows than circles. 3 is 2 less than 5. 5 is 2 more than 3). Tell me an addition about them. (2 added to 3 gives 5, 3 plus 2 is 5) Tell me a subtraction (take away) about them. (2 taken from 5 is 3; 5 minus 2 is 3.) *20 min*	Whole class work. Insist on showing fingers, cards only when indicated. Praising. Display on BB. Ask for an inequality too if pupils are able.
4	**Interlude** Song, verse, game, physical exercise *23 min*	Whole class in unison
5	**Poster 5** Ask pupils to talk about the picture. Encourage complete sentences. How many birds are flying? How many ducks are swimming? Which are there more of? Which are equal in number? etc. *30 min*	Teacher repeats incorrect sentences correctly. Whole class discussion

6	***Book 1, page 10***
	
	Q.1 Read: *Show how Paul can choose two balls from a red*
	                  ball, a white ball and a green ball.
	        Review solution with whole class.
	
	Q.2a Read: *Draw the matching number of dots in the grid.*
	                  Circle the correct signs.
	        Stop. **X**, show what you have done on the BB. Who agrees?
	        Why did you circle these signs? (Reasoning, helped by T)
	
	Q.2b Read: *Draw the matching number of dots in the grid.*
	                  Cross out the wrong signs.
	        Review solution with whole class as above. Discussion.
	 40 min
		Individual work.
		Use actual balls and a pupil to show all the ways.
		
		Use a large photocopy or rough drawing.
		
		or
		
		Hold up a sign card. Pupils shout out 'No' if wrong.

7	***Book 1, page 10*** Choose what you like from Q.3 or Q.4. *45 min*	Individual work Monitoring, praising

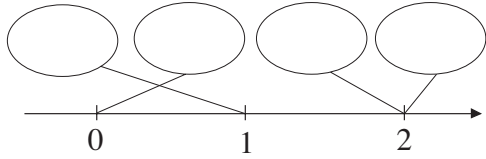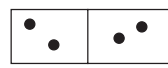| **Bk1**	R: Counting. operations, comparisons **C: Less than, more than, equal to, not equal to** E: *Open, closed domains; combinations*	*Lesson Plan* *11*
Activity		**Notes**
1	**Number ladder** Let's climb up the number ladder. Shout '1' then whisper '2, 3', then shout '4', then whisper '5, 6', etc. ———— *5 min* ————	Whole class in chorus with help of T.
2	**Which is more?** Look at the BB. Join up each plate to a spoon. Pupils come to BB, one at at time to draw in a connection. What is there more of? (There are 2 more spoons than plates.) How many plates are needed? (Two plates) BB: 4 + 2 = 6 ———— *10 min* ————	Whole class activity Pictures drawn on BB or use enlarged copy master Discussion, agreement, Checking, praising
3	***Book 1, page 11*** Q.1 Read: *Complete the drawings to make the signs correct*. What does this sign mean? (T holds up '=' sign card.) Point to it in your book. How many ice-creams should we draw in the RHS space? (3) What does this sign mean? (T holds up ' ≤ ' sign card.) Point to it in your book. **A**, How many ice-creams could we draw in the LHS space? Who has a different answer? Show that the answer could be 3, 2, 1 or 0. (Continue for each sign.) Now draw your pictures. ———— *20 min* ————	Individual work, monitored Discussion at BB Agreement. Checking. praising
4	**Interlude** Verse, action song, game ———— *23 min* ————	Whole class in unison
5	***Book 1, page 11*** Q.2 Read: *Draw matching dots in the grids and write correct signs between the pictures*. Everyone stop. **A**, come and show us what you have done. Why did you choose that sign? Who had the same as **A**? Who had a different sign? **B**, come and show us. Why did you choose that sign? Who had the same as **B**? (Continue until all possibilities covered.) ———— *30 min* ————	Individual work, monitored Use enlarged picture or drawing on BB. Discussion at BB Agreement, praising.
6	***Book 1, page 11*** Q.3 Writing practice. Demonstrate on BB a few times first. ———— *40 min* ————	Individual work, monitored. T helping, only praising.
7	***Book 1, page 11, Q.4*** Have a blank table drawn on BB. **X** come and draw some dots in the middle part of the top row. Is he/she correct? **Y**, come and draw *less* dots on the LHS of the top row. Is he/she correct? Could there be another answer? Repeat for 'more'. (Similarly for bottom row) ———— *45 min* ————	Whole class activity Use different coloured chalk or stuck-on shapes for each row. Discussion. Agreement. Praising.

Bk1	R: Memory, numbers, counting **C: (not) less, (not)more, equal; more (less) than or equal to** E: *Sequences, combinatorics*	*Lesson Plan* *12*

Activity		**Notes**
1	**What has changed?** 5 or 6 things are on the T's table (or stuck to the BB). **X**, turn round so that you cannot see. **A**, come and add (take away) something. **X**, turn and look at the table. What has changed? ———— *5 min* ————	Whole class activity Repeat with several Ps.

2	**Hide-and-Seek**
	Your fingers are the rabbits and your desk is the hedge.
	Hide your rabbits under the hedge.
	• Let 2 *more* rabbits jump out from the hedge than I am showing with my fingers. (e,g.. 1, 5, 2)
	    Show the number with your fingers . . . now!
	• This time the number of rabbits which jump out must be 2 *less* than the number I am showing. (e.g. 8, 5, 2)
	    Show the number with your fingers . . . now!
	———— *10 min* ————
		Whole class activity
		
		At speed
		
		Checking, praising
		
		You could try (1) to see what happens!

3	**Number ladder** Let's climb down the number ladder from 20. Whisper '20' then say 19, then whisper '18' and say '17', and so on. ———— *15 min* ————	Whole class in chorus.
4	**How many more?** Look at the BB. The rabbits are looking for flowers and vegetables to eat in the garden! How many rabbits are there? How many carrots are there? **A**, put a correct sign between these two pictures. What other sign could we put there too? (=, ≤, ≥) How many cabbages are there? **B**, come and put a sign between the rabbits and the cabbages. What other sign could we put? (<, ≤, ≠) Which are there more of, rabbits or cabbages? How many more? (1) We can show how many more by drawing dots. T draws ⟨ on BB. **C**, put a correct sign between the flowers and cabbages. Can we put any more signs there? (>, ≥, ≠) How many more cabbages are there than flowers? (3) We can show how many more by drawing dots. T draws ⫶> on BB. ———— *28 min* ————	Use large pictures. Have sign cards stuck to BB. Whole class activity Several Ps come to BB Reasoning Agreement, checking, praising Or helps P to draw it. Or helps P to to draw it .
5	**Interlude** Song, verse, physical exercises ———— *30 min* ————	Whole class in unison
6	***Book 1, page 12*** Q.1 *Continue the pattern*. T demonstrates on BB first. Choose from Q.2 or Q.3. ———— *45 min* ————	Individual work Close monitoring Praising, helping, noting

Bk1	R: Comparisons; left, right **C: Identifying and writing 0; knowing its place on number line** *E:*	*Lesson Plan* *13*
Activity		***Notes***
1	**Action song** Let's sing a song and point to what we are singing about. Let's think about our bodies. Point to your head (ears, legs, nose) etc. Close your eyes. Open your left eye. Raise your right hand (left foot). Look around the classroom. Find objects of which there is only one (2, 3). How many giraffes are in the classroom? (none) ———— *10 min* ————	Song: Head, shoulders, knees and toes. Whole class in unison. T writes '0' on BB
2	**Counting 0, 1, 2** Show with your fingers the number 1 (2). Show me the number zero. Who can find the number zero (1, 2) on the number line? Who can find the number zero in their books? Show me with your number cards: 0 (1, 2). Lay them down in *increasing* order on your desk. ———— *20 min* ————	Whole class activity Involve as many Ps as possible. Monitoring, praising
3	***Book 1, page 13*** Q.3 T draws a large zero on BB, saying how to do it. Let's draw a zero together. Pupils draw a large zero in the air, then on their desk. Now draw a zero on your neighbour's back. Now let's draw a big zero in our books. (only if ready) Q.4 Let's try to draw smaller zeros in the boxes. ———— *30 min* ————	Whole class in unison If odd no. in class, let pupil draw on T's back. Helping, praising Use grids for extra practice
4	***Book 1, page 13*** Q.1 Read: *Join up the pictures which show the same number.* Review solutions with whole class. Q.2 Read: *How many little chicks are in each picture?* *Circle the correct number.* Look at the first picture. How many birds are in the picture? (2) Are they both the same kind of bird? (Yes) How do you know if there is a chick? (It is smaller.) What could the birds be? (ducks) Colour yellow all the little chicks you see, then circle the correct number below each picture. ———— *40 min* ————	Individual work Make sure Ps know the difference between the birds. Encourage use of complete sentences. Monitoring, checking.
5	**Review** Who can tell me a true sentence with 'zero' in it? 'There are . . .' ———— *45 min* ————	T repeats sentences correctly where necessary.

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Bk1	R: Comparisons **C: Identifying and writing 1; knowing its place on number line** *E:*	*Lesson Plan* *14*

Activity		**Notes**
1	**Numbers** Sing a song with numbers. Put up as many fingers as I am clapping, jumping, etc. Put on the LHS of your desk as many blue counters as I am whistling. Put on the RHS of your desk as many red counters as I am nodding. Put down the correct number card below each pile of dots. Which are there more of, red counters or blue counters? Find the correct sign card to put between the piles of counters. *———— 10 min ————*	e.g. On desks:
2	***Book 1, page 14*** Q.1 Read: *Complete the pictures* Review solutions with whole class. *———— 20 min ————*	Individual work Monitored
3	**Poster 7** Talk about the picture. Who is clever enough to say a true sentence about the picture with numbers? What are there 4 (3, 2, 1) of in the picture? How many cars are there? How many of the cars are green? How many bicycles are in the picture? *———— 25 min ————*	Involve as many pupils as possible. Different outcomes expected.
4	***Book 1, page 14*** T writes a large number '1' on BB, saying how to do it. Let's write it together in the air (on your tummy, desk). **A,** come and write a big '1' on the BB. Who else can do it? Let's all write it in our books. *———— 30 min ————*	Only allow writing in books if you are sure all are ready. Use grids for extra practice.
5	***Book 1, page 14*** Q.4 Read: *Write the correct numbers and signs in the boxes*. Review solutions with whole class. *———— 45 min ————*	Use enlarged picture or rough drawing on BB.

Bk1	R: Comparisons **C: Identifying, writing and using '1'** *E:*	*Lesson Plan* *15*

Activity		**Notes**

1	**Shape Cards**
	Look at the 2 sets on the BB.
	
	A, go outside. **B**, change one shape.
	
	A, come in and say what has been changed.
	Let's say a true sentence about the pictures.
	Begin the sentence with: 'All . . .
	                       'There is . . .
	                       'There is no . . .
	
	5 min
		Or Ps cover their eyes and T makes changes.
		
		T helping, correcting

2	**Number machine** What is the machine doing? If I put in □ , what comes out? (Ps hold up ■) If I put in ○ , what would come out? (Ps hold up ●) and so on. Pupils stick missing shapes on table on BB. *10 min*	Machine drawn on BB beforehand (or use real box) Use shape card set. Tell pupils the name of each shape and ask them to repeat it. Make sure Ps understand that this machine does the same to every shape put through it.

3	**Numbers**
	Ask one boy to stand at front of class.
	Ask another boy to stand beside him. How can we show this?
	    BB: $1 + 1 = 2$
	Ask a girl to stand beside them. How can we show this?
	    BB: $1 + 2 = 3$
	How many pupils are there? (3) Let's count them. $1 + 1 + 1 = 3$
	Tell one pupil to sit down but the others must keep his place open.
	Now what do we see? BB: $1 + 0 + 1 = 2$.
	Repeat with other pupils.
	Who can make another addition with their cards?
	
	25 min
		Ps copy T, laying number and sign cards on their desks.
		
		Monitoring, helping, praising
		Show all on number line.

4	***Book 1, page 15*** Q.3 Read: W*hat is the machine doing? Complete the pictures*. Talk about how machines can be set to do different things. Say that not all machines do the same and that the machines in this question do different things from the machine above. Dicuss what is happening in each machine before allowing pupils to start working in books. Pupils complete table (a) on BB first. Review solutions with whole class. Display as additions on BB. *35 min*	Have machine and table drawn on BB beforehand, with stick-on balls. Or use real balls/cardboard box. Part (b) individual work.
5	***Book 1, page 15*** Q.4 Read: *Colour over the thread which could lose its bead*. Talk about what the question means. Pupils colour the threads in their books. (2 threads should be coloured. *45 min*	T could have actual string and beads to illustrate this. T asks Ps for their answers. Check with other Ps. Agreement.

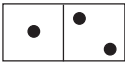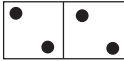| **Bk1**	R: Directions **C: Identifying, writing and using '2''; number line** *E:*	*Lesson Plan* *16*
Activity		*Notes*

1	**What is where?**
	
	A, stand up. Who is in front of (behind) you?
	                   Who is to the left (right) of you?
	                   What is above (below) you?
	
	All those sitting in the first row from the front (back), stand up.
	All those sitting in the 2nd seat from the left (right) stand up.
	Who is sitting in the 2nd seat from the right in the 2nd row from front?
	B, tell us where you are sitting. (Repeat with other Ps.)
	
	——————— *10 min* ———————
		Ask several Ps.
		
		Try to involve as many Ps
		as possible.
		
		T repeats incorrect sentences
		where necessary.

2	**Ordinal numbers** **X**, come and put 2 rabbits in a row on my desk. **Y**, come and point to the 2nd rabbit fromthe left. **C**, come and put 3 teddies in a row on my desk. **D,** come and hug the 1st teddy from the left (2nd from the right) etc. ——————— *15 min* ———————	Use various toys. Give appropriate instructions to suit each. Involve several Ps.

3	*Book 1, page 16*
	
	Q.1 We will read the top line. T: *How many balls can you see?*
	         Ps repeat. Show me with a number card . . . now!
	
	         Now we will read the 2nd line. T: *How many animals are
	         there?* Ps repeat. Which animals can you see?
	         I can see a . . . How many animals are there altogether?
	         Put the same number of counters on your desk.
	
	         (Continue with rest of question in similar way.)
	
	——————— *25 min* ———————
		Reading in unison.
		
		Or use enlarged copy master
		
		Whole class discussion.
		
		Or use Ps' own collection
		of objects.

4	**Interlude** Song or rhyme about 2. ——————— *28 min* ———————	Whole class in unison
5	**Writing 2** Everybody hold up 2 fingers. What do we have two of? (eyes, etc.) What are there 2 of in the classroom? Where can you see the number '2' in the classroom? Put 1 object on the left side of your desk. Put 2 objects on the right side. Which is more? How many more? What sign card could we put between them? $(1 < 2)$ **E**, come and point to 0 on the number line. Now point to 2 with other hand. Which number is between 2 and 0? (1) Write '0 1 2' on BB. **F**, come and put the correct sign between the numbers. T writes a large 2 on BB, saying how to do it. Repeats several times. Let's all draw a big 2 in the air (on the floor, etc.) Who would like to draw a 2 on the BB (door, window, etc.)? ——————— *38 min* ———————	Whole class Monitoring, individuals, praising, helping Can use Ps' number lines too. Whole class in unison (Also in sandpit)
6	*Book 1, page 16* Q.3 Now draw big 2's in your book. Draw it in one movement, without lifting your pencil. Q.4 When you think you can, try to draw smaller 2's. ——————— *45 min* ———————	Individual work Monitoring closely Helping, praising Use grids for extra practice.

Bk1	R: 0 and 1 **C:** **Identifying, writing and using '2'; number line** E: *Comparisons*	*Lesson Plan* *17*

Activity		Notes
1	**Number Bonds** Let's make 2 with our number strips. BB [2] **A**, come and stick the 2 strip on the BB. **B**, show us another way to make 2. (2 '1's) Let's say it with numbers. $1 + 1 = 2$ $2 + 0 = 2$ Copy on your desks with number cards and signs. Let's read out what you have done. *———— 10 min ————*	Use enlarged copy master, cut out and stuck on BB, or OHP Ps copy on their desks what is being done on BB. Discussion Ps copy what T says.
2	**Bubbles** Look at the BB I have still to finish the drawing. Can you help me? **X**, to which number is the first bubble joined? (1) Come and draw what could be in that bubble. **Y**, point to the bubble which is joined to the zero. What should we draw there? (nothing) **Z**, come and point to a bubble which is joined to the 2. What is missing? Draw it. Is our drawing finished now? (No) Who can finish it? *———— 20 min ————*	Whole class activity Drawn on BB or use enlarged copy master or OHP Suggest simple things to draw, e.g. dots, balls, squares, etc. or it will take too long!

3	***Book 1, page 17***
	 Q.1 Read: *Join the pictures . . .*
	
	      In this drawing, all the pictures are complete.
	      You must join each to the correct place on the number line.
	      Review with whole class
	
	 Q.2 Read: *Colour the necklace which has more beads*.
	      A, which necklace did you colour? (top)
	      B, which necklace is longer? (both the same)
	      But if the top necklace has more beads why is it not longer?
	 ———— 25 min ————
		Individual work, monitoring, helping, praising
		
		 Items stuck on BB or use enlarged copy master or OHP
		
		 Go over mistakes with whole class.
		
		 Discussion, agreement

4	***Book 1, page 17*** Q.3 Read: *Compare the two parts of each domino.* *Write it down using numbers and signs*. Let's do one together first. T draws domino on BB. **S**, come and draw 2 dots on the LHS **X**, come and draw 2 dots on the RHS. [2 2] Stick on the correct number cards below the dots. Which side has more? (Both the same, i.e. equal) **Y**, come and stick the sign card beneath the numbers. $2 = 2$ Now see if you can do the rest! Review with whole class. *———— 40 min ————*	Whole class activity to start Drawn on BB or use enlarged copy master or OHP Can use real dominoes if class has sets. Individual work, monitored
5	***Book 1, page 17*** Q.4 Read: *Colour the row which is different* Who can say a number sentence about the pictures? Begin with: 'There are . . '. 'In the top row there are . . .' 'In the first picture there are . . .' 'In the second picture there is . . .' *———— 45 min ————*	Individual work, monitored, reviewed with whole class Involve as many Ps as possible. T should repeat incorrect statements correctly.

Bk1	R: Ordering numbers **C:** **Writing and using +, −, =** *E:*	*Lesson Plan* *18*

Activity		*Notes*
1	**Shape cards** Look at the BB. Hold up: the 1st shape on the left (the 2nd on the right, etc.) and shout out its name at the same time if you can. *————— 5 min —————*	Drawn or stuck on BB. At speed.
2	**Problem** Listen to me carefully. Yesterday I had £1. Today my mother gave me £1. How many pounds do I have now? See if you can show this with counters on your desk. (Repeat each part slowly walking round class. Wait until all Ps are ready before repeating next part.) T writes on BB, saying equation. Ps repeat. *————— 10 min —————*	On Ps' desks: ○ + ○ = ○ ○ 1 + 1 = 2
3	**Equations** Look at the pictures on the BB. I have made equations to match each picture but have mixed them up. **A**, come and choose an equation. Read out the equation to the class. Is he/she correct? What number should come after the '=' sign? T writes it on the card. Which picture does it belong to? Put it beneath (Similar for other equations.) Do all the cards have matching pictures? *————— 15 min —————*	Have these equations on cards stuck at side of BB: 2 + 0 = 1 + 1 = 1 + 0 = 0 + 2 = 0 + 0 = 0 + 1 = Discussion
4	**Interlude** Song, verse or physical exercises *————— 18 min —————*	Whole class in unison
5	***Book 1, page 18*** Q.1 Read: *Complete the right-hand side of each* ... Revise notation for '1 more than', etc. Put two counters on LHS of desk. Put 3 counters on RHS. Which is more? Put the correct sign between them. How many more? Put that number of counters beside the sign. Write on BB. Does everyone understand? Now do question in books. Review solutions on BB with whole class. *————— 25 min —————*	On Ps' desks: ⋮ < ⋮ On BB: 2 <¹ 3
6	***Book 1, page 18, Q.2*** What kind of flowers are these? (e.g. daisies, tulip) **A**, come and put one of each kind in a vase. How many flowers are there altogether in the vase? How can we show this? BB: **1** + *1* = 2 **B**, come and choose 1 flower to put in this vase. What kind has he/she chosen? (e.g. daisy) How many tulips are in this pot? (none) How many flowers are in the vase? How can we show this? BB: **1** + *0* = 1 What if I put a tulip in the vase instead of a daisy? How could I write it? BB: *0* + **1** = 1 *————— 35 min —————*	Use real vases and plastic flowers if available. Use coloured markers to show which number refers to the daisies and which number refers to the tulips.
7	***Book 1, page 18*** Q.4 and Q.5 Go round class asking for solutions to each at speed. *————— 45 min —————*	Or individual work, monitored

Bk1	R: Ordering numbers **C: Writing and using +, –, =** *E:*	*Lesson Plan* *19*
Activity		***Notes***

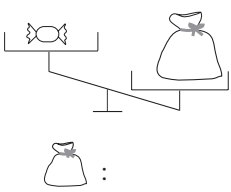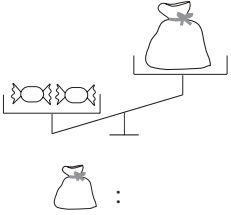| **1** | **Playing with counters**   *Blue*   *Red*

Put 2 red counters on the RHS of your desk.   ○   ○○
Put 1 less blue counter on the LHS.
Put the correct number cards and sign card below.   1   <   2

A, show me 2 counters. Give me one of them.
How many do you have left? (1) What has happened?

Lets's show this on the BB using:
• sticks
• number cards and signs.
Show it on your desks too.
                                   10 min | Individual work, monitored

Discussion
On BB:
         ‖ – ∣ = ∣
         2 – 1 = 1

Individual work, praising |
2	**Poster 2** Look at the picture and list all the things there are: • only 1 of There is only one . . . in the picture • 2 of There are two . . . in the picture • none of There are no . . . in the picture *25 min*	Involve as many pupils as possible. T repeats incorrect sentences correctly.

3	***Book 1, page 19***
	Q.1 Read: *Complete the equations to match the pictures*.
	                 Discuss what is happening in each picture with whole class.
	
	Q.2 Read: *What do the pictures tell you?*
	                     Complete the subtractions.
	                 Discuss what is happening with whole class.
	
	Q.3 Similar to above.
	
	Now fill in the missing numbers in these 3 questions.
	
	Review solutions with whole class. Who had a different answer?
	Do you know how to do it now? Who does not understand?
	                                     35 min
		Make sure Ps understand what is happening before any written work begins.
		
		Solutions shown on BB by individual Ps. Mistakes used as teaching points.

4	***Book 1, page 19*** Q.4 Read: *Fill in the missing numbers*. Go round class asking for solutions to each at speed, or have equations on flash cards and whole class responding in unison. *45 min*	Repeat questions if necessary so that all pupils are involved.

Bk1	R: Mental counting **C: Writing and using 0, 1, 2; operations; contextual problem** *E:*	*Lesson Plan* *20*

Activity		**Notes**
1	**Dominoes** Look at the dominoes drawn on the BB. $0 + 2 = 2$ $1 + 0 = 1$ $2 + 0 = 2$ $1 + 1 = 2$ $0 + 1 = 1$ $0 + 0 = 0$ **A**, tell me an addition about the 1st domino. Come and write it on the BB. Write the left-hand (first) number in red and the right-hand (second) number in green. Write the sign and the sum in white (black). Is he/she correct? Class, read out what **A** has written. Copy in your Ex. books. (Repeat for 5 other dominoes, using a different pupil each time.) Circle the sums which are 2. ———— *10 min* ————	Have dominoes on Ps' desks if available. Discussion, agreement Monitoring, helping Checking

2	**Word Problem**
	Listen carefully!
	a) I had no money, then I was given £2.
	    How much money do I have now?
	    Show me with a number card . . . now! (2)
	    X, tell me an addition about it. ($0 + 2 = 2$)
	b) We have one television. We want to have two televisions.
	    How many do we have to buy?
	    Show me with a number card . . . now! (1)
	    Show with number and sign cards on your desks: an addition
	                                   a subtraction
	    about it.
	———— *15 min* ————
		Whole class activity
		Repeat a few times.
		Checking, praising
		
		On Ps desks:
		$1 + 1 = 2$
		$2 - 1 = 1$

3	***Book 1, page 20***
	Q.1 Read: *Join each domino to . .*
	       X, say an addition for the first domino. ($1 + 0 = 1$)
	       Who can draw sticks on the BB to show it? Is he/she correct?
	       Where would we put this domino on the number line?
	       Now do the question in your books.
	       Review solutions as above.
	———— *25 min* ————
		BB: |+ = |
		
		Individual work, monitoring, helping, praising

4	**Interlude** Song, verse or physical exercises ———— *28 min* ————	Whole class in unison
5	***Book 1, page 20*** Q.2 Read: *Write the answers in the boxes.* *Display the equations by drawing sticks.* We will do part a) together on the BB. **R**, come and fill in the missing number. (2) Read out the equation. Is he/she correct? **S,** come and draw sticks to show this equation. Is he/she correct? Does anyone have a different answer? Now all copy down part a) in your books and do the other parts too. Review solutions with whole class. ———— *35 min* ————	Whole class BB: $1 + 1 = \boxed{2}$ |+|=|| Individual work, monitored, T helping, praising

Bk1		*Lesson Plan 20*
Activity		*Notes*

6	***Book 1, page 20***
	
	Q.3 Read: *Complete the subtractions to match the pictures*.
	
	Look at the pictures in the book carefully. Now I am going to copy the pictures. Watch me and see if I make a mistake.
	
	• T holds up 2 cherries, breaks one off and eats it. $(2 – 1 = 1)$
	
	• T holds up a paper flower, then crushes it and throws it away.
	                                                    $(1 – 1 = 0)$
	
	• T holds up 2 paper cups, tears one in half and throws it away.
	                                                    $(2 – 1 = 1)$
	
	• T holds up 2 candles, is about to light them but doesn't.
	                                                    $(2 – 0 = 2)$
	
	What did I do that is different from the pictures in the book?
	———— *40 min* ————
		Whole class activity
		
		Ps give equation after each action.
		
		Discussion, agreement

7	***Book 1, page 20*** Q.4 You have 3 minutes to write in the answers to these sums, starting from . . . now! Go over solutions with whole class, asking 2 or 3 Ps what they put for each sum. ———— *45 min* ————	Individual work Monitoring, praising Note any common errors.

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Bk1	R: Mental (contextual) problems **C: Comparisons: balancing equations and inequalities** *E:*	*Lesson Plan* *21*

Activity		**Notes**
1	**Do what I say!** Let's start from 1. Put a counter on the LHS of your desk. Now do what I tell you. Take away 1, add 2, take away 1, add 1. Show me with your fingers how many you have left . . . now! **A**, come and write it on the BB. $(1 - 1 + 2 - 1 + 1 = 2)$ Is he/she correct? Now, **A**, you tell the class what to do and **B** will write it down so that no one can see! 'Start with . . . counters etc.' Show how many you have left . . . now! **B**, show us what you have written. Who agrees with **B**? ———— *5 min* ————	Or use items from Ps' own collections. Walk slowly around class. With T's help Agreement, praising (New example) Checking, agreement
2	**Making numbers** a) By adding together 2 numbers, tell me different ways to make: • 1 (e.g. 0 + 1, 1 + 0) • 2 (e.g. 0 + 2, 1 + 1, 2 + 0) b) By adding or subtracting 3 numbers, tell me different ways to make: • 2 (e.g. 1 + 0 + 1 = 2, 0 + 0 + 2 = 2) • 1 (e.g. 0 + 1 + 0 = 1, 2 − 1 − 0 = 1) • 0 (e.g. 0 + 0 + 0 = 0) Are there any others? (0 − 0 − 0 = 0) ———— *15 min* ————	Whole class activity T writes each on BB Check on number line Discussion
3	**Problem** Listen carefully! David has two apples more than John. David has two apples. How many apples does John have? Show me with number cards . . . now! Let's show this on the BB? BB: $\boxed{0} <_2 2$ $\boxed{0} + 2 = 2$ $2 - 2 = \boxed{0}$ ———— *20 min* ————	Whole class discussion: inequality, equation subtraction Reasoning
4	**Interlude** Song, verse, physical exercises ———— *23 min* ————	Whole class in unison

5	*Book 1, page 21*
	Q.1 Read: *Colour in as many pears as will make the inequality true.*
	Look at the first picture. **X**, what is the starting number? (0)
	All put your fingers on zero on your number lines.
	What does the sign tell us about the missing number?
	(It is 1 more than 0.)
	What number on your number line is 1 more than 0? (1)
	Write '1' in the box and colour in the same number of pears.
	Repeat for 2nd and 3rd pictures.
	———— *30 min* ————
		Number line 0–9 on Ps' desks
		
		Practise reading the inequalities in both directions:
		
		  '0 is one less than 1'
		  '1 is one more than 0'

Bk1		*Lesson Plan 21*

Activity		*Notes*
6	**Dominoes**	
	Look at this domino. (Hold up flash card or draw on BB)	
	Let's compare the two halves.	$1 < 2$
	Who can say a true sentence starting with: 'One is . . .'	
	'Two is . . .'	$1 + 1 = 2$
	Use your number cards 0, 1, 2 and signs to make a true statement about this domino on your desks. (You can make more than one if you can.)	$2 - 1 = 1$
	A, what did you make? Is he/she correct? Who did the same as **A**?	
	A, come and write it on the BB. Who made a different statement?	
	Are there any more? (T helps if necessary.)	$1 > 0$ $2 = 2$
	Book 1, page 21	$1 + 0 = 1$ $2 + 0 = 2$
	Q.2 Read: *Compare the two sides of each domino.*	$1 - 1 = 0$ $2 - 2 = 0$
	Write it down in different ways.	
	Let's see if you can write 3 different statements about these dominoes.	
	Review solutions with whole class.	
	———— *40 min* ————	
7	***Book 1, page 21***	Individual work
	Q.3 You have 3 minutes to fill in the missing numbers.	Monitoring, helping praising
	You can use your number lines to help you.	
	Start from . . . now!	Check mistakes on number line
	Review solutions round the class.	
	———— *45 min* ————	

Bk1	R: Mental calculation **C: Comparisons: equations, inequalities** *E: Inverse operations*	*Lesson Plan* *22*

Activity		*Notes*
1	**Mental Practice** Round the class at speed. Choose questions from Book 1. ———— *5 min* ————	*Book 1, page 22*, Q.1 and 2
2	**Making 2** Look at this number puzzle. BB Each shape stands for a number. Which number does each shape stand for? Think about it for a while! Who can fill in a number? Why do you think it is that number? Who agrees? (Continue until all filled in.) What is the rule for this puzzle? (Sum of numbers in each column is 2.) ———— *15 min* ————	Whole class activity Use enlarged copy master. $\bigcirc = 0$, $\triangle = 1$, $\square = 2$ Discussion, reasoning, agreement, checking Praising
3	**Equations Balancing** Have ready a simple balance (make one if necessary from a coathanger with a clear plastic bag on each end). Put 2 marbles in one side. How many marbles will we have to put in the other side to make it balance? (2) Let's check: 1 + 1. If we put another marble in, what happens? If we take a marble out, what happens? What is needed to make it balance? (One side must equal the other side.) This is what equations must *always* do! Now look at the balances drawn on the BB. a) b) **X**, how many marbles do you think are hidden in the bags? **Y**, what do you think? Let's write an equation for each balance. BB 1 + 1 = 2 1 + 2 = 1 + 1 + 1 Ps read out each one in unison, emphasising 'equals'. ———— *30 min* ————	Whole class activity Discussion about balance BB: 2 = 1 + 1 Reasoning Agreement, checking Or use: • real balances and items from Ps' collections • enlarged copy master. Discussion, agreement, checking
4	**Interlude** Song, verse, physical exercises ———— *33 min* ————	Whole class in unison
5	***Book 1, page 22, Q.3*** I will say a number. I want you to hold it in your head and follow my instructions, step by step. Nod your head when you have completed each step. Then show me your answer with a number card. • Start with 1, add 1, take away 1, add 0, add 1 and take away 1. What number is in your head? Show me . . . now! • Start with 2, take away 1, add 1, take away 0, add 0, take away 1. • Start with 0. add 1, add 1, add 0, take away 1, add 1. ———— *40 min* ————	Whole class activity Pause after each step. Ps can give instructions too!

Bk1		*Lesson Plan 22*
Activity		***Notes***
6	***Book 1, page 22*** Q.4 Read: *What number makes each statement true?* Show me the sign which means 'less than' ('more than'). (Make sure all know which is which.) Let's see how many you can do in 4 minutes! Review solutions around the class. ———— *45 min* ————	Individual work Monitoring, praising Note common errors.

	R:	*Lesson Plan*
Bk1	**C: Comparisons: equations, inequalities**	*23*
	E: *Inverse operations*	

Activity		Notes
1	**Number line** Here are some cards with additions on them. **A**, come and take a card. What does it say? Where should it go on the number line? Is he/she correct? **A**, why did you choose that number? Similar for other cards. *⎯ 5 min ⎯*	Cards: $\boxed{0+0}$ $\boxed{0+1}$ $\boxed{1+1}$ $\boxed{0+2}$ $\boxed{0-0}$ $\boxed{1-1}$ $\boxed{2-0}$ $\boxed{2-1}$ $\boxed{2-2}$ $\boxed{1-0}$
2	**Inequalities** Look at the balances drawn on the BB. a) b) **a)** Look at this bag first. Is it heavier or lighter than the sweet? **X**, how many sweets do you think could be hidden in the bag? Why do you think this? **Y**, what do you think? Who thinks another number? and another? How far on could we go? How could we write this using just one number and one sign? If there were 2 sweets in the bag, what would we have to do to make it balance? (add 1 sweet to LHS or take away 1 sweet from RHS) b) Now look at this bag. Is it heavier or lighter than the sweets? **R**, how many sweets could be hidden in this bag? (e.g. 1) **S**, what do you think? What other number could there be? (e.g. 0) Could it be any other number? (No) If there were no sweets in the bag, what would we have to do to make it balance? (Add 2 sweets to bag or take away 2 sweets from LHS.) *⎯ 15 min ⎯*	Or use real set of scales! T writes in what pupils say: a) : $2\ (3, 4, \ldots)$ > 1 $1 + 1 = 2$ or $2 - 1 = 1$ b) : 1 or 0 Discussion, agreement, checking: $2 = 0 + 2$ or $2 - 2 = 0$
3	***Book 1, page 23*** Q.1 Read: *Which numbers have been covered up?* a) Look at the two sets of scales. Do they balance? (Yes) **X**, how many are on the RHS? (2) **Y**, what must the LHS be in total? (2) Why? So what number is covered up? (1) Discuss 2nd set of scales in similar fashion. b) See if you can write down an equation for each balance. Review with whole class. Whole class reads equations together. *⎯ 25 min ⎯*	BB: $0 + 2 = 2$ and $1 + \boxed{1} = 2$ $2 - 1 = 1$ and $1 + \boxed{0} = 1$ T monitoring, helping
4	**Interlude** Action songs *⎯ 30 min ⎯*	Whole class in unison Ps' choice

Bk1		*Lesson Plan 23*
Activity		***Notes***
5	***Book 1, page 23*** Look at the numbers I am holding in my hands. (e.g. 1 and 2, 0 and 1, 2 and 2, etc.) Show me the correct sign to put between them . . . now! Q.2 Read: *Compare the numbers.* *Write the correct signs in the boxes.* (Parts a), b) and c) can be designated according to ability.) Review solutions with whole class. ———— *40 min* ————	Note those who are struggling Individual work T monitoring, praising, helping
6	***Book 1, page 23*** Choose from Q.3, 4 or 5. ———— *45 min* ————	Individual work, monitored Ask reason for choice.

Bk1	R: Mental operations **C: Comparisons: equations, inequalities** E: *Chain operations*	*Lesson Plan* 24
Activity		*Notes*

1   **Counting mentally**

Let's start from 1.

Show me the correct number card at the end of each step.

$$1 + 0 + 1 + 0 - 1 + 1 - 2 - 0 = ?$$

Notes: Whole class activity

Checking

5 min

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2   **Reading inequalities**

Look at part a) on the BB.

a) $2 - 1 \;_{\text{ı}}\!> \; 1 - \square$

     Read it out loudly. (2 minus 1 is one more than 1 minus square.)
     What number is missing? Show the correct number card. (1) BB
     Let us read it again. (2 minus 1 is one more than 1 minus 1)
     What number can we replace '2 – 1' with ? (1) BB
     What number can we replace '1 – 1' with? (0) BB
     Now let's read the the inequality again. (1 is one more than 0)

b) $0 + 1 \; <_{\text{ı}} \; 1 + \square$

     Let's read part (b) loudly. (0 plus 1 is one less than 1 + square)
     What number is missing? Show the correct number card. (1) BB
     Let's read it again. (0 + 1 is one less than 1 + 1)
     What number can we replace '0 + 1' with? (1) BB
     What number can we replace '1 + 1' with? (2) BB
     Now let's read the inequality again. (1 is one less than 2)

Notes:
Whole class activity

In chorus with T.
T writes in 1 $\boxed{1}$
In chorus
T writes '1' below '2 – 1'
T writes '0' below '1 – 1'
In chorus   BB: $1 \;_{\text{ı}}\!> 0$
           $\boxed{1}$

In chorus with T.
T writes in 1 $\boxed{1}$
In chorus
T writes '1' below '0 + 1'
T writes '2' below '1 + 1'
In chorus   BB: $1 \; <_{\text{ı}} \; 2$

10 min

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3   **Missing numbers**

Let's fill in the missing numbers.

a) Look at part a) first.

     A, what is the sum of the missing numbers? (2)
     Why do you think that? Who agrees with **A**?
     B, come and fill in one of the missing numbers. (e.g. 1)
     C, come and fill in another missing number. (e.g. 1)
     Continue until one version is complete. (e.g. 1 + 1 + 0 + 0 = 2)
     Let's read it out together.
     Could we have a different solution? Discuss other cases.

b) as above.

Notes:
BB

a)
```
      +
  = 2 +
      +
```

Whole class activity at BB
Discussion
Agreement

b)
```
      −
  = 2 +
      −
```

20 min

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4   ***Book 1, page 24***

Q.1   Read: *Write the missing numbers in the boxes*.
      Choose Ps to come to front and fill in the numbers.
      Discuss solutions with whole class.

Notes:
Part whole class activity, part individual work

Discussion at BB, agreement, checking

30 min

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5   ***Book 1, page 24***

Q.2 to Q.4

Do one question at a time as individual work: for each explain the task, allow a set time, review solutions with whole class, involve as many pupils as possible, and use any mistakes as teaching points.

Notes:
Monitoring, helping praising

For Q.2, ask the pupils also to give a shorter version, as in *Activity 2* above.

45 min