Ministry of Education, Youth & Information

Primary Exit Profile
Bringing Abilities to Light

STUDENT CAMP 2021

ABILITY ASSESSMENT

BOOKLET 3

PREPARED BY CURRICULUM UNIT, MoEYI

INTRODUCTION

Dear Students,

The Curriculum Unit of the MoEYI welcomes the opportunity to help you prepare for your final examination, the PEP Ability Test. We know that you have been facing some difficult times, but also that your faith in God has been keeping you strong. For some persons, doing a test is like doing a puzzle that is fun, but for others, it is a time of discomfort due to troubling emotions. Despite these differences, there is so much you can learn about yourself and about life from doing a test! So be encouraged as you are not alone and there are many persons waiting to support you because they, like us, want you all to taste the pleasure that comes with learning success.

This assessment booklet was designed to help you to succeed. It contains different kinds of tasks that will help you decide how ready you are and what you need to do to excel. The tasks will also require you to integrate the skills you have developed and the understandings you have gained from learning about different aspects of life through the various time-tabled subjects, the co-curricular activities and also from using what you have been taught in your everyday living. To benefit from each activity, remember to reflect on what you know, remain focused and optimistic and visualize yourself persevering to reach your goal. Above all, do your BEST by bringing every relevant strategy and technique you know to unravel the secret code that each test item tries to hide. If you are baffled by any item, treat the experience as a message that is pointing you to seek help from other sources of ideas.

As you learn and make progress towards achieving your goals, share new insights with members of your learning circle – family, friends, and faithful teachers/mentors.

So get ready, knowing that we are looking forward to hearing your story of VICTORY!

TIPS FOR PARENTS

General Note:

These booklets are developed by the Core Curriculum Unit of the Ministry of Education, Youth and Information (MoEYI) to support your child/ward in developing key skills for the upcoming PEP Ability Test. The Unit has tried to make the booklets as simple and user- friendly as possible so that your child will be able to work through most of the tasks independently. However, your role may become important at different points based on the ability of your child. Some tips are set out below for you:

- ✓ Schedule time slots for your child/ward to review/ revise work in the booklet. If the child also has online classes, you will need to carefully help him/ her to balance his/ her time.
- ✓ Give your child breaks between activities. Do not crowd the child with too many tasks in one block. Allow time for play.
- ✓ Guide your child/ward in going through the steps/ processes as outlined in the given examples for each activity. Avoid short-cuts.
- ✓ Have your child explain their thinking behind selected responses.
- ✓ Use simple household chores and projects to further your child's learning, for example measuring the ingredients for baking, budgeting for shopping and so on
- ✓ Play a supportive role but allow your child/ward to do the work required.
- ✓ You may seek support from the child's teacher (or the National Parent Teachers Association – NPTA) where you are unable to assist the child on your own with some areas of the tasks.
- ✓ Expose your child to additional resources available through radio and television lessons and the learning kits provided by the MoEYI. Speak to your teacher/principal to access the schedule for the lessons and to access the kits.
- ✓ Praise your child's efforts. *Have fun while learning with your child!*

TIPS FOR TEACHERS

General Note:

These booklets are developed by the Core Curriculum Unit of the Ministry of Education, Youth and Information (MoEYI) to supplement the preparation of your students for the upcoming PEP Ability Test. Some tips on the role you may play are outlined below:

- ✓ Familiarize yourself with the booklet and try as far as possible to align it to your lessons.
- ✓ You may use this resource in addition to other resources that you are currently using.
- ✓ As often as is required the activities recommended in the booklet should be differentiated to meet the diverse needs of your students.
- ✓ You can use this booklet in your *Student Camp sessions* or for take home activities for students to complete.
- ✓ Encourage them to ask questions during class time about any aspect of the booklet that they may find difficult.
- ✓ Mark/Assess the work that students have done in the booklet and supply them with feedback.
- ✓ Allow for student feedback through self-assessment activities such as student learning portfolios and the use of success criteria
- ✓ You may access further support through your school's Supervisory Officers or the Curriculum Unit

How to Use This Booklet?

The Booklet provides a number of assessment tasks that can be strategically used in preparation for the PEP Ability Test examinations.

Test Categories

Review the Ability Test categories and the targeted skills being assessed.

Linking Skills

Review the skills requirement of the NSC and Ability Test mentioned in the Booklet and assess for areas of commonality.

Assessment Items

Use the different items to gauge student's level of preparation and develop targeted skills.

Reflective Journal

Complete the self-assessment activity at the end of each section to determine where further development would be needed.

PRIMARY EXIT PROFILE (PEP) ABILITY TEST

The PEP Ability Test is designed to assess the student's ability to reason and process information. The test covers two broad areas; quantitative reasoning and verbal reasoning.

Quantitative Reasoning targets understanding and application of basic mathematical concepts.

Verbal Reasoning focuses on analysing texts (words and phrases) to make determinations, make inferences and draw conclusions.

The categories under each area are shown in the diagram below.

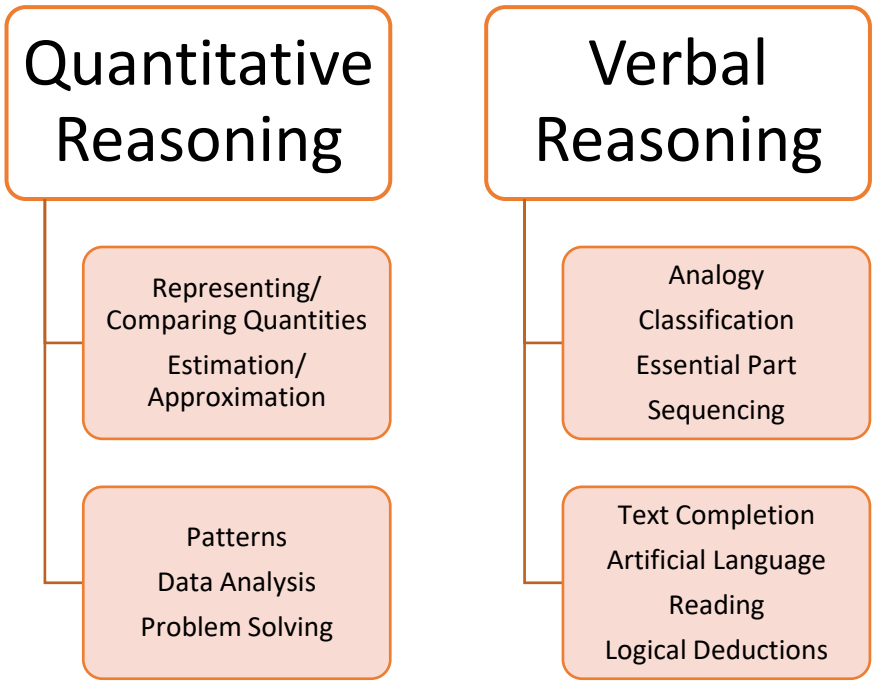


Figure 1: Ability Test Categories

ABILITY TEST CATEGORIES

The categories targeted in ***this*** booklet are explained below.

Classification – students are required to group various objects based on shared characteristics or relatedness, or being part of a whole.

Reading – students are required to read for meaning at the literal and inferential levels.

Logical Deductions – Given a conclusion, students are required to find a supporting premise OR given a set of premises, students are required to find a corresponding logical conclusion.

Patterns – students are required to identify, generate and describe patterns in a given sequence OR to complete/ extend a given sequence.

Data Analysis – students are required to sort data based on characteristics. Read, interpret and make inferences from data presented in tables and/ or graphs

Problem Solving – students are required to make sense of problems, reason abstractly and quantitatively and use mathematical models to interpret and solve problems.

Linking Skills in the Ability Test and the National Standards Curriculum

The Science National Standards Curriculum (NSC) seeks to develop the process skills and science and engineering practices outlined below. These skills are similar to the skills focus of the Ability Test.

The **Process skills** include**:**

- Observing
- Communicating
- Measuring
- Classifying
- Predicting
- Inferring
- Identifying and controlling variables
- Define operationally
- Formulating hypotheses
- Interpreting data
- Experimenting
- Creating models

The Science and Engineering practices, as identified by the Next Generation Science Standards (NGSS), are:

- Asking Questions or Defining Problems
- Developing and Using Models
- Planning and Carrying Out Investigations
- Analysing and Interpreting Data
- Using Mathematics and Computational Thinking
- Constructing Explanations or Designing Solutions
- Engaging in Argument From Evidence
- Obtaining, Evaluating, and Communicating Information

Emphasis on developing the skills component of the NSC Science Curriculum will therefore prepare students to successfully manage the PEP Ability Test.



I will know that I have learned when I can:

- ✓ Compare and classify items by placing them in correct groups
- ✓ Read to obtain information
- ✓ Make inferences after reading a passage
- ✓ Make logical deductions based on information given
- ✓ Use information to make calculations and solve problems
- ✓ Analyse and compare data in tables and graphs
- ✓ Identify patters in results
- ✓ Use patterns in results to make predictions
- ✓ Use data from investigations to draw conclusions

Verbal Reasoning

SECTION 1

Item #	1 - 3
Item type	Verbal Reasoning
Category	Classification
Targeted skills	Analyse, Compare, Classify

Question 1

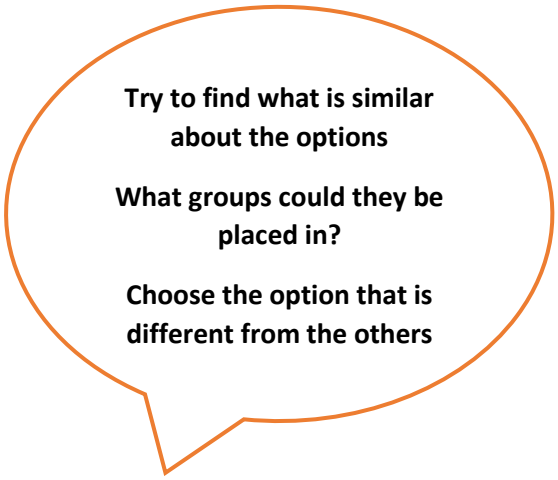
Which does **NOT** belong to the group?

A. Candle
B. Flashlight
C. Mirror
D. Sun

Question 2

Which is the **odd** one out?

A. Baking a cake
B. Boiling an egg
C. Frying a sausage
D. Melting some butter



Question 3

Which of the following does **NOT** belong in this group?

A. Corn
B. Kidney beans
C. Lentils
D. Peanut

Item #	4 and 5
Item type	Verbal reasoning
Category	Reading
Targeted skills	Make determinations and inferences

Reading Passage - Growing vegetables

Tomatoes and Peppers can be planted yearlong once sufficient moisture is available. The best method for planting these vegetables is by transplanting seedlings that were planted in seed trays or boxes. Tomatoes need lots of sun, rich loose soil and lots of water. The roots, not the leaves, must be watered. Tomato plants grow very tall so they need to be tied to a pole or be staked.

Use the information to answer the questions below.

Read carefully to obtain details

Question 4

Which statement gives the **best** conditions for growing tomatoes?

A. Tomatoes are planted by transplanting seedlings
B. Tomatoes can be planted all year long
C. Tomatoes grow very tall and need to be tied
D. Tomatoes need lots of sun and water

Question 5

A farmer uses a sprinkler system that sprays water high into the air to water his tomatoes.

Which statement **likely** explains why the farmer should stop this practice?

A. Tomatoes need rich loose soil
B. Only the leaves must be watered
C. Only the roots must be watered
D. Tomatoes need to be tied to a pole

Item #	6 and 7
Item type	Verbal reasoning
Category	Logical deductions
Targeted skills	Analyse, drawing conclusions

Question 6

All matter takes up space and has mass. All solids, liquids and gases are matter. Therefore, all gases _____.

A. cannot be seen and has mass
B. has mass and takes up space
C. can be seen and takes up space
D. has no mass and takes up space

Start by eliminating the statements that are way out

Look closely at the statements that remain

Choose the best ones that fit the information given

Question 7

Find the **TWO** statements below that together prove that:

Steven attends Science Club

1. Steven's school has Chess and Science clubs
2. Shana has Science Club with Jake
3. Steven's friend Jake attends Chess and Science clubs
4. Steven and Jake are in the same clubs
5. Jake's sister Shana attends Chess club with Steven

A. 1 and 2
B. 1 and 5
C. 2 and 3
D. 3 and 4

Item #	8
Item type	Verbal reasoning
Category	Logical deductions
Targeted skills	Analyse, drawing conclusions

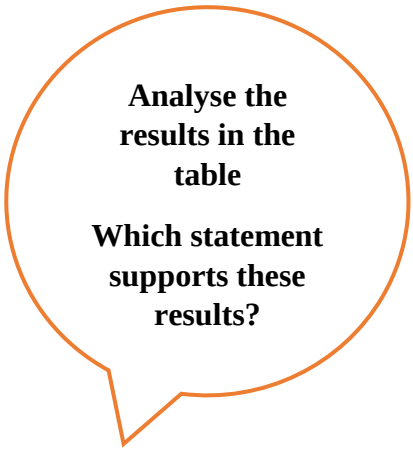
Question 8

A class investigated the growth of plants under different environmental conditions. The results were placed in the table below.

Group	Amount of light	Amount of water	After 2 weeks
1	Plenty	Little	Plants were small and brown
2	Plenty	Plenty	Plants were tall and green
3	Little	Plenty	Plants were very tall and pale yellow

Which statement is **most likely** true?

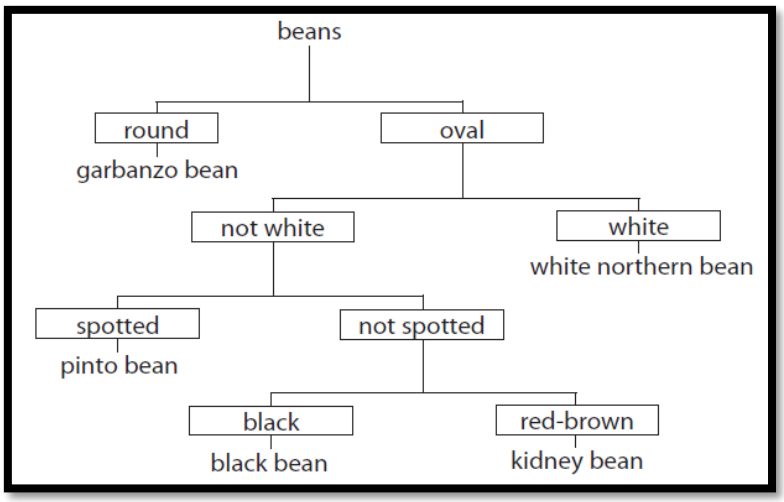
A. Plants grow best with plenty of light
B. Plants grow best with plenty of light and water
C. Plants grow best with plenty of water
D. Water and light do not affect plant growth



Item #	9
Item type	Verbal Reasoning
Category	Classification, Logical deductions
Targeted skills	Analyse, Classify

Question 9

The diagram below shows a key that is used to identify beans.



What is the **best** description of a pinto bean?

A. Oval and spotted
B. Oval and not spotted
C. Round and spotted
D. Round and not spotted

Analyse the diagram

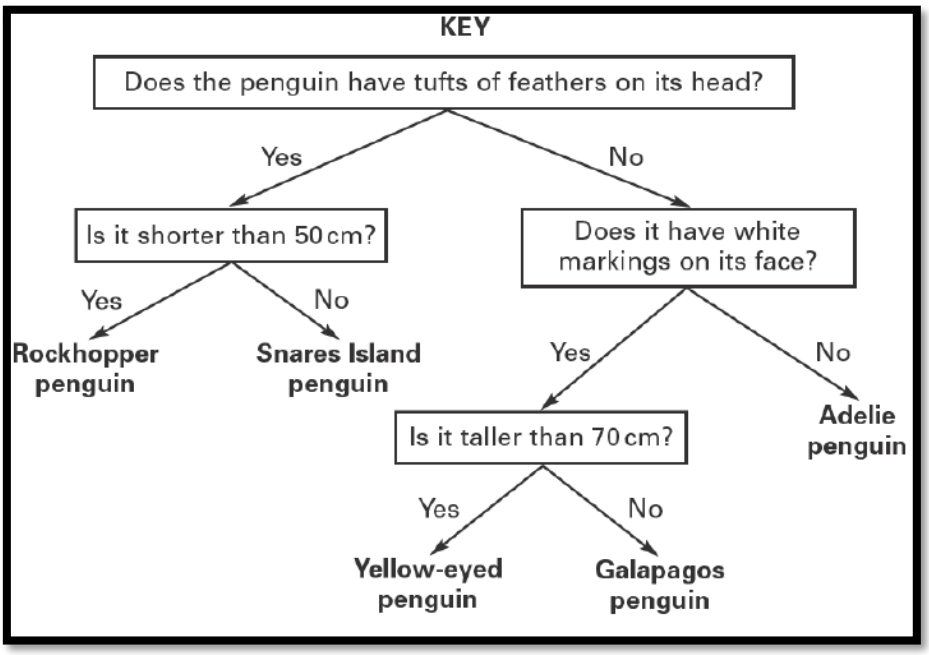
What characteristics can be identified?

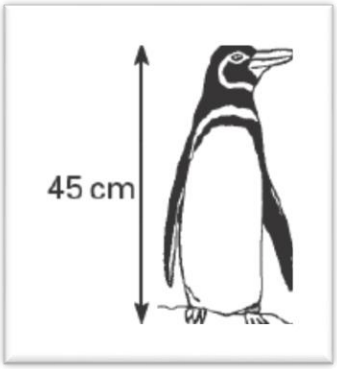
Which is the most suitable group?

Item #	10
Item type	Verbal Reasoning
Category	Classification, Logical deductions
Targeted skills	Analyse, Classify

Question 10

The diagram below shows a key used to identify penguins.





The penguin in the diagram is **best** described as a/ an _____

A. Yellow-eyed penguin
B. Rockhopper penguin
C. Galapagos penguin
D. Adelie penguin

Analyse the diagram

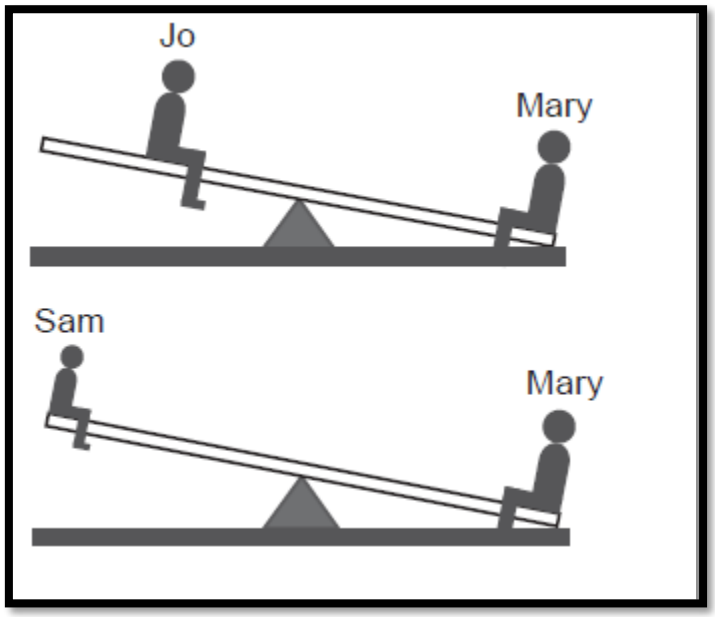
What characteristics can be identified?

Which is the most suitable group?

Item #	11
Item type	Verbal Reasoning
Category	Logical deductions
Targeted skills	Analyse, draw conclusions

Question 11

The diagram below shows some students on a See-Saw. Use it to answer item 11.



Which statement does the diagram **most likely** support?

A. Jo is heavier than Mary
B. Mary is the heaviest
C. Sam is the lightest
D. Sam is heavier than Mary

Analyse the diagram

Does the diagram support each statement?

Reflective Journal – Part 1

Challenge: Answer the questions below as honestly as you can. You can write answers in your journal or learning portfolio to share with your teacher.

What aspects of the task did you find **most** challenging?

_____
_____
_____

Which tasks were easy to complete?

_____
_____
_____

Which verbal reasoning category do you need further help with?

_____
_____
_____

Self-Check: Tick (✓) to show what you can do

I can	Yes 	Not sure 	Not yet 
Compare and classify objects by placing them in correct groups			
Read to obtain information			
Make inferences after reading a passage			
Make logical deductions based on information given			

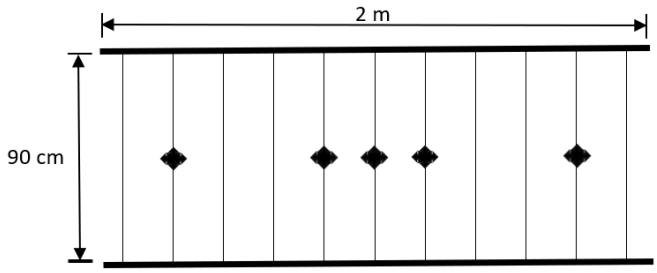
Quantitative Reasoning

SECTION 2

Item #	12 and 13
Item type	Quantitative reasoning
Category	Problem solving
Targeted skills	Analyse and interpret data, solve problems

Scenario

Use the information below to answer items 12 and 13.



The diagram above shows the design of a handrail for a length of walkway for a school located 400 metres from the beach. The horizontal bars each measure 2 metres, the vertical bars each measure 90 cm and the handrail is designed with 5 decorative stars.

Question 12

A student wants to use the same design to cover 6 metres.
How many decorative stars would he need for the handrail?

A. 5
B. 10
C. 30
D. 15

Use the information given in the question

Make calculations

Question 13

What is the total length of horizontal bars needed to make the 6-metre handrail?

A. 6 metres
B. 12 metres
C. 18 metres
D. 24 metres

Item #	14 - 16
Item type	Quantitative reasoning
Category	Logical deductions
Targeted skills	Analyse and interpret data, drawing conclusions

The label below shows nutrition facts about a container of Macaroni and Cheese Pie. Use the information to answer items 14 and 15.

SHAQ'S MACARONI AND CHEESE PIE

NUTRITION FACTS
Serving Size 1/2 cup (228 g)
Servings Per Container: 3

AMOUNT PER SERVING
Calories 240 Calories from Fat 110

	% Daily value
Total Fat 10 g	16%
Saturated Fat	15%
Trans Fat	1%
Cholesterol	30%
Sodium	15%
Total Carbohydrate	24%
Protein 10 g	
Vitamin A Vitamin C	2 % 3 %

Cholesterol	2000	2500
Total Carbohydrates	300 g	375 g

Question 14

Merrick ate three servings of the Macaroni and Cheese Pie.
What percentage of the daily value for total fat did he eat?

Analyse the data given on the label

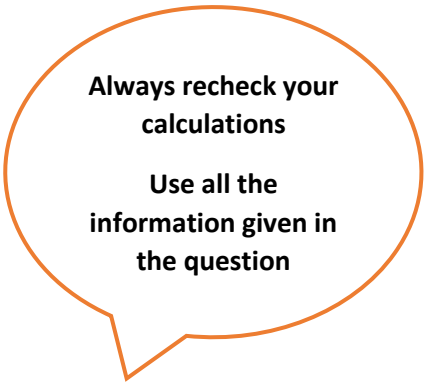
Use this to answer the question

A. 10
B. 16
C. 30
D. 48

Question 15

How many calories did Merrick consume?

A. 240
B. 720
C. 228
D. 110



Question 16

A seed box had twelve tomato seeds planted. Some of the tomato plants did not germinate. If nine plants germinated.

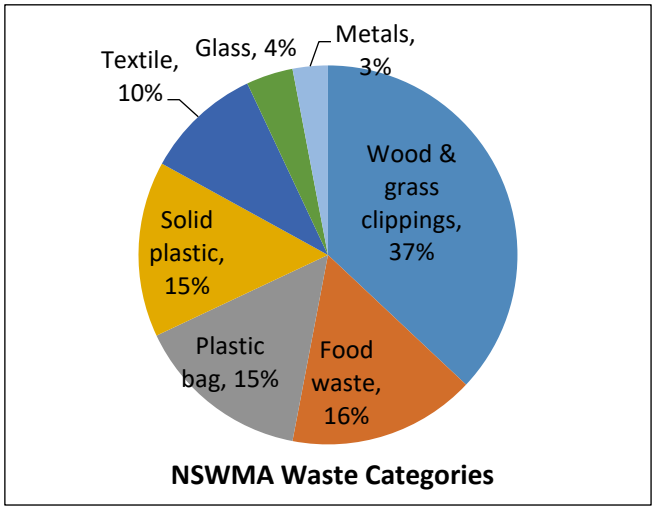
What percentage of the plants did **not** germinate?

A. 3%
B. 25%
C. 33%
D. 75%

Item #	17
Item type	Quantitative Reasoning
Category	Data Analysis, Comparing quantities
Targeted skills	Analyse and interpret data, compare

Question 17

The pie chart below shows the categories of waste collected from Jamaican households.



The National Solid Waste Management Authority (NSWMA) has suggested that portions of the waste that can decompose should be composted.

What percentage of the waste should be composted?

A. 16%
B. 37%
C. 53%
D. 47%

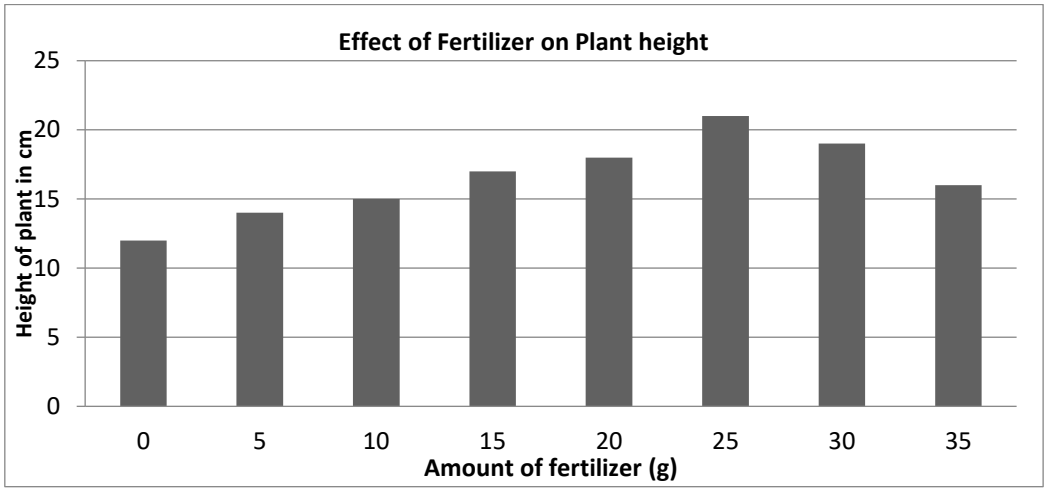
Use data in the graph

Recheck your calculations

Item #	18
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 18

A student conducted an investigation on the effect of fertilizer on the height of red peas grown over a period of 4 weeks. The student's results were placed on the chart below.



Choose the letter to show whether the following statements are **supported** or **not supported** based on the results of the investigation.

	Statements	Supported	Not Supported
1	Plant height is **not** affected by the amount of fertilizer	**A**	**B**
2	Increasing the amount of fertilizer will always increase plant height	**A**	**B**
3	Fertilizer amounts over 25 grams will reduce plant growth	**A**	**B**

Look at each statement carefully

Is the statement supported by the graph?

Item #	19
Item type	Quantitative Reasoning
Category	Data Analysis, Patterns
Targeted skills	Analyse and interpret data, predict

Question 19

The body temperatures of different animals in hot and cold environments are shown in the table below.

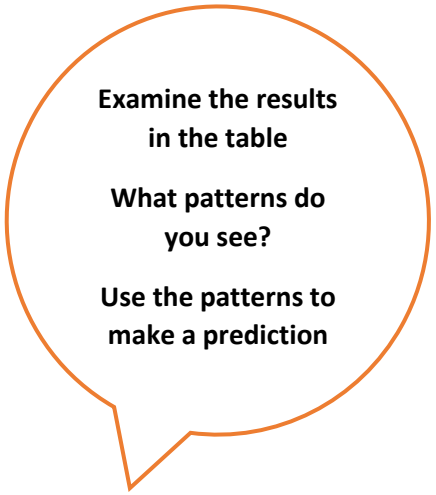
Table showing body temperatures of animals in different environments.

Name of Animal	Animal Body Temperature °C	
	Cold environment - 10°C	Hot environment - 30°C
Snake	10	30
Bobcat	38	39
Fish	10	30
Rat	38	38

A student placed a snake and a rat in an environment at 25°C.

Which body temperatures are they **most** likely to have after a few days?

A. Snake 20 °C and Rat 25 °C
B. Snake 25 °C and Rat 38 °C
C. Snake 37 °C and Rat 25 °C
D. Snake 38 °C and Rat 38 °C



Item #	20
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 20

A student measured the time it takes for water to pass through different soil samples. The diagram of the experiment is shown below. The table shows the results of the student's investigation.

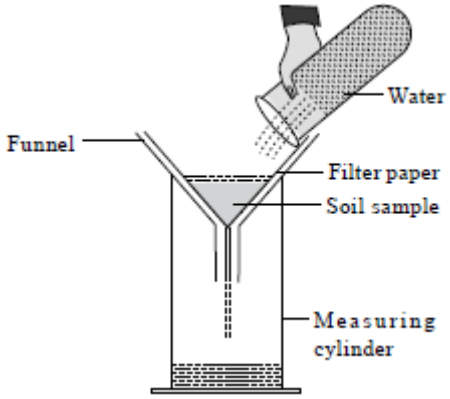


Table showing the volume of water and time taken for different soils

	Clay	Loam	Sand
Volume of water added to soil (cm^3)	30	30	30
Volume of water collected in cylinder (cm^3)	24	27	29
Time for water to pass through funnel (minutes)	5	2	1

Choose the letter that completes the conclusion below.

Water takes longer to pass through

A. Clay
B. Loam
C. Sand

soil.

A. Clay
B. Loam
C. Sand

soil has the **least** water-holding capacity of the soil samples.

Analyse the results in the table

Which soil held the most water?

How quickly did water pass through each soil?

Item #	21
Item type	Quantitative reasoning
Category	Patterns, Data Analysis
Targeted skills	Analyse and interpret data, identify patterns

Question 21

A student wants to find out how the temperature of the water affects the time it takes a sugar cube to dissolve in water.

- He does the experiment three times at four different temperatures
- He uses one sugar cube each time and the same volume of water.
- The results are shown in the table.

Table showing time taken for sugar cube to dissolve at different temperatures.

Temperature of water (°C)	Time (minutes)		
	Test 1	Test 2	Test 3
30	10	9	11
40	8	8	9
50	7	7	8
60	6	6	7

Which statement **best** describes the pattern of the results?

A. The more water used, the shorter the time taken
B. The higher the temperature, the longer the time taken
C. The more water used, the longer the time taken
D. The higher the temperature, the shorter the time taken

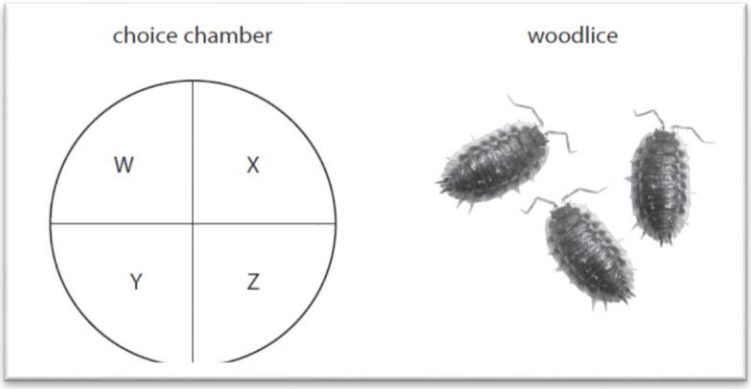
Look for patterns

Compare how quickly the sugar dissolved at different temperatures.

Item #	22
Item type	Quantitative reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 22

A class investigated the habitat preferred by woodlice. They set up a Choice Chamber with four sections W, X, Y and Z representing different habitats for the woodlice.



The class released 20 woodlice into the chamber and counted how many woodlice were in each section after five minutes. These are their results.

Section	Description	Number of woodlice
W	Dry and light	2
X	Damp and light	5
Y	Dry and dark	3
Z	Damp and dark	10

What conclusion can the class make from the results?

A. Woodlice prefer dark habitats
B. Woodlice prefer damp habitats
C. Woodlice prefer dry habitats
D. Woodlice prefer the light

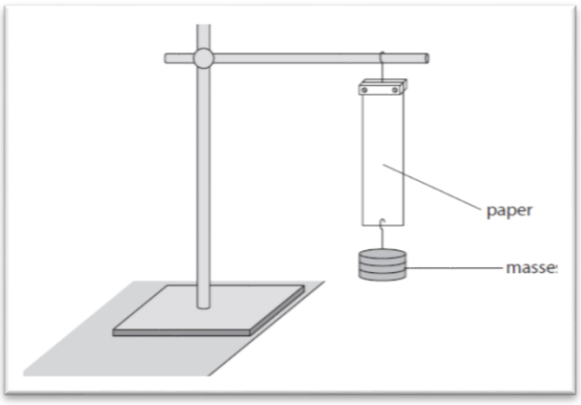
Compare the number of woodlice in each section

What is similar about the sections that had more woodlice?

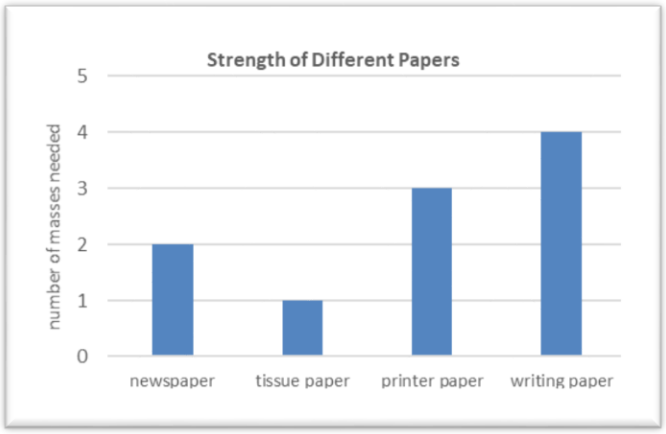
Item #	23
Item type	Quantitative reasoning
Category	Data Analysis, Comparing quantities
Targeted skills	Analyse and interpret data, compare, draw conclusions

Question 23

A student investigated the strength of different types of paper by hanging different masses on the paper until the paper tears.



The results are shown in the bar graph.



Which type of paper was the strongest?

A. Printer paper
B. Newspaper
C. Tissue paper
D. Writing paper

Analyse the information in the graph

Item #	24 and 25
Item type	Quantitative reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, predict, draw conclusions

A student investigates friction by pulling a block and recording the force needed using a forcemeter. The results are shown in the table. **Use the information to answer items 24 and 25.**

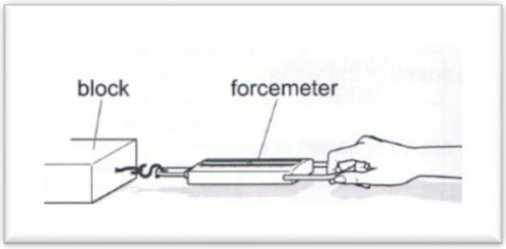


Table showing the force needed for different surfaces

Surface	Force needed (in Newtons)
Table top	2.5
Paper towel	2.8
Fine sand paper	3.0
Rough sand paper	3.3

Question 24

What is the conclusion for this investigation?

A. Force move objects on different surfaces
B. Force stops objects from moving
C. The rougher the surface, the greater the force needed
D. The smoother the surface, the greater the force needed

Analyse the information in the table

What pattern can you find?

Question 25

Oil is added to the table top. Which prediction will **likely** take place?

A. The force needed will be 2.0
B. The force needed will be 2.6
C. The force needed will be 3.1
D. The force needed will be 3.4

Item #	26
Item type	Quantitative reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 26

Some students were carrying out an investigation to determine the best material for soundproofing. These are the steps carried out.

They measured the sound level of an alarm from a phone in an open box. They then measured the sound level of the phone alarm in the following situations:

1. When the box was closed
2. When the box was packed with different materials and closed

The results are shown in the table below.

Where the phone alarm was placed?	Sound level in decibels (dB)
Open box	80
Closed box	70
Closed box packed with bubble wrap	40
Closed box packed with cotton	50
Closed box packed with fabric	55
Closed box packed with paper	60

Which material is **best** for soundproofing the box?

A. Bubble wrap
B. Cotton
C. Fabric
D. Paper

Analyse the results

Use the information to draw conclusions

Item #	27
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 27

A student wanted to determine which material could keep her soup warm for the longest time. She carried out the steps below.

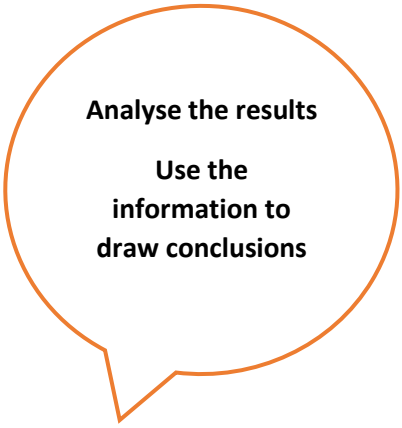
1. She placed the same amount of soup in cups made of different materials, A, B, C and D.
2. She measured the temperature of the soup in each cup at the beginning and at the end of 10 minutes.

The student obtained these results.

Material	Start Temperature/ °C	End Temperature/ °C
A	70	56
B	70	51
C	70	61
D	70	62

Which material is the **worst** insulator?

A. Material A
B. Material B
C. Material C
D. Material D



Item #	28
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Question 28

Mr. Smith wants to determine the best brand paper towels he should use in his kitchen to soak up water by carrying out an investigation. The number of pieces of paper towel used to soak up 150 ml of water in each case is given in the table.

Paper Towel	Number of pieces used
Brand A	8
Brand B	4
Brand C	6
Brand D	5

Which is the **best** brand paper towel for Mr Smith to use?

A. Brand A
B. Brand B
C. Brand C
D. Brand D



Item #	29
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

Adding baking soda (or powder) to vinegar in a bottle can create a rocket. A student wanted to find out how the amount of baking soda would affect the height of the rocket. The results are shown in the table below. Use the information to answer item 29.

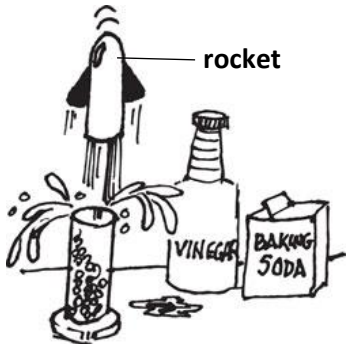


Table showing amount of baking soda and height of rocket formed

Teaspoons of baking soda	Rocket height/ cm
1	70
2	130
3	170
4	180

Analyse the information in the table

What pattern can you find?

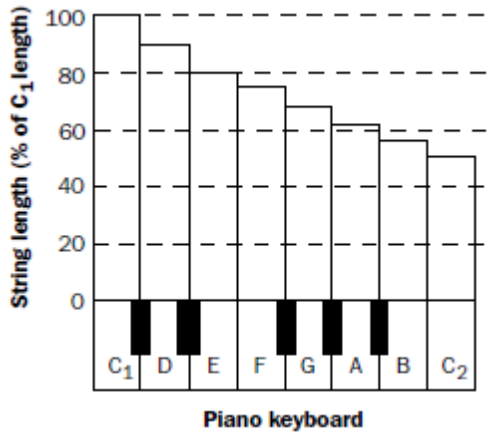
Question 29

What is a **likely** conclusion from his investigation?

A. As the amount of baking soda increased the rocket height increased
B. Baking soda reacts with bottled vinegar
C. If the amount of baking soda is increased then the rocket height will change
D. When baking soda and vinegar are mixed, a rocket is produced.

Item #	30
Item type	Quantitative Reasoning
Category	Data Analysis
Targeted skills	Analyse and interpret data, draw conclusions

The graph shows the length of some piano strings and the pitch of the sound they produce.



Piano Key	Pitch
C1	low
D	low
E, F	medium
G	medium
A, B	high
C2	high

Use the information above to answer the question.

Question 30

Which statement is **true**?

A. The piano key C_1 has the shortest string
B. The piano key C_2 has the longest string
C. The shorter the string, the higher the pitch of the sound
D. The longer the string, the higher the pitch of the sound

Look at all the information given

Check if each statement is supported by the information

Reflective Journal – Part 2

Challenge: Answer the questions below as honestly as you can. You can write answers in your journal or learning portfolio to share with your teacher.

What aspects of the task did you find **most** challenging?

_____
_____
_____

Which tasks were easy to complete?

_____
_____
_____

Which quantitative reasoning category do you need further help with?

_____
_____
_____

Self-Check: Tick (✓) to show what you can do

I can	Yes 	Not sure 	Not yet ☹
Use information to make calculations and solve problems			
Analyse and compare data in tables and graphs			
Identify patterns in results			
Use patterns in results to make predictions			
Use data from investigations to draw conclusions			

SOLUTIONS TO QUESTIONS

SECTION 3

Solution		
Question Number	**Answer**	**Comment/ Explanation**
1	**C. Mirror**	Mirror is not a source of light
2	**D. Melting some butter**	Other options are irreversible changes
3	**A. Corn**	Corn is not a legume
4	**D. Tomatoes need lots of sun and water**	
5	**C. Only the roots must be watered**	
6	**B. Has mass and takes up space**	
7	**D. 3 and 4**	
8	**B. Plants grow best with plenty of light and water**	Too little light causes leaves to be pale yellow
9	**A. Oval and spotted**	
10	**C. Galapagos penguin**	
11	**B. Mary is the heaviest**	
12	**D. 15**	Multiply 5*3 for 6-m length
13	**B. 12 metres**	Horizontal bar (at top and bottom) = 6*2
14	**D. 48**	1 serving = 16%; 3 servings = 3*16 = 48
15	**B. 720**	3 servings = 240*3
16	**B. 25%**	
17	**C. 53%**	Wood, grass and food can decompose
18	**1 B – Not supported** **2 B – Not supported** **3 A - Supported**	Above a certain value, too much fertilizer can reduce growth (damage plants)
19	**B. Snake 25 °C and Rat 38 °C**	
20	**Part 1 - A – Clay** **Part 2 - C - Sand**	Least water-holding capacity is sand as most water passed through sand.
21	**D. The higher the temperature, the shorter the time taken**	
22	**B. Woodlice prefer damp habitats**	Habitats that were damp had the most woodlice (even when there was light)
23	**D. Writing paper**	
24	**C. The rougher the surface, the greater the force needed**	Pattern seen in the roughness of the surface and force needed
25	**A. The force needed will be 2.0**	Oil would decrease the force needed on all surfaces
26	**A. Bubble wrap**	Best soundproofing would result in lowest decibels

27	**B. Material B**	
28	**B. Brand B**	Most absorbent paper would use less pieces
29	**A. As the amount of baking soda increased, the rocket height increased**	Conclusion is written at the end of an experiment hence option C is incorrect.
30	**C. The shorter the string, the higher the pitch of the sound**	