Unit 2
Place value and ordering

Year 1
Spring term

Primary
National Strategy

This Unit Plan is designed to guide your teaching.

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

Unit Objectives

Year 1

• **Read and write numerals from 0 to at least 20.**	Page 8
• Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).	Page 8
• **Within the range 0 to 30, say the number that is 1 or 10 more or less than any given number.**	Page 12

Link Objectives

Reception

- Begin to record numbers, initially by making marks, progressing to simple tallying and writing numerals.
- **Find one or more less than a number from 1 to 10.**

Year 2

- **Read and write whole numbers to at least 100** in figures and words.
- Say the number that is 10 more or less than any given two-digit number.
- **Know what each digit in any two-digit number represents, including 0 as a place holder** and partition two-digit numbers into a multiple of 10 and ones (TU).

(Key objectives in bold)

Resources needed to teach this unit:

- Resource sheet 2.1
- OHT 2.1 and counters
- ITP 'Ordering numbers'
- Activity sheet 2.1
- 0–20 number line
- Dice marked 1 more than/1 less than
- 100 bead string
- 'Magic' box/bag
- Number cards 0–100
- Mega Money (large coins)
- 10 bags of balloons each with 10 balloons
- 100 bead string
- OHP calculator
- Calculators
- Place value cards
- Cards with number sentences on them
- Colourful handkerchief
- A4 cards with numerals and words 1–20 written on them
- Washing line
- ITP 'Ordering numbers'
- Whiteboards
- 1p and 10p coins
- Purse
- Dice marked 1-6

Also see Models and Images Charts:
- Partitioning and recombining;
- Understanding addition and subtraction.

department for
education and skills

Planning Sheet	Day One	Unit 2 *Place value and ordering*	Term: *Spring*	Year Group: *1*
Oral and Mental		**Main Teaching**		**Plenary**
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions

Oral and Mental Objectives	Oral and Mental Activities	Main Objectives	Main Teaching Activities	Plenary
Count on and back in ones from any small number and in tens from and back to zero. Compare two familiar numbers and say which is more or less. Order numbers to at least 20.	• Using a bead string, count in ones from 1 to 20 with the class. • Count back from 20 to 1 moving one bead at a time. **Q** As we count back what is happening to the numbers? Draw out that the numbers are getting smaller. • Next use the bead string to count in tens from 10 to 100. **Q** If we are counting in tens starting at 10 what other numbers will we say? Use the term 'multiple of ten' to describe the numbers. Count in tens on the bead string moving ten beads at a time. • Draw a number line on the board (0–20) with some numbers missing, ask children to come up and write in the missing numbers. **Q** What number comes after 10? **Q** What number is 1 less than 6? **Q** What number is one more than 13?	Within the range 0–30, say the number that is 1 or 10 more or less than any given number.	• Show the OHT 2.1 of the bus (or draw a picture of a bus on the board). Alternatively set up a 'bus' in the classroom and use children as passengers. Say that you are going to be finding 1 more and 1 less. Put six counters on the bus to represent passengers. **Q** How many people are on the bus? Say that at the next bus stop 1 more person wants to get on and add one counter. **Q** Now there are 7 people already on the bus and 1 more person wants to get on. How many will be on the bus then? What is 7 add on 1? Encourage children to hold up 7 fingers and to add on one more counting on from 7. Point to the number 7 on a number line and jump forwards one more. When the children have suggested 8, add one more counter to the bus saying, '7 people on the bus add on 1 more is … 8'. Say that now there are 8 people on the bus and at the next bus stop 1 more person wants to get on. • Repeat above process to find 1 more, encouraging children to count on 1 from the start number. Show this on a number line and use the language '1 more than 8 is 9'. • Now say that at the next bus stop 1 person wants to get off. **Q** There are 9 people on the bus and 1 person wants to get off. There will be 1 less person on the bus. How many people will be on the bus then? • Encourage the children to hold up 9 fingers and to fold down 1 finger saying as they do '9, 8'. On the number line jump back 1 from 9 saying 9 count back 1 is 8. Remove 1 counter from the bus saying 1 less than 9 is 8. • Repeat above process to find 1 less than 8 and 1 less than 7. • Repeat, this time finding one more/one less than numbers between 10 and 20. • Turn over a 1–30 card and roll a die marked 1 more/1 less. Write the corresponding number sentence on the board, e.g. 1 less than 15 is 14, 1 more than 17 is 18. Ask the children to repeat this process in pairs, recording the sentence in books.	• Ask the children to imagine a bus with 5 people on it. **Q** How many people will be on the bus if 10 more get on? Encourage children to count on 10 by putting 5 in their heads, holding up 10 fingers and counting on from the 5. Also show this on a number line. Start at 5 and jump on 10. • Show the children a purse. Count in 4 pennies. Now add a 10 pence coin. **Q** How much do I have in my purse now? **Q** I had 4p and I have added 10p more. What is 4p add 10p? Ask children to count on putting 4 in their head and counting on 10 from 4. **Q** What do you notice about the numbers? Draw out that one ten is put in front of the units digit. • Repeat for other amounts. **By the end of the lesson children should be able to:** • **respond to questions such as: What is 1 more than 6? Than 9? Than 19? Than 24? What is 1 less than 8? Than 20? Than 25?** • **use and apply knowledge of adding and subtracting 1 or 10 in a variety of contexts.** (Refer to supplement of examples, section 5, page 12.)
VOCABULARY count on count back ones tens more less multiple of ten order RESOURCES 100 bead string		VOCABULARY one more one less number names to 30 RESOURCES OHT 2.1 Counters 0–20 number line Number cards 1–30 Dice marked 1 more than/1 less than 1p and 10p coins Purse		

PNS Unit Plans

Planning sheet	**Day Two**	**Unit 2** *Place value and ordering*	**Term:** *Spring*	**Year Group:** *1*
Oral and Mental		**Main Teaching**		**Plenary**

| **Objectives and Vocabulary**	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/Focus Questions**
Count on and back in ones from any small number and in tens from and back to zero. Give a number that lies between two others.	• Use a 100-bead string or the ITP 'Ordering numbers' to count in tens, moving 10 beads at a time. • Pause the ITP at the point when it labels the multiples of ten (or write them on a blank number line on the board). Ask the children to suggest a number that lies between two multiples of 10, e.g. 20 and 30. Confirm the numbers that do lie between 20 and 30 by counting in ones from 20 to 30 moving one bead at a time. • Repeat the above, asking the children for other numbers between two multiples of 10.	Begin to know what each digit in a two-digit number represents. Partition a teens number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).	• Put the number cards into a 'magic' box or bag (initially without 'teens' numbers). Pull out a number and ask the children what number it is. Use the bead string to show them the number, e.g. 'The number is 23. Let's count that many beads: 10, 20, and 1, 2, 3.' Q How many tens are there in 23? Q How many ones are there? Write on the board: 23 = 20 + 3. Say that when we write the number 23 we do not write 203, we write how many groups of tens and how many ones. • Repeat for other two-digit numbers. • Look at the number 18 with the children. Count out 18 beads. Q How many tens in 18? Q How many ones in 18? Write on board 18 = 10 + 8. Say that we do not say 10 8 but eighteen. Introduce the term 'teens'. • Repeat for other 'teens' numbers. • Give out Activity sheet 2.1. Q How many beads are on the first string? Do we need to count all the beads one at a time? Establish that children can count in tens to find the multiple of ten. Ask the children to complete Activity sheet 2.1.	Q Which string had the most beads? Least beads? • Use hands to throw numbers at children (e.g. flash both hands twice for 20 and show five fingers for 5 to make 25). Ask children to write down the number on whiteboards. • Show the class two 10 pence coins and five pennies. Q How much money am I holding? Q How many 10p coins? How many 1p coins? Record 25p = 20p + 5p. • Repeat for other amounts using 10p and 1p coins. **By the end of the lesson children should be able to:** • **know what each digit represents in numbers from 10 to 20;** • **say for example which number is the same as one ten and seven ones, three tens and eight ones;** • **begin to partition larger numbers.** (Refer to supplement of examples, section 5, page 8.)
VOCABULARY count on count back multiple of ten lies between RESOURCES ITP 'Ordering numbers' 100 bead string 1–6 dice		VOCABULARY units/ones tens digit two-digit number RESOURCES 100 bead string 'Magic' box/bag Number cards 1–100 Activity sheet 2.1 Whiteboards Mega money (large coins)		

Planning sheet	Day Three	Unit 2 *Place value and ordering*		Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/ Focus Questions**
Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU). Count on and back in ones from any small number and in tens from and back to zero.	• Repeat the activity 'Throwing Numbers' from the plenary on Day two. Emphasise vocabulary tens and ones. • Use large 10p coins to count on and back in tens. Q I have four 10p coins. How much do I have altogether? Count in tens to find out, 10p, 20p, 30p, 40p. Q I have four 10p coins and I spend 20p. How much do I have now? Show the children the four coins and count back in tens to find out how much is left. • Repeat for other multiples of ten.	Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).	• Show the children 10 bags of balloons with 10 balloons in each bag. Count the balloons by counting in tens. Hold up 6 bags. Q How many balloons do I have altogether now? Hold up four bags. Q How many balloons am I holding now? Open one of the bags so that you can show single balloons. Hold up three bags and two single balloons. Q How many balloons do I have now? How many bags of ten? How many ones? Write on board 30 + 2 = 32. • Repeat for other two-digit numbers, including the 'teens' numbers. • Turn over a number card from the 0–9 set and one from the 10–100 set. Write the numbers on the board and draw bags of balloons (simple rectangular shapes) and single balloons to match. 42 = 40 + 2 • Ask the children to repeat this in pairs, quickly sketching the bags and balloons in their books and recording the associated number sentence.	• Ask children to work with a partner and give each pair a whiteboard on which to write their answers. Q I need 45 balloons. How many bags of 10 do I need? Q How many single balloons do I need? Q I need 97 balloons. How many bags of 10 do I need? Q How many single balloons do I need? • Take feedback and discuss their responses. Q How many bags of 10 would I need to get 100 balloons? **By the end of the lesson children should be able to:** • **say for example which number is the same as one ten and seven ones, three tens and eight ones;** • **begin to partition larger numbers: for example, 34 = ☐ + 4; 42 = 40 + ☐;** • **know for example that 24 is 20 + 4.** (Refer to supplement of examples, section 5, page 8.)
VOCABULARY tens ones count on count back how much? RESOURCES Mega Money (large coins)		VOCABULARY tens ones how many? two-digit number RESOURCES 10 bags of balloons each with 10 balloons. Number cards 0–9 and 10–100 (Refer to models and images chart 'Partitioning and recombining')		
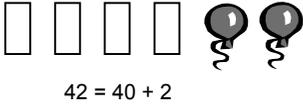
Planning Sheet	Day Four	Unit 2 *Place value and ordering*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/Focus Questions**
Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU). Within the range 0 to 30, say the number that is 1 or 10 more or less than any given number. Give a number that lies between two others. VOCABULARY tens ones 1 more 1 less 10 more 10 less RESOURCES Whiteboards	• Play the game 'Guess my number'. Ask children to write down on their whiteboards the numbers that you are describing. Point out that there will be more than one answer for some questions. Q My number has got 2 tens. What could it be? Q I am thinking of another number. This number has got 4 ones. What could it be? Q My next number has got 6 tens and 4 ones. What number is it? Q My next number is 1 more than 12. What is it? Q My next number is 1 less than 12. What is it? Q This number is 10 more than 14. What is it? Q I am thinking of a number that lies between 20 and 30. What could it be? Q I am thinking of a number that lies between 50 and 60. What could it be? Q I am thinking of a number more than 10 but less than 30. What could it be?	Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU). VOCABULARY tens ones two-digit numbers multiple RESOURCES Place value cards OHP calculator Calculators 100 bead string Number sentences on card Colourful handkerchief	• Put the 10s number cards 10 to 90 into a bag and the single-digit cards 1 to 9 into another bag. Ask a child to select a tens card and a ones card. Q Martin has pulled out 50 and 5. If I were to give Martin that number of beads, how many beads would I have to give him? Use the bead string to count out 55 beads by counting in tens then ones. Q How many groups of ten beads have we counted? How many single beads have we counted? Write on board 55 = 50 + 5. • Write the number 36 on the board. Q What multiple of ten and multiple of one could we add together to make 36? Collect children's responses and say that you are going to use a calculator to check. Key in 30 + 6 = on the OHP calculator, and establish that these two numbers do add up to 36. Record 36 = 30 + 6 on the board. • Repeat with anther two-digit number. • Ask the children to work in pairs. One child should think of a two-digit number (e.g. 54) and the other child should say which multiples of ten and one combine to make this number (e.g. 50 and 4). The first child should then key the sum into the calculator, e.g. 50 + 4 to check that their partner is correct. The children should then swap.	• Write the following number statements separately on large pieces of card without showing the children: 20 + 7 = 27 30 + 8 = 38 40 + 2 = 42 60 + 3 = 63 • Use a colourful handkerchief to cover parts of the statements, for example the 7 in the first statement. Q Which number is hidden? When you have some responses, reveal the number by removing the handkerchief. • Repeat for the other statements, hiding ones, tens numbers or the two-digit answers. HOMEWORK – Ask children to look for a number with a 5 in the tens place on their way home or at home. Write it down and bring it into school tomorrow. **By the end of the lesson children should be able to:** • **read numbers to 100;** • **say for example which number is the same as one ten and seven ones, three tens and eight ones;** • **begin to partition larger numbers: for example, 34 = ☐ + 4; 42 = 40 + ☐.** • **know for example that 24 is 20 + 4.** (Refer to supplement of examples, section 5, page 8.)

Planning Sheet	Day Five	Unit 2 *Place value and ordering*	Term: *Spring*	Year Group: *1*

Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	**Teaching Activities**	**Objectives and Vocabulary**	**Teaching Activities**	**Teaching Activities/Focus Questions**
Compare two familiar numbers and say which is more or less. Order numbers to at least 20.	• Draw a number line on the board from 0 to 20. Write in some numbers but leave others off. Draw on markers and invite children to come and write on the missing numbers. Q How can we work out which number goes here? Q Which number comes after 12? Q Which number comes before 12? Q Which number is 1 less than 6? • Pull two numbers out of a 'magic' box or bag e.g. 14 and 3. Ask children to write the smaller number on a whiteboard, i.e. 3. Collect responses and agree on the answer. Q What number lies between the two numbers? • Repeat with other pairs of numbers.	Read and write numbers to at least 20. VOCABULARY number names to 20 RESOURCES A4 cards with numerals on one side and words 1–20 written on the other. Washing line Resource Sheet 2.1 – cut up for each pair of children, clipped together with a paper clip	• Review the homework set yesterday. Ask different children to come and write the numbers they saw. Use the bead string to 'show' some of the numbers. Q Where did you see your number? What was the biggest number we found? Could there be a bigger two-digit number with a 5 in the tens place? What's the smallest number we found? Is there a smaller two-digit number with a 5 in the tens place? • Hang the A4 number cards (figures showing) on a washing line. Count along the line with the class. Turn over the cards so that the words are showing. Point to different cards. Q What does this word say? If children are unsure refer to the numbers before and after. Check suggestions by turning the cards around. • Emphasise to the children that the numbers 14, 16, 17, 18, 19 are easy to read if we can read the numbers 4, 6, 7, 8 and 9. We just need to add 'teen'. Point out the 'teens' (11, 12, 13 and 15). Spend time looking at these words more carefully. • Give out a set of numbers from Resource sheet 2.1 to each pair of children. Ask the children to shuffle them facing down. They then turn them over one at a time and put them in order from one to twenty. They should then write the word 'one' on the reverse of the card with 1 on it, 2 on the reverse of the card with two written on it etc. so that they end up with 20 cards with numerals on one side and words on the other as on the washing line.	• Mix up the cards showing number names on the washing line so they are in the wrong order. Ask for individuals to come out and order the numbers 1–20 by reading the number names. Check the order by turning over the cards. • Describe numbers to the class and ask them to write down the number you are describing in words on their whiteboards. Q Which number has 1 ten and 2 ones? Q Which number is 1 less than 13? Q Which number is 1 more than 10? Q Which number is the same as 2 tens? **By the end of the lesson children should be able to:** • **write in figures and words numbers to 20;** • **find a card with '12' or 'twelve' written on it.** (Refer to supplement of examples, section 5, page 8.)
VOCABULARY order more/less RESOURCES Number cards 1–20 'Magic' box or bag Whiteboards				

1	two	3	four	5
6	seven	8	9	ten
11	12	thirteen	14	fifteen
16	seventeen	18	19	twenty

Double Decker Bus

Year 1 Unit 2 (Spring Term)
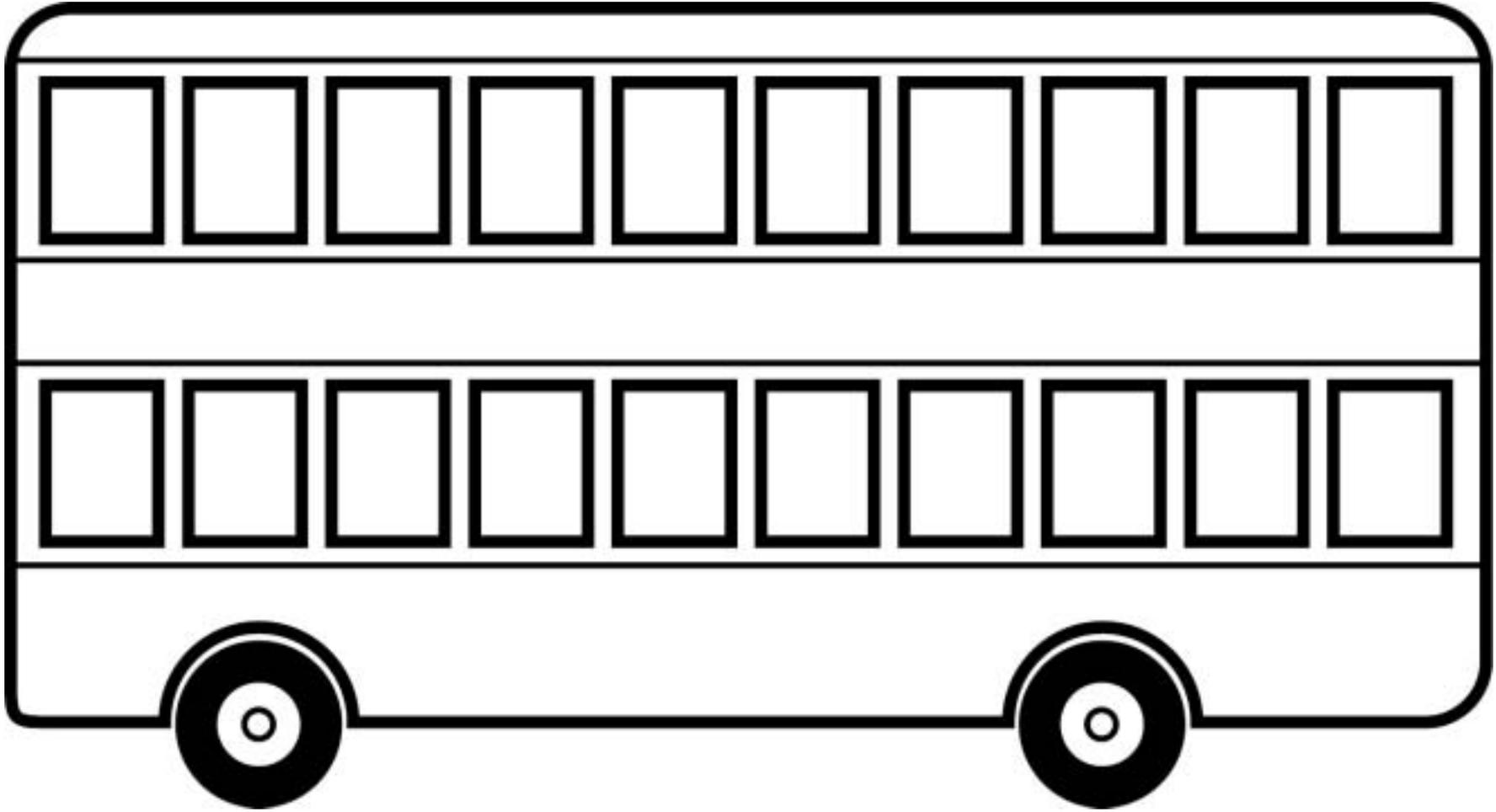
How many beads?

Year 1 Unit 2 (Spring Term) Support Session 1
Place value

Objectives	Oral and Mental Starter
Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).	Count in tens from 0 to 100, asking children to flash both hands to show 10.

Objectives

Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).

Vocabulary

ones
tens
two-digit number

Resources

Bead string

Labels showing multiples of ten (0 – 100) to place on bead string

Whiteboards

Two-digit numeral cards

Oral and Mental Starter

Count in tens from 0 to 100, asking children to flash both hands to show 10.

Use a 100-bead string to count in tens, moving 10 beads at a time.

Place labels 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 on the bead string.

Q Who can tell me a number that lies between 20 and 30?

Q Who can tell me a number that lies between 50 and 60?

For each number given count out that many beads by counting on from the multiple of 10 in ones moving one bead at a time. Encourage the children to join in.

Main Activity

Move 34 beads to one end of the bead string.

Q How many beads are at this end of the string?

Q How can we find out?

Q Do we need to count in ones or tens or both?

Count the beads with the children by counting in tens then ones, 10, 20, 30, 31, 32, 33, 34.

Q There are 34 beads. Who can write the number 34 on the board?

Remind the children that although we say thirty-four when we write the number we write how many groups of tens so 34 is written as 34 (3 groups of ten and 4 ones) rather than 304. Use the bead string to count the groups of ten in 34.

Move 56 beads to one end of the bead string.

Q How many beads are at this end of the string?

Q How can we find out?

Count the beads with the children by counting in tens then ones, 10, 20, 30, 40, 50, 51, 52, 53, 54, 55, 56

Q There are 56 beads. Who can write the number 56 on the board?

Give each child a whiteboard and repeat the above process for different numbers of beads asking children to write down how many on their boards.

Plenary

Ask each child to count out a specific number of beads on the bead string. Check each one as a group by counting in tens and ones.

Year 1 Unit 2 (Spring Term) Support Session 2
Place value

Objectives
Begin to know what each digit in a two-digit number represents. Partition a 'teens' number and begin to partition larger two-digit numbers into a multiple of 10 and ones (TU).

Vocabulary
ones

tens

two-digit number

place value

partition

Resources
Place value cards (tens and ones) including two 0 cards

Bead string

Resources sheet S2.1 (cut out for a pairs game)

10p and 1p coins

Oral and Mental Starter
Use hands to throw two-digit numbers at children (e.g. flash both hands twice for 20 and show three fingers for 3 to make 23). Ask the children to write down the number on whiteboards. Remind the children how they wrote the two-digit numbers yesterday.

Ask children to throw you the numbers 23, 67, 45 using their hands and fingers.

Main Activity
Put the tens cards 0, 10, 20, 30, 40, 50, 60, 70, 80, and 90 into a bag.

Put the single digit cards 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 into another bag.

Ask a child to select a tens card and a ones card.

> **Q** Look at these cards 20 and 3: if I were to count out 20 beads then 3 beads how many beads would I have altogether?

Count out 20 then 3 beads on the bead string and write on the board 20 + 3 = 23.

Ask another child to pull out a tens card and a ones card (e.g. 60 and 5)

Write on board 60 + 5 = ☐

Ask for a volunteer to write the answer. Use the bead string to assist if necessary.

Discuss what will happen if the zero cards are drawn.

> **Q** We've pulled out 30 and 0. What do we write? We've pulled out 0 and 6. What do we write?

Play a pairs game with the whole group using Resource sheet S2.1.

Children should find the two-digit number to go with each sum of a multiple of ten and a multiple of one.

Continue to use the bead string to support.

Plenary
Show the class two 10 pence coins and 5 pennies.

> **Q** How much money am I holding?

> **Q** How many 10p coins? How many 1p coins?

Repeat for other amounts using 10p and 1p coins.

30 + 2	60 + 1	40 + 5	50 + 1	10 + 7
20 + 3	70 + 3	80 + 7	90 + 0	20 + 4
23	61	45	51	17
32	73	87	90	24