

Stage 3

Outcomes Based

Assessment

Tasks

MEASUREMENT

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

Stage of Task	3 MEASUREMENT
Outcome	1: Attributes, units and tools
Outcome Descriptor	a) Selects from a range of units and measuring devices to measure accurately and record in practical situations. b) Makes conversions between measurement units.
Stage	Number of Indicator Questions
1	1
2	2
3	5

Question	1	2 a	2 b	3	4	5	6 a	6 b	7	8		
Stage	1	2	2	2	3	3	3	3	3	3		
Indicator Description												
<ul style="list-style-type: none"> responds to a direction to find a container which holds less than, more than or the same as a cup 	*											
<ul style="list-style-type: none"> explains that the length, width and area of tabletop can be measured 		*	*									
<ul style="list-style-type: none"> explains that the height, mass and volume of the human body can be measured 				*								
<ul style="list-style-type: none"> describes a square kilometre in terms of familiar regions, eg school playground, home paddock, shopping centre car park 					*							
<ul style="list-style-type: none"> makes determinations concerning the best unit for measuring medium to long distances 						*						
<ul style="list-style-type: none"> expresses a gram as one thousandth of a kilogram 							*					
<ul style="list-style-type: none"> expresses a millilitre as one thousandth of a litre 								*				
<ul style="list-style-type: none"> reads and interprets the scale on measuring devices, eg tape measure, spring balance 									*			
<ul style="list-style-type: none"> operates, reads and interprets a stopwatch 										*		

ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 1: Attributes, Units and Tools

STAGE 1: 1 QUESTION

1. Match the pictures to the words that describe the amount of water each container can hold compared to the cup.



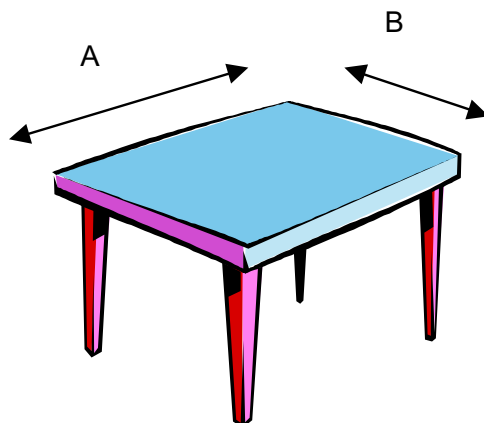
same as

more than

less than

STAGE 2: 2 QUESTIONS

2. Examine the diagram below



a) What is arrow A is measuring? Circle the correct answer.

- Length
- Height
- Area

b) Circle the way you would work out the area of the table-top.

- $A + B$
- $A - B$
- $A \times B$
- $A \div B$

3. Circle the tool you would use to measure the height of a person.

- Bathroom scales
- Kitchen scales
- Tape measure
- Measuring jug

STAGE 3: 5 QUESTIONS

4. Circle the place you would measure in square kilometres

- Car park
- Garden bed
- Sheep station
- Football field

5. Circle the unit you would use to measure the distance between Lightning Ridge and Dubbo.

- Millimetres
- Centimetres
- Kilometres
- Kilograms

6. a) Circle the amount, which equals one kilogram.

- 10 grams
- 100 grams
- 1000 grams
- 10000 grams

b) Circle the amount, which equals 1 litre.

- 100ml
- 1000ml
- 10000ml

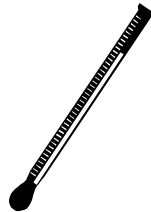
7. Match the measuring device to the measuring unit.

centimetre

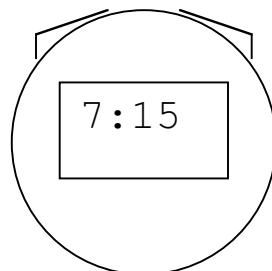
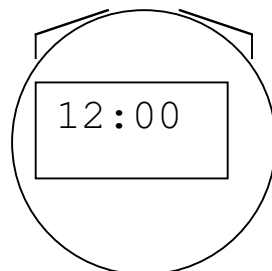
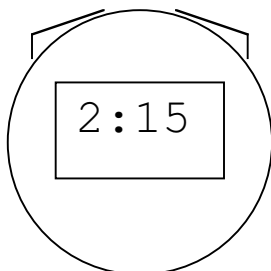
degrees

litre

kilogram



8. Circle the stopwatch, which shows the quickest time for running a kilometre.



STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

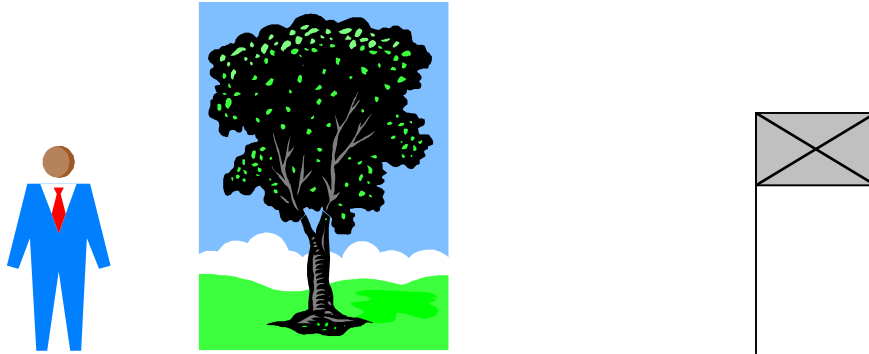
Stage of Task	3 MEASUREMENT
Outcome	2: Length
Outcome Descriptor	Estimates, measures and records lengths in metric units from millimetres to kilometres.
Stage	Number of Indicator Questions
1	1
2	2
3	5

Question	1	2	3	4	5	6	7	8					
Stage	1	2	2	3	3	3	3	3					
Indicator Description													
<ul style="list-style-type: none"> • compares and orders distances between objects • uses language to describe the length of objects, eg longer, shorter, nearer, further 	*												
<ul style="list-style-type: none"> • selects, from a collection of objects, an item with a length close to a given length 		*											
<ul style="list-style-type: none"> • uses standard SI abbreviations for metre and centimetre. ie m and cm • records measurements in a table or column graph 			*										
<ul style="list-style-type: none"> • recognises the need for a unit smaller than the cm • describes a mm as one tenth of a cm, and writes it in decimal notation • uses the standard SI abbreviation for millimetre, ie mm 				*									
<ul style="list-style-type: none"> • describes a mm as one tenth of a cm, and writes it in decimal notation 					*								
<ul style="list-style-type: none"> • estimates the length of objects and distances between objects in mm, cm, m and km 						*							
<ul style="list-style-type: none"> • recognises that the odometer is used for measuring km 							*						
<ul style="list-style-type: none"> • describes a mm as one tenth of a cm and writes it in decimal notation • solves problems involving length, choosing appropriate units and interpreting results in the context of the question • measures and records the length of objects appropriately in m, cm and mm 								*					

**ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 2: LENGTH**

STAGE 1: 1 QUESTION

1. Look at the picture, then choose the best word to fill in each space.



a) The person is _____ than the tree.

b) The tree is _____ the person than the flagpole.

c) The tree is _____ than the flagpole.

taller

nearer

shorter

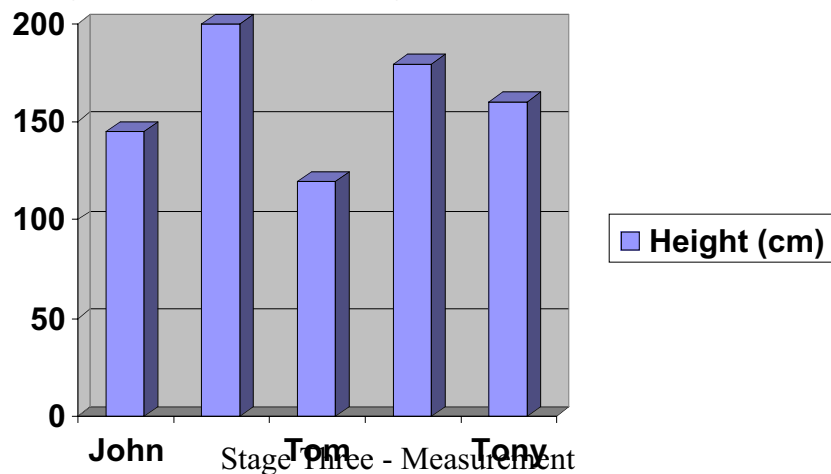
longer

STAGE 2: 2 QUESTIONS

2. Circle the object that would be about 0.3m in length.

- Ruler
- Pencil
- Desk
- Door

3. Read the graph about the boys' heights then circle the correct statement.



Circle the statement that is correct.

- John is taller than Dylan
- Alan is taller than Tony
- John is taller than Tony
- Dylan is taller than Alan

STAGE 3: 5 QUESTIONS

4.



a) Circle the unit you would use to measure the width of the rectangle.

- Millimetres
- Centimetres
- Metres
- Millilitres

b) Write the abbreviation for the units of centimetre.

5. A fingernail is 0.6cm wide. This is the same as ... Circle your answer.

- 60mm
- 6mm
- 600mm

6. Circle the best answer. The length of my bed is about

- 10000mm
- 2000cm
- 1m
- 2m
- 1km

7. What unit does an odometer measure? Circle the correct answer.

- Centimetres
- Kilograms
- Litres
- Kilometres
- Millimetres

8. Here are the distances that 6 different children paced.

Adam	750 mm	Sarah	1110 mm
Lee	960 mm	Tom	1200 mm
William	1050 mm	Jan	1090 mm

(a) Write the length of Jan's pace in centimetres using decimal notation ____

(b) Circle the difference between the length of Lee's and William's paces.

- 9cm
- 11cm
- 0.9cm
- 91mm

(c) What would be the best unit for measuring the distance between two towns?
Circle your answer.

- mm
- cm
- dm
- km

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

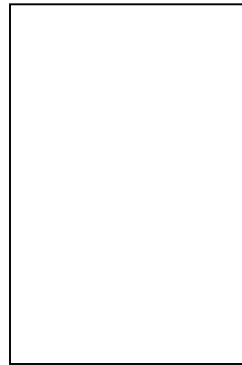
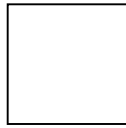
Stage of Task	3 MEASUREMENT
Outcome	3: Area
Outcome Descriptor	Explains the relationship between length, breadth and area of a rectangle and uses it to calculate the area of rectangles.
Stage	Number of Indicator Questions
1	1
2	2
3	5

Question	1	2	3	4	5	6	7	8				
Stage	1	2	2	3	3	3	3	3				
Indicator Description												
<ul style="list-style-type: none"> estimates the number of informal units, eg hands, paper squares, needed to cover a region completely 	*											
<ul style="list-style-type: none"> estimates the area of regular and irregular shapes by counting squares on a grid uses standard SI abbreviations for square metre and square centimetre, ie m² and cm² 		*										
<ul style="list-style-type: none"> demonstrates efficient strategies for counting large numbers of square centimetres, eg using strips of ten, squares of 100 			*									
<ul style="list-style-type: none"> records in table form the length, breadth and area for a number of rectangles drawn on squared paper 				*								
<ul style="list-style-type: none"> deduces the relationship Area = L x B 					*							
<ul style="list-style-type: none"> uses the language length, width, breadth, depth appropriately 						*						
<ul style="list-style-type: none"> uses calculators where appropriate to determine the area of rectangles, eg where side lengths are given in decimal notation 							*					
<ul style="list-style-type: none"> uses the relationship between length, breadth and area in problem solving situations, eg how many tiles required to cover a floor 								*				

**ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 3: AREA**

STAGE 1: 1 QUESTION

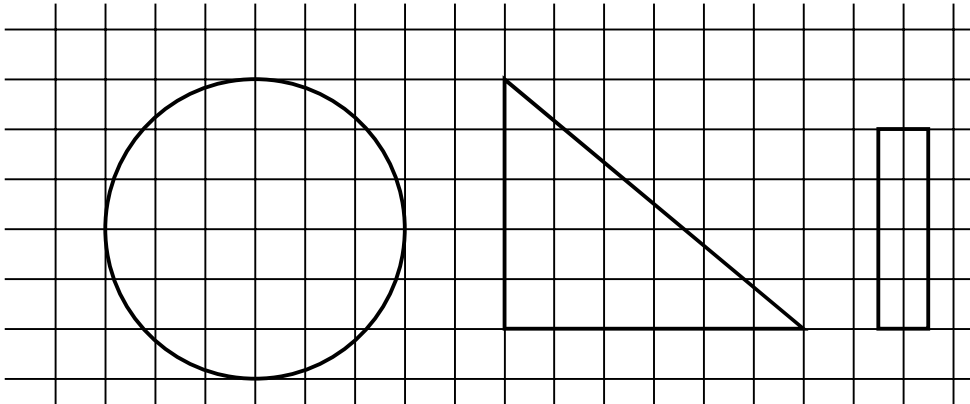
1. Circle the number of squares you would need to cover the rectangle.



- 4
- 8
- 12
- 6

STAGE 2: 2 QUESTIONS

2. Examine the diagram below and answer the following questions



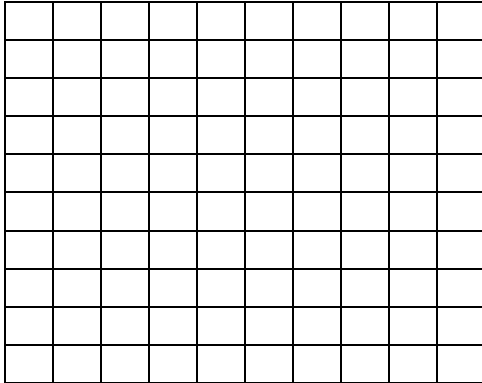
Each Square is 1cm by 1cm

Circle the correct area for each shape.

circle	16mm ²	16cm ²	28cm ²	28m ²
rectangle	16cm ²	16mm ²	4cm ²	4mm ²
triangle	10cm ²	30cm ²	15mm ²	15cm ²

3. If you had to quickly measure the area of this page and you didn't have to be precise which of these three measuring grids would you use.

10 X 10 Grid = 100 squares



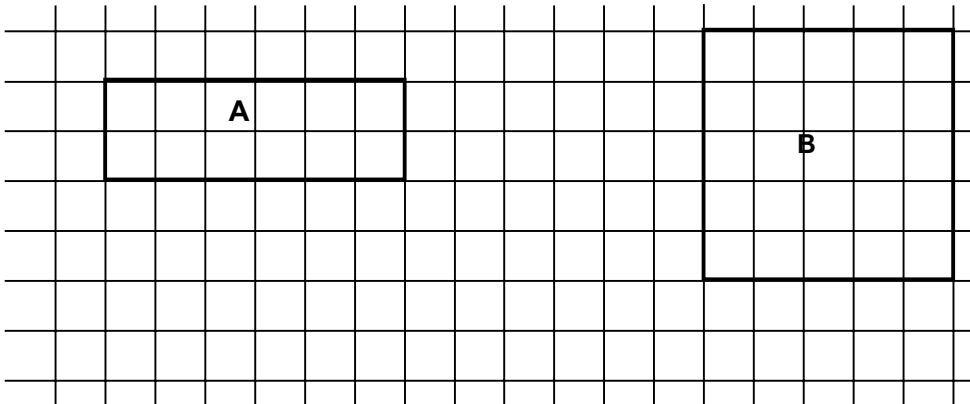
10 X 1 Grid = 10 squares



1 X 1 Grid = 1 square

STAGE 3: 5 QUESTIONS

4. Fill in the table below with the correct measurements using the grid.

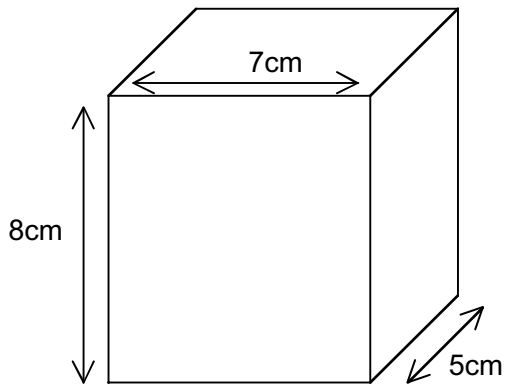


Rectangle	Length	Breadth	Area (Squares)
A			
B			

5. Circle the correct statement below connecting length, breadth and area of a rectangle.

- Area = Length + Breadth
- Breadth – Length = Area
- Area = Length x Breadth

6. Circle the correct answer for each measurement

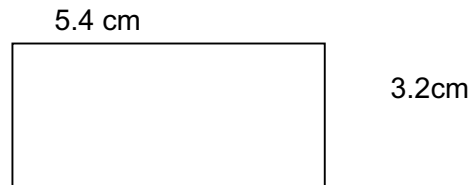


The length is: 5cm 7cm 8cm

The width is: 5cm 7cm 8cm

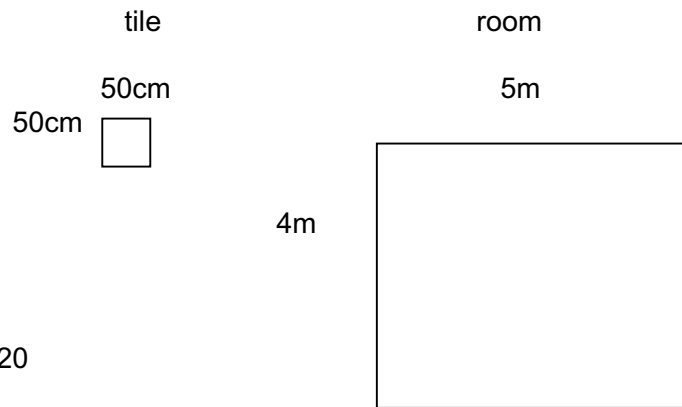
The depth is: 5cm 7cm 8cm

7. To work out the area of the rectangle using a calculator, circle the correct set of keys you would use.



- 5 0 4 + 3 . 2 =
- 5 . 4 x 3 . 2 =
- 5 . 4 x 3 0 2 =

8. Circle the number of tiles needed to cover the floor of the room



- 20
- 80
- 9
- 40

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

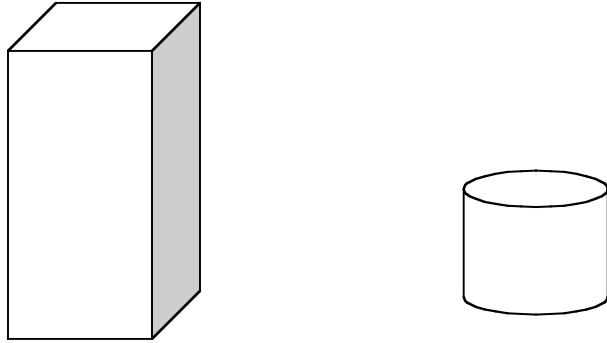
Stage of Task	3 MEASUREMENT
Outcome	4: Capacity and volume
Outcome Descriptor	a) Estimates, measures and records the capacity of containers using litres and millilitres. b) Uses cubic centimetre and cubic metre units to estimate, measure and record volume.
Stage	Number of Indicator Questions
1	1
2	2
3	5

Question	1	2	3	4	5	6	7	8				
Stage	1	2	2	3	3	3	3	3				
Indicator Description												
<ul style="list-style-type: none"> discusses the effect of putting equal quantities of liquid into different shaped containers 	*											
<ul style="list-style-type: none"> recognises the need for a standard unit of capacity selects from a range of containers those which have a capacity of more than, less than and about one litre 		*										
<ul style="list-style-type: none"> estimates, measures and describes the number of litres of water required to fill larger containers, eg bucket, sink 			*									
<ul style="list-style-type: none"> describes a millilitre as one thousandth of a litre 				*								
<ul style="list-style-type: none"> associates mL measures with familiar objects, eg a teaspoon = 5mL 					*							
<ul style="list-style-type: none"> uses the relationship between litres and millilitres to solve problems involving capacity and interprets the results in the context of the question 						*						
<ul style="list-style-type: none"> estimates in cubic centimetres the volume of 3D objects represented in photographs and isometric drawings and checks by building and counting 							*					
<ul style="list-style-type: none"> uses a model of a cubic metre to estimate and measure the volume of large spaces, eg the classroom 								*				

**ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 4: CAPACITY AND VOLUME**

STAGE 1: 1 QUESTION

1. A cup of water is poured into each of these containers.



Circle the statement which is true.

- The amount of water is the same but the shape is different.
- The amount of water is different in each container.
- The rectangular prism container has more water in it.

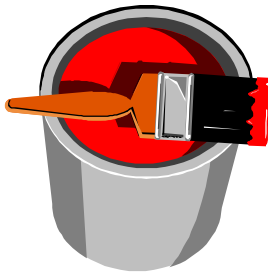
STAGE 2: 2 QUESTIONS

2. For each container circle the number to show the approximate capacity.

- 1 = more than one litre
- 2 = less than one litre
- 3 = about one litre



1 2 3



1 2 3



1 2 3

3. A bucket holds 8L of water. Estimate the numbers of buckets you think it would take to fill a bathtub. Tick the closest number.

- 2
- 25
- 100

STAGE 3: 5 QUESTIONS

4. Circle the correct answer.

One millilitre:

$$= \frac{1}{1000}L$$

$$= \frac{1}{100}L$$

$$= 0.01L$$

$$= 1.0L$$

5. Join the measuring device to its correct unit.

5mL

30mL

250mL

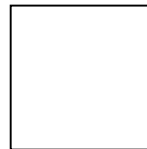


6. How many cups of water will it take to fill a 2L container? Circle the answer.

Cup-125mL

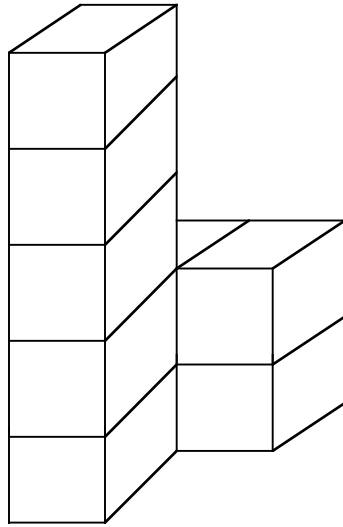
2L container

- 4
- 6
- 8
- 10



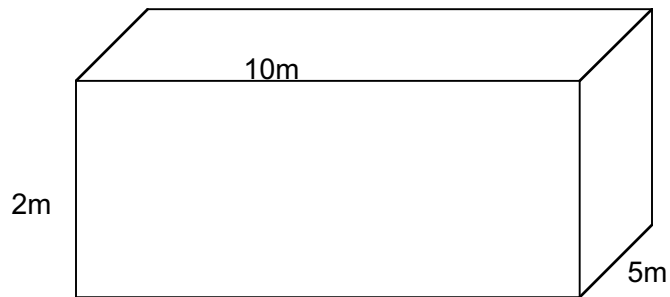
7. Circle the volume of this solid 3D shape.

Each block has a volume of 1 cubic centimetre



- 7 centimetres
- 7 cubic centimetres
- 8 centimetres
- 9 square centimetres
- 9 cubic centimetres

8. Circle the number of cubic metres which shows the volume of the classroom.



- 110 m³
- 100 m³
- 90 m³
- 1100 m³

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

Stage of Task	3 MEASUREMENT
Outcome	5: Mass
Outcome Descriptor	Measures and records the mass of objects to the nearest gram.
Stage	Number of Indicator Questions
1	1
2	2
3	5

Question	1	2	3	4	5	6	7	8			
Stage	1	2	2	3	3	3	3	3			
Indicator Description											
<ul style="list-style-type: none"> selects appropriate informal units to measure the mass of given objects uses language to describe the mass of objects, eg light, heavy, heaviest 	*										
<ul style="list-style-type: none"> selects from a range of objects those which have a mass of more than, less than and about the same as one kilogram or half a kilogram estimates and measures the mass of everyday objects in kilograms and half kilograms uses the standard SI abbreviation for kilogram, ie kg 		*									
<ul style="list-style-type: none"> demonstrates awareness of the need for a standard unit of mass 			*								
<ul style="list-style-type: none"> associates gram measures with familiar objects, eg a standard egg has a mass of about 60 grams lists familiar items with masses of approximately 1g, 5g, 10g, 50g, 100g, 500g and 1kg 				*							
<ul style="list-style-type: none"> finds the mass of a small object, eg paper clip, by establishing the mass of a larger number, eg 50, and then dividing 					*						
<ul style="list-style-type: none"> recognises the relationship between a litre of water and one kilogram 						*					
<ul style="list-style-type: none"> chooses appropriate units to solve problems involving mass, interpreting the results in the context of the question 							*				
<ul style="list-style-type: none"> chooses appropriate units to solve problems involving mass, interpreting the results in the context of the question 								*			

**ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 5: MASS**

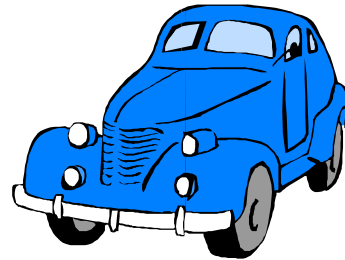
STAGE 1: 1 QUESTION

1. a) Join the object to the most appropriate unit of mass for weighing it.

gram

tonne

kilogram



b) Circle the object that would be the heaviest.

STAGE 2: 2 QUESTIONS

2. Examine the pictures below



Girl



Pumpkin



Bread

Write the name of the object which is

more than 1kg _____

about 1 kg _____

less than 1kg _____

3. Billy measured the mass of 3 different balls using a beam balance and weighing each ball with oranges.

BALL	NUMBER OF ORANGES
football	3.5 oranges
tennis ball	1 orange
cricket ball	3 oranges

He realised that this was not an effective way of weighing objects because ... Circle the best reason.

- Oranges are different in China.
- Oranges are always the same size.
- Not all oranges weigh the same amount.
- Objects are always the same and oranges never change.

STAGE 3: 5 QUESTIONS

4. List each object in the table under their closest measurement.



Plastic Dice



Chicken Egg



Plastic Counter



Leather work-boots



Soccer Ball

1g	10g	20g	500g	1kg

5. If you wanted to find the mass of a counter, circle the best way you could do it.

- Weigh 1 counter on kitchen scales
- Weigh 20 counters then divide by 20
- Use bathroom scales to weigh 1 counter
- Weigh a ruler on a beam balance

6. Circle the correct answer.

1kg = _L of water

= 1L of water

= 2L of water

7. Choose the best unit to measure the mass of 1 banana. Circle your answer.

- Grams
- Kilograms
- Millilitres
- Tonnes

8. Bill's tug-o-war team

John's tug-o-war team

Bill 58 kg

John 45 kg

Carol 55 kg

Kim 42 kg

Brett 60 kg

Pat 49 kg

Simon 64 kg

Ann 43 kg

Joe 65 kg

Daniel 50 kg

a) Which team should win the tug-o-war? _____

b) Give your reason.

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

Stage of Task	3 MEASUREMENT
Outcome	6: Temperature
Outcome Descriptor	Estimates, measures and records temperatures of objects and materials in degrees Celsius.
Stage	Number of Indicator Questions
1	1
2	3
3	4

Question	1	2	3	4	5	6	7	8						
Stage	1	2	2	2	3	3	3	3						
Indicator Description														
<ul style="list-style-type: none"> identifies cooler and warmer objects and places, eg. the swimming pool is cooler than the bath uses language to describe the temperature of objects, eg. hottest, coldest, cooler, warmer uses sight and touch (if appropriate) to compare the temperature of two objects or material 	*													
<ul style="list-style-type: none"> measures temperature in degrees Celsius uses the standard SI abbreviation for degrees Celsius 		*												
<ul style="list-style-type: none"> recognises and discusses the disadvantages of using differently scaled thermometers 			*											
<ul style="list-style-type: none"> investigates, describes and records what happens to the liquid in a thermometer in a variety of situations 				*										
<ul style="list-style-type: none"> calculates differences in temperature in degrees Celsius measures and records changes in temperature 					*									
<ul style="list-style-type: none"> uses language associated with recording temperature, eg boiling point, freezing point, minimum, maximum 						*								
<ul style="list-style-type: none"> estimates in degrees Celsius the temperatures associated with everyday experiences, eg hot and cold drinks, water in a swimming pool, weather 							*							
<ul style="list-style-type: none"> uses language associated with recording temperature, eg boiling point, freezing point, minimum, maximum 								*						

**ASSESSMENT TASK FOR STAGE 3
MEASUREMENT 6: TEMPERATURE**

STAGE 1: 1 QUESTION

1. Match the word with the temperature of an object.

Ice	hot
Water from the tap	cold
Food cooking on a stove	cool
Your breath	warm

STAGE 2: 3 QUESTIONS

2. In what unit is temperature measured? Circle your answer

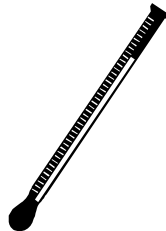
Celsius Metres Kilograms Centimetres

3. Select which thermometer you would use to measure the temperature of boiling water. Circle your answer.

- A thermometer measuring up to 200°C
- A thermometer measuring up to 70°C
- A thermometer measuring between -10°C and 40°C

4. A thermometer is placed into hot water. What would you expect to happen to the liquid in the thermometer? Circle your answer.

- It would rise.
- It would stay at the same level.
- It would fall.



STAGE 3: 4 QUESTIONS

5. The temperature of water heated on a stove was recorded.

Time (minute)	Temperature °C
Start	25
2	50
4	75
6	100

- a) How much has the temperature increased over the 6 minutes? _____
- b) What would you expect the temperature to be if it was heated for another 2 minutes? _____
6. The temperature over a day was recorded.

Time (minute)	Temperature °C
1.00am	12
5.00am	6
9.00am	14
1.00pm	20
5.00pm	11
9.00pm	10

- a) What was the minimum temperature? _____
- b) What was the maximum temperature? _____
7. Match the temperatures to the situation.

Cup of tea	10°C
Hot, summer day	40°C
Cold drink with ice	35°C
Water in a swimming pool	18°C

8. Match the temperatures to the language.

0°C	boiling point
25°C	freezing point
37°C	body temperature
100°C	cold winter day
8°C	warm spring day

STAGE 3 OUTCOME ASSESSMENT MAPPING GRID

Stage of Task	3 MEASUREMENT
Outcome	7: Time
Outcome Descriptor	Uses 24 hour time and am and pm notation to read, construct and interpret timetables and timelines in real life situations.
Stage	Number of Indicator Questions
1	1
2	3
3	4

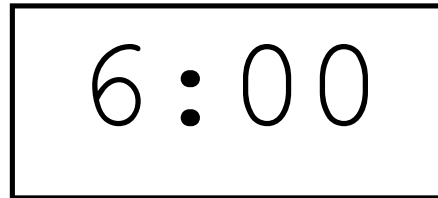
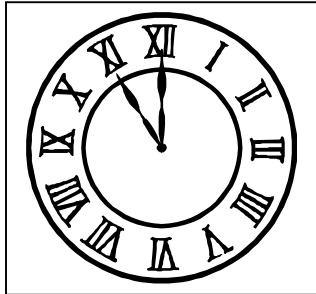
Question	1	2	3	4	5	6	7	8				
Stage	1	2	2	2	3	3	3	3				
Indicator Description												
<ul style="list-style-type: none"> • Tells the time on the hour on both digital and analog clocks 	*											
<ul style="list-style-type: none"> • Tells and records time in one minute intervals on digital and analog clocks • Tells the time on the half hour using digital and analog clocks • Reads and writes digital time in hours and minutes, eg 12:24 		*										
<ul style="list-style-type: none"> • Makes comparisons between time units, eg minutes, hours, days 			*									
<ul style="list-style-type: none"> • Describes activities in terms of time taken to complete 				*								
<ul style="list-style-type: none"> • Recognises and reads time using am and pm notation • Expresses 24 hour time in am and pm notation and vice versa 					*							
<ul style="list-style-type: none"> • Reads local timetables correctly • Uses bus, train, ferry, airline timetables to prepare a simple travel itinerary 						*						
<ul style="list-style-type: none"> • Compares and orders the duration of events using starting and finishing times to calculate elapsed time, eg duration of sporting events, television programs 							*					
<ul style="list-style-type: none"> • Develops a timeline from a series of familiar events, eg life history, development of the constitution 								*				

ASSESSMENT TASK FOR STAGE 3

MEASUREMENT 7: TIME

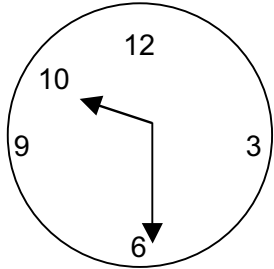
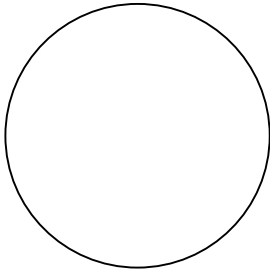
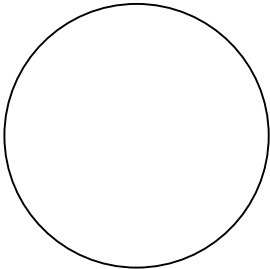
STAGE 1: 1 QUESTION

1. What time do these clocks tell you? Write your answer underneath.



STAGE 2: 3 QUESTIONS

2. Complete the table.

In words		_ past six	
Clock Face			
Digital Time	10:30		12:20

3. Match the picture with the time it would take to complete each activity.

hours

minutes

days

Brush your teeth



Sleeping



A plant to grow



4. How long would it take you to
- Eat your lunch _____
- Read a chapter of a book _____
- Complete a whole day of school _____

STAGE 3: 4 QUESTIONS

5. Record Eighteen Hundred hours using
- a) digital 24 hour time _____
- b) am / pm notation _____

6. Examine the airline table below

Armidale to Sydney			Sydney to Armidale		
Day	Depart	Arrive	Day	Depart	Arrive
MTWTF--	9.25am	10.35am	MTW----	7.55am	9.05am
-----S-	10.35am	11.45am	----TF--	8.00am	9.10am
-----S	1.55pm	3.05pm	-----S-	9.10am	10.20am
----F--	3.20pm	4.30pm	-----S	12.30pm	1.40pm
MTWT--S	5.20pm	6.30pm	---F--	1.55pm	3.05pm
----F--	6.30pm	7.40pm	MTWT--S	3.55pm	5.05pm
			----F--	5.00pm	6.10pm

- a) How many flights are there from Armidale to Sydney on Fridays?
Circle your answer.

- 1
- 3
- 6
- 2

- b) If you were in Sydney and had an appointment in Armidale at 10.00am on Thursday morning circle the departure time of the plane you would need to catch.

- 3.55pm
- 8.00am
- 12.30pm
- 9.10am

7. I arrived at the Football at 2.00pm. The pre-game entertainment lasted _ hour. The first and second halves of the game lasted 40 minutes each. Half time was 10 minutes. Circle the time when the game finished.

- 3.30pm
- 4.00pm
- 5.00pm
- 4.30pm

8. Create a timeline from the information in the table below.

Time	Activity
7.30am	Wake Up
8.30am	Start School
3.00pm	Finish School
5.00pm	Dinner
10.00pm	Go to sleep