

3

Time to go



My name is Ben. I love sport. Football and athletics are my favourites. I like going to matches and events. I even like the journey there. I usually travel by bus, tube or train, or I run if it is not too far.

One of my best memories was when I went to Manchester to watch the 2002 Commonwealth Games. They were great! I went on Wednesday 31 July 2002. I set the alarm on my watch for 05:30 because I had to catch an early train. I didn't want to miss a minute of the games! It took around three hours on the train and then I had to catch the shuttle bus to the stadium.

I bought a programme and looked at the timetable of events. There were so many things to see. I even took my stopwatch to time some of the runners. The atmosphere was fantastic.

Talk about it

Do you have a watch? Is it digital? Does it also show the date?

Do you ever travel by bus or train?

How do you know what time the train leaves?

Do you use a timetable?

Have you ever used a stopwatch?

These are the skills you will practise in this unit.

Which are the most useful for you? Tick the boxes.

- ☐ Reading, measuring and recording time in common date formats and using the 12-hour and 24-hour clock
- ☐ Calculating using time
- ☐ Adding and subtracting time
- ☐ Converting units of time

Skill code

MSS1/L1.2

MSS1/L1.3

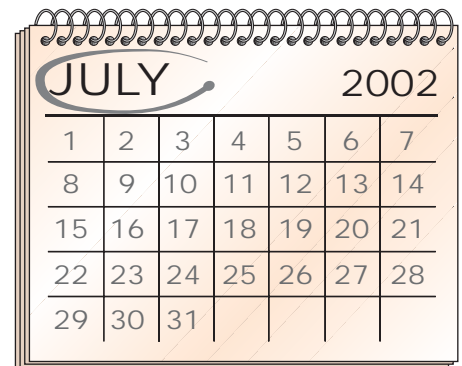
MSS1/L1.6

MSS1/L1.7

Sporting dates

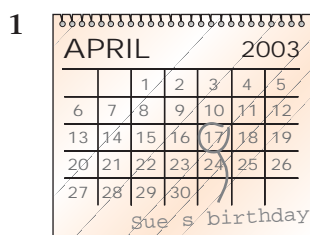
The last Commonwealth Games in England started on 25 July 2002. This can be written as 25/07/02.

In this country we write the day first (25), followed by the month (07, as July is the seventh month) and then, finally, the year (02, which is short for 2002).



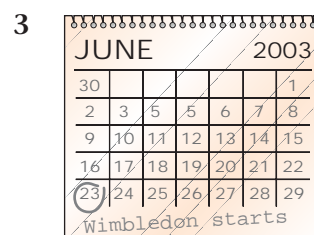
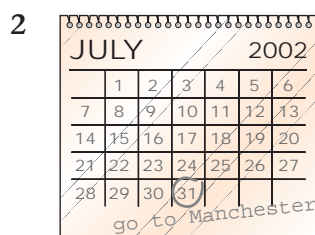
Activity 1

Look at these calendars and write the correct date in two ways. The first one has been done for you.



17 April 2003

17/04/03



Activity 2

Work out the birthdays of these sports stars.

e.g. David Beckham was 27 years old at the 2002 World Cup. He was born on the second day of the fifth month. David Beckham's birthday is 02/05/1975.

1 Kelly Holmes was 32 years old at the 2002 Commonwealth Games. She was born on the nineteenth day of the fourth month.

2 Jonathan Edwards won gold in the triple jump at the 2002 Commonwealth Games. He was 36 years old, and was born on the tenth day of the fifth month.

Twenty-four/seven

There are 24 hours in the day. Some clocks show a 12-hour clock and repeat the times twice. Others show a 24-hour clock and show times once.

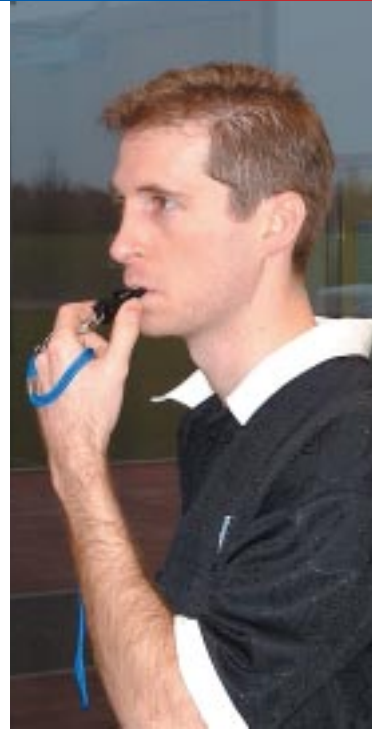
Football games usually kick off at 3 o'clock in the afternoon. This can be written as 3 pm using a 12-hour clock, or 15:00 (1500) using the 24-hour clock – 15 being the number of hours and 00 the number of minutes. After 12 o'clock midday, the hours continue up to 23:59. Midnight starts the process again at 00:00.



12-hour clock



24-hour clock



Talk about it

Full-time in most football games is around 4:30 pm.

What time is that on the 24-hour clock?

How would it look on my watch?



Activity 3

Match the 12-hour times to the 24-hour times.

e.g. 3:20 pm

- 1 2:00 pm
- 2 7:45 pm
- 3 9:36 pm
- 4 9:17 pm
- 5 11:23 pm
- 6 midnight



Review

Do you need more practice in using the 24-hour clock?

Yes ☐ No ☐

For more work on this, go to H1 (page 14) or E1 (page 16).
This work links to mini-project M1 (page 17).

Time flies – or does it?

Talk about it

Sometimes a minute seems to go by quickly, and other times slowly. If I am waiting for a bus, each minute drags by. If I am watching a match, 45 minutes seems to go very quickly. In reality, time is constant. It is regular.

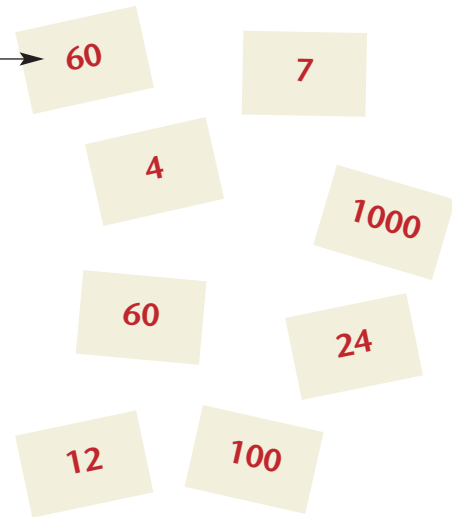


Activity 4

Look at the boxes. Choose the right amount of time to complete each sentence correctly. For example:

There are 60 seconds in one minute. → 60

- 1 There are minutes in one hour.
- 2 There are hours in one day.
- 3 There are days in one week.
- 4 There are about weeks in one month.
- 5 There are months in one year.
- 6 There are years in a century.
- 7 There are years in a millennium.



Activity 5

Answer the following questions.

e.g. How many days are there in three weeks? 21 days

- 1 How many hours are in two days?
- 2 How many seconds are in half a minute?
- 3 How many years are in half a century?
- 4 How many minutes are in two hours?

*It is 3 weeks until the next match... 7 days = 1 week
3 x 7 = 21 days*



Tip

There are 60 seconds in one minute, 60 minutes in one hour and 24 hours in one day.

Activity 6

I like watching sport on TV too. I work out how long the games are on because I hate missing the finish if I have to go out! I know a football match lasts one and a half hours but with injury time and breaks, it takes about two hours.



If the match starts at 3 o'clock, what time will it end?
To work it out, add two hours onto the start time.

$$3 \text{ o'clock} + 2 \text{ hours} = 5 \text{ o'clock}$$

or

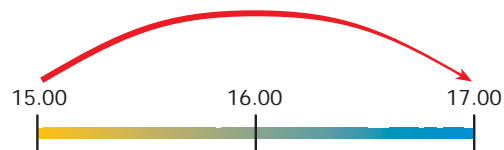
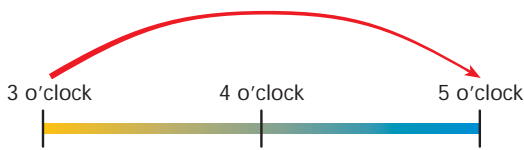
$$15:00 + 2 \text{ hours} = 17:00$$



+ 2 hours



+ 2 hours



Look at the start of each programme. Add how long it will last. When will each programme end?

e.g. Athletics starts at 1:30 pm and lasts for three hours.



It will end at **4:30 pm.**

1 The golf match starts at 2:00 pm and lasts four hours.



It will end at

2 Racing starts at 2:30 pm and lasts $2\frac{1}{2}$ hours.



It will end at

3 Canoeing starts at 16:00 and lasts $1\frac{1}{4}$ hours.

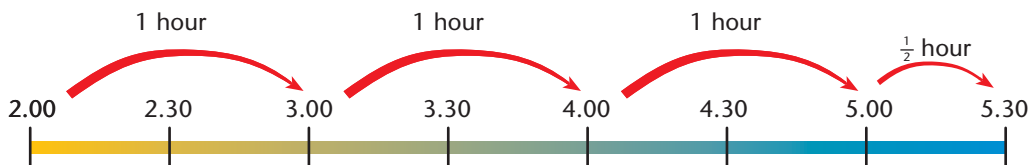


It will end at

Activity 7

The tennis match starts at 2:00 pm and ends at 5:30 pm. How long does it last?

To work this out, I need to find the difference between the two times. $5:30 - 2:00 = 3\frac{1}{2}$ hours



How long is each programme?

1 Swimming starts at 4:00 pm and ends at 6:30 pm. How long does it last?

2 Rugby starts at 14:00 and ends at 16:15. How long is the match?



Review

Do you need more practice in adding or subtracting time?

Yes ☐

No ☐

For more work on this, go to H2 (page 14) or E2 (page 16).

This work links to mini-project M2 (page 17).

In record time

Kelly Holmes can run 800 metres in 0:01 56. That is 1 minute and 56 seconds.

I like to run the 800 metres too. I take my stopwatch to the athletics track to time my laps to see if I am improving and getting faster, but I am not as fast as Kelly yet! My digital watch has a stopwatch facility on it. Look at it and read my lap time.



Activity 8

Work with another person and use a stopwatch.

Work out how it works. How do you start and stop the watch?

Estimate how long you think it will take you to complete each activity.

Time each other and record the results below.



Activity	My estimate	My actual time	Other person's time
Throwing a ball and catching it ten times			
Ten sit-ups			
Writing my name ten times			
Making 20 cubes into a tower			
Jumping up and down 15 times			

Look at your results.

Were your estimates accurate?

Who was faster at each activity?

Activity 9

I like running fast. I keep track of my lap times and compare them. I ask myself, was I faster or slower on that lap? Who was faster than me and by how much?



On race days, they write the results up on a board. My time was 2 minutes and 15 seconds. Look at the board and compare the times. Then answer the questions below.

Men's 800 m race results	World record 1.41
1 Jo	2:08
2 Ali	2:09
3 Pete	2:13
4 Ben	2:15
5 Victor	2:20
6 Steve	2:27

e.g. What was Victor's time? **2 minutes and 20 seconds**

- 1 What was the winner's time?
- 2 How much slower was Ali?
- 3 What was the time difference between third and fourth place?
- 4 What was the time difference between the fastest and the slowest runner?

Review

Do you need more practice in reading and measuring seconds?

Yes ☐

No ☐

**For more work on this, go to E3 (page 16).
This work links to mini-project M3 (page 17).**

Every second counts

I like to add my lap times together to find a total time, but this involves adding seconds and minutes.



*Remember,
60 seconds = 1 minute*



The times for Ben's last three laps are shown here.

He adds the minutes $2 + 2 + 2 = 6$

Then the seconds $15 + 22 + 36 = 73$

He gets the answer 6 min and 73 sec.

Ben's stopwatch says 7.13. Why is it different?

Lap 1	2:15
Lap 2	2:22
Lap 3	2:36
Total	6 min 73 sec

Tip

To convert the seconds into minutes, 73 seconds is 1 minute and 13 seconds. Add this to the 6 minutes and you have an answer of 7.13, the same as Ben's stopwatch.



Activity 10

Convert these seconds into minutes and seconds.

e.g. 63 seconds = 1 minute and 3 seconds

1 72 seconds =

2 86 seconds =

3 120 seconds =

4 135 seconds =



Activity 11

Add these times together and give your answer in minutes and seconds.

e.g. 23 seconds and 45 seconds = 68 seconds = 1 minute and 8 seconds

1 15 seconds and 55 seconds =

2 43 seconds and 25 seconds =

3 1 minute 34 seconds and 1 minute 38 seconds =

Remember

- 60 seconds = 1 minute
- 60 minutes = 1 hour



Activity 12

If you can work out how to convert seconds to minutes, you can also work out how to convert minutes to hours. Try these.

e.g. 30 minutes and 45 minutes = 75 minutes = 1 hour and 15 minutes

1 45 minutes and 45 minutes =

2 2 hours 25 minutes and 1 hour 50 minutes =

I live at Bethnal Green in London and travel a lot by tube. The time the tube takes between each stop is about $2\frac{1}{2}$ minutes. So I can go from my home to Tottenham Court Road in about 15 minutes.

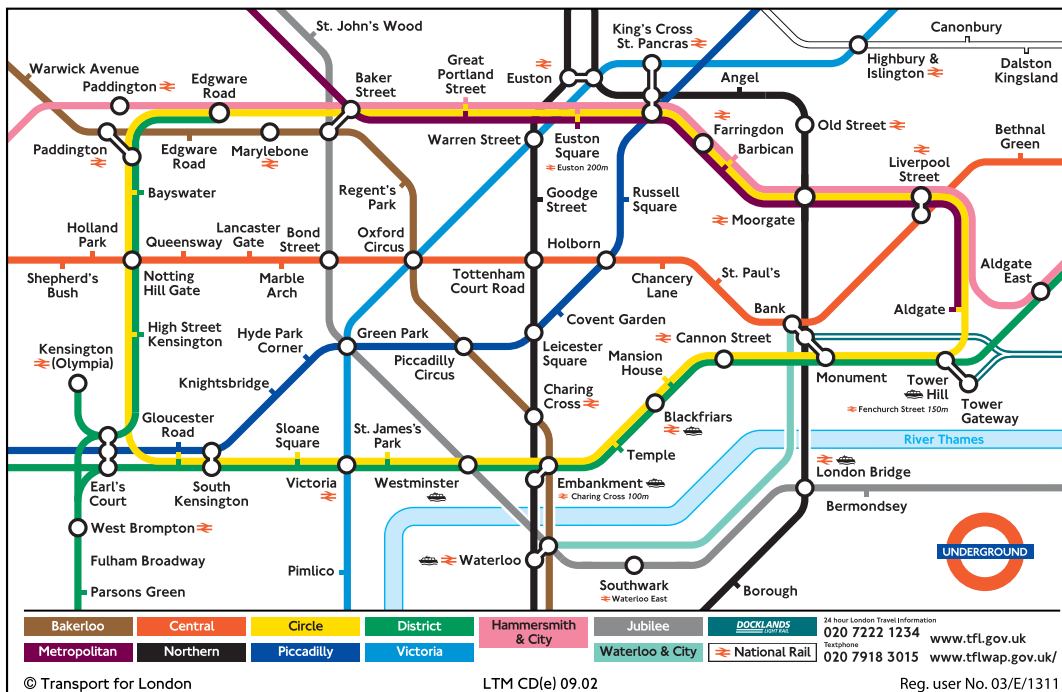


Activity 13

Ben likes to go to Highbury to watch Arsenal play. He gets the tube to Highbury and Islington. The time between each station is about $2\frac{1}{2}$ minutes and each change of train about $7\frac{1}{2}$ minutes. What would be his quickest route from home to the football grounds?

Find the quickest route for each of these journeys. What is the journey time?

- 1 Baker Street to Covent Garden
- 2 Old Street to Sloane Square
- 3 Knightsbridge to Great Portland Street
- 4 Temple to Lancaster Gate



Review

Do you need more practice in converting times?

Yes ☐ No ☐

For more work on this, go to H3 (page 15).

Time travel

I run with the South London Harriers. We sometimes train on Sundays at Crystal Palace athletics track. To get there I travel by tube to Stockwell Station, then by bus from the station to the track. I need to know the times of the buses, so I look at the timetable.



Activity 14

Below is part of the timetable for the number 2 bus in London.

Ben usually arrives at the Stockwell Station bus stop about 10:00 am.

His next bus to Crystal Palace would be at 10:03.

How long does this bus take to get to Crystal Palace Parade?

If he misses the bus at 10:03 what time is the next bus?

LONDON BUS ROUTE – 2 timetable

Sundays and public holidays

Crystal Palace (Parade)	0715	0730	0745	0800	0812		1812	1824		2319
West Norwood (Bus Garage)	0723	0738	0753	0808	0820	Then	1821	1832	Then	2326
West Norwood (Library)	0725	0740	0755	0810	0822	about	1823	1834	about	2328
Brixton Station	0738	0753	0808	0823	0835	every	1827	1847	every	2337
Stockwell Station	0744	0759	0814	0829	0841	10	1843	1853	12	2342
Vauxhall Station	0748	0803	0818	0833	0845	mins	1847	1857	mins	2345
Victoria Station	0754	0809	0824	0839	0851	until	1853	1903	until	2351
Marble Arch	0801	0816	0831	0846	0858		1900	1910		2358
Marylebone Station	0808	0823	0838	0853	0905		1907	1917		0005

Sundays and public holidays

Marylebone Station	0813	0828	0843	0858	0910	0922	0934	0946		2010		0010
Marble Arch	0822	0837	0852	0907	0919	0931	0943	0955	Then	2021	Then	0017
Victoria Station	0830	0845	0900	0915	0927	0939	0951	1003	about	2031	about	0024
Vauxhall Station	0837	0852	0907	0922	0934	0946	0958	1010	every	2039	every	0031
Stockwell Station	0842	0857	0912	0927	0939	0951	1003	1015	10	2044	12	0035
Brixton Station	0846	0901	0916	0931	0943	0955	1007	1019	mins	2048	mins	0038
West Norwood (Library)	0847	0902	0917	0932	0944	0956	1008	1020	until	2050	until	0039
West Norwood (Bus Garage)	0858	0913	0928	0943	0956	1009	1021	1033		2103		0050
Crystal Palace (Parade)	0908	0923	0938	0953	1007	1021	1034	1046		2115		0058

Use the Sunday timetable to answer these questions.

1 Ben arrives at Stockwell Station at 09:30. When is his next bus to Crystal Palace?

.....

2 If he arrives at Stockwell Station at 10:40 am, approximately when is his next bus due?

.....

3 If Ben arrives at Crystal Palace Parade at 6:05 pm, what time is his next bus back to Stockwell Station?

.....

4 Ben has a race on Sunday. Which bus should he take from Stockwell to arrive at Crystal Palace (Parade) for 10:30 in the morning?

.....

5 After the race, he meets up with some friends. What time is the last bus back to Stockwell Station from Crystal Palace Parade?

.....

Activity 15

On the Manchester Commonwealth Games website there is an example of travelling times to help you plan your day. Add up how long it would take to get from the train station to your seat.

Arrive Manchester Piccadilly station
Walk to Sportcity shuttle boarding stand	15 min
Shuttle bus to Sportcity	15 min
Walk to stadium	10 min
Stadium entrance and security checks	45 min
Buy programme and locate seating	20 min
Total time

The athletics started at 12:00. I looked up the train times on the Internet.
 What train did I need to catch from London to arrive in Manchester in time?
 Estimate first and ring your estimated time of departure.

Don't forget to
add the time
from the station
to your seat!

1 Work out which train you need to catch to arrive at the stadium for the 12:00 start.

.....

2 How much longer does the 7:00 train take than the 7:55 train? Why do you think that is?

.....

TRAIN TIMES							
	From	To	Changes	Date	Depart	Arrive	Duration
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	6:00	9:02	3:02
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	6:50	9:36	2:46
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	1	31.07.02	7:00	10:20	3:20
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	7:55	10:36	2:41
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	1	31.07.02	8:00	11:10	3:10
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	1	31.07.02	8:25	11:28	3:03
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	8:55	11:36	2:41
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	1	31.07.02	9:00	12:00	3:00
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	9:35	12:31	2:56
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	0	31.07.02	9:55	12:36	2:41
<input checked="" type="checkbox"/>	London Euston	Manchester Piccadilly	1	31.07.02	10:00	13:28	3:28

Review

Do you need more practice in reading timetables?

Yes ☐ No ☐

For more work on this, go to H4 (page 15) or E3 (page 16).
 This work links to mini-project M3 (page 17).

Time to work

In my job, I get paid an hourly rate. Every week I have to submit a time sheet of my hours. I record when I come in and go out, but I only get paid for my time in. I add up the hours each day then total the hours for the week.



Activity 16

Look at the time sheet and total the hours worked each day.

e.g. Monday $7\frac{1}{2}$ hours

- 1 Tuesday
- 2 Wednesday
- 3 Thursday
- 4 Friday
- 5 Saturday



Activity 17

Look at the time sheet and answer the following questions.

If I have worked fewer than 8 hours during the day, I like to go for a 30-minute run in the evening. After 8 hours' or more work I am usually too tired!

- 1 Which days do I go for a run?

.....
.....

- 2 How many hours have I worked this week?

.....

Time sheet Ben week 17						
	Mon	Tues	Wed	Thurs	Fri	Sat
0800	in	in		in		in
0830						
0900			in		in	
0930						
1000						
1030						
1100			out			
1130						
1200	out	out		out		
1230				in		
1300	in	in	in			out
1330						
1400						
1430				out		
1500						
1530				in		
1600						
1630	out					
1700		out			out	
1730			out	out		
Total hours	$7\frac{1}{2}$					
Total weekly hours						



Review

Do you need more practice in calculating time?

Yes ☐ No ☐

For more work on this, go to H4 (page 15).

Activity H1

Fill in the missing times using the 24-hour clock.

Morning times		Afternoon/evening times	
1 o'clock	01:00	1 o'clock	
2 o'clock		2 o'clock	
3 o'clock		3 o'clock	
4 o'clock		4 o'clock	16:00
5 o'clock	05:00	5 o'clock	
6 o'clock		6 o'clock	
7 o'clock		7 o'clock	
8 o'clock		8 o'clock	
9 o'clock		9 o'clock	
10 o'clock	10:00	10 o'clock	
11 o'clock		11 o'clock	
12 midday		12 midnight	



Activity H2

Add or subtract the times to answer these questions.

e.g. EastEnders starts at 20:00 and ends at 20:30.

How long is the programme? **30 minutes or $\frac{1}{2}$ hour**

- The Channel 4 News starts at 19:00 and lasts for one hour.
What time does it finish?

.....

- The Simpsons starts at 6:30 pm and finishes at 6:50 pm. How long does it last?

.....

- The tennis highlights start at 21:30 and finish at 22:15.

How long is the programme?

- The cricket starts at 11 o'clock in the morning and finally finishes $8\frac{1}{2}$ hours later.

What time does it end?





Activity H3

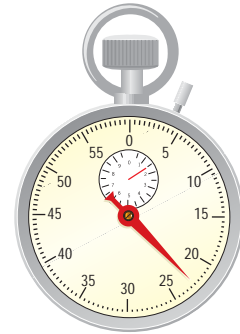
Convert these **seconds** into minutes and seconds.

e.g. 64 seconds = 1 minute and 4 seconds

1 80 seconds =

2 72 seconds =

3 90 seconds =



Convert these **minutes** into hours and minutes.

e.g. 75 minutes = 1 hour and 15 minutes or $1\frac{1}{4}$ hours

4 86 minutes =

5 100 minutes =

6 180 minutes =

Convert these **hours** into minutes.

e.g. 2 hours = 2×60 minutes = 120 minutes

7 $\frac{1}{2}$ hour =

8 $1\frac{1}{2}$ hours =

9 4 hours =



Activity H4

Here is a college timetable for a part-time learner. Use it to answer the questions below.

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 to 11:00 am	Numeracy			IT	Numeracy
11:00 am to 1:00 pm	English		Numeracy	English	IT
1:00 to 2:00 pm	Lunch				
2:00 to 3:30 pm	Child studies		Child studies		

e.g. What time is the numeracy lesson on Wednesday? 11:00 am to 1:00 pm

1 What time is child studies on Monday?

2 On what days is there IT?

3 What time is lunch?

4 Which weekday does the learner not attend lessons?

5 How many English lessons are there during the week?

Extension

Activity E1

Write the equivalent time on the 24-hour clock.

e.g. 2:30 pm 14:30

- | | |
|------------------|-----------------------------------|
| 1 5:45 pm | 2 5 o' clock in the morning |
| 3 9:10 am | 4 midday |
| 5 10:34 pm | 6 10 minutes to midnight |

Write the equivalent time on the 12-hour clock.

e.g. 17:30 5:30 pm

- | | |
|----------------|----------------|
| 7 23:47 | 8 00:00 |
| 9 14:00 | 10 10:59 |
| 11 06:38 | 12 02:03 |

Activity E2

Ben usually watches about 16 hours of TV per week: around two hours each week night and a bit more at the weekend.

Look through a TV guide and find programmes for him to watch during the week. Remember he likes sport!

Add up the times for the daily totals and then add them together to find the weekly total.



Activity E3

SUNDAY									
Exeter St Davids	0939	1125	1317	1455	1645	1850	2027	2147	2255
Exeter Central	0942	1128	1320	1458	1648	1853	2030	2150	2258
St James Park	0944	1130	1323	1500	1650	1855	2041	2152	2300
Polsloe Bridge	0947	1133	1326	1503	1653	1858	2044	2155	2303
Digby and Sowton	0951	1137	1329	1507	1657	1902	2047	2159	2307
Topsham	0955	1141	1333	1511	1701	1906	2051	2203	2311
Exton	0958	1144	1336	1514	1704	1909	2054	2206	2314
Lympstone Village	1001	1147	1341	1517	1707	1912	2058	2209	2318
Exmouth	1006	1152	1345	1522	1712	1917	2102	2214	2322

Use the timetable to answer these questions.

- What time does the 11:25 from Exeter St Davids get to Exmouth?
.....
- How long is the journey from Polsloe Bridge to Lympstone Village on the 11:33 from Polsloe Bridge?
.....
- What time must I leave Exeter Central if I want to arrive in Topsham at about 5 pm?
.....

Mini-projects

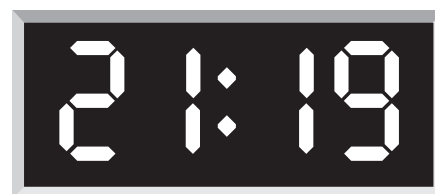
Activity M1

Where is the 24-hour clock used?

The 24-hour clock is often used in places where it is important to avoid confusion between morning and afternoon.

Look on the Internet, in magazines, newspapers and timetables. Find examples of times using the 24-hour clock.

Write at least five examples of where the 24-hour clock is used.



- 1
- 2
- 3
- 4
- 5

Activity M2

Ben watches about 16 hours of television per week.

How much TV do you watch during the week?

Keep a record of your TV watching for next week.

Use a TV guide to get accurate times of the programmes.

Add up the daily times and then add up the total for the week.

Do you watch more or less television than Ben?



Activity M3

Using a computer, find some websites for train times.

Have a look at www.railtrack.co.uk if you can't find any others.

Plan a journey from your home to a sporting venue in this country – one that would involve a train journey, i.e. tennis at Wimbledon, football in Newcastle, cricket at Lords or the Grand Prix at Silverstone.

Use the timetables to look up the train times. When does the event start? How long will it take you to get there? How long is the journey? Which is the best train to catch?





Check it

Activity C1

Look at the calendars and write the date.

1

JULY 1949						
	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			

.....

2

November 2004						
	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			

.....

3

March 1982						
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				

.....

Activity C2

Write the equivalent 24-hour clock time (remember to use four digits for each time).

1 5:30 pm

2 10:54 pm

3 2:13 am

4 8:47 pm

Activity C3

Convert these minutes into hours and minutes.

1 74 minutes

2 95 minutes

3 125 minutes

4 90 minutes

LONDON BUS ROUTE – 2 timetable

Sundays and public holidays

Crystal Palace (Parade)	0715	0730	0745	0800	0812		1812	1824		2319
West Norwood (Bus Garage)	0723	0738	0753	0808	0820	Then	1821	1832	Then	2326
West Norwood (Library)	0725	0740	0755	0810	0822	about	1823	1834	about	2328
Brixton Station	0738	0753	0808	0823	0835	every	1827	1847	every	2337
Stockwell Station	0744	0759	0814	0829	0841	10	1843	1853	12	2342
Vauxhall Station	0748	0803	0818	0833	0845	mins	1847	1857	mins	2345
Victoria Station	0754	0809	0824	0839	0851	until	1853	1903	until	2351
Marble Arch	0801	0816	0831	0846	0858		1900	1910		2358
Marylebone Station	0808	0823	0838	0853	0905		1907	1917		0005

Activity C4

- a The 07:15 bus from Crystal Palace arrives at Brixton station at

b How long does the journey take?
- How long does the 07:45 bus from Crystal Palace take to get to Victoria station?
.....
- I want to travel from Marble Arch to Marylebone station.
I arrive at Marble Arch at 9:00 am precisely. What time should the next bus arrive?
.....

How am I doing?

Now look back at the skills listed on page 1.

Then complete the sentences below.

I am confident with

.....

.....

I need more practice with

.....

Date

Activity 1

- | | |
|---------------------|----------|
| 1 17 April 2003 | 17/04/03 |
| 2 31 July 2002 | 31/07/02 |
| 3 23 June 2003 | 23/06/03 |
| 4 8 May 2003 | 08/05/03 |
| 5 25 December 2004 | 25/12/04 |
| 6 10 September 2002 | 10/09/02 |

Activity 2

- | | |
|-----------------|----------|
| 1 19 April 1970 | 19/04/70 |
| 2 10 May 1966 | 10/05/66 |

Activity 3

- | | |
|------------|---------|
| 1 2:00 pm | → 14:00 |
| 2 7:45 pm | → 19:45 |
| 3 9:36 pm | → 21:36 |
| 4 9:17 pm | → 21:17 |
| 5 11:23 pm | → 23:23 |
| 6 midnight | → 00:00 |

Activity 4

- | | | | |
|------|-------|--------|-----|
| 1 60 | 2 24 | 3 7 | 4 4 |
| 5 12 | 6 100 | 7 1000 | |

Activity 5

- | | | | |
|------|------|------|-------|
| 1 48 | 2 30 | 3 50 | 4 120 |
|------|------|------|-------|

Activity 6

- | | |
|-----------|-----------|
| 1 6:00 pm | 2 5:00 pm |
| 3 17:15 | |

Activity 7

- | |
|--|
| 1 $2\frac{1}{2}$ hours or 2 hours and 30 minutes |
| 2 $2\frac{1}{4}$ hours |

Activity 8

Responses will vary.

Activity 9

- | |
|---------------------------|
| 1 2 minutes and 8 seconds |
| 2 1 second slower |
| 3 2 seconds |
| 4 19 seconds |

Activity 10

- | |
|----------------------------|
| 1 1 minute and 12 seconds |
| 2 1 minute and 26 seconds |
| 3 2 minutes |
| 4 2 minutes and 15 seconds |

Activity 11

- | |
|----------------------------|
| 1 1 minute and 10 seconds |
| 2 1 minute and 8 seconds |
| 3 3 minutes and 12 seconds |

Activity 12

- | | |
|------------------------|--------------------------|
| 1 $1\frac{1}{2}$ hours | 2 4 hours and 15 minutes |
|------------------------|--------------------------|

Activity 13

Introductory example: Bethnal Green to Highbury. Change at Liverpool St and then change at Kings Cross = six stops and two changes = 30 minutes.

- | |
|--|
| 1 Baker St to Covent Garden – two different quick routes, each $17\frac{1}{2}$ minutes. |
| 2 Old St to Sloane Square – change at Kings Cross and then change at Victoria = $32\frac{1}{2}$ minutes. |
| 3 Temple to Lancaster Gate – change at Westminster and then change at Bond St = 30 minutes. |

Activity 14

Introductory example: The next bus would be 10:03. It would take 31 minutes. The next bus is the 10:15.

- | | | |
|---------|---------|---------|
| 1 09:39 | 2 10:45 | 3 18:12 |
| 4 09:51 | 5 23:19 | |

Activity 15

Introduction: Arrival time (to reaching seat) = $1\frac{3}{4}$ hours or 1 hour 45 minutes

- | |
|---|
| 1 6:50 train (7:00 train will be a little late). |
| 2 39 minutes more because you have to change trains once. |

Activity 16

- | | | |
|-----------|------------------------|-----------|
| 1 8 hours | 2 $6\frac{1}{2}$ hours | 3 8 hours |
| 4 8 hours | 5 5 hours | |

Activity 17

- | |
|----------------------------------|
| 1 Monday, Wednesday and Saturday |
| 2 43 hours |



Help

Activity H1

Morning times	
1 o'clock	01:00
2 o'clock	02:00
3 o'clock	03:00
4 o'clock	04:00
5 o'clock	05:00
6 o'clock	06:00
7 o'clock	07:00
8 o'clock	08:00
9 o'clock	09:00
10 o'clock	10:00
11 o'clock	11:00
12 midday	12:00

Afternoon/evening times	
1 o'clock	13:00
2 o'clock	14:00
3 o'clock	15:00
4 o'clock	16:00
5 o'clock	17:00
6 o'clock	18:00
7 o'clock	19:00
8 o'clock	20:00
9 o'clock	21:00
10 o'clock	22:00
11 o'clock	23:00
12 midnight	00:00

Activity H2

- 1 20:00
- 2 20 minutes
- 3 45 minutes
- 4 7:30 pm (19:30)

Activity H3

- 1 1 minute and 20 seconds
- 2 1 minute and 12 seconds
- 3 1 minute and 30 seconds
- 4 1 hour and 26 minutes
- 5 1 hour and 40 minutes
- 6 3 hours
- 7 30 minutes
- 8 90 minutes
- 9 240 minutes

Activity H4

- 1 2:00 to 3:30 pm
- 2 Thursday and Friday
- 3 1:00 to 2:00 pm
- 4 Tuesday
- 5 Two

Extension

Activity E1

- 1 17:45
- 2 05:00
- 3 09:10
- 4 12:00
- 5 22:34
- 6 23:50
- 7 11:47 pm
- 8 midnight
- 9 2:00 pm
- 10 10:59 am
- 11 6:38 am
- 12 2:03 am

Activity E2

Check your answers with your teacher.

Activity E3

- 1 11:52
- 2 14 minutes
- 3 16:48

Mini-projects

Activity M1

Various responses

Activity M2

Various responses

Activity M3

Various responses

Check it

Activity C1

- 1 13 July 1949
 - 2 26 November 2004
 - 3 12 March 1982
- 13/07/49
26/11/04
12/03/82

Activity C2

- 1 17:30
- 2 22:54
- 3 02:13
- 4 20:47

Activity C3

- 1 1 hour 14 minutes
- 2 1 hour 35 minutes
- 3 2 hours 5 minutes
- 4 1 hour 30 minutes

Activity C4

- 1 a 07 38
b 23 minutes
- 2 39 minutes
- 3 9:08am (09:08)