Nigeria Teacher Development Programme (TDP) Impact Evaluation of Output 1: In-Service Teacher Training Endline Survey 2017

Teacher Development Needs Assessment Mark Scheme.

ALTERED version.

November 2017

Exercise 1

Scoring is dichotomous. Mark as either correct (for one point), or incorrect (for zero/no points)

		Mark correct or incorrect	Provide the correct answer	For research use only
1.	What is 523 − 126? Ans: 397	✔		[1 point] [TW1]
2.	What is 6.8- 2.246? Ans: 4.657	x	4.55 or 4.554	1 point] [TW2]
3.	What is 1325 − 471? Ans: 854	x	954	1 point] [TW3]
4.	What is 7.45 − 6.97? Ans: 1.48	x	0.48	1 point] [TW4]
5.	What is 15.17 − 14.84? Ans: 0.33	✔		1 point] [TW5]
6.	Write the missing number in the boxes below : 5.8 X 100 = 5800	x	1000	1 point] [TW6]
7.	Write the missing number in the boxes below : 1050 + 100 = 2050	x	1150	[1 point] [TW7]
8.	Write the missing number in the boxes below : 3 X 50 = 150	✔		[1 point] [TW8]
9.	Look at the number sequence below. Write in the boxes the next two numbers. 25 45 65 85 95 105	x x	105 125	[1 point] Only correct if both are correct [TW9]
10.	Which of the following has the same value as 374? a) 3000 + 700 + 4 b) 30 + 70 + 4 c) 300 + 70 + 4 d) 3 + 7 + 4	x	c	[1 point] [TW10]
11.	Find the average of 94, 59, 60, 38 and 24	✔		[1 point] [TW11}

	(A) 55 b) 30 c) 38 d) 24			
12.	$\sqrt{16}$ = (a) 2 b) 4 c) 8 d) 5	x	B	[1 point] [TW12]
13.	Which two numbers add up to make 0.92? (0.36) 0.8 0.08 (0.56) 0.51 0.17	✔		[1 point] Only correct if both are correct [TW13]
14.	Divide 400 eggs equally among 20 pupils. a) 10 b) 15 (c) 20 d) 25	✔		[1 point] [TW14]
15.	What is the value of 11^2 ? a) 9 b) 121 (c) 112 d) 22	x	b	[1 point] [TW15]
16.	2 exercise books cost N18. What is the cost of 15 exercise books? a) N1005 b) N135 (c) N115 d) N105	x	b	[1 point] [TW16]
17.	Change 4.26m to cm. a) 420cm b) 426cm (c) 4260cm d) 42600cm	x	b	[1 point] [TW17]

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18.	Which of the following fractions is equivalent to 1/3: a) 6/15 b) 3/15 c) 4/12 d) 6/12	x	c	[1 point] [TW18]

19.	This table shows the height of four children. Complete the table.	x		

	Cm	m
Sam	140	14
Ann	132	13.2
Alice	145	1.54

	cm	m
	140	1.4
	132	1.32
	154	1.54

[1 point]
[TW19]

20.	This is the time Musa starts to walk to his sister's house. The walk takes 45 minutes. What time did Musa arrive? 7.20	✔		[1 point] [TW20]

21.	Children in Primary 5 did a survey of how many animals people kept.			
	They drew this Venn			
	(B) How many cats did people have? ⬜ 41	X	42	[1 point] [TW21]
	b) Which animal was the least popular? Cats Rabbits ⬭Dogs	x	Cats	[1 point] [TW22]
22.	Some children at school did a survey on the colour of their parent's cars.			
	The results of the survey are shown in the graph below:			
	How many silver cars were counted by the children? ⬜ 19	x	10	[1 point] [TW23]
23.	Joe took part in a sponsored cycle ride. This graph shows how far he rode and how long it took him.			[1 point] [TW24]
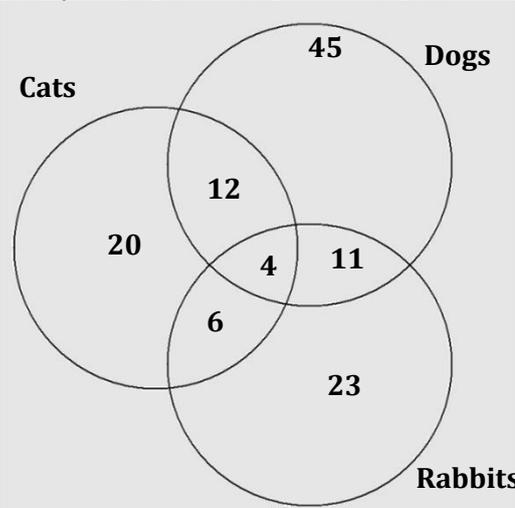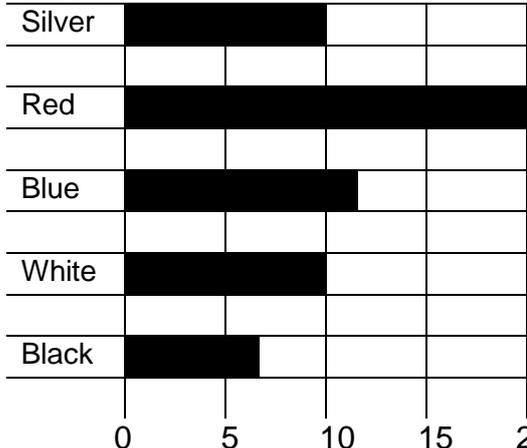
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a) Look at the graph.
How far has Joe ridden after 6 hours?

[_____] Km

b) Joe started at riding at 8.30 in the morning. How far had he gone at 12.00pm?

[_____] km

X   110 (105 – 115 are all acceptable)

X   70 (71-75 are all acceptable)

[1 point]
[TW25]

Exercise 2

A) Reading for factual information

		For research use only
1)	How many people die in every ten-thousand (10,000) vehicle accidents in: Kenya **60**……………….… Zimbabwe **27**………………….	[2 points] [TW26] [2 points] [TW27]
2)	Which country records the biggest number of road fatalities per 10,000 vehicle accidents? **Tanzania**………………………………………	[1 point] [TW28]
3)	According to the bar chart, which African country has the lowest number of deaths from road accidents per 10,000 vehicle accident? **Benin**……………………………………..	[1 point] [TW29]
4)	Which group of road users suffer the most injuries or deaths? **Pedestrians**……………………………………………	[1 point] [TW30]
5)	What does the phrase 'the price is not just measured in human terms' mean? **The financial costs are also high** *Mark as correct any answer that reflects understanding of the above including quotes from the passage on scarce technical and medical resources, limited foreign currency and cost to government in terms of GDP*	[1 point] [TW31]

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(B) Finding hidden meanings in words, phrases or sentences

Read the newspaper report *'On the buses in Lagos'*. Prepare the answer sheet below:

		For research use only
1)	What does the phrase '**suffering and smiling'** mean? Write a few short sentences to explain. **Commuters tolerate a painful journey with good humour.** (marks – e.g., tolerate with good humour (smiling) – 1 mark and painful journey (suffering) – 1 mark *Answer should reflect both elements for full mark*	[2 points] [TW32]
2)	What does the Danfo driver Ismaila Ojo mean when he says **'If you don't hurry up the money will leave you behind' ?** Write a few short sentences to explain. **The drivers have to speed in order to get back (if they don't another taxi will take them) to pick up another load of people who pay fares (the money will leave you behind)** *Answer should reflect the understanding to gain full mark, but must not be in exact words.*	[2 points] [TW33]
3)	What does the lawyer Gabriel Odefe mean when he says '**They may have their potential dangers but my day won't be complete if I don't travel in one**' ? Write a few short sentences to explain. **The taxis are unsafe – they are not roadworthy (brakes, tyres, etc.,) but commuters have a lot of fun in them – people tell jokes, some sell goods, others religion, etc., (and that fulfills them – it makes their day)** *Answer should reflect the understanding to gain full marks but must not be in exact words.*	[2 points] [TW34]
5)	'**44 sitting, 99 standing; suffering and smiling … sang Fela, as he lambasted the Lagos authorities for the lack of a proper transport policy'.** What is the singer trying to do with his song?. Write a few short sentences to explain. **He is shaming the authorities into recognizing the need for a better transport policy where the busses are regulated (how many people can safely be transported), their speed,**	

	their roadworthiness. *Answer should reflect the understanding to gain full marks but must not be in exact words.*	[2 points] [TW36]
6)	The author writes: '**Despite their dangers and discomfort, the busses have one compensation – their entertainment value'.** What are two experiences on the buses that the writer sees as entertaining? **Those who tell jokes** **Those who sell products on the busses** **The religious evangelists** **These pieces of evidence are found in the text and can be cited directly** *Each answer qualifies for a point*	[2 points] Partial Scoring [TW37]

Exercise 3

(A) Scoring rules: Partial Credit

			For research use only
	Students in a Primary 3 class in Nigeria were given 100 words to read. The table below shows the results.		

Name	Sex	Number of words read correctly out of 100
Bolaji	M	0
Yusuf	M	0
Fagbemi	M	20
Ahmed	M	6
Alfolabi	M	5
Olu	M	13
Mustafa	M	0
Raufu	M	26
James	M	21
Omar	M	52
Mary	F	13
Janet	F	0
Aisha	F	53
Lami	F	0
Amina	F	15
Linda	F	44
Agnes	F	0
Laraba	F	0
Saratu	F	22
Maria	F	0

1)

Using the information in the table above to complete the following table:

	Reading 0	Reading 1-21 words	Reading 22-42 words	Reading more than 43 words
Boys	3	5	1	1
Girls	5	2	1	2

[4 points] {for every mistake reduce one point until zero, there are no negative scores)

[TW38]

(B) Scoring rules: Partial credit

			For research use only
1)	The table below shows the average results over three school terms (1 year) of a reading assessment for 20 primary 3 students in a school in Nigeria. Students were given 100 words to read.		

	Term 1	**Term 2**	**Term 3**
Boys	12.3	35.0	42.1
Girls	6.4	39.1	57.9

Using the scores in the table, draw a **line graph** that shows the reading progress in percentages, of girls and boys for the school year.

Scoring:

2   *lines roughly correspond with the axes and showing increase - 1 mark*
2   *lines broadly following the key provided i.e Dotted line for boys and solid line for girls – 1 mark*

[2 points] {for every mistake reduce one point until zero, there are no negative scores)

[TW39]

2)	Remark on the progress that girls have made over the year, compared to that of boys. Please write 4-5 sentences.
	
	One sentence on progress of girls – 1 mark
	
	   e.g The score for girls is improving from term to term, by six times in term 2, etc
	
	One sentence on progress of boys – 1 mark
	
	   e.g The score for boys is improving from term to term, tripled in term 2, but slowed down in term 3, etc
	
	Progress of girls compared to that of boys – 2 marks maximum
	
	   e.g girls are improving faster than boys, at the end of the year girls performed better than boys, etc
		[4 points]
		
		[TW40]

(C) Scoring rules: Partial Credit

|		For research use only
	Students in a primary 4 class are learning how to write a friendly letter. They were asked to write a letter to a friend to tell them about their school. Below are three examples of students' work. Look at each example and write a short assessment, pointing out the strengths and weaknesses in each letter. Comment on the following: purpose, organisation, grammar, spelling and punctuation. Please write your assessment in full sentences (as you would if you were sharing these assessments with parents or the head teacher).	
1)	Dear Kelvin My frend's name is caLLed Kelvin He Live in Machakos town I Love himHellow Kelvin pLease I have party come When you come we will eat my party very niceLy and happiLy I have very nice cakes fruts at home an very nice juice and many thing that we can eat at party I Love you my frend Kelvin. HeLLo Kelvin my name is Kelvin. My sister have birthday party pLease come we celebrate his party I have very good party. Kelvin Write your assessment of Kelvin's letter here. Please write 5-6 full sentences. The teacher is expected to comment the pupils answers in terms of the the following: 1 mark- Purpose of the letter – Write to a friend, talk about school 1 mark- Organisation – Clear paragraphs are provided and sentences within paragraphs are well organized, salutation and address 1 mark- Grammar – Structure of individual sentences 1 mark- Spelling – Of various words, common or uncommon 1 mark- Punctuation- Use of capitals, full stops, between and within sentence punctuation *The marker is expected to scan through the teachers comments and allot one point each in terms of the teacher's comments on the above. Note that you are marking the teachers comments not the actual letter that the student wrote.*	[5 points] [TW41]

2)	Dear Topister I hope you are fine where you are now. I want to tell you about our school. Our school is very clean. It has four offices. I want you to know our headteacher. The first office is for the headteacher Mr. Njoroge. He is a very nice man. The second office is for Mrs. Joyce. Mrs Joyce is the deputy head teacher. The third office is for the Senoir teacher. Our Senoir teacher is Mrs Kilui. Mrs Kilui is very nice and kind. We enJoy Leaning in our school, And our school has a secretary. Our secretary is Mrs Nekesa. She types letters. I think you will be happy to know about our school. Yours faithfuLLy From your Loving Friend Susan	[5 points]

Write your assessment of Susan's letter here. Please write 5-6 full sentences.

The teacher is expected to comment the pupils answers in terms of the the following:

- 1 mark- Purpose of the letter – Write to a friend, talk about school
- 1 mark- Organisation – Clear paragraphs are provided and sentences within paragraphs are well organized, salutation and address
- 1 mark- Grammar – Structure of individual sentences
- 1 mark- Spelling – Of various words, common or uncommon
- 1 mark- Punctuation- Use of capitals, full stops, between and within sentence punctuation

[TW42]

The marker is expected to scan through the teachers comments and allot one point each in terms of the teacher's comments on the above. Note that you are marking the teachers comments not the actual letter that the student wrote.

3)	Dear Mohammed I hope you are fine. Where you are I want to tell that our school is very clean, everyday we sweep class. It has Trees flowers Offices Classes and flag. We have a Headmaster. Our Headmaster is called Mr Mwangala. We plant flower everday. We have a Deputy head teacher is Gladdys. We have desks. Senior teacher has her office. Head master has Office. Your friend John	[5 points]

Write your assessment of John's letter here. Please write 5-6 full sentences.

The teacher is expected to comment the pupils answers in terms of the the following:

- 1 mark- Purpose of the letter – Write to a friend, talk about school
- 1 mark- Organisation – Clear paragraphs are provided and sentences within paragraphs are well organized, salutation and

	address • 1 mark- Grammar – Structure of individual sentences • 1 mark- Spelling – Of various words, common or uncommon • 1 mark- Punctuation- Use of capitals, full stops, between and within sentence punctuation *The marker is expected to scan through the teachers comments and allot one point each in terms of the teacher's comments on the above. Note that you are marking the teachers comments not the actual letter that the student wrote.*	[TW43]
4)	Now write a model letter of your own that you can use to demonstrate to the students how to avoid the weaknesses that you have noticed and how to build on the strengths that you have seen in their work. Write your model letter here: *Note that now you are marking the teacher's letter and not the student. Please go through and allot one mark each for* • 1 mark- Purpose of the letter – Write to a friend, talk about school • 1 mark- Organisation – Clear paragraphs are provided and sentences within paragraphs are well organized, salutation and address • 1 mark- Grammar – Structure of individual sentences • 1 mark- Spelling – Of various words, common or uncommon • 1 mark- Punctuation- Use of capitals, full stops, between and within sentence punctuation	**[5 points]** [TW44]

Exercise 4

1. The pictures below show the life cycle of a butterfly. Label the illustrations and show

        (a) Larva
        (b) *Pupa*
        (c) *Adult*

Changes in animals

larva

Adult/butterfly
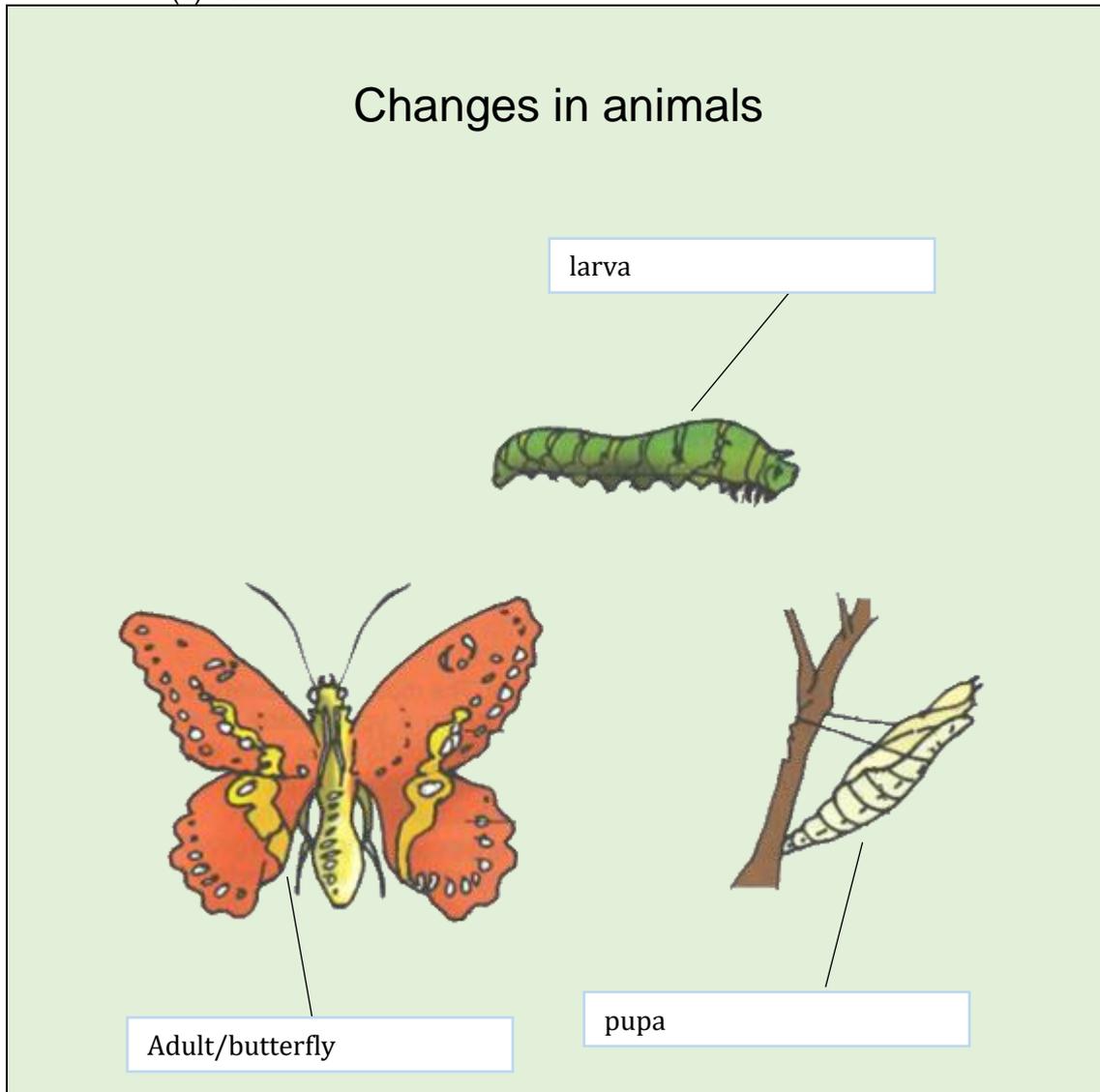
pupa

Shows larva	1 mark
	(tw45)
Shows pupa	1 mark
	(tw46)

Shows adult	☐ 1 mark **(tw47)**

Total score: 3 marks

2. Now label the following parts on the adult:

    (a) antenna
    (b) forewing
    (c) hindwing
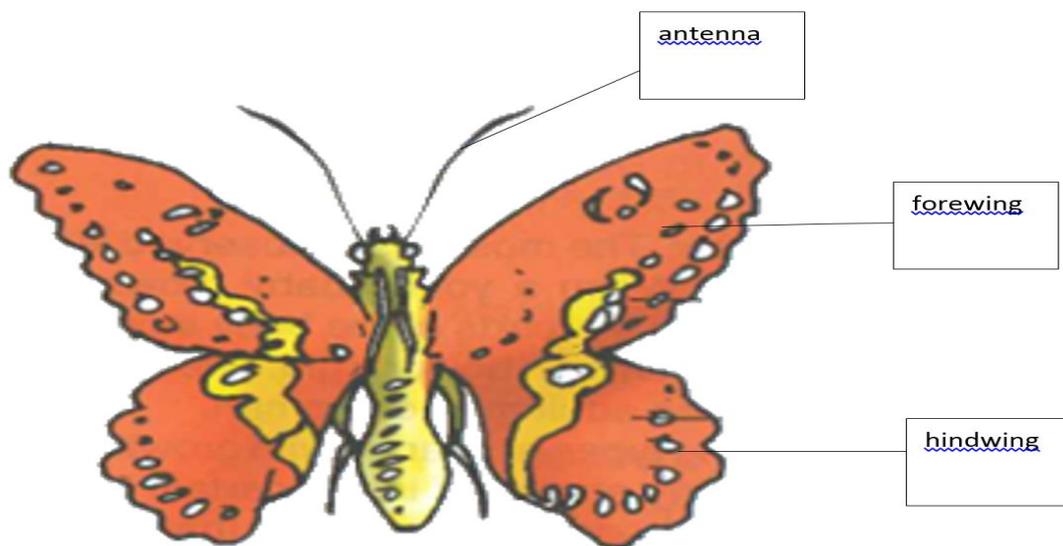
Shows antenna	☐ 1 mark **(tw48)**
Shows forewing	☐ 1 mark **(tw49)**
Shows hindwing	☐ 1 mark **(tw50)**

Total score: 3 marks

3. The worksheet below is for teaching about weather. The four pictures tell you something about weather conditions. Label the pictures to describe the weather conditions. The first one has been done for you.
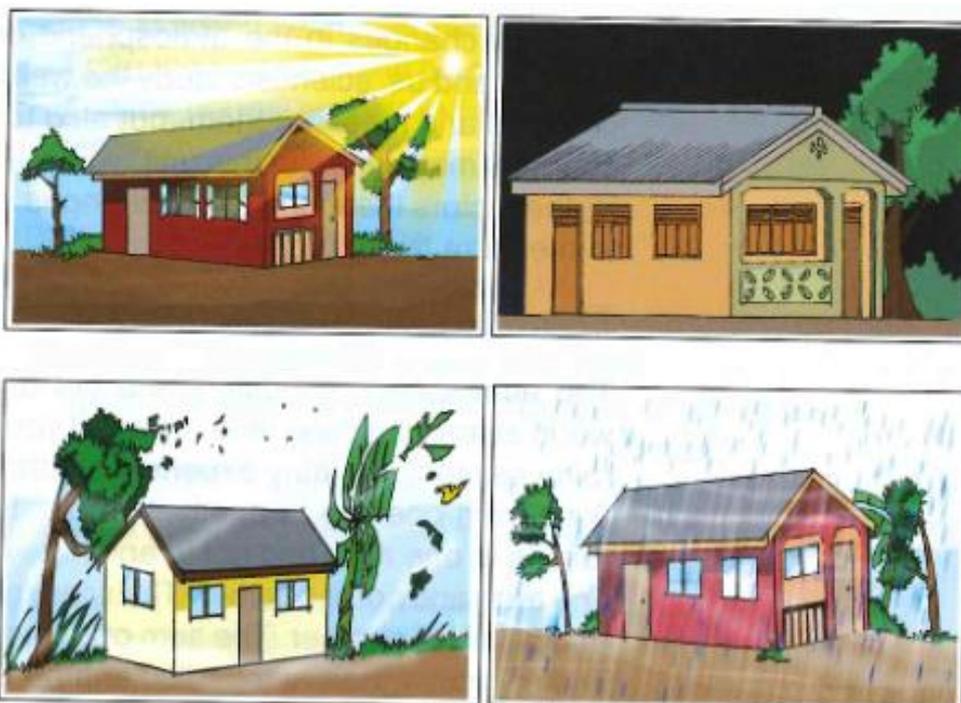
b) It is night / evening. The weather is cool	☐ **1 mark** (tw51)
c) It is windy / the wind is blowing. The weather is cool / cold	☐ **1 mark** (tw52)
d) It is raining. The weather is cool / cold	☐ **1 mark** (tw53)

Either a word/phrase/sentence is acceptable for one point. Answer can be either one or both sentences provided.

Total score: 3 marks

4. The worksheet below is for teaching about the human digestive system. Label each part of the picture that has a line pointing to it.

a. mouth

b. gullet/oesophagus

c. stomach

d. Small intestine

d. Large intestine

e. anus
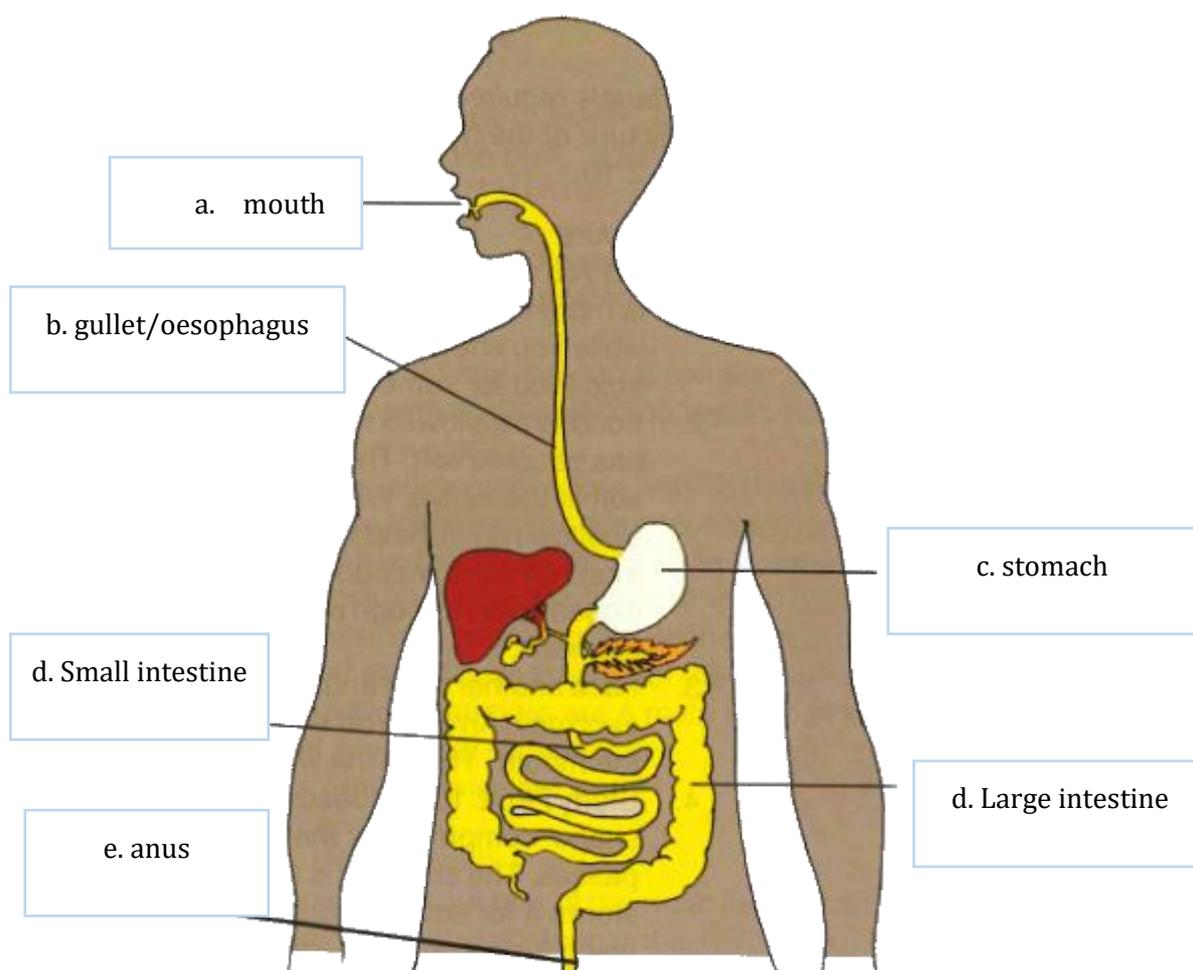
a. Mouth	☐ 0.5 mark (tw54)
b. Gullet/ Oesophagus	☐ 0.5 mark (tw55)
c. Stomach	☐ 0.5 mark (tw56)
d. Small Intestine	☐ 0.5 mark (tw57)
e. Large Intestine	☐ 0.5 mark (tw58)
f. Anus	☐ 0.5 mark (tw59)

Minor spelling mistakes can be permitted as long as the answer is clear

Total score: 3 marks

5. In the space below, explain what happens to food when you eat it.

Give a mark for any of the following statements. If two statements are in the wrong order, give a mark for only one of them.

food is chewed in the mouth	☐ **0.5 mark**
food mixes with saliva	☐ **0.5 mark**
food is swallowed and passes through the gullet	☐ **0.5 mark**
it passes into the stomach	☐ **0.5 mark**
the food is broken down in the stomach	☐ **0.5 mark**
the food is broken down by enzymes	☐ **0.5 mark**
the broken down food is passed through the small intestine	☐ **0.5 mark**
the body takes the nutrient it needs	☐ **0.5 mark**
waste is passed through the large intestine	☐ **0.5 mark**
waste is passed out of the anus	☐ **0.5 mark**

Total score: 5 marks (tw60)

6. A rain gauge can be used to measure rainfall. The worksheet below will explain how to make a rain gauge and use it to measure rainfall. Complete the instructions.
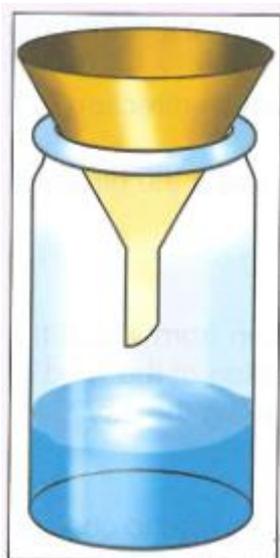
To make a rain guage, **a) Take a bottle and insert a funnel inside it**	☐ **1 mark (tw61)**
When it rains: b) **Place the rain guage (bottle and inserted funnel) outside on the floor/ground**	☐ **1 mark (tw62)**
After it has rained, we can measure the rainfall by c) **Take out the funnel. Measure the amount of water in the bottle by placing the wooden ruler inside the bottle.**	☐ **1 mark (tw63)**

Total score: 3 marks

7. The worksheet below explains how we can measure the volume of an object by placing it in water. Complete diagram (b) and label it.
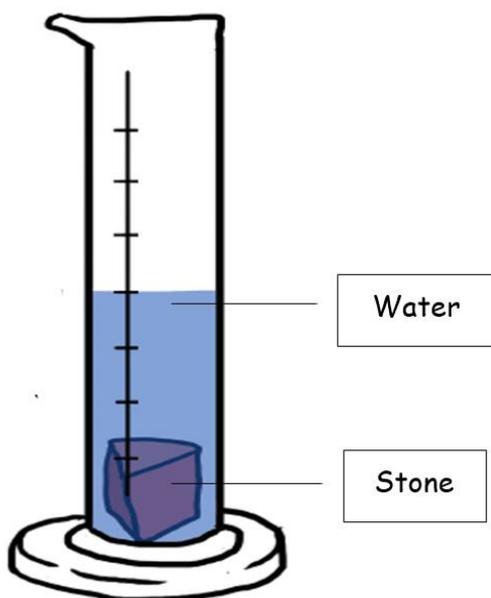
Water

Stone

Draws the correct picture (showing object and water at higher level)	☐ 0.5 mark
Correctly labels stone and water	☐ 0.5 mark

Total score: 1 mark (tw67)

8. Fill in the blanks to explain the experiment.

    a) To measure the volume of an object, 3 marks (tw64)

1. **Pour water into a beaker.**	☐ **0.5 mark**
2. **Look at beaker and record water level**	☐ **0.5 mark**
3. **Tie thread around a small stone and gently lower stone into water**	☐ **0.5 mark**
4. **Look at water level again and record it**	☐ **0.5 mark**
5. **Subtract water level in 2) from water level in 4) to find the volume of the stone**	☐ **1 mark**

The water level will **b) rise**	☐1 mark (tw65)
Because **c) we have added a stone/object.**	☐1 mark (tw66)

Total score: 5 marks

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9. The pictures in the worksheet below are designed to show **evaporation**. Write an explanation of what evaporation is.

*Mark any of the following answers or variation as correct as long as the meaning of the sentence is correct.*

Evaporation means that water disappears **Evaporation is the process by which water/liquid is converted to vapour/gas**	☐ **1 mark (tw68)**

10. Use the pictures to explain different rates of evaporation

   (a)   *(b)*
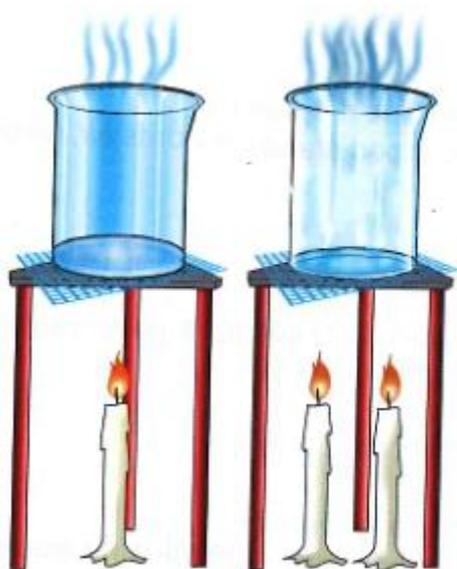
The water will evaporate more quickly in picture (b)	☐ **1 mark (tw69)**
The water heats up more quickly in picture (b)	☐ **1 mark (tw70)**

Total score: 3 marks

11. The worksheet below has a table with 7 different forms of energy and the sources of that energy. Complete the table.

Any one of the answers provided should be marked correct for one point. Each question (a) through (h) carries 0.5 points

Energy		For Research Use only
		11a) [TW71]
		11b) [TW72]

Form of energy	Source of energy	
Heat	Sun, fire	
a) **chemical**	Food	**11c)** [TW73]
Sound	b) **Musical instruments, human voice, thunder**	**11d)** [TW74]
c)	d)	**11e)** [TW75]
e)	f)	
g)	h)	**11f)** [TW76]
Solar	Sun	**11g)** [TW77]
		11h) [TW78]

c) d) e) f) g) h) could be any of the following combinations

Form of energy	Source of energy
Light	**sun, torch, fire**
Kinetic / mechanical	**moving objects, human body, wind, tide**
Gravitational / potential	**raised objects**
Electric / Electrical	**Electricity, electric charges, batteries**
Magnetic	**Magnets, electromagnets**
Nuclear	**atoms**
Elastic potential	**stretched or squashed objects, catapult, elastic, rubber**

Total score: 4 marks

Total score: 33 marks