

# UNIT 3

## Unit 3

## • SESSION 1 •

## TOTAL TIME

30  
MINUTES

## OBJECTIVES

- Count on and back in ones and tens
- Say the number that is 1 or 10 more/less than any given two-digit number

## VOCABULARY

tens, ones, digits, two-digit number, count on, count back, add, subtract

## RESOURCES

large 0–99 grid; small 0–99 grids (resource sheet 5); dice marked with 10 and 1 only or 1, 10, 1, 10, 1, 10 paperclip spinner (resource sheet 7)

## HOMEWORK

Play *Towards the 90s*, using a number grid (resource sheet 5)

## STARTER

5  
MINUTES

Children count on and back together in tens from zero. Refer back those who are not sure of the order to the 0–99 grid. They now count on and back in tens from other numbers, for example, 2, 12, 22, 32; 92, 82, 72. Try doing these without the aid of the number grid, for example 79, 89, 99, 109. Write a few questions such as  $68 + 10 = \square$  and  $\square + 10 = 47$  on the board, for the children to complete orally.

Remind the children that when they count on in tens, they are adding on ten each time. Demonstrate on the number grid, adding on ten first by counting in ones, and then by moving down one space. Discuss with the children which is the more efficient method.

## KEY QUESTIONS

- What is happening to the tens digit? To the ones digit? Is it quicker to add ten by counting on in ones or in tens?

## MAIN ACTIVITY

15  
MINUTES

Invite one of the children to come to the front to model how to play *Towards the 90s* with you, using a class 0–99 grid. You both write your initial at zero, using different coloured chalks. Take turns to toss a dice featuring the numbers 10 and 1 only. Add this number to the number you are on, find the square with that number and draw your path to it. A path might go, for instance 0, 1, 11, 21, 22, 32. The first person to reach 90 or more is the winner. Set the children in pairs to play the game on their own grids.



Use the key questions below.

Explain activity sheet 3.1, which children should complete before the next session. They should only use a number grid to help them if they are stuck.

#### KEY QUESTIONS

- What happens when you add 10? And add 1?
- What happens when you subtract 10? And 1? Can you predict where your answer will be on the grid? What would happen if you added 11?

#### PLENARY

10  
MINUTES

*What have you learned today about adding and subtracting? How would you add or subtract other numbers quickly, such as 11, 20, 21, or 31?*

Give the children a pathway which they are to trace on their grids. For example: start at 12, add 10, add 1, add another 1, add 10, add another 10, and ask which number they finish on.

## Unit 3

## SESSION 2

## TOTAL TIME

30  
MINUTES

## OBJECTIVES

- Count on and back in ones and tens
- Say the number that is 1 or 10 more/less than any given two-digit number
- Say the number 20, 30 more/less than any given number

## VOCABULARY

tens, digit, ones, multiples, two-digit number, count on, count back, add, subtract, more, less

## RESOURCES

large 0–99 grid; small 99–0 grids (resource sheet 6); large, blank 10 × 10 grid; dice marked 1, 10, 1, 10, 20, 30 or paperclip spinner (resource sheet 8)

## STARTER

7  
MINUTES

Practise counting on and back in tens from any number. If necessary, allow the children to use a large 0–99 grid to help them, but encourage them to have a go without one. Remind them that, when they are adding or taking away 10, only the tens digit changes. Put the grid away and ask them to imagine that they are looking at 47.

*What number is 10 more? 10 less? What number is 20 more? 20 less? What number is 30 more? 30 less?*

Ask individual children to write number sentences on the board for some of these.

## KEY QUESTIONS

- How much is 20 less than 57? Can you write the number sentence that shows this? What does it say?

## MAIN ACTIVITY

18  
MINUTES

Give each pair of children nine 10p coins, nine 1p coins, a dice marked 1, 10, 1, 10, 20, 30 and a 99–0 grid (resource sheet 6). Each child takes turns to throw the dice and remove the equivalent coin(s). The winner is the first to run out of coins. The children should track the operation on their 99–0 grid each time. Model the game with a child at the front before the pairs begin.

Stick the large, blank grid on the board. Ask the children to imagine it shows the numbers 0–99. They are to write in specific numbers, for example, 52.

*Who can write on the grid the number which is 10 less? 1 more? 1 less? 20 more? 20 less?*

Explain activity sheet 3.2, which they should complete before the next session. They should only use a number grid to help them if they are stuck.

## KEY QUESTIONS

- ☐ What helps you to find a given number on the blank grid?
- ☐ Which was the hardest/easiest number to find?
- ☐ How do you find a number which is 20 more? 20 less?

## PLENARY

5  
MINUTES

*What have we learned today about adding and subtracting? What was easy to do? Why? What was difficult to do? Why?*

*How do you find the number that is 11 more? What about 21 more? Discuss strategies for working this out.*

*How do you find the number that is 11 less? What about 21 less?*

**Name** .....**Date** .....

Dear Parents/Carers,

We have been practising counting on and back in ones and tens. Please help your child by playing the game below.

Thank you for your help.

Your child's teacher

### **Towards the 90s**

- You will need a coin, two different coloured crayons and the 0–99 number grid. Both players start at 0 (zero) on the number grid.
- Take it in turns to toss the coin. If it lands tails, move ten places and colour the square. If it lands heads, move one place and colour the square. The first one to reach the end of the grid is the winner; you do not have to reach 99 exactly.
- If you find this easy, why not play again, this time beginning at 99 and counting backwards?

Name .....

Date .....

Activity  
sheet

3.1

1. Make number patterns by adding or subtracting as in the example.

+10	2	12	22	32	42
+10	0	10			
+10	17				
-10	90				
-10	95				
+10	54				

2. Write the number that is 10 less and 10 more than each number in the middle row.

10 less	16							
	26	42	51	88	37	63	19	74
10 more	36							

3. These are parts of the 0-99 number grid.  
Write in the missing numbers.

27		

		42	

			15

Name .....

Date .....

Activity  
sheet

3.2

1. Make number patterns by adding or subtracting.

11	+ 2		+ 10		+ 2		+ 10		+ 2	
6	- 1		+ 10		- 1		+ 10		- 1	
92	+ 1		+ 10		+ 1		+ 10		+ 1	

2. Keep adding 20.

14	34					
37						

3. Keep subtracting 20.

125						
152						

4. Write the number that is 1 less and 1 more than each number in the middle row.

1 less	105							
	106	79	110	251	360	199	220	400
1 more	107							



## Unit 3

## RESOURCE SHEET 5

UNIT

3

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

## Unit 3

## RESOURCE SHEET 6

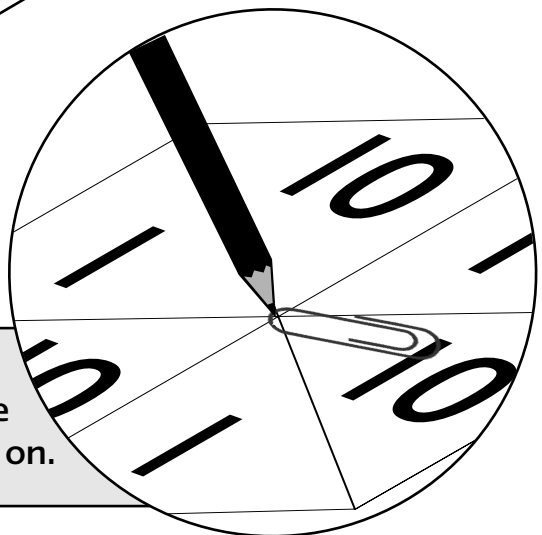
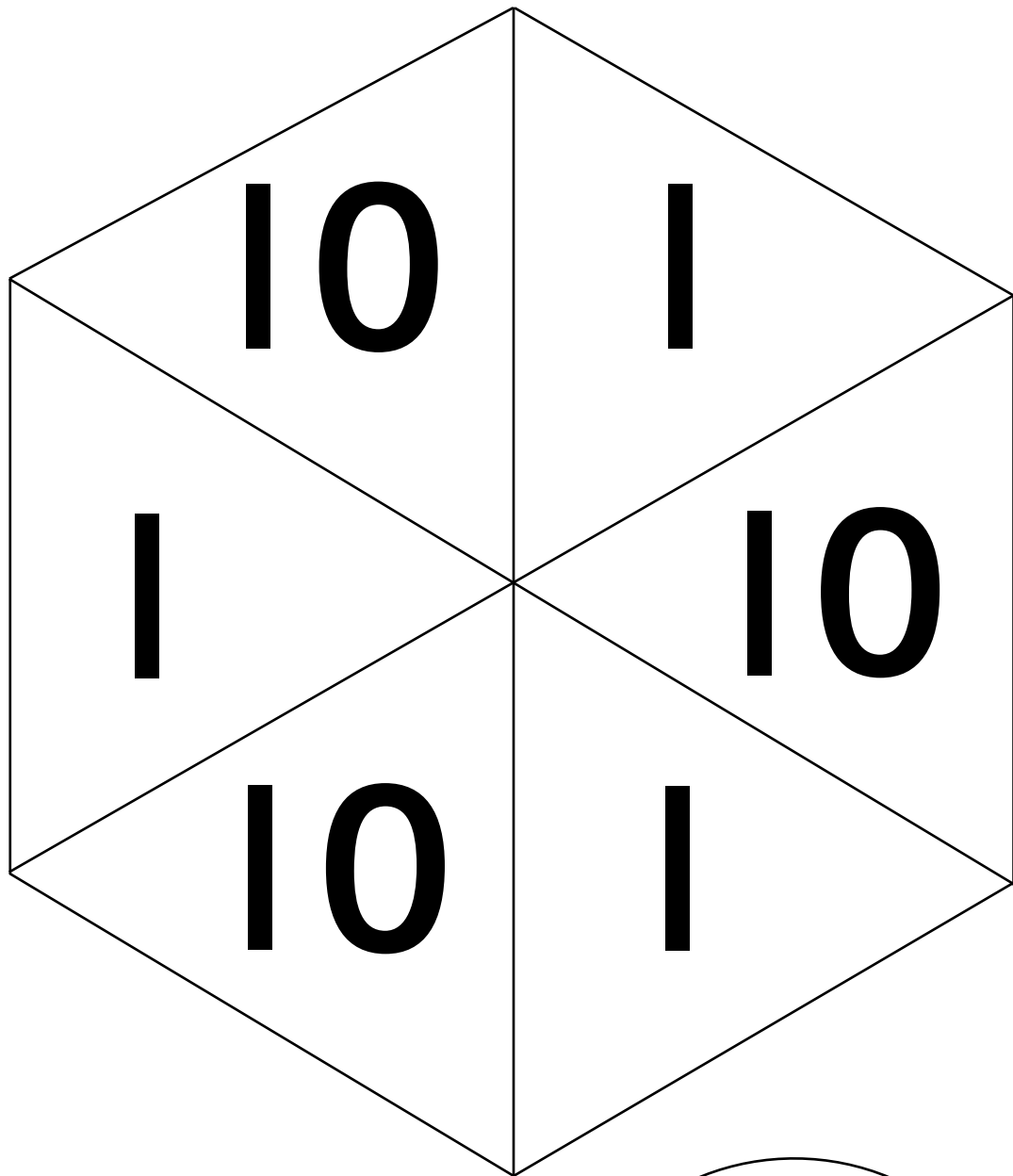
99	98	97	96	95	94	93	92	91	90
89	88	87	86	85	84	83	82	81	80
79	78	77	76	75	74	73	72	71	70
69	68	67	66	65	64	63	62	61	60
59	58	57	56	55	54	53	52	51	50
49	48	47	46	45	44	43	42	41	40
39	38	37	36	35	34	33	32	31	30
29	28	27	26	25	24	23	22	21	20
19	18	17	16	15	14	13	12	11	10
9	8	7	6	5	4	3	2	1	0

## Unit 3

## RESOURCE SHEET 7

UNIT

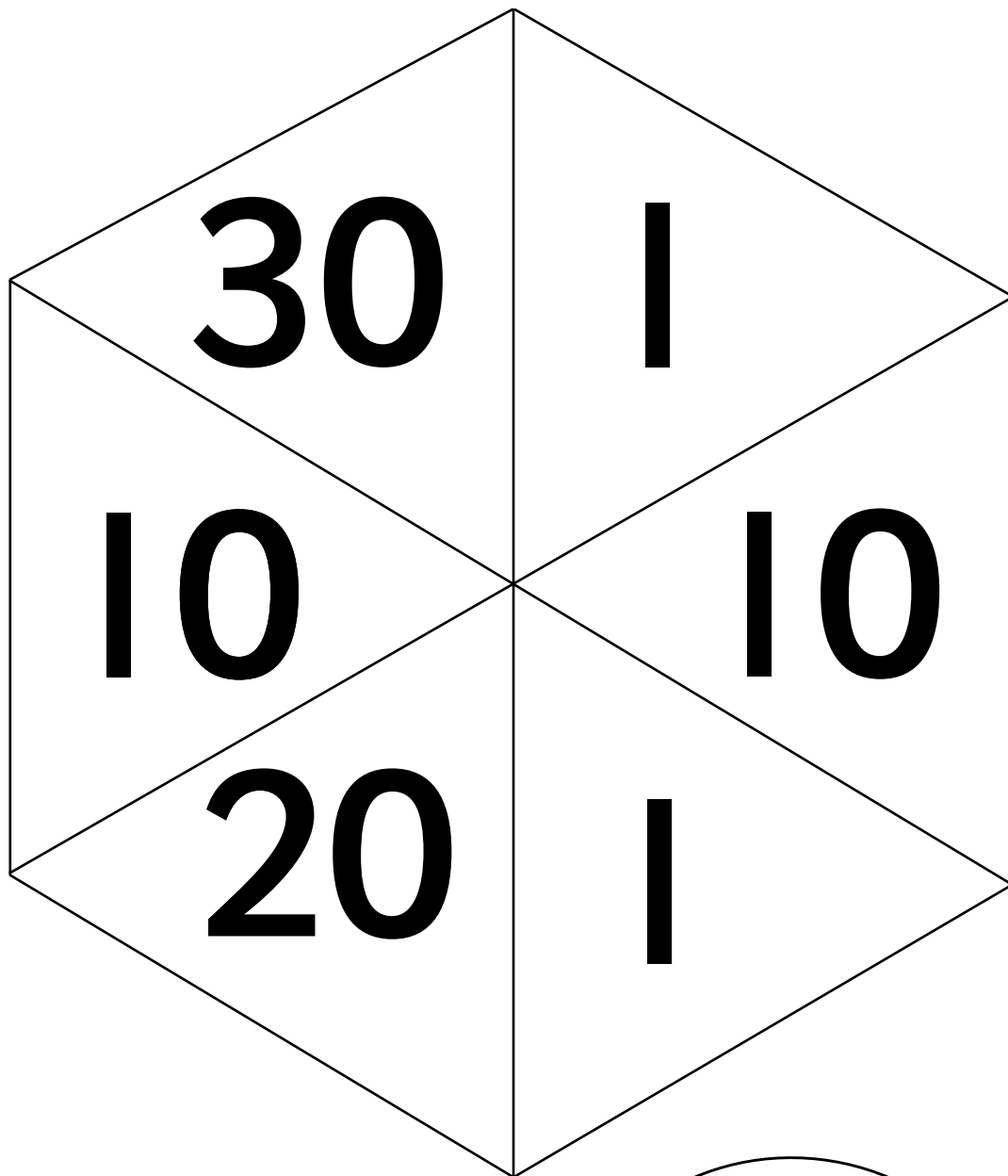
3



Hold the pencil fixed and flick the paper clip around. Read the number that the paper clip stops on.

## Unit 3

## RESOURCE SHEET 8



Hold the pencil fixed and flick the paper clip around. Read the number that the paper clip stops on.

