

# 1

## At the office

<p><b>Coverage</b></p> <p>This unit is about reading, writing, ordering and comparing numbers up to 10, including 0. It also includes adding single-digit numbers with totals to 10, subtracting single-digit numbers from numbers up to 10, understanding +, – and = signs.</p> <p>Calculators are introduced and used to check calculations.</p>	<p><b>Skills</b></p> <p><b>N1/E1.2</b> read and write numbers up to 10, including zero</p> <p><b>N1/E1.3</b> order and compare numbers up to 10 including zero</p> <p><b>N1/E1.4</b> add single-digit numbers with totals to 10</p> <p><b>N1/E1.5</b> subtract single-digit numbers from numbers up to 10</p> <p><b>N1/E1.6</b> interpret +, – and = in practical situations for solving problems</p> <p><b>N1/E1.7</b> use a calculator to check calculations using whole numbers</p>
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Resources needed for effective teaching of this unit:

Demonstration	Group	Pair	Individual
<p>Four sets of cards: 0–10 (numerals), zero to ten (words), I–X (Roman numerals), first to tenth (words)</p> <p>Newspaper</p> <p>Counters or pennies</p> <p>Number line</p>	<p>Telephone key pads</p> <p>Calculators</p> <p>Pennies</p> <p>Number lines</p>	<p>Calculators</p> <p>Counters</p> <p>Pennies</p> <p>Number lines</p> <p>Fact cards (activity 9) – pairs of cards with the same totals, e.g. <math>4 + 3</math> and <math>2 + 5</math></p> <p>Dominoes</p>	<p>Calculators</p> <p>Counters</p> <p>Pennies</p> <p>Number lines</p> <p>Number cards: 0–10 (numerals), zero–ten (words), I–X (Roman numerals), first to tenth (words)</p> <p>Pack of playing cards</p> <p>Dominoes</p> <p>‘Post-it’ (self-adhesive) notes</p> <p>Access to computers desirable</p>

### Reminder

In the Links, H means Help, E means Extension and M means Mini-project.

## Remember

Throughout the unit, be aware of the reading needs of learners.

You may need to read out parts of the text.

Words **highlighted** in **bold** will need particular clarification.

## Context

- Discuss the scenario as a group.
- Be sensitive to the fact that not all learners will know about working in an office. Discuss where learners have met or used numbers, written as digits and as words, e.g. lifts, telephones, buses, flat or house numbers, on notices, magazines or advertisements.

## Stimulus questions

- Have you ever been into an office?
- Have you ever been into a school or college office?
- Do you use a telephone?
- Do you have a telephone number?

## Pages 2 and 3 Words and numbers

### Introduction to activity 1

- As a group, discuss the use of numbers in everyday life.
- Ask learners which numbers they have used today.
- Share and compare number words from one to ten in different languages, and different ways of writing numerals.
- Discuss the number of people, doors, windows, chairs, tables etc. in the room.
- Introduce and discuss 'zero', 'nought' and 'nothing'.
- Look together at the numbers written in the unit. Use two sets of large cards with the numbers written in numerals and in words to demonstrate matching a figure with the corresponding word.
- Some learners will benefit from having the numeral and word for each number written on cards or 'Post-it' notes.

## Activity 1

- Discuss telephone numbers.
- Ask learners which telephone numbers are important to them.
- Learners practise translating words into numerals.

## Activity 2

- Look at telephone key pads. Have real ones to look at.
- Have you noticed that all telephone key pads are similar? The 5 has a raised spot (or similar) for visually impaired users.
- Look at calculator key pads too.
- Discuss calculators and introduce the calculator clear (C) key.
- Emphasise that the display should be cleared before keying in a new number.
- Emphasise that the 'space' cannot be entered so 345 3507 becomes 3453507
- Learners work in pairs to practise keying in telephone numbers on calculators.
- Be aware that some learners will not be used to using telephones.

## Introduction to activity 3

- Discuss Roman numerals.
- Ask learners where they have seen Roman numerals, e.g. on a clock or on the volumes of books in the library.
- Discuss how Roman numerals are constructed.
- Demonstrate using two sets of cards – one with Arabic and one with Roman numerals. Ask learners to pick corresponding pairs.
- Discuss how 1 becomes 'first', 2 becomes 'second' and so on. Some learners will benefit from using counters in a row to consolidate this concept.

## Activity 3

- Learners draw lines to link corresponding Arabic and Roman numerals.

**LINKS: H1, H2**

## Pages 4 and 5

### Ten floors

#### Introduction to activities 4 and 5

- Discuss using a lift. When have learners used a lift? Which floor did they choose? Why?
- Learners may need help with the vocabulary in the list of departments on each floor.
- Discuss the use of the words first, second, third ... tenth.
- Ensure learners know that 1 corresponds to first, 2 to second etc.
- Go through examples orally.

#### Activities 4 and 5

- Learners practise choosing the correct words and digits.
- Learners can refer back to page 3 for help with correct spelling (or provide a separate copy).
- Some learners may benefit from having cue cards or 'Post-it' notes with cardinal numbers on one side and the ordinal word on the reverse.

#### Introduction to activity 6

- Talk about why order is important.
- Discuss things that are numbered in order, e.g. page numbers in a newspaper, book or magazine. Discuss room numbers. How are they written?
- Ask learners to continue sequences of numbers such as 4, 5, 6, ... or 6, 7, 8 ....
- Mix up the pages of a newspaper and ask learners to put them back in the right order. (Note that some learners may have difficulty with the physical requirements of this task.)

#### Activity 6

- Learners practise inserting numbers in the correct positions.
- Some learners will find it beneficial to rearrange 1–10 number cards first.

#### Introduction to activity 7

- Learners need to understand and use the vocabulary of comparing numbers, e.g. more than, less than.

- Look at the picture of stocks of different coloured paper.

#### Activity 7

- Work with your group to compare how much paper there is of each different colour. Encourage use of the words more than, less than or equal amounts.
- Some learners will benefit from using a 0–10 number line.

*LINKS: H1, H2, H3, E1, E2, E3, M1, M2*

## Pages 6–8

### How many reams?

#### Introduction to activity 8

- You may need to explain what a ream of paper is.
- Discuss addition and other words that may be used: add, sum, total, plus, and. Make a list on the board or flipchart.
- Explore different strategies for mental addition by eliciting learners' methods, e.g.  $5 + 4$  is one less than  $5 + 5$ .
- Demonstrate addition using counters.
- Demonstrate addition using a number line (horizontal or vertical) by counting on.
- Share methods of writing down addition calculations. Ensure that learners understand the use of the + and = signs and that adding zero to a number leaves the number unchanged.

#### Activity 8

- Learners add up the number of reams of each colour of paper.

#### Activity 9

- Discuss different ways of reaching the same total e.g.  $1 + 4 = 5$ ,  $4 + 1 = 5$ ,  $2 + 3 = 5$ ,  $3 + 2 = 5$ . Make sure learners add only two numbers.
- Show how addition is communicative, i.e.  $1 + 4 = 4 + 1$ .

- Use counters or pennies to help visualise the possible combinations for each total from 2 to 10.
- Provide learners with sets of 'number statement' cards:  $1 + 3$ ,  $2 + 2$ ,  $4 + 1$ ,  $2 + 3$ ,  $3 + 3$ ,  $4 + 2$ ,  $4 + 3$ ,  $2 + 5$ ,  $4 + 4$ ,  $1 + 7$ ,  $2 + 6$ ,  $5 + 3$ ,  $4 + 5$ ,  $2 + 7$ ,  $1 + 8$ ,  $6 + 3$ ,  $5 + 5$ ,  $4 + 6$ ,  $2 + 8$ ,  $3 + 7$ . Ask learners to pair cards that make the same total. Encourage learners to say out loud (or subvocalise), e.g. '2 plus 3 equals 5' etc.

### Activity 10

- Learners draw lines to link pairs of sums with the same totals.
- Encourage learners to say out loud (or subvocalise), e.g. '3 plus 1 equals 2 plus 2'.

### Activity 11

- Discuss all the possible ways of adding two numbers to make 10.
- Discuss the different words that can be used to describe the sums, e.g.  $5 + 5$ , 5 add 5, 5 and 5, 5 plus 5, the sum of 5 and 5.
- Work as a group to match the number statements.
- Learners draw lines to link the matching facts.
- Some learners would benefit from having cue cards, one showing  $+$  and the other  $=$ , with the relevant vocabulary on the reverse. Alternatively, you might want to develop wall charts.

### Activity 12

- Learners work in pairs to make up sums and write them in different ways.

**LINKS:** H4, H5, E4, M3, M4

## Page 9

### Calculator sums

#### Introduction to activity 13

- Ensure learners are familiar with the calculator numerals,  $+$ ,  $=$  and C (clear) keys.

- Emphasise the need to clear the display by pressing the C (clear) key before starting a new calculation.

### Activity 13

- Learners check calculations using a calculator, and correct any wrong answers.

### Activity 14

- Learners practise checking calculations using a computer calculator.

**LINKS:** H5

## Pages 10–12

### Take them away

#### Introduction to activity 15

- Discuss subtraction. Talk about the different vocabulary that is used, e.g. take away, difference, minus.
- Explore different strategies for mental subtraction, such as counting on and 'near numbers', e.g.  $9 - 5$  is one less than  $10 - 5$ .
- Use counters, pens or pennies to demonstrate subtraction, encouraging learners to physically 'take away'.
- Some learners would benefit from a cue card with a minus sign on one side and the appropriate vocabulary on the reverse.

### Activity 15

- Learners practise subtraction using the various office items. Suggest crossing out the items to be subtracted and then counting the rest to get the result.

### Activity 16

- Demonstrate the use of a number line (horizontal or vertical) to aid subtraction by counting back.
- Learners practise subtraction using number lines.

## **Activity 17**

- Compare the results of subtracting single-digit numbers from 10 with the results of adding pairs of numbers that make 10 and look for patterns.
- Learners practise subtracting all the single-digit numbers from 10 in turn, checking by adding back.

### **Introduction to activity 18**

- Discuss use of calculators with learners. Introduce the use of the minus key and remind them to clear the display before each new calculation.

## **Activity 18**

- Learners check subtraction calculations and correct any wrong answers.

**LINKS: H6, E4, M4**

## **Pages 13 and 14 Help**

- Encourage learners to say out loud (or subvocalise) wherever possible.

### **H1**

- Remind learners of how to form each digit and the order of digits from 0 to 10.
- Some learners may benefit from having individual cue cards/'Post-it' notes with one numeral on each.
- Ask learners to write the numbers from 0 to 10 in ascending order (biggest to smallest etc.).
- Discuss how to write numbers in descending order.

### **H2**

- Remind learners of the Roman numerals and match them to their Arabic partners.
- Learners match Arabic and Roman numerals with the corresponding words.
- Some learners may benefit from having cue cards or 'Post-it' notes to match the different forms physically first.

### **H3**

- Go through some numbers and ask learners to identify the number below and the number above each.
- Some learners may benefit from having individual 0–9 number cards or a number line.
- Learners complete simple number sequences individually or in pairs by filling in the missing numbers before and after a single-digit number.

### **H4**

- Go through some examples with learners.
- Working individually or in pairs, learners use 10 pennies and record all the possible sums to make 10. Repeat the activity for a different number of pennies.

### **H5**

- Go through some examples with learners.
- Working individually or in pairs, learners count the pennies to find the totals.

### **H6**

- Go through some examples with learners.
- Working individually or in pairs, learners practise subtraction by crossing out the number of counters to be taken away and counting the remainder.

## **Page 15 Extension**

### **Activity E1**

- Provide learners with number cards or playing cards to sort into ascending order (smallest to biggest).
- Learners practise sorting the jumbled files into order, working individually or in pairs.

### **Activity E2**

- Provide learners with four sets of cards: 1–10 (numbers), one to ten (words), I–X (Roman numerals) and first to tenth (words). Ask learners to match up the corresponding sets, e.g. 1, one, I and first; 2, two, II and second, etc.

### ↑ E3

- Provide learners with a pack of playing cards.
- Learners should work individually or in pairs.
- Decide whether to remove the picture (face) cards before learners do the sorting.

### ↑ E4

- Provide learners with a set of dominoes. Ask them to add and record all the sums, adding the numbers on the two halves of each domino.
- Repeat but subtract the numbers, recording the numbers on the two halves of each domino.

## Page 16

### Mini-projects

#### M1

- Ask learners to record the numbers they use by completing the suggested list.

#### M2

- Ask learners to play a game of dominoes. At this level it should be just a basic game:
  - Players place all dominoes face down on a table and mix them up.
  - Each player takes seven dominoes.
  - The player with the highest double (double 6 is the highest possible) lays it face up on the table.
  - The player to his/her left lays a domino down, matching one number with the same number on the domino already played.
  - Play continues until one player has played all his dominoes. S/he is the winner.
  - If at any point a player cannot match a domino s/he should pick up one of the spare dominoes.

#### M3

- Learners make up two calculations, one addition and one subtraction, from each set of three digits, e.g. from 3, 5 and 8 you can make  $3 + 5 = 8$  and  $8 - 5 = 3$ .

#### M4

- Learners use a computer calculator to check some of the calculations completed in this booklet.
- Some learners may benefit from a cue card of instructions (Start – Programs – Accessories – Calculator) to access the computer calculator.

## Page 17

### Check it

- Use these questions to assess how learners have coped with the skills in this unit. Ask learners to indicate the areas in which they would like help.

### *How am I doing?*

- Learners complete this individually or with teacher support.