PART 3

UNIT 11

SPRING first half

MEASURES

UNIT 11

MEASURES

SUGGESTED TIME **4 hours**

TEACHING OBJECTIVES

- Use, read and write standard metric units of mass and capacity.
- Suggest suitable units and equipment to estimate or measure mass, capacity and time.
- Read measurements from scales, including time.
- Know pound (lb), pint, gallon.
- Use all four operations to solve word problems involving measures.
- Choose appropriate operations and calculation methods.
- Convert from one metric unit to another (for example. grams to kilograms).

SECTION 1 Mass (weight)

SECTION 2 Units of mass

SECTION 3 Capacity

SECTION 4 Time

HOMEWORK

- Conversion of units as in Section 1, Star Challenge 1 and Section 2, Star Challenge 5.
- Reading and interpreting timetables, as in Section 4, Star Challenge 10.
- Problems involving measures, as in Section 1, Star Challenge 2, Section 2, Star Challenges 4 and 5, and Section 4, Star Challenge 11.

Unit 11 Checklist for pupils

Mass (weight)

You will:

- convert kilograms into grams, and grams into kilograms ☐

Units of mass

You will:

- read scales ☐
- work with grams, kilograms and tonnes ☐
- use imperial measures ☐

Capacity

You will:

- convert millilitres to litres and litres to millilitres ☐

Time

You will:

- use 12-hour and 24-hour clocks ☐
- read timetables ☐
- work out time intervals ☐

UNIT 11

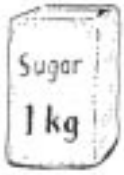
SECTIONS 1 AND 2: MASS (WEIGHT)

DIRECT TEACHING POINTS

- Pupils will be familiar with the term weight. The relationship between mass and weight is part of the KS3 Science Programme of Study.
- Give pupils practical experience of weighing, in order to help them estimate sensibly. These examples can form the basis of a class discussion. Pupils need 'benchmarks' on which to base their estimates.

1 kilogram = 1000 grams

1 kg = 1000 g



A bag of sugar weighs 1 kilogram

A bag of crisps weighs 25 grams

A crisp weighs approximately 1 gram

Say whether each of the following statements is reasonable (YES) or not (NO).

1 A large bag of crisps weighs 150 g.
2 My dad weighs 500 grams.
3 A bag of potatoes weighs 3 kg.
4 A bag of sweets weighs 10 kg.
5 A newborn baby weighs 3 $\frac{1}{2}$ kg.
6 A newborn kitten weighs 150 g.
7 An apple weighs 15 g.
8 A small car weighs 1000 kg.

- Pupils need to recall simple kg <—> g conversions; 1 kg, $\frac{1}{2}$ kg, $\frac{1}{4}$ kg and their decimal equivalents. Much of this work can be done orally. Section 1, exercises 1 and 2 provide examples. Section 2, exercises 1 and 2 use decimal notation.
- Introduce pupils to everyday examples of imperial units, as in Section 2, Star Challenge 5.
- Build on the use of number lines to reinforce the reading of scales.
- All pupils should solve problems involving mass – Star Challenge 4.

KEY VOCABULARY TO LEARN AND USE

mass *weight* *kilogram* *kg* *gram* *g*
scale *pound* *ounce*

UNIT 11

Mass

1 Kilograms and grams

1 kilogram = 1000 grams.
This can also be written as 1 kg = 1000 g

1 2 kg = ... g
2 5 kg = ... g
3 $\frac{1}{2}$ kg = ... g
4 $\frac{1}{4}$ kg = ... g
5 $\frac{3}{4}$ kg = ... g
6 $2\frac{1}{2}$ kg = ... g
7 $3\frac{1}{4}$ kg = ... g
8 $1\frac{3}{4}$ kg = ... g
9 $5\frac{1}{2}$ kg = ... g

10 1 kg 200 g = ... g
11 3 kg 500 g = ... g
12 2 kg 250 g = ... g

Solve these problems:

13 I bought 1 kg of carrots. I cooked 400 g of them.
How many grams of carrots did I have left?

.....

14 I had 200 g of flour in the flour box.
Then I put another $1\frac{1}{2}$ kg of flour into the box.
How much flour is in the box now?

.....

15 I had 2 kg of sugar. I used 500 g to make jam,
and 350 g to make a cake.
How much sugar do I have left?

.....

UNIT 11

Mass

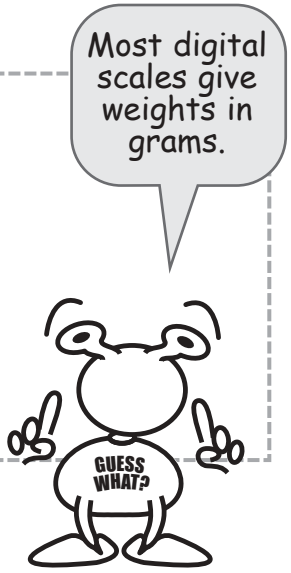
2 Grams and kilograms

Example

Look for the pattern here:

1500 g = 1 kg 500 g
3020 g = 3 kg 020 g = 3 kg 20 g
12005 g = 12 kg 005 g = 12 kg 5 g

the last 3 digits give the number of g



Fill in the gaps:

1 4500 g = ... kg ..... g
2 2050 g = ... kg ..... g
3 5005 g = ... kg ..... g
4 1020 g = ... kg ..... g
5 3008 g = ... kg ..... g
6 2200 g = ... kg ..... g
7 2030 g = ... kg ..... g

Example

You can use this method in reverse:

2 kg 450 g = 2450 g
3 kg 20 g = 3 kg 020 g = 3020 g

8 2 kg 300 g = ... g
9 3 kg 30 g = ... g
10 1 kg 220 g = ... g
11 2 kg 50 g = ... g
12 3 kg 5 g = ... g
13 4 kg 60 g = ... g
14 2 kg 25 g = ... g

Mass

STAR CHALLENGE 1

Equivalent measurements

All correct 1 star

Write in kg and g:

1 1600 g .....
2 2055 g .....
3 3003 g .....
4 5050 g .....
5 4400 g .....

Write in g:

6 2 kg 40 g .....
7 1 kg 200 g .....
8 2 kg 85 g .....
9 5 kg 500 g .....
10 2 kg 750 g .....

STAR CHALLENGE 2

The metal button appeal

Both correct 1 star

Children at a primary school were asked to raise money for charity by collecting metal buttons. One child from each class took the buttons they had collected to the school office. These are the amounts that they took:

Yasmin 650 g	Peter 2 kg 50 g	Ceri 3 kg 500 g	Mary 1 kg 220 g
Arthur 2 kg 380 g	Sara 5 kg 100 g	Kian 4 kg 250 g	Franco 2 kg 350 g

1 Work out the total weight of buttons collected.

2 The buttons are sold at 12p for each 100 g.
How much money did the children raise altogether?

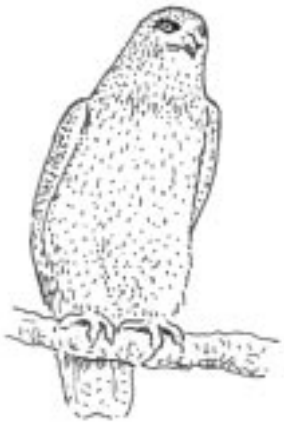
UNIT 11

Mass

STAR CHALLENGE 3

In order of weight

All correct 1 star



Booted eagle $\frac{3}{4}$ kg

Rook 450 g

Buzzard 900 g

Red kite 1 kg 50 g

Osprey 1400 g

Crow $\frac{1}{2}$ kg

Place the birds in order of weight.
Put the lightest first.

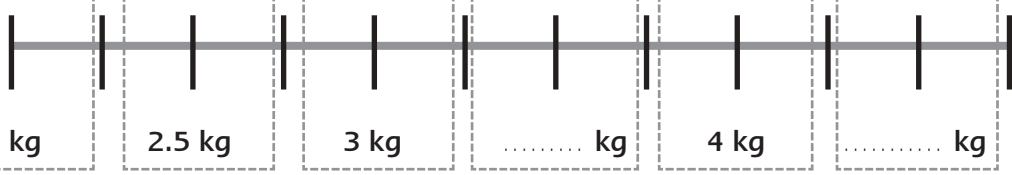
UNIT 11

Units of mass

1 Reading scales

1 Fill in the gaps:

2000 g	2500 g	..... g	3500 g	..... g	..... g	5000 g
2 kg	2 kg 500 g	3 kg	.... kg ..... g	4 kg	4 kg 500 g	5 kg



2 kg	2.5 kg	3 kg	..... kg	4 kg	..... kg	5 kg

2 (a) The arrow shows the weight of some potatoes.

How much do the potatoes weigh? (use decimal notation)

..... kg

(b) 1 kg of potatoes is added to those already there.

Draw an arrow to show the new weight.

3 (a) The arrow shows the weight of two bags of shopping.

How much do the two bags weigh? (use decimal notation)

..... kg

(b) One bag is taken off the scales. This bag weighed 1.5 kg.

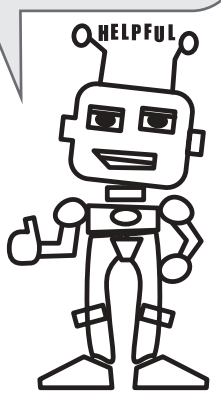
Draw an arrow to show the weight of the other bag.

UNIT 11

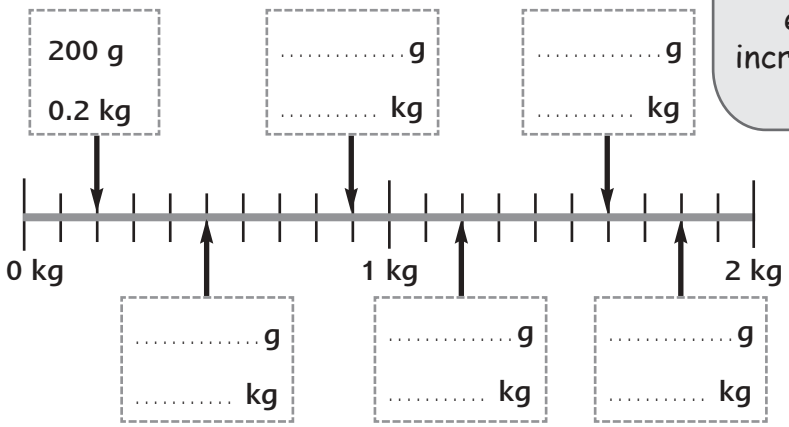
Units of mass

2 More scales

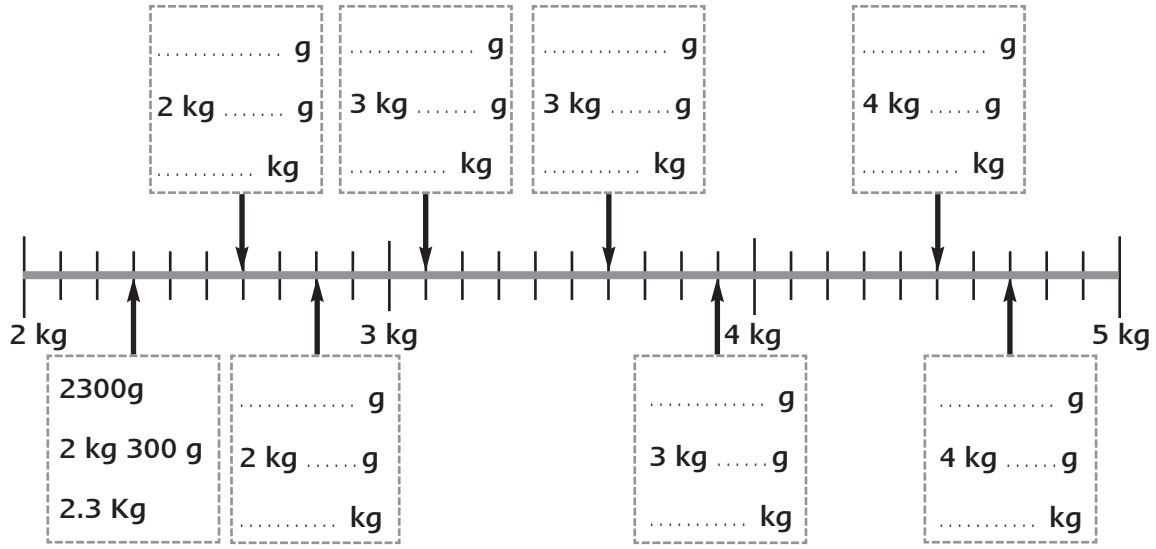
There are 10 spaces between each kg marker; each little line is an increase of $\frac{1}{10}$ kg or 0.1 kg or 100 g.



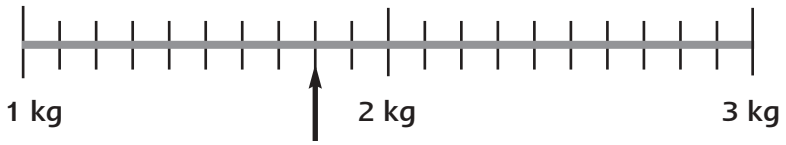
1 Label each arrow below:



2 Fill in the gaps below:



3 The arrow below shows the weight of some flour.
600 g more flour is added. What is the total weight? .....



UNIT 11

Units of mass

STAR CHALLENGE 4

Kilogram problems

All correct 1 star

1 A boat can carry 155 kilograms.

Name	Ellen	Dave	Peter	Fergus	Dervla
Weight in kg	63.5	69.2	58.1	84.3	61.2

(a) Who are the two heaviest people in this list? .....

(b) Can the boat carry these two people together? .....

Explain why or why not. .....

.....

.....

.....

2 Ellie and Sylvia check in at the airport.
Ellie places her suitcase on the scale.
The weight is 24.2 kg.
Sylvia places her suitcase beside Ellie's.
The weight of both is 49.6 kg.

Work out the weight of Sylvia's suitcase.

3 A postal carrier charges £8.95 up to 20 kg then 20p for each kg over that weight.
Jane wants to send four boxes to the same address.
The boxes weigh 6.4 kg, 7.2 kg, 6.3 kg, 6.1 kg.

(a) Which three of the boxes have a total weight nearest to 20 kg but still less than 20 kg?

.....

(b) Work out the total cost of sending all four boxes together.

.....

UNIT 11

Units of mass

STAR CHALLENGE 5

Metric and imperial equivalent weights

All correct 1 star

1 kg ≈ 2 pounds

≈ means 'is approximately equal to'

1 2 kg is approximately equal to ..... pounds.

2 $\frac{1}{2}$ kg is approximately equal to ..... pounds.

3 $1\frac{1}{2}$ kg is approximately equal to ..... pounds.

4 ..... kg is approximately equal to 10 pounds.

5 ..... kg is approximately equal to 12 pounds.

6 Sam wants to buy half a pound of meat.
He goes shopping at the Belgian camp-site shop.

What fraction of a kilo should he ask for?

.....

7 The next day, Sam is sent to buy one and a half pounds of meat.
He goes shopping at the same Belgian camp-site shop.

What should he ask for?

.....

8 Dave is sent to buy flour. His birthday cake needs 1 pound of flour.
By mistake, he buys 1 kg of flour.

How many cakes could his mother make with this amount of flour?

.....

9 The instruction book says "Cook the chicken for 20 min for every pound weight".

How long do I cook a chicken that weighs:

(a) 4 pounds (b) 4 kg

UNIT 11

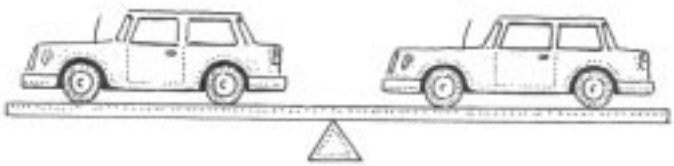
Units of mass

STAR CHALLENGE 6

Meet the heavyweights

6–7 correct 1 star

1 tonne = 1 000 kg

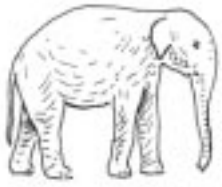


A small family car weighs approximately 1 tonne or 1 000 kg.

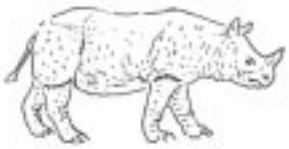
1 (a) Which is the lightest of the three heavyweights below?

(b) Which is the heaviest?

lorry 5 tonne 200 kg



Asian elephant 5500 kg



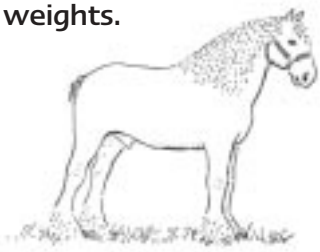
Rhino 5050 kg

2 Match up these heavyweights with their correct weights.

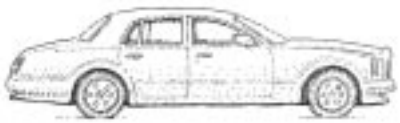
Weights:

10 tonne
7 tonne
2.5 tonne
1 tonne
52 tonne

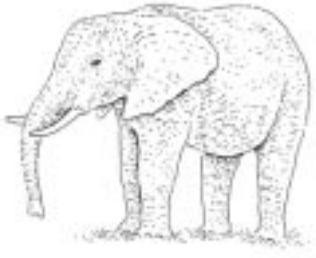
Centurion tank .....



Shire horse .....



Bentley .....



African elephant .....

Double-decker bus .....

UNIT 11

SECTION 3: CAPACITY

DIRECT TEACHING POINTS

- Give pupils experience of measuring capacity in litres and millilitres.
  They should be familiar with centilitres, which are covered in Star Challenge 8.

Standard metric units of capacity

The basic unit is a litre (*l*)

1 *cl* = 1 centilitre = $\frac{1}{100}$ *l*

1 *ml* = 1 millilitre = $\frac{1}{1000}$ *l*

1000 *ml* = 1 *l*

- Extend the use of number lines and counting sticks to reinforce the reading of scales.
- Pupils should recall simple conversions of litres to millilitres (and centilitres), and vice versa.
- Exercise 3 can usefully be used as a set of oral word problems.
- Star Challenge 7 links the work on measures and may form a focus for a class or group discussion.

capacity *litre* *l* *millilitre* *ml*
centilitre *cl* *pint* *gallon*

Capacity

1 Metric units of capacity

Standard metric units of capacity

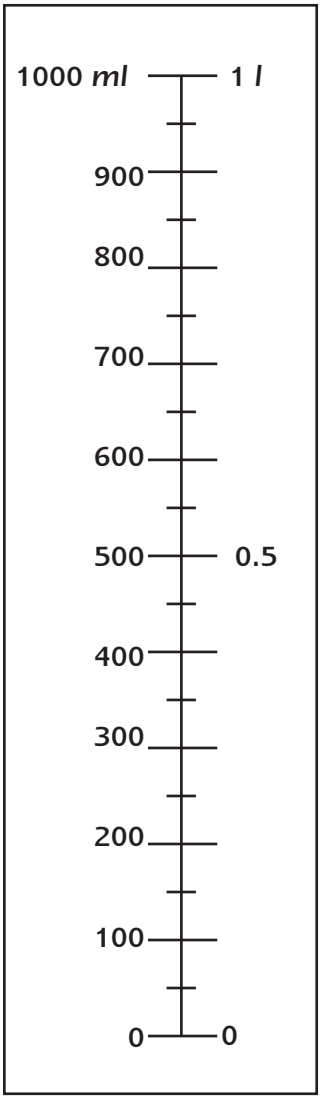
The basic unit is a litre (*l*)

1 *cl* = 1 centilitre = $\frac{1}{100}$ *l*

1 *ml* = 1 millilitre = $\frac{1}{1000}$ *l*

1000 *ml* = 1 *l*

The capacity of a container is the amount of liquid it holds when full.



1 $\frac{1}{2}$ *l* = ... *ml*

$\frac{1}{4}$ *l* = ... *ml*

$\frac{3}{4}$ *l* = ... *ml*

2 *l* = ... *ml*

2 $\frac{1}{2}$ *l* = ... *ml*

2 $\frac{1}{4}$ *l* = ... *ml*

2 A large jug holds 2500 *ml*. This is ..... *l* .....*ml*

3 How many *ml* are there in 1.5 *l*? .....*ml*

4 How many *l* are there in 4000 *ml*? .....*l*

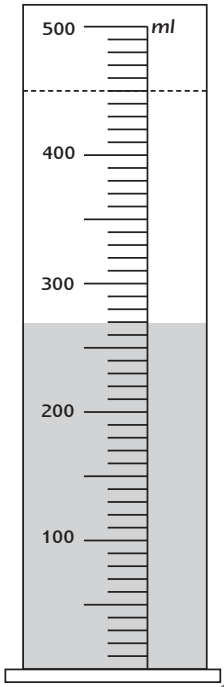
5 A cup holds 250 *ml* of soup.
How many cups of soup can you get from 1 litre?

.....cups

UNIT 11

Capacity

2 More metric units



1 When the cylinder is full, the water reaches the top of the scale.

How many *ml* does the cylinder hold when full? ..... *ml*

2 How many *ml* does the cylinder hold when half full? ..... *ml*

3 How many *ml* does the cylinder have in it now? ..... *ml*

4 70 *ml* of water are added to the cylinder.
Draw the new level of water on the diagram.

5 How much water is in the cylinder after the water has been added? ..... *ml*

6 If the water reaches the dotted line, how much would be in the cylinder? ..... *ml*

3 Capacity problems

1 A large bottle of squash holds $1\frac{1}{2}$ litres.

The capacity of the bottle is $1\frac{1}{2}$ *l or* ..... *ml*

2 A jug holds 1200 *ml* when full.

The jug's capacity is ..... *l* ..... *ml*

3 A mug is half full of coffee. It contains 120 *ml* of coffee.

What is the mug's capacity? ..... *ml*

4 The petrol tank in Mum's car has a capacity of 40 litres.
The tank on Dad's van holds $2\frac{1}{2}$ times as much.

What is the capacity of the van's tank? ..... *l*

5 A bucket has a capacity of 5800 *ml*.

What is its capacity to the nearest litre? ..... *l*

UNIT 11

Capacity

STAR CHALLENGE 7

What would you use to measure ... ?

All correct 1 star

Draw a line between what you need to measure and what you would use to measure it.

One has been done for you.

You need to measure	You would use
the length of a skirt	bathroom scales
the weight of a packet of sweets	a metre rule
the capacity of a teapot	a public weigh station
the capacity of a doll's teacup	a measuring spoon
the weight of a lorry	a measuring jug
the length of a room	a set of scales
the weight of a person	a tape measure

UNIT 11

Capacity

STAR CHALLENGE 8 Centilitres

6–7 correct 1 star

Centilitres (cl) are not used as much as litres and millilitres.

1 cl = 10 ml.

1 A bottle of wine contains $\frac{3}{4}$ litre of wine. What is this in *cl*?

.....

2 A jug holds 160 *cl*. What is its capacity in *l* and *cl*?

.....

3 A teapot holds 95 *cl*. What is this in *ml*?

.....

4 The doctor says you must take two 5 *ml* spoonfuls of medicine three times a day.

(a) How much medicine must you take **each time** in *ml*? .....

(b) How much medicine must you take **each day** in *ml*? .....

(c) How much medicine must you take **each day** in *cl*? .....

(d) The bottle of medicine holds 15 *cl*.
How many days will the medicine last? .....

STAR CHALLENGE 9 Who drinks the most?

All correct 1 star

Some children have been measuring how much they drink in a day.
Put them in order, with the one who drinks the most first.

Harry	Georgia	Anil	Paul	Diana	Martha
1.75 *l*	3 *l*	1500 *ml*	1 *l* 250 *ml*	1 *l* 600 *ml*	1.8 *l*

UNIT 11

SECTION 4: TIME

DIRECT TEACHING POINTS

- Make sure that all pupils are confident with both the 12-hour and 24-hour clock. Telling the time can be incorporated into ongoing mental work. Exercises 1 and 2 provide practice examples. An outline clock on an OHT can provide support.
- Pupils need to be taught how to read timetables. Demonstrate the process. Ask questions to test their understanding. Star Challenge 10 provides a practical example. This and Star Challenge 11 involve essential skills of reading and understanding information.
- Exercise 3 and Star Challenge 10 provide opportunities to calculate time intervals. Develop pupils' skills, for example 'bridging' through the next hour.

07:45 to 08:00 is 15 minutes.
08:00 to 08:10 is 10 minutes.
The answer is 25 minutes.

- Make sure that pupils know the days of the week, months of the year and the number of days in each month.
- Demonstrate the use of a calculator to solve problems involving time. Pupils should be able to complete calculations like: How many minutes are there in 3 days?

time *hour* *minute* *second*
day *week* *month* *year*

UNIT 11

Time

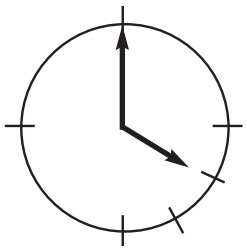
1 Telling the time

1 Complete:

1 hour = 60 minutes

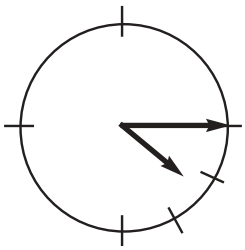
half an hour = ... minutes

2 quarter of an hour = ... minutes



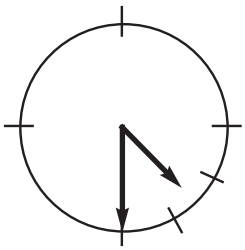
4 o'clock

4.00



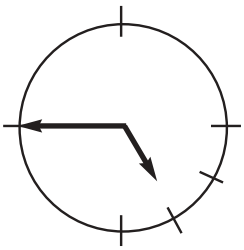
quarter past 4

4. .....



..... past 4

..... : .....

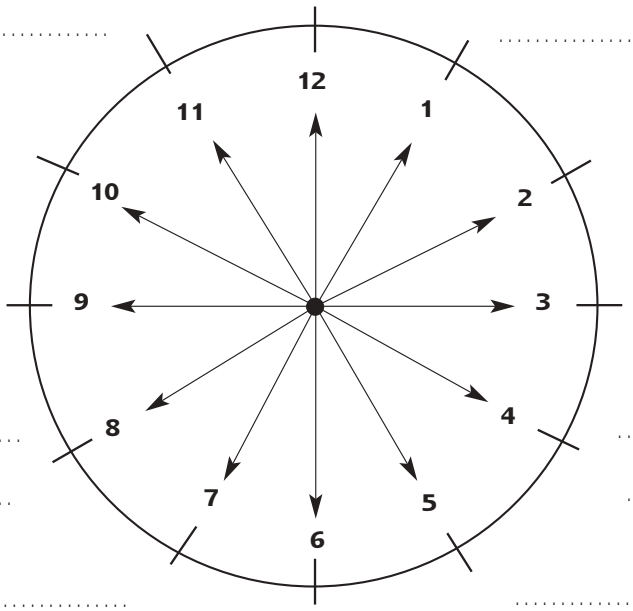


..... to .....

..... : .....

3 Complete the 24-hour clock times:

00:00
12:00



02:00
14:00

17:00

UNIT 11

Time

2 The 24-hour clock

1 Fill in the gaps:

morning	01:00	02:00	03:00	04:00	05:00	06:00
afternoon	13:00					

morning	07:00	08:00	09:00	10:00	11:00	12:00
afternoon	19:00					

How would these times be shown on a digital clock:

2 quarter past 9 in the morning .....

3 quarter past 9 in the evening .....

4 ten to 8 in the morning .....

5 ten to 8 in the evening .....

6 quarter to 12 in the morning .....

7 twenty past 3 in the afternoon .....

8 25 past 4 in the afternoon .....

9 25 to 7 in the evening .....

10 five to 6 in the afternoon .....

3 Digital times in action

1 A TV programme starts at 18:55 and finishes at 19:20.
How long is the programme? .....

2 A TV programme starts at 10:50 and is 15 minutes long.
At what time does it finish? .....

3 A boat leaves on a trip at 14:30. The trip takes two and a quarter hours.
At what time does the boat get back? .....

4 A boat leaves on a trip at 10:15. It gets back at 12:15.
How long does the trip take? .....

5 A radio programme is 1 hour 10 minutes long. It ends at 15:40.
What time did it start? .....

UNIT 11

Time

STAR CHALLENGE 10

Bus timetable

10–11 correct 2 stars
7–9 correct 1 star

MARYPORT (Station Street)	07:20	08:20	09:53	11:53	13:53	15:53
Dearham (Commercial)	07:35	08:30	10:03	12:03	14:03	16:03
Dovenby (The Ship)	07:44	08:39	10:12	12:12	14:12	16:12
Papcastle (PO Corner)	07:49	08:44	10:17	12:17	14:17	16:17
COCKERMOUTH (Main Street)	07:55	08:47	10:20	12:20	14:20	16:20

1 Where does the bus start from? .....

2 Where does the bus finish its trip? .....

3 How long does the 08:20 from Maryport take to get to Dearham? .....

4 How long does the 08:20 from Maryport take to get to Cockermouth? .....

5 Where does the bus stop in Dovenby? .....

6 How long does the 13:53 from Maryport take to get to Cockermouth? .....

7 Mr. Cooper has to be in work in Cockermouth by 09:00.
What is the time of the bus he could catch from Maryport? .....

8 Mrs. Brown has a dental appointment at 2pm in Papcastle.
(a) Why should she not get the 13:53 from Maryport? .....

.....

(b) What is the time of the bus she should catch from Maryport? .....

9 Ellie catches the 07:35 from Dearham.
How long does the bus take to get to Papcastle? .....

10 One of these bus trips also goes through Ewenrigg and Grasslot, so it takes longer to get to Cockermouth.
What time does this bus leave Maryport? .....

UNIT 11

Time

STAR CHALLENGE 11

Car park charges

All correct 1 star

1 How much does it cost to park for
(a) 45 minutes? (b) $2\frac{1}{2}$ hours?

....

2 Sally parks her car at 10:30.
She drives out of the car park at 11:45.
How much does she pay?

.....

3 Dan parks his car at 14:10.
He drives out of the car park at 14:55.
How much does he pay?

.....

Car Park Charges	
Time	Charge
up to 1 hour	30p
1 to 2 hours	80p
2 to 3 hours	£1.20
3 to 4 hours	£1.60
over 4 hours	£5.00

4 Peter parks his car at 13:30. He has to pay £1.60 for parking.
If he had left 10 minutes earlier, it would have cost him only £1.20.
(a) How long was his car parked?

.....

(b) At what time did he drive out of the car park?

.....

UNIT 11

Unit 11 Answers

Section 1 Mass

1 Kilograms and grams

1	2000 g	6	2500 g	11	3500 g
2	5000 g	7	3250 g	12	2250 g
3	500 g	8	1750 g	13	600 g
4	250 g	9	5500 g	14	1 kg 700 g
5	750 g	10	1200 g	15	1 kg 150 g

2 Grams and kilograms

1	4 kg 500 g	6	2 kg 200 g	11	2050 g
2	2 kg 50 g	7	2 kg 30 g	12	3005 g
3	5 kg 5 g	8	2300 g	13	4060 kg
4	1 kg 20 g	9	3030 g	14	2025 g
5	3 kg 8 g	10	1220 g		

Section 2 Units of mass

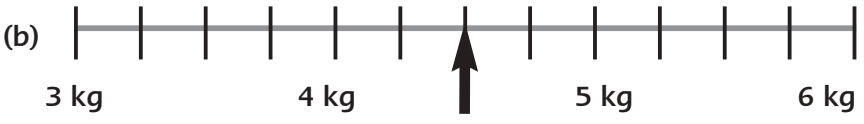
1 Reading scales

1

3000 g	3 kg 500 g 3.5 kg	4000 g	4500 g 4.5 kg

2 (a) 3.5 kg

(b)



3 (a) 8.25 kg

(b)

UNIT 11

Unit 11 Answers

Units of mass *continued*

2 More scales

1

	900 g 0.9 kg		1600 g 1.6 kg	
500 g 0.5 kg		1200 g 1.2 kg		1800 g 1.8 kg

2

2600 g 2 kg 600 g 2.6 kg	3100 g 3 kg 100 g 3.1 kg	3600 g 3 kg 600 g 3.6 kg		4500 g 4 kg 500 g 4.5 kg
	2800 g 2 kg 800 g 2.8 kg		3900 g 3 kg 900 g 3.9 kg	4700 g 4 kg 700 g 4.7 kg

3 2 kg 400 g or 2.4 kg

Section 3 Capacity

1 Metric units of capacity

1 500 *ml*
250 *ml*
750 *ml*
2000 *ml*
2500 *ml*
2250 *ml*

2 2 *l* 500 *ml*

3 1500 *ml*

4 4 *l*

5 4

UNIT 11

Unit 11 Answers

Capacity *continued*

2 More metric units

1 500 *ml*

2 250 *ml*

3 270 *ml*

4 

5 340 *ml*

6 450 *ml*

3 Capacity problems

1 1500 *ml* 2 1 *l* 200 *ml* 3 240 *ml* 4 100 *l* 5 6 *l*

Section 4 Time

1 Telling the time

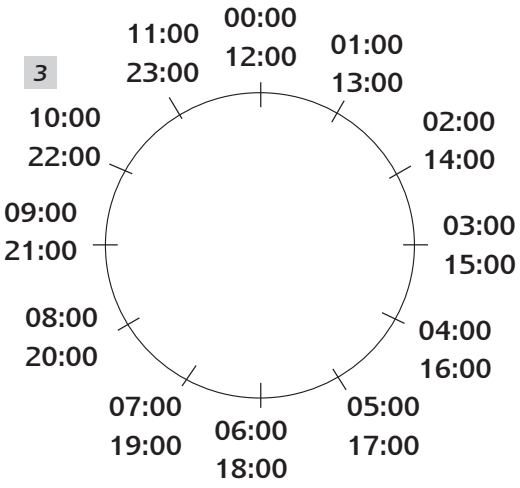
1 30 minutes

15 minutes

2 quarter past 4 4.15

half past 4 4.30

quarter to 5 4.45



2 The 24-hour clock

1 14:00 15:00 16:00 17:00 18:00
20:00 21:00 22:00 23:00 00:00

2 09:15 4 07:50 6 11:45 8 16:25 10 17:55

3 21:15 5 19:50 7 15:20 9 18:35

3 Digital times in action

1 25 mins 2 11:05 3 16:45 4 2 hours 5 14:30

Unit 11 Answers

Star Challenge answers

Equivalent measurements

All correct 1 star

1 1 kg 600 g 3 3 kg 3 g 5 4 kg 400 g 7 1200 g 9 5500 g

2 2 kg 55 g 4 5 kg 50 g 6 2040 g 8 2085 g 10 2750 g

The metal button appeal

Both correct 1 star

1 21 kg 500 g 2 £25.80

In order of weight

All correct 1 star

Rook Crow Booted eagle Buzzard Red kite Osprey

Kilogram problems

All correct 1 star

1 (a) Fergus and Dave (b) Yes: their total weight = 153.5 kg, which is less than the safety limit of 155 kg.

2 25.4 kg

3 (a) 6.4, 7.2 and 6.3 (b) £10.15

Metric and imperial equivalent weights

All correct 1 star

1 4
2 1
3 3
4 5
5 6
6 a quarter
7 three quarters of a kilo
8 2 cakes
9 (a) 80 min (b) 160 min

Meet the heavyweights

6–7 correct 1 star

1 (a) Rhino (b) Asian elephant

2

Shire horse	Bentley	Bus	African elephant	Tank
1 tonne	2.5 tonne	7 tonne	10 tonne	52 tonne

UNIT 11

Unit 11 Answers

Star Challenge answers *continued*

STAR CHALLENGE 7

What would you use to measure...?

All correct 1 star

You need to measure	You would use
the length of a skirt	bathroom scales
the weight of a packet of sweets	a metre rule
the capacity of a teapot	a public weigh station
the capacity of a doll's teacup	a measuring spoon
the weight of a lorry	a measuring jug
the length of a room	a set of scales
the weight of a person	a tape measure

STAR CHALLENGE 8

Centilitres

6–7 correct 1 star

1 75 *cl*
2 1 *l* 60 *cl*
3 950 *ml*
4 (a) 10 *ml* (b) 30 *ml* (c) 3 *cl* (d) 5 days

STAR CHALLENGE 9

Who drinks the most?

All correct 1 star

Georgia Martha Harry Diana Anil Paul

STAR CHALLENGE 10

Bus timetable

10–11 correct 2 stars
7–9 correct 1 star

1 Maryport
2 Cockermouth
3 10 min
4 27 min
5 The Ship
6 27 min
7 08:20
8 (a) She would not get there in time.
(b) 11:53
9 14 min
10 07:20

STAR CHALLENGE 11

Car park charges

All correct 1 star

1 (a) 30p (b) £1.20
2 80p
3 30p
4 (a) 3 h 10 min (b) 16:40