REACH ASSESSMENTS™   ICAS ASSESSMENTS™

PAPER D

PRACTICE QUESTIONS

Note: Some UNSW Global assessments are only available online.

Science

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

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1. The table gives information about rocks gathered on a beach.

Shape	Length (cm)	Colour
flat disc-like	6½	silver grey and black patches
egg-like	5	pinkish white with black glassy spots
rounded disc-like	4	glassy white
egg-like	3	white with black spots

Which two shapes describe the four rocks?

(A) round, spotty
(B) white, black
(C) disc, egg
(D) dull, glassy

For questions 2 and 3 use the information below.

Some students tested four white powders.

The table gives their results.

| Powder	Test			
	Do the powder and water form a clear mixture?	What colour does red cabbage juice turn when the powder is placed in it?	Do drops of white vinegar on the powder cause bubbles to form?	Do drops of yellow iodine turn black when placed on the powder?
corn flour	no	blue	no	yes
baking soda	yes	blue	yes	no
washing soda	yes	green	yes	no
epsom salt	yes	blue	no	no

The students constructed a flow chart to show how they distinguished between the four powders using some of the tests in the table.
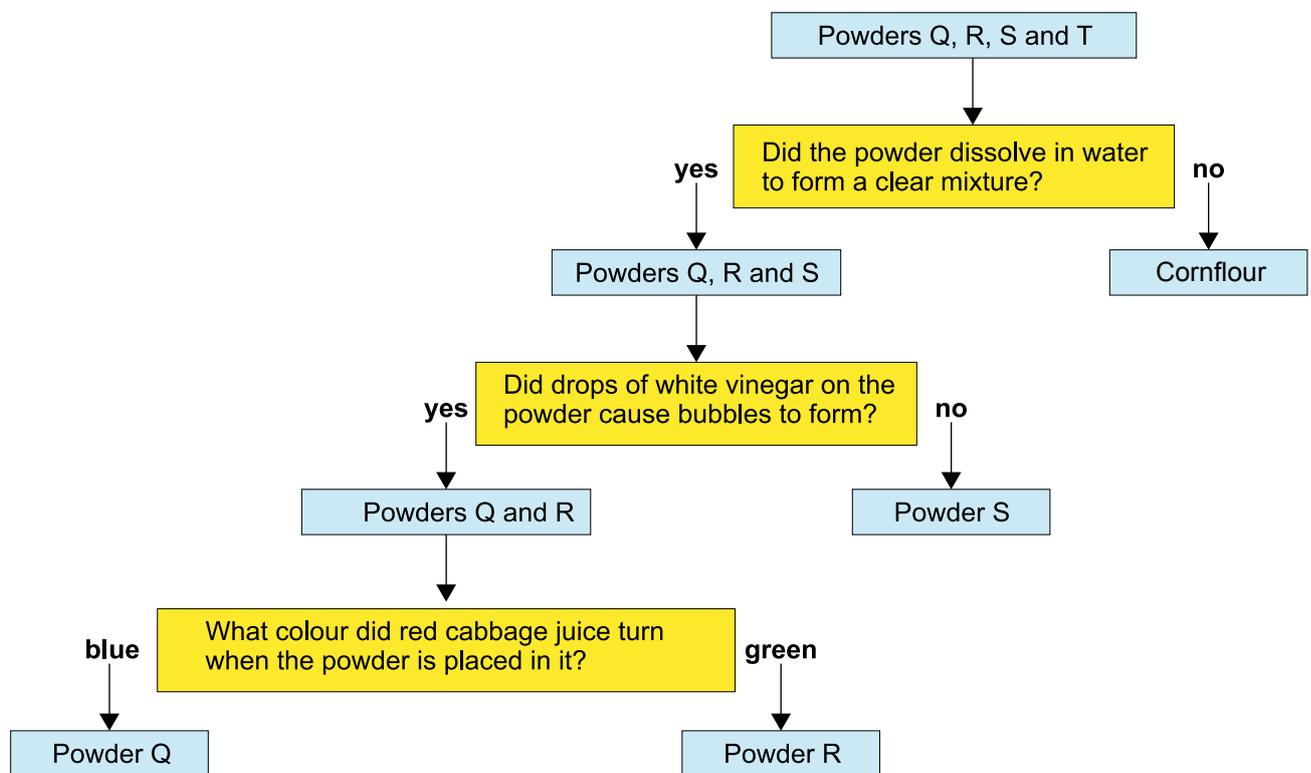

2. Which substance is powder S?

(A) cornflour
(B) baking soda
(C) washing soda
(D) epsom salt

3. The students did not use the test for identifying powders containing starch to make their flow chart. Which powder contained starch?

(A) Q   (B) R   (C) S   (D) T

4. The graph shows the average distance from the Sun and the average daytime temperature for some planets in the solar system.
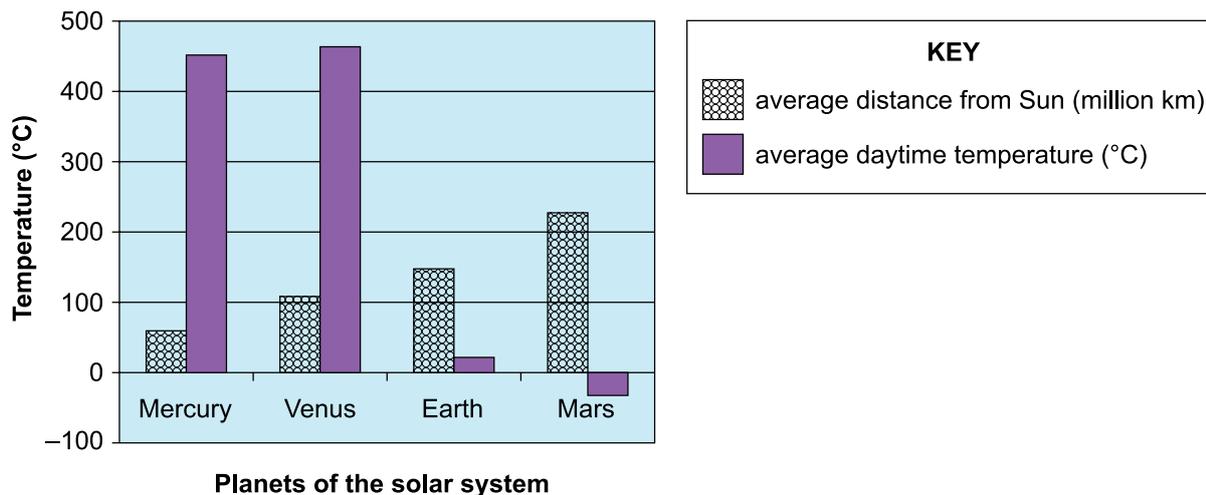

Generally, the further a planet is from the Sun, the colder its average daytime temperature will be.

According to the graph, which planet does not follow this trend?

(A)   Mercury
(B)   Venus
(C)   Earth
(D)   Mars

5. The diagrams below show the relationship between the numbers of producers and consumers in two food chains.
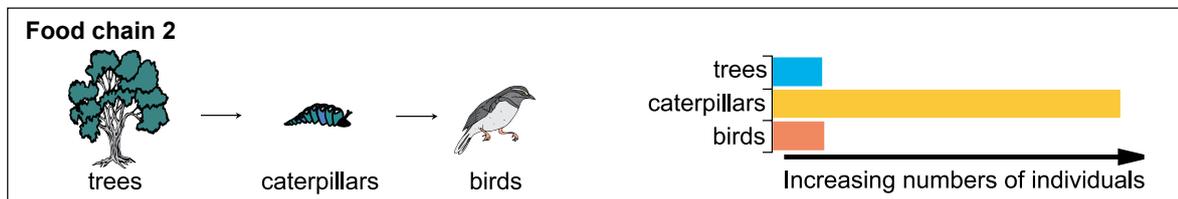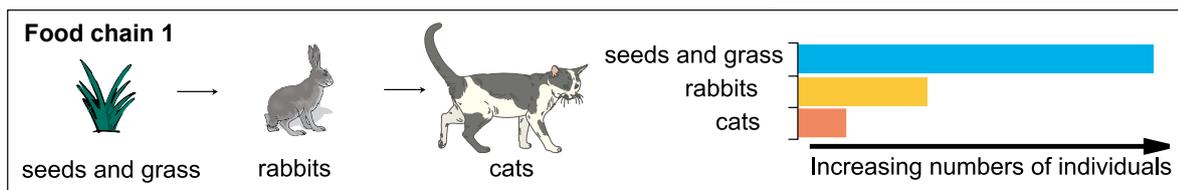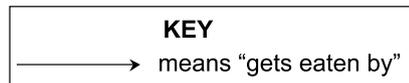
Which of the following statements is supported by the information above?

In a food chain

(A)   there are more primary consumers than there are secondary consumers.
(B)   there are more primary consumers than there are producers.
(C)   primary consumers are larger than secondary consumers.
(D)   primary consumers are usually insects that eat plants.

END OF PAPER

PAPER D S

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HOW TO FILL OUT THIS SHEET:

✏ USE A PENCIL

- Print your details clearly in the boxes provided.
- Make sure you fill in only <u>one</u> oval in each column.
- Rub out all mistakes completely.
- Do not use a coloured pencil or pen.

EXAMPLE 1: *Debbie Bach*

FIRST NAME | LAST NAME
D E B B I E | B A C H

EXAMPLE 2: *Chan Ai Beng*

FIRST NAME | LAST NAME
C H A N | A I B E N G

EXAMPLE 3: *Jamal bin Abas*

FIRST NAME | LAST NAME
J A M A L B I N | A B A S

FIRST NAME to appear on certificate

LAST NAME to appear on certificate

Are you male or female? ○ Male ○ Female

Does anyone in your home usually speak a language other than English? ○ Yes ○ No

School name: _____

Town / suburb: _____

Today's date: _____ / _____ / _____ **Postcode:** _____

DATE OF BIRTH

Day	Month	Year
0 0	0 0	0 0
1 1	1 1	1 1
2 2	2 2	2 2
3 3	3 3	3 3
4	4	4
5	5	5 5
6	6	6 6
7	7	7 7
8	8	8 8
9	9	9 9

STUDENT ID (optional)

0 0 0 0 0 0 0 0
1 1 1 1 1 1 1 1
2 2 2 2 2 2 2 2
3 3 3 3 3 3 3 3
4 4 4 4 4 4 4 4
5 5 5 5 5 5 5 5
6 6 6 6 6 6 6 6
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9 9 9 9 9 9 9 9

CLASS (optional)

A K
B L
C M
D N
E P
F P
G Q
H R
I S
J T

TO ANSWER THE QUESTIONS

Example:

Ari added cordial to water to make a jug of drink. What will be the volume of the drink in the jug?

(A)   50 mL
(B)   150 mL
(C)   200 mL
(D)   250 mL

mL 400
300
200
100

cordial

mL 100
50

water
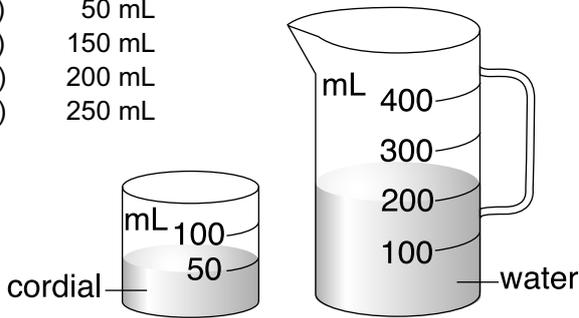
The answer is 250 mL, so you would fill in the oval Ⓓ, as shown.

Ⓐ   Ⓑ   Ⓒ   ⬤

USE A PENCIL
DO NOT USE A COLOURED PENCIL OR PEN

START

1 Ⓐ Ⓑ Ⓒ Ⓓ

2 Ⓐ Ⓑ Ⓒ Ⓓ

3 Ⓐ Ⓑ Ⓒ Ⓓ

4 Ⓐ Ⓑ Ⓒ Ⓓ

5 Ⓐ Ⓑ Ⓒ Ⓓ

SAMPLE

QUESTION	KEY	KEY REASONING	LEVEL OF DIFFICULTY
1	C	Some rocks are flat while others are rounded, but all are either disc-like or egg-like.	Easy
2	D	Start at the top of the flow chart and use information from the table. Of the four powders, only T (cornflour) does not form a clear mixture with water. Of the remaining three powders, only S (Epsom salts) does not bubble when white vinegar is added.	Medium
3	D	There are four tests; (1) mix with water, (2) mix with red cabbage juice, (3) mix with white vinegar and (4) mix with yellow iodine solution. Starting at the top of the chart, test 1 is performed, and then test 3 and finally test 2. This means that test 4 is the test that was not performed and so it must be the test that indicates the presence for starch. From the table, this last test indicated that cornflour is the only substance that contains starch. The next step is to identify which substance (Q, R, S or T) is cornflour. From the table, cornflour is the only substance that does not form a clear mixture with water. Start at the top of the flow chart. Of the four powders, only T does not form a clear mixture with water. Hence, powder T is cornflour and contains starch.	Medium/Hard
4	B	To answer the question, we have to ask the following: as the spotted graph goes up (increasing distance away from the Sun), does the purple graph (average daytime temperature) always go down? The average daytime temperature of Venus is higher (not lower) than Mercury's average daytime temperature even though it is further from the Sun. It should be noted that the daytime temperature of Mars is below Earth's daytime temperature.	Medium/Hard
5	A	In a food chain the producers are always plants. The graphs representing the two food chains show the number of individuals that are producers, primary consumers and secondary consumers. In food chain 1, there are more producers than consumers. In food chain 2, the size of the individuals matters more than the numbers of individuals. Because the trees are large and the caterpillars are small, few trees feed many caterpillars. However, in both food chains, there are more primary consumers than secondary consumers.	Hard

LEGEND

Level of difficulty refers to the expected level of difficulty for the question.

Easy   more than 70% of candidates will choose the correct option.

Medium   about 50–70% of candidates will choose the correct option.

Medium/Hard   about 30–50% of candidates will choose the correct option.

Hard   less than 30% of candidates will choose the correct option.

THE FOLLOWING YEAR LEVELS SHOULD SIT THIS PAPER	
Australia[1]	Year 6
Brunei	Primary 6
Egypt	Year 6
Hong Kong	Primary 6
Indian Subcontinent[2]	Class 6
Indonesia	Year 7
Malaysia	Standard 6
Middle East[3]	Class 6
New Zealand/ Pacific[4]	Year 7
Singapore	Primary 5
Southern Africa[5]	Grade 6

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