

3

At the leisure centre

Coverage

This unit is about using analogue and digital clocks to tell the time using am and pm. The work involves reading clocks to the nearest five minutes and builds on previous work on reading time to the nearest quarter of an hour.

Learners are introduced to calendars, and activities are provided to identify and use different date formats, as well as making use of a calendar and appreciating how this might be used for a variety of purposes.

The final section of this unit looks at fractions and builds on previous work using halves, quarters, thirds and fifths, as well as recognising and using equivalent fractions in a variety of contexts.

Skills

MSS1/E3.3 use analogue and digital clocks to tell the time

MSS1/E3.3 use a calendar to read the date

N2/E3.1 read, write and understand common fractions

N2/E3.2 recognise and use equivalent fractions

Resources needed for effective teaching of this unit:

Demonstration	Group	Pair	Individual
Analogue clock face	Tiles (two colours)	Tiles (two colours)	Analogue clock sheets
Digital clock face		Fraction dominoes	Digital clock sheets
Time map			Various calendars
Cuisenaire rods			Whiteboards
Multilink cubes			Cuisenaire
			Multilink cubes
			Prompt cards: numbers and written words of months of the year

Reminder

In the 'Link' H means Help, E means Extension, 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 in a group. Be aware that some learners will not have visited a leisure centre.

Stimulus questions

- Have you ever visited a leisure centre?
- Have you seen any programmes on the TV about leisure centres?
- What type of work would a manager at a leisure centre do?
- What type of work would a receptionist at a leisure centre do?
- What maths skills would a manager of a leisure centre need for his or her job?
- What maths skills would a receptionist of a leisure centre need for his or her job?
- What other maths skills would be needed in a leisure centre?

Pages 2 and 3 Booking the squash courts

Introduction to activity 1

- Discuss how bookings might be made for a squash court.
- What information would be needed?
- What does 8 o'clock mean – is this morning or evening?
- How could you differentiate? Explain the need to identify morning or evening.
- Explain use of am and pm.

Activity 1

- Discuss the information in the table (number of courts / opening times / last bookings / number of people booked etc.)
- Work through the example of Peter Ashe. What time is his booking?
- Stress the use of am and pm, and when am becomes pm.
- Stress the use of vocabulary and use of 'eight a-m'.
- Work through the example of Kelly Andrew. What time is her booking?
- Stress use of am and pm again.
- Stress use of vocabulary and use of '1 p-m'.
- Learners complete the booking times.

Introduction to activity 2

- Show learners a digital clock and explain times at 5-minute intervals: 5 / 10 / 15 / 20 minutes etc.
- Show how an analogue clock is marked every 5 minutes. Count in fives to find the time past the hour (to 55 minutes) using 'seven forty' etc.
- Show various times on the analogue and digital clocks.
- Ask learners to read and set times.
- Differentiate between hour and minute hand (problematic for blind and partially sighted learners).
- Work through the examples.
 - Invite learners to show the time 7:20 am when Karen arrives at work.
 - Stress the position of the hour hand on the analogue clock – it is not at seven exactly.
 - Invite learners to show the time 3:40 pm when Karen finishes work.
 - Stress the position of the hour hand on the analogue clock – it is not at three exactly.

Activity 2

Stress the use of vocabulary 'seven twenty am' and 'three forty pm'.

- Go through the first row of the table.
- Stress that all the columns are to be completed, including some clock faces.
- Learners complete the activity individually or in pairs.

LINKS H1, M1

Pages 4 and 5 Starting and finishing times

Introduction to activity 3

- Revise 'quarter past', 'half past' and 'quarter to' (taught at entry level 2). Relate these times to: 15, 30 and 45 minutes.
- Introduce 5 / 10 / 20 / 25 minutes **past**.
- Go through some examples on an analogue clock.

Activity 3

- Work through the examples.
 - Work in pairs to find the name David Tenor
 - What time does he start? Why might he start late?
- Where else do learners make appointments? (Job Centre, doctor's surgery, dentist's surgery etc.) Why is it important to be on time? (Waste of professional time, keeping other people waiting etc.)
- Work through the first question.
- Learners complete the activity individually or in pairs.

Introduction to activity 4

- Introduce 25 / 20 / 10 / 5 to the hour.
- Go through some examples on an analogue clock using 25 / 20 / 10 / 5 to the hour.
- Work through the examples.

Activity 4

- Go through the first question.
- Learners complete the activity individually or in pairs.

Note that the 24-hour clock is introduced at the next level.

LINKS: H1, M2

Pages 6 and 7 Booking the main hall

Introduction to activity 5

- Discuss what sort of activities might take place in the main hall.
- Look at the rows and columns in the table Highlight that the day and date is shown across the top and the part of the day down the side.
- Give some examples, e.g. aerobics is on Tuesday 1st July and is in the afternoon.
- Be prepared to explain what a tea dance is.
- Revise writing the date as day / month / year.
- Explain that the American notation is mm / dd / yy.

- Use month and number prompt cards, if required.

Activity 5

- Ask questions about the table.
- How many 'sessions' are there in a day?
- What is the first date shown?
- When is the ballet class?

The following may be of some use:

*30 days hath September
April, June and November
All the rest have 31,
except in February alone
which has but 28 days clear
and 29 in each leap year*

- Work through the examples.
 - In pairs, find the entry for Tap dancing – the class is on Monday 30 June 2003.
 - Demonstrate that this can be written as 30/6/03 – revise dd / mm / yy.
- Use calendar formats to practise dates in both ways.
- Do more examples as necessary for the group. Focus on dates that have meaning for learners (birthdays, Christmas, special religious events).

Activities 6 and 7

- Discuss where you might find calendars – diary, desk, computer, wall planner etc.
- Provide learners with a variety of calendars to look at.
- Consider different formats (Sunday or Monday in the first column).

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	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	1	2	3	4

- Discuss convention of including days from previous months.
- In groups decide what questions can be answered using a calendar e.g. the first / last day of the month, the shortest / longest month, how many days / Mondays etc.
- Identify rows and columns.

LINKS H2, E1, M3, M4

Pages 8 and 9 In the crèche

Introduction to activities 8 and 9

- Introduce Andreas and Frieda who are playing in the crèche and colouring shapes in their books.
- Provide links to earlier work in (Entry 2) on halves and quarters.
- Explain the format of a fraction:
 - top number (numerator)
 - bottom number (denominator) which tells you how many equal parts.
- Work through the examples.
- Introduce thirds and the notation $\frac{1}{3}$.
- Stress that parts must be equal. Highlight by showing examples where parts are not equal. For example, this is not one-third:



- Introduce fifths and the notation $\frac{1}{5}$.
- Stress that parts must be equal. Highlight by showing examples where parts are not equal. For example, this is not one-fifth.



- Use the learners to create fractions e.g. $\frac{3}{10}$ prefer tea, $\frac{7}{10}$ have trainers.

Activities 8 and 9

- Learners complete the activities individually or in pairs.

Introduction to activities 10 and 11

- Revise the format of fractions.
- Discuss the bottom number (denominator), which tells you how many equal parts.
- Discuss the top number (numerator), which tells you how many of those equal parts.
- Work through the examples.
- Do further examples if learners require more practice.

Activities 10 and 11

- Learners complete the activities individually or in pairs.

LINKS: H3, H4, E2

Introduction to activity 12

- Revise the format of fractions.
 - Stress that the bottom number (denominator) tells you how many equal parts.
 - Stress that the top number (numerator) tells you how many of those equal parts.

It might be helpful to use fraction walls to introduce the concept of equivalent fractions. (See page 39 of the Numeracy Core Curriculum.)

- Go through some examples similar to those in the activity, e.g. shade $\frac{3}{5}$ of a shape means that the shape is divided into five equal parts; the learner should shade any three.

Activity 12

- Learners complete the activity individually or in pairs.

Introduction to activity 13

- Encourage the use of concrete examples and multisensory activities (see page 245 of *Access for All*.)

Activity 13

- Discuss the idea that $\frac{1}{1}$, $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$ is the same as one whole. Use the same cake or block of chocolate divided into a different number of parts.
- Discuss $\frac{4}{8}$, $\frac{3}{6}$, $\frac{1}{2}$ etc. of the same bar of chocolate.
- Discuss making $\frac{4}{8} = \frac{1}{2}$ by simplifying (dividing top and bottom by same number). Work through several similar examples but make sure that divisor is within the capabilities of the learners.
- Andreas says they should each have $\frac{1}{2}$ and Frieda says they should each have $\frac{4}{8}$ – who is right?

- Introduce the idea of equivalent fractions – explain the term ‘equivalent’.
- Learners complete the activity individually or in pairs.

Introduction to activity 14

- Discuss the example and the different ways of shading a half.
- Look at other similar examples if learners need more help.

Activity 14

- Learners complete the activity in pairs.

LINKS H3, E2

Pages 12 and 13 Help

H1

- Ask general questions about the tables.
- Work in pairs to identify different names and the times booked.
- Stress the use of am and pm.

H2

- Provide learners with a variety of calendars to look at.
- In groups, decide what questions can be answered using a calendar:
 - the first/last day of the month
 - the shortest and longest month
 - the number of days in a month.

H3

- Provide links to earlier work in Unit 2 on halves and quarters.
- Discuss the format of a fraction.
- Discuss the top number (numerator) and bottom number (denominator).
- Stress that the bottom number tells you how many equal parts – they must be equal.

H4

- Revise the format of a fraction.
- Stress that the bottom number (denominator) tells you how many equal parts.
- Stress that the top number (numerator) tells you how many of those equal parts.
- Revise use of multiplying (or dividing) top and bottom by same number.

Page 14 Extension

E1

- Provide learners with a variety of calendars to look at.
- Use calendar formats to practise dates expressed in different ways and explain dd / mm / yy.
- Explain use of the American format mm / dd / yy. Why might this be confusing in the UK?

E2

- Explain equivalent fractions and how they can be made.
- Revise the use of multiplying (or dividing) the top and bottom of the fraction by the same number.
- Use equivalent fractions to identify which fraction is the smallest and which is the biggest.
- Encourage learners to draw diagrams or refer to fraction walls to help them.

Page 15 Mini-projects

M1, M2, M3, M4

- These activities are to be undertaken individually or in groups, using an atlas, encyclopaedia, the library or the Internet.

Pages 16 and 17

Check it

Use these questions to assess how the 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 should complete this individually or with teacher support.