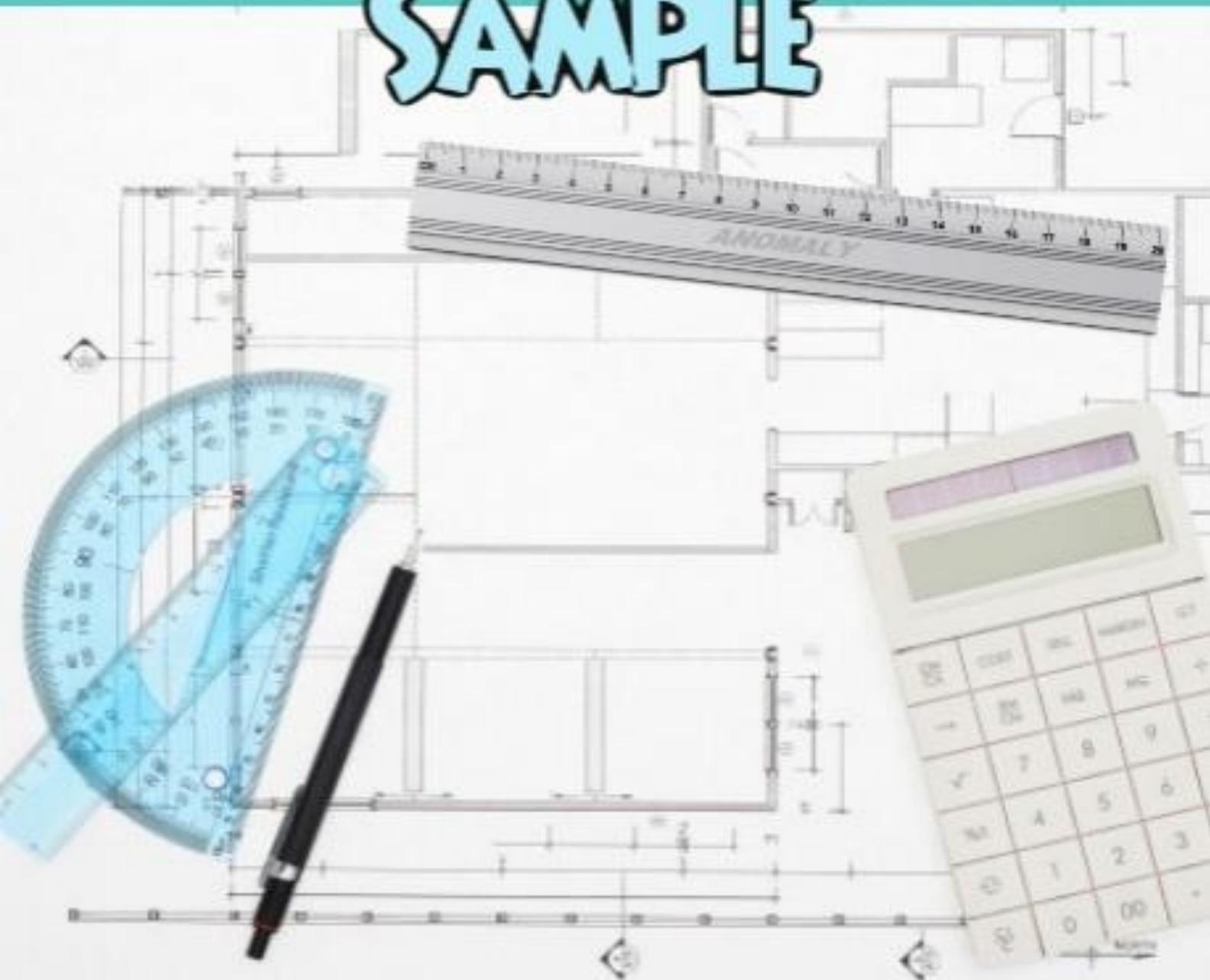


Level 2



MEASURE UP SAMPLE



Student Worksheets

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Contents

Note to the Teacher

Programme Overview

The Metric System

Temperature

- A. Temperature Vocabulary
- B. Measuring Temperature
- C. Temperatures in Everyday Life
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- A. Weight Vocabulary
- B. Estimating Weight and Reading Scales
- C. Weight in Everyday Life

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- A. Capacity Vocabulary
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- A. Length and Distance Vocabulary
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- A. Time General
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- H. Types of Time Instruments
- I. Telling the Time
- J. Digital Time
- K. Elapsed Time
- L. Time in Everyday Life
- M. Key Times

Appendices

Teacher Notes

Mapping of Learning Outcomes

Measuring Temperature

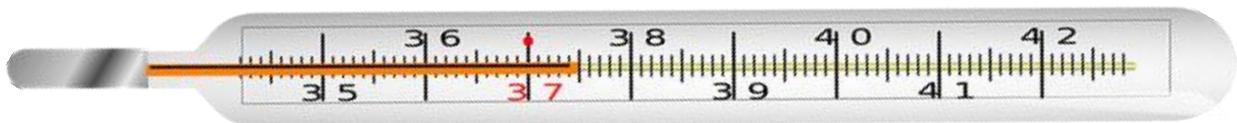
1. Look at a thermometer.

TEACHER NOTES

2. Read:

A thermometer measures temperature. Most thermometers are closed glass tubes containing liquids such as alcohol or mercury. When air around the tube heats the liquid, the liquid expands and moves up the tube. A scale then shows what the actual temperature is.

3. Read the thermometers and write the temperatures.



TEACHER NOTES

5. Make a thermometer.

MATERIALS:

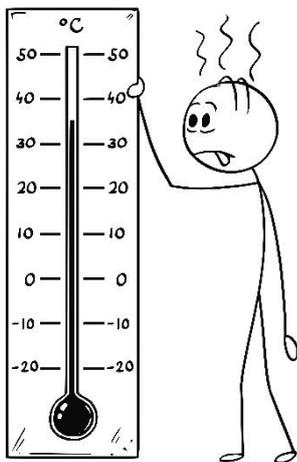
- 🧴 clear, plastic bottle (250 ml +)
- 🧴 water
- 🧴 rubbing alcohol
- 🧴 clear plastic drinking straw
- 🧴 modelling clay
- 🧴 food colouring



PROCESS:

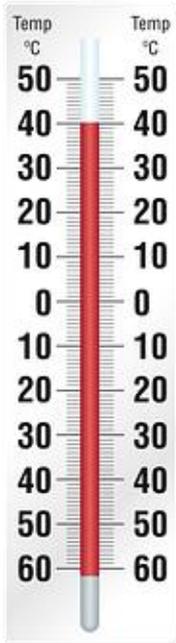
- A. Fill about $\frac{1}{4}$ of the bottle with equal parts of water and rubbing alcohol.
- B. Add a few drops of food colouring.
- C. Place the straw in the bottle, but don't let it touch the bottom.
- D. Use the modelling clay to seal the neck of the bottle, so the straw stays in place. (Be careful that the straw doesn't touch the bottom of the bottle.)
- E. Hold your hands on the bottom of the bottle (to warm it) and watch the mixture move up through the straw.

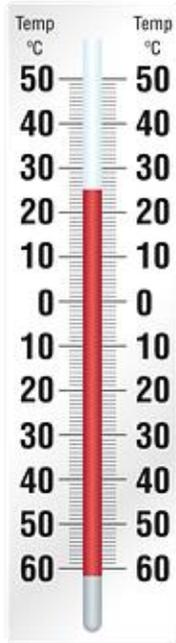
EXPLANATION:

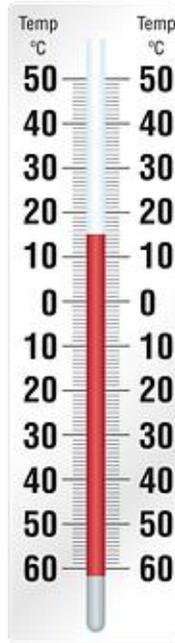


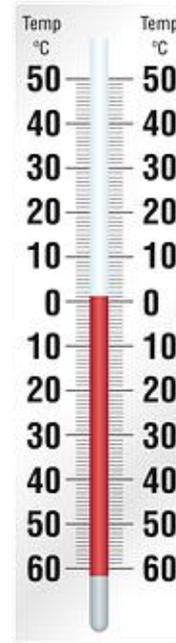
Why does this happen? Just like any thermometer, the mixture expands when it is warm. This makes the mixture no longer fit in the bottom of the bottle. As the alcohol expands, the coloured mixture moves up through the straw. If the bottle gets extremely hot, the mixture will come up through the top of the straw.

8. What are the temperatures?

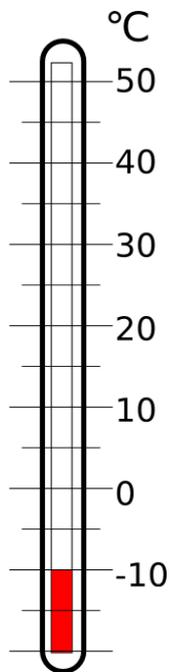


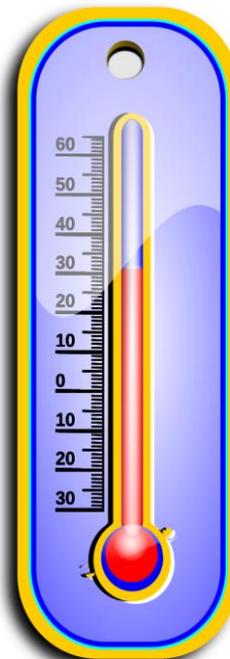


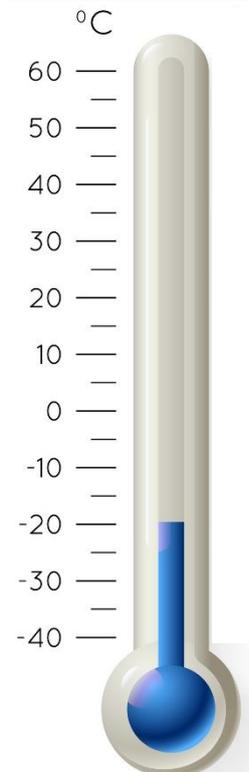




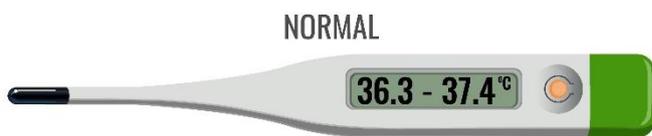








10. Look at the thermometers, showing body temperatures.



a) Mel has a temperature of 38°C . Is her temperature normal? Explain.

b) If you had a very high fever, what might your temperature be?

c) Complete the sentence: If your temperature is 35°C , your temperature is too _____.

d) If your temperature is 36 to 37°C , do you have a fever? Explain.

*If you have a thermometer at home, check your temperature!



4. Look at the conversion table below. Write the degrees Celsius for each instruction. (as close as possible)

Celsius	Fahrenheit
50 °C	122.0 °F
60 °C	140.0 °F
70 °C	158.0 °F
80 °C	176.0 °F
90 °C	194.0 °F
100 °C	212.0 °F
200 °C	392.0 °F

a) Bake the cake at 350°F.



b) Put the homemade pizza base in an oven preheated to 400°F.

c) Bake the casserole at 200°F.

d) The summer temperatures in Egypt reached 122°F.

5. Comment on the temperatures.



10. Arrange the temperatures in order, from coldest to hottest.

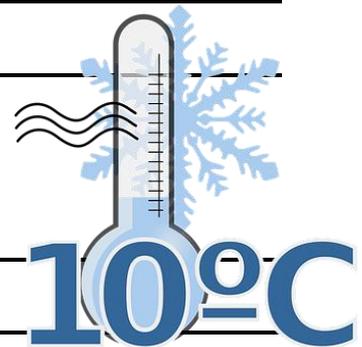
a) 25°C , -10°C , 20°C , -20°C , 40°C , 8°C

b) -35°C , 16°C , -17°C , -30°C , 43°C , -28°C

c) 16°C , 29°C , -34°C , -18°C , 27°C , -48°C

d) 2°C , -8°C , -1°C , -6°C , -4°C

e) 6°C , 10°C , -15°C , -11°C , 14°C



f) 16°C , 18°C , -23°C , -25°C , -13°C , 12°C , 20°C

D. Weather Temperatures

1. Look at the information below.



Lat/long: 53°21'N / 6°16'W
Currency: Euro (EUR)
Languages: English, Irish

 **TIME ZONE**
 - IST (Irish Standard Time), UTC/GMT +1 hour

 **AIRPORTS**
 - Dublin Airport, DUB, About 9 km N of Dublin
 - Weston Airport, WST, About 15 km W of Dublin

 **Weather**

 °C
16


SUNRISE
 07:09 115° East


SUNSET
 16:48 245° West


DAY LENGTH
 9 hours, 19 minutes
 -3m 47s shorter

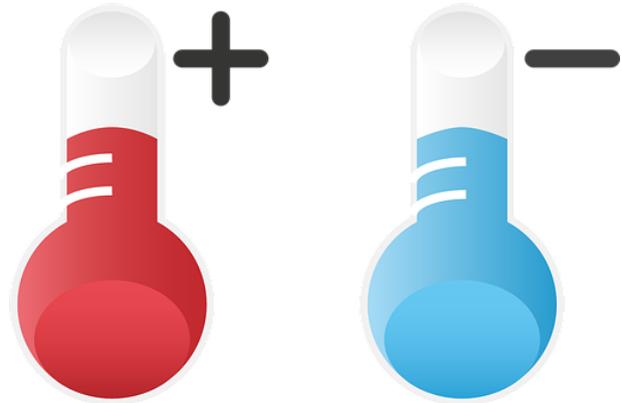
2. Below, write about the temperature and weather.

3. What temperatures are expected in the next week? Use Google on your phone or computer.

Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Date							
Temp							

4. Which of these temperatures is lowest? Underline the correct answer.

- a) -4°C or -2°C
- b) -8°C or 8°C
- c) -16°C or -17°C
- d) -5°C or -6°C



5. Answer the questions.

a) The temperature rises by 12 degrees from -4°C . What is the new temperature?

b) The temperature falls from 11°C to -2°C . How many degrees does the temperature fall?

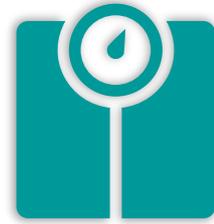
c) The temperature is 5°C . It falls by 8 degrees. What is the temperature now?

d) The temperature is -5°C . How much must it rise to reach 5°C ?

e) What is the difference in temperature between -4°C and 14°C ?

Assessment Brief 2

Course: L2LP Numeracy: Measurement
Assessment: Collection of Work
Title: **Weight**
Weighting: Collection of Work 100%



Guidelines:

You will be expected to develop an awareness of weight, to include:

1. Use appropriate vocabulary to describe the units of weight
2. Identify the marks for the units of weight.
3. List some examples of weight from daily life.
4. Use weighing scales to work out the weight of powders and solids, e.g. weighing the ingredients for a cake

Assessment criteria:

- Exercises and tasks must be complete and correct.
- Write number sentences and units and show working out for all calculations.
- Use words related to weight, e.g. kilograms, grams.
- Use a scale, weigh everyday items and read the units of weight.
- Work out problems related to weight in everyday life, e.g. weight of food products, weight conversions, reading different scales, estimating weight and measuring ingredients for baking.
- Discussions may be recorded.
- Photographic and/or video evidence may be required.

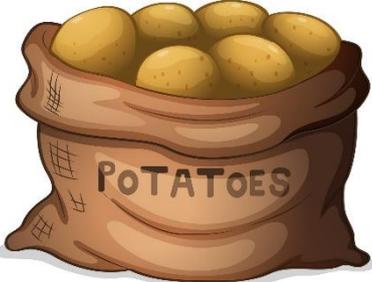
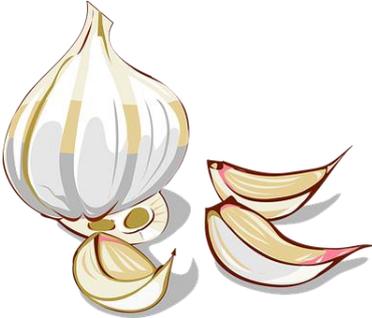
Submission date:

I confirm that this is my own original work.

Signed:

Date:

3. Which unit would you use to measure the weight? Circle that unit of measure.

	
<p>grams kilograms</p>	<p>grams kilograms</p>
	
<p>grams kilograms</p>	<p>grams kilograms</p>
	
<p>grams kilograms</p>	<p>grams kilograms</p>
	
<p>grams kilograms</p>	<p>grams kilograms</p>

5. Look at the weights. Complete the sentences, using these weights:



a) $5 \text{ g} + \underline{\hspace{2cm}} = 10 \text{ g}$

b) $500 \text{ g} + \underline{\hspace{2cm}} = 1 \text{ kg}$

c) $\underline{\hspace{2cm}} + 50 \text{ g} = 100 \text{ g}$

d) $250 \text{ g} + 25 \text{ g} = \underline{\hspace{2cm}}$

e) $250 \text{ g} + 250 \text{ g} + 500 \text{ g} = \underline{\hspace{2cm}}$

6. In pairs: Find three items in the classroom that you think have quite different weights. Estimate the weight of each and then measure its weight using a scale.

Item	Estimate	Weight

7. Write the items above from lightest to heaviest.

8. If something was placed on this scale that was $6 \frac{1}{2}$ kg, draw where the pointer would be.



4. Which of the following would weigh about 1 kg? Tick them.

- One litre of water
- An ant
- A car
- A tennis ball
- A bee
- Two tubs of butter
- A student
- A muffin
- Bag of sugar
- A lemon



5. Do some research. How much do the following food products usually weigh?

- a) Packet of grated cheese _____
- b) Tin of baked beans _____
- c) Packet of cornflakes _____
- d) Loaf of wholegrain bread _____
- e) Bottle of honey _____
- f) Packet of frozen peas _____
- g) Bottle of turmeric _____
- h) Large slab of dark chocolate _____
- i) Packet of bananas _____
- j) Packet of brown rice _____



8. How many millilitres?

*Remember, 1,000 millilitres = 1 litre

a) _____ = 16 litres

b) _____ = 10 litres

c) _____ = 30 litres

d) _____ = 23 litres

e) _____ = 22 litres

f) _____ = 2 litres

g) _____ = 28 litres

h) _____ = 19 litres

i) _____ = 3 litres

j) _____ = 4 litres

k) _____ = 14,000 millilitres

l) _____ = 27,000 millilitres

m) _____ = 12,000 millilitres

n) _____ = 20,000 millilitres

o) _____ = 7,000 millilitres

p) _____ = 8,000 millilitres

q) _____ = 29,000 millilitres

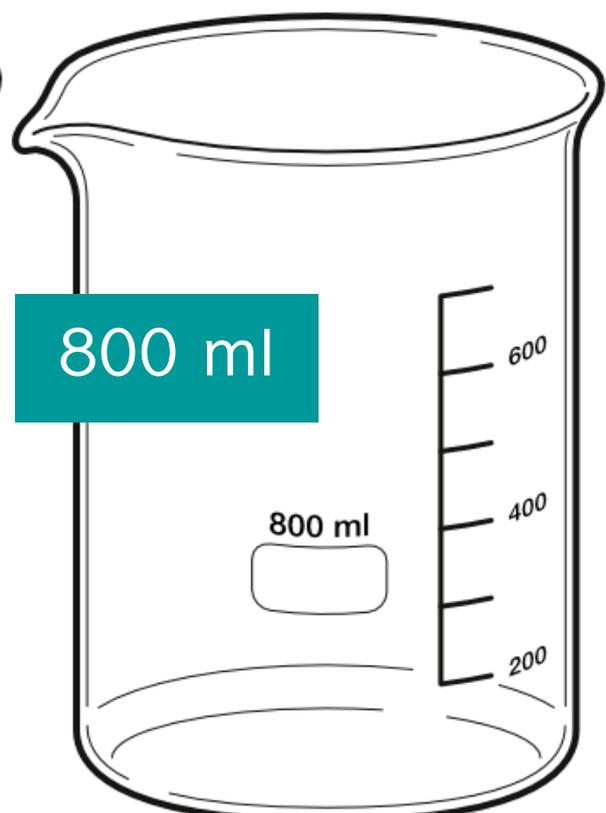
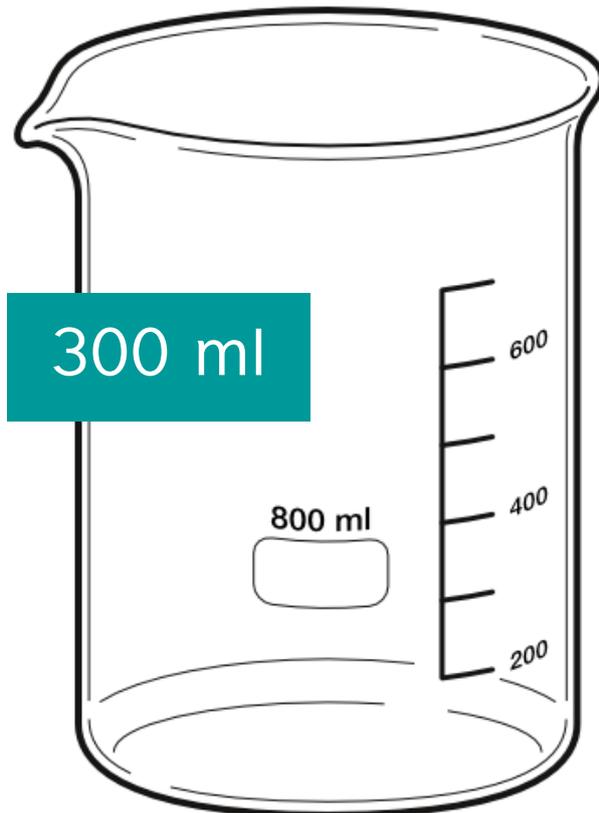
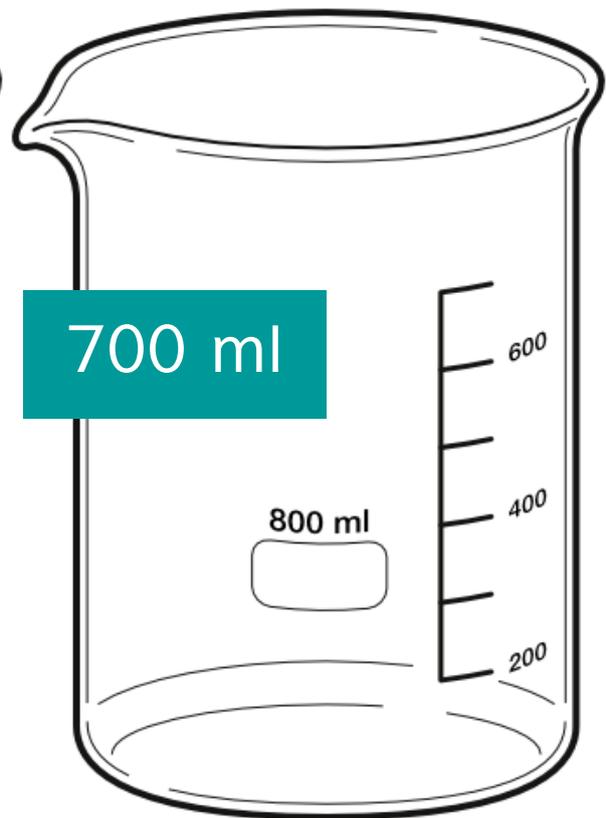
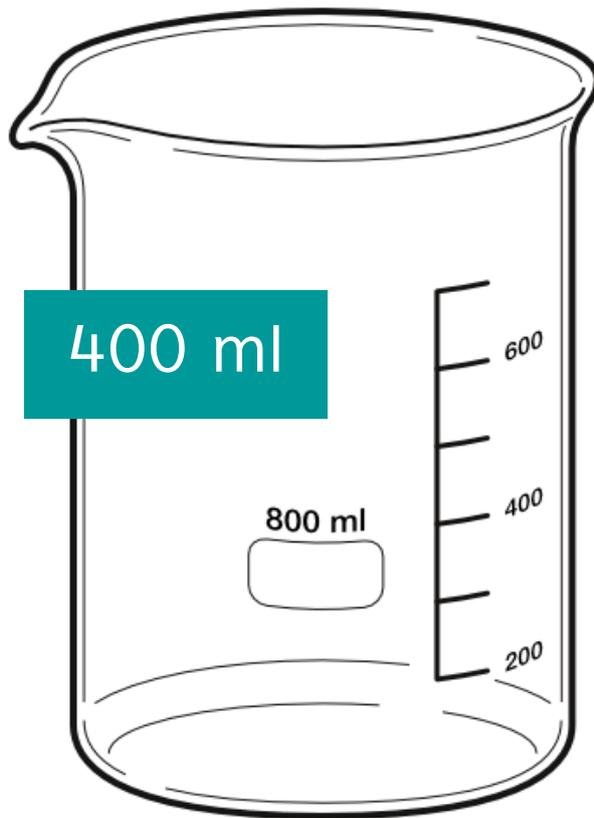
r) _____ = 13,000 millilitres

s) _____ = 9,000 millilitres



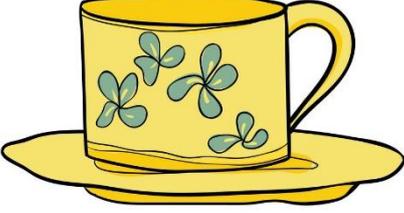
B. Measuring Capacity

1. Shade in the jugs to show the amounts.



C. Capacity in Everyday Life

1. About how much does the container hold? Circle the more reasonable estimate.

	
<p>About 35 ml About 1 litre</p>	<p>About 3 litres About 3 ml</p>
	
<p>About 2 litres About 200 ml</p>	<p>About 2 litres About 2 ml</p>
	
<p>About 5 ml About 5 litres</p>	<p>About 500 ml About 5 litres</p>
	
<p>About 300 ml About 3 litres</p>	<p>About 250 ml About 2 litres</p>

a) I have 1 litre of orange juice. I give 300ml to Pat, 200ml to Paul and 250ml to Emma. How much orange juice do I have left?



b) I need 2 litres of lemonade to make a punch. I only have 250-millilitre containers. How many will I need to make 2 litres?

c) I have 500 ml of glue. I need half of it for a craft project. How many millilitres of glue do I need?



d) Tom has 300 ml of tea. He drinks a mouthful of tea every minute. If a mouthful is 50ml how long does his tea last?

14. Which units are you more likely to use when measuring these?

centimetres, metres, kilometres

- a) height of a building _____
- b) length of a notebook _____
- c) length of key _____
- d) distance from Krakow to Frankfurt _____
- e) height of a giraffe _____
- f) length of an aeroplane _____
- g) length of a teaspoon _____
- h) height of a mature oak tree _____
- i) distance between the airport and the city

- j) length of your toothbrush _____
- k) distance of the London Marathon _____
- l) height of a light switch _____
- m) distance around a football field _____
- n) height of a coffee mug _____
- o) length of a motorway _____



C. Estimating Length and Distance

1. Choose the best answers.

a) What is the height of an A4 piece of paper?

- 30 metres
- 30 millimetres
- 30 centimetres
- 30 kilometres

b) What is the height of a car?

- 2 centimetres
- 2 millimetres
- 2 metres
- 2 kilometres

c) What might the length of a river be?

- 24 kilometres
- 24 millimetres
- 24 centimetres
- 24 metres

d) What might the depth of a swimming pool be?

- 3 millimetres
- 3 metres
- 3 kilometres
- 3 centimetres

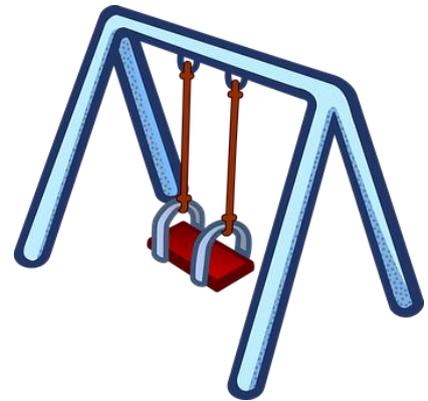
e) What is the height of a refrigerator?

- 2 kilometres
- 2 metres
- 2 millimetres
- 2 centimetres



2. Solve the problems. Write the number sentences and answers.

a) There are two playgrounds in the town. One is 25 m long and the other is 15 m long. How much shorter than the big playground is the smaller one?



b) Your three bean plants have grown. You measure them and find that they are 12 cm, 8 cm and 7 cm. If you laid all three end-to-end, how long would they be?



c) In a swimming competition, the swimmers swim 100 m each. What length do the swimmers swim altogether?

2. Write in the months in the correct order in the calendar below.

July January May February December September
March April October November June August

1	2	3
4	5	6
7	8	9
10	11	12

3. Write the months that come before and after.

Before	This Month	After
	February	
	October	
	January	
	November	
	August	
	April	

9. Write the shortened dates. See the example.

a) Twenty-second of November 22/11

b) First of January _____

c) Twelfth of June _____

d) Fifth of September _____

e) Twenty-first of March _____

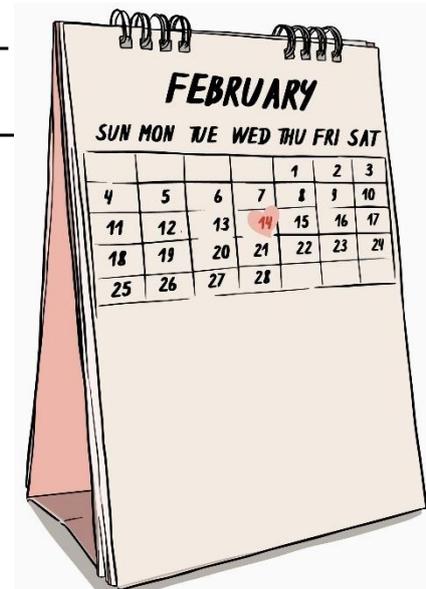
f) Fourth of October _____

g) Second of April _____

h) Twentieth of July _____

i) Third of May _____

j) Ninth of February _____



10. Write the shortened dates. See the example.

a) 21st December, 1966 21/12/66

b) 30th March, 1953 _____

c) 23rd October, 1933 _____

d) 10th January, 1980 _____

e) 25th April, 1976 _____

f) 5th August, 1990 _____

g) 31st May, 1995 _____

h) 7th October, 2002 _____

i) 2nd February, 1986 _____

j) 22nd July, 2001 _____

k) 19th November, 1999 _____

1st September, 1975 _____

A. Time Vocabulary

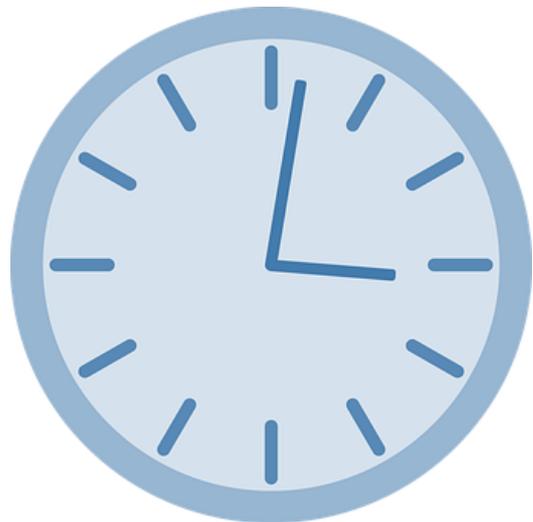
LEARN THIS

- 🕒 60 seconds = 1 minute
- 🕒 60 minutes = 1 hour
- 🕒 30 minutes = $\frac{1}{2}$ hour
- 🕒 15 minutes = $\frac{1}{4}$ hour
- 🕒 24 hours = 1 day



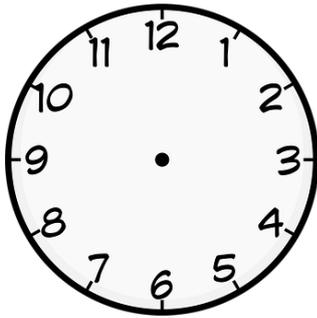
1. Complete the phrases:

- a) 60 minutes = 1 _____
- b) _____ minutes = $\frac{1}{2}$ hour
- c) 1 minute = _____ seconds
- d) 60 minutes = _____ hour
- e) 24 hours = 1 _____
- f) 60 _____ = 1 minute
- g) 30 _____ = $\frac{1}{2}$ hour
- h) 60 _____ = 1 hour
- i) 30 minutes = $\frac{1}{2}$ _____
- j) _____ minutes = $\frac{1}{4}$ hour
- k) 24 hours = _____ day
- 15 minutes = 1 _____

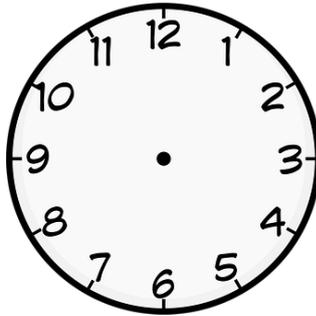


11. Draw the hands and numbers in the right place on these clocks.

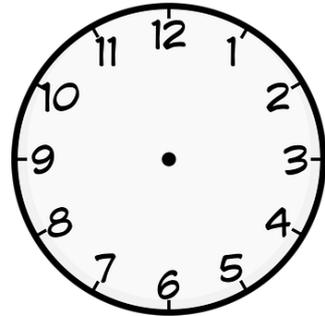
Half past 10



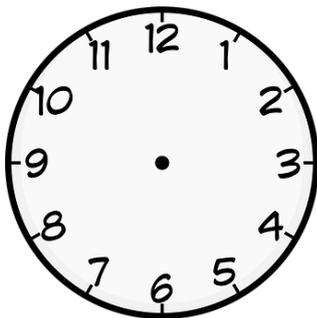
Half past 8



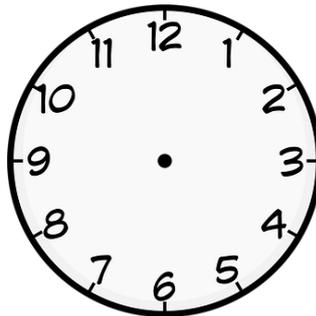
Half past 12



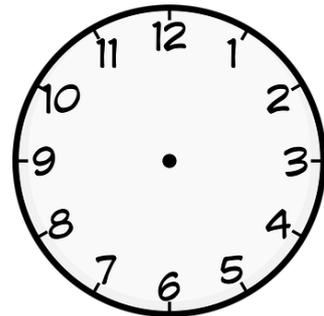
Half past 9



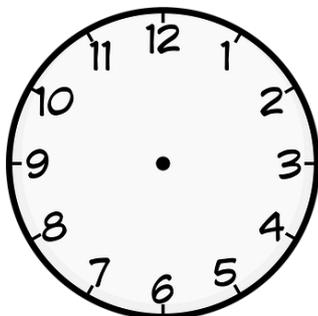
Half past 3



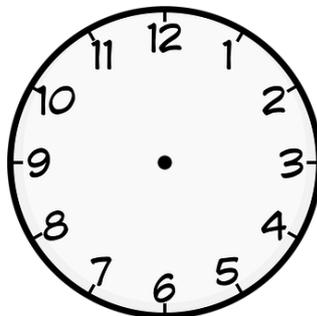
Half past 5



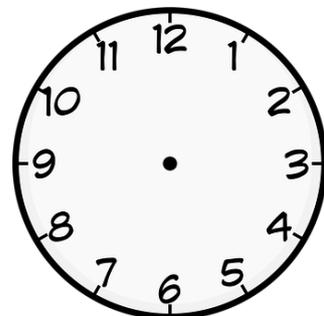
Half past 9



Half past 3



Half past 5



K. Elapsed Time

1. Answer the questions.

a) How many months, weeks, and days are there between May 2nd, 2019 and September 20th, 2019?

b) Chris was born on December 12th, 1965 . How old will he be on his birthday in 2019?



c) If you arrive at the Hilton Hotel on June 5th, and you stay three nights, on which date will you check out of the hotel?

d) Conor's appointment with the doctor was on August 10th. He must go back to the doctor in 6 months' time for a check-up. In which month should Conor make an appointment?



Mapping of Learning Outcomes

Developing an awareness of temperature

1. Use appropriate words to describe temperature, e.g. hot and cold Pages 8 to 14 (temperature vocabulary), Page 26 (temperature vocabulary), Pages 37 to 39 (describing weather and temperatures), Page 40 (weather words, weather log)
2. Identify instruments used for indicating and adjusting temperature, e.g. thermometer, marked oven dials Page 15 (looking at a thermometer), Page 16 (examples of temperature in everyday life), Page 17 (making a thermometer), Page 33 (cooker dials)
3. Relate temperatures to everyday situations, e.g. heating in a classroom Page 16 (examples of temperature in everyday life), Page 18 (freezer experiment), Pages 19 to 24 (locating temperatures in everyday situations), Pages 25 to 34 (temperatures in everyday life, ordering temperatures from coldest to hottest)
4. Locate appropriate temperatures on a cooker dial, e.g. gas mark 4, 200 degrees Celsius Pages 19 to 24 (locating temperatures on different thermometers and everyday items), Page 27 (conversion of temperature – °F and °C, reading temperature on a screen), Page 33 (cooker dials)
5. Compare temperatures for the different times of the year, e.g. hot in summer and cold in winter, keep a simple weather log Pages 35 to 39 (weather and temperatures), Page 40 (weather log template)

Developing an awareness of weight

1. Use appropriate vocabulary to describe the units of weight, e.g. kilograms, grams Pages 43 to 50 (weight vocabulary, difference between mass and weight, addition of basic weights, weight conversions), Page 51 (types of scales), Page 59 (weight vocabulary, e.g. heavy, light, ton)
2. Identify the marks for the units of weight, e.g. using a weighing scale Pages 51 to 57 (estimating weight and reading scales, measuring ingredients for baking or cooking)
3. List some examples of weight from daily life, e.g. knowing own weight Pages 48 and 50 (weight conversions), Page 52 (looking at different scales), Pages 53 and 55 (estimating weight of everyday items and using scales to check actual measurement), Page 57 (weighing ingredients for cooking / baking), Pages 58 to (weight in everyday life)
4. Use weighing scales to work out the weight of powders and solids, e.g. weighing the ingredients for a cake Pages 53 and 55 (estimating weight and using scales to check actual measurement)

Developing an awareness of capacity

1. Use appropriate vocabulary to describe the units of capacity, e.g. litres, 500ml Pages 65 to 68 (capacity vocabulary, capacity conversions), Pages 69 to 71

- (capacity vocabulary, e.g. measuring capacity, graduated jug), Page 74 (common measurements)
2. Identify the marks for the units of capacity, e.g. using a measuring jug Pages 69 to 75 (measuring capacity, using everyday items to measure capacity, checking addition of capacities using graduated jugs, using graduated jugs and measuring spoons), Page 75 (using graduated jugs/vessels/measuring spoons to check the capacity of everyday items)
 3. List some examples of capacity from daily life, e.g. a litre of milk Pages 67 and 68 (capacity conversions), Page 73 (making a litre), Page 74 (common measurements), Page 75 (using graduated jugs/vessels/measuring spoons to check the capacity of everyday items), Pages 76 to 82 (capacity in everyday life)
 4. Use a graduated vessel to work out the capacity of liquids, e.g. using a jug to measure litre of milk Page 71 (estimating and measuring capacities), Page 73 (checking addition of capacities using graduated jugs), Page 75 (using graduated jugs/vessels/measuring spoons to check the capacity of everyday items)

Developing an awareness of length and distance

1. Use appropriate vocabulary to describe the units in length and distance, e.g. kilometres, metres, centimetres Pages 85 to 93 (length and distance vocabulary, length and distance conversions), Pages 94 and 95 (measuring

- instruments), Pages 108 to 110 (length and distance in everyday life)
2. Identify the units of length and distance on a ruler, metre stick and measuring tape Page 89 (questions about a ruler), Pages 94 to 100 (measuring instruments, measuring length and distance), Page 95 (measuring with a ruler, metre stick and measuring tape), Pages 99 and 100 (reading rulers), Pages 103 to 105 (estimating and measuring length/height/width/distance), Page 106 (measuring common places)
 3. Use a ruler to draw and measure different lengths of lines Page 95 (measuring with a ruler, metre stick and measuring tape), Pages 96 to 98 (measuring with a ruler, drawing lines), Pages 103 to 105 (estimating and measuring length/height/width/distance)
 4. Estimate the length of common objects, e.g. the length of a book Page 91 (estimating units of measurement), Pages 101 to 105 (estimating length), Pages 103 to 105 (estimating and measuring length/height/width/distance), Page 107 (estimating units or measurement)
 5. Measure the length of common places, e.g. bedroom, kitchen, classroom using a measuring tape Page 106 (measuring common places)

Developing an awareness of time

1. Tell the time from an analogue clock for the hour, half hour and quarter hour Pages 140 to 150 (telling the time)

2. Tell the time from a digital clock for the hour, half hour and quarter hour [Pages 151 to 157 \(digital time\)](#)
3. Identify key times during the day, on the hour, half hour and quarter hour, e.g. lunch breaks, use of visual schedule [Page 115 \(time vocabulary\)](#), [Pages 133 to 137 \(time vocabulary, estimation and units\)](#), [Pages 138 to 139 \(time instruments\)](#), [Pages 171 to 174 \(key times\)](#)
4. Solve problems to work out the passage of time, e.g. use the start and finish time to calculate duration of journey or programme, calculate the duration of a specific programme [Pages 158 to 161 \(elapsed time\)](#), [Pages 162 to 170 \(time in everyday life\)](#)
5. Find a specified day or date on a calendar or timetable, e.g. my birthday [Pages 116 to 119 \(days of the week\)](#), [Pages 120 to 122 \(months of the year\)](#), [Pages 123 to 128 \(time and dates\)](#), [Pages 131 to 132 \(calendar, weekly schedule\)](#)
6. Match months or activities with their seasons, e.g. matching pictures [Pages 129 to 130 \(seasons\)](#)