



**GAUTENG DEPARTMENT OF EDUCATION**  
**PROVINCIAL EXAMINATION**  
**JUNE 2018**  
**GRADE 6**

**NATURAL SCIENCES AND  
TECHNOLOGY**

<b>DISTRICT</b>	
<b>SCHOOL NAME</b>	
<b>EMIS NUMBER</b>	
<b>CLASS (e.g. 6A)</b>	
<b>SURNAME</b>	
<b>NAME</b>	

<b>GENDER:</b>	<b>BOY</b>		<b>GIRL</b>	
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**TIME: 1½ hours**

**MARKS 50:**

**9 pages**

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**NATURAL SCIENCES AND TECHNOLOGY**

**TIME: 1½ hours**

**MARKS: 50**

**INSTRUCTIONS**

- 1 Answer ALL three sections.
- 2 Write neatly and legibly.
- 3 Read the instructions of each question before answering.
- 4 All questions must be answered on the question paper.

**CONTENT OF THE QUESTION PAPER**

**STRANDS**

NATURAL SCIENCES	LIFE & LIVING , MATTER & MATERIALS
TECHNOLOGY	PROCESSING

- The question paper consists of **SECTION A**, **SECTION B** and **SECTION C**

<b>SECTION A : LOWER ORDER QUESTIONS / COGNITIVE LEVEL 1</b>	<b>SECTION B : MIDDLE ORDER QUESTIONS / COGNITIVE LEVELS (2 &amp; 3)</b>	<b>SECTION C : HIGHER ORDER QUESTIONS / COGNITIVE LEVELS (4,5 &amp; 6)</b>
Q 1 Photosynthesis. Nutrition. Nutrients in food groups. Food processing. Mixtures. processes to purify water.	Q 6 Solids, liquids and gases. Solutions as special mixtures. Food processing.	Q 8 Food processing.
Q 2 Solids, liquids and gases. Dissolving. Processes to purify water. Food processing.	Q 7 Solids, liquids and gases.	
Q 3 Photosynthesis. Nutrients in food groups. Nutrition. Ecosystems and food webs. Food Processing.		
Q 4 Nutrition. Nutrients in food groups.		
Q 5 Ecosystems and food webs.		
<b>Total=25</b>	<b>Total=18</b>	<b>Total=7</b>

## SECTION A

### QUESTION 1: MULTIPLE CHOICE QUESTIONS

Circle the letter of the correct answer.

- 1.1 Which substance in leaves absorbs sunlight and gives leaves their green colour? (1)
- A Chloroplast
  - B Photosynthesis
  - C Sunlight energy
  - D Chlorophyll
- 1.2 Which of the following substances prevents you from suffering from constipation? (1)
- A Fats
  - B Water and Fibre
  - C Oranges and lemons
  - D Salt
- 1.3 Which purification method is the best to kill any germs left in the water? (1)
- A Sieving
  - B Settlement
  - C Chlorination
  - D Filtering
- 1.4 Sand and Water is a mixture of ... (1)
- A solid and liquid.
  - B solid and gas.
  - C solid and solid.
  - D liquid and gas.
- 1.5 Which item below is an example of salting? (1)
- A Rice
  - B Biltong
  - C Fresh milk
  - D Dried maize
- (5)**

## QUESTION 2

Match the statements in Column A with the correct word in Column B. Write the correct LETTER in Column C next to the number.

Example: 2.6 Method used to separate rice and beans. **2.6=G** (Hand sorting)

COLUMN A		COLUMN B	COLUMN C
2.1	To use hands or tools to separate a mixture	<b>A</b> Processing	<b>2.1 =</b>
2.2	A mixture in which the different substances cannot be identified	<b>B</b> Saturated	<b>2.2 =</b>
2.3	When all germs and harmful substances in water have been removed	<b>C</b> Unsaturated	<b>2.3 =</b>
2.4	Changing food to make it more edible or last longer	<b>D</b> Physical	<b>2.4 =</b>
2.5	Solution in which more of the solute will dissolve in the solvent	<b>E</b> Purified	<b>2.5 =</b>
		<b>F</b> Solution	

(5)

## QUESTION 3

Provide the scientific name / term for each of the following statements.

Statement		Answer
3.1	An indicator that is used to test for the presence of starch	
3.2	Processing food in such a way to prevent or slow down the spoiling of the food	
3.3	An area covered by shallow water for most of the year	
3.4	Many food chains that are linked together	
3.5	Two or more substances that are mixed together	

(5)

**QUESTION 4**

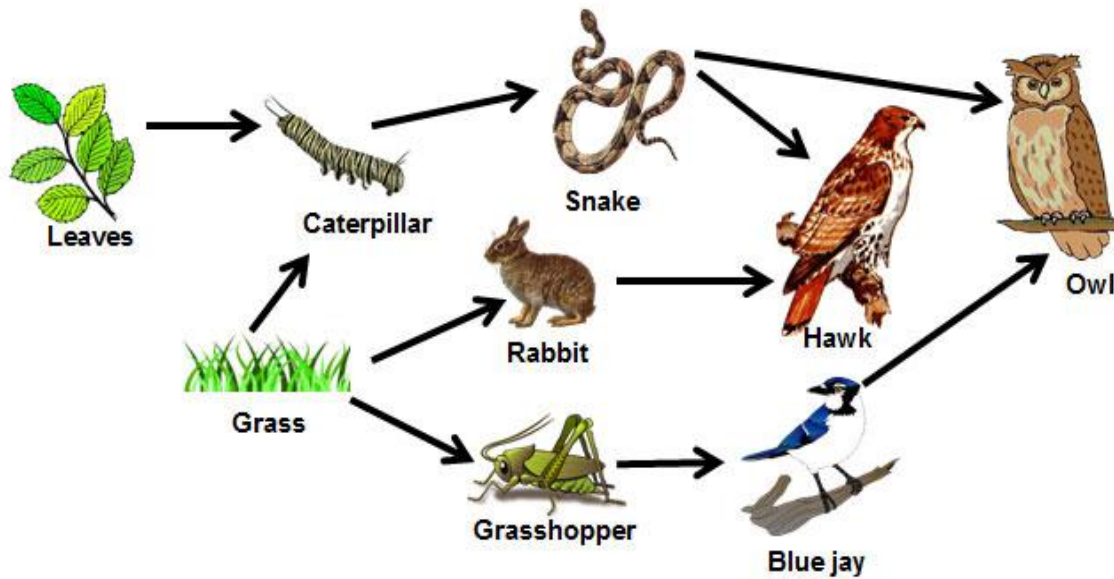
Study the pictures of the different types of food in the table and provide the name of the food group to which they belong.

Type of food	Food group
	4.1
	4.2
	4.3
	4.4
	4.5

(5)

### QUESTION 5

Study the food web below and answer the questions that follow.



5.1 What do we call grass and leaves in the food web? \_\_\_\_\_ (1)

5.2 Birds like “Hawks” and “Owls” are meat eaters, what do we call them?  
\_\_\_\_\_ (1)

5.3 Name ONE herbivore in the food web.  
\_\_\_\_\_ (1)

5.4 Write down ONE (1) food chain from the food web.

Producer	Primary consumer	Secondary consumer	Tertiary consumer

(2)  
(5)  
[25]

**SECTION B**

**UNDERSTANDING AND APPLYING SCIENCE AND TECHNOLOGY**

**QUESTION 6**

6.1 Explain the difference between *soluble* and *insoluble* substances.

\_\_\_\_\_ (2)

6.2 Explain what steps an obese person can follow to lose weight.

\_\_\_\_\_ (1)

6.3 How is *sieving* different from *filtering*?

\_\_\_\_\_ (2)

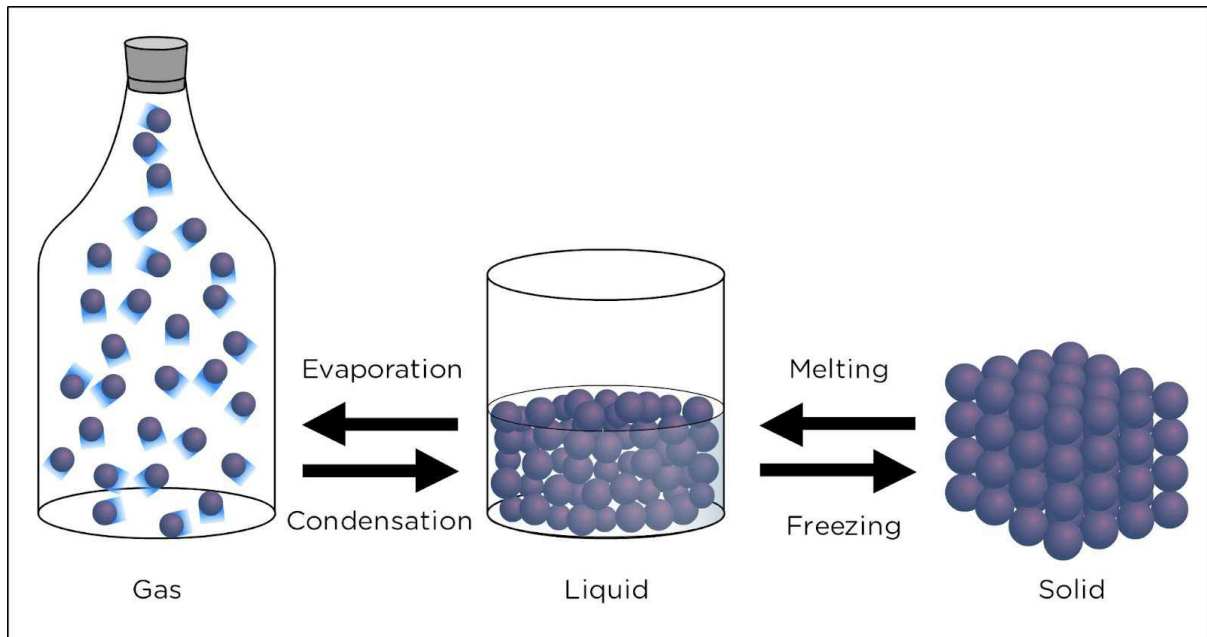
6.4 Arrange the following skills according to scientific processes used in Natural Sciences.

	<b>Skills not in the right order</b>	<b>Skills in the right order (USE LETTERS ONLY)</b>
A	<b>Draw a conclusion-</b> Determine whether your predictions were correct or incorrect.	STEP 1:
B	<b>Plan your investigation-</b> Decide on the materials, equipment as well as the method you will use.	STEP 2:
C	<b>Communicate your findings-</b> share your findings with others.	STEP 3:
D	<b>Evaluate your investigation-</b> Ask questions (What did I do well? What was not done well? How can I improve on it?)	STEP 4:
E	<b>Prediction-</b> Statements about what you guess the results will be	STEP 5:
F	<b>Record your findings-</b> Record your observation or results.	STEP 6:
G	<b>Conduct your investigation-</b> Follow the steps in your plan / method or instructions.	STEP 7:
H	<b>Investigate-</b> Ask questions of what you need to investigate / aim of the experiment.	STEP 8:
I	<b>Interpret data-</b> Say what your findings mean.	STEP 9:

(9)

### QUESTION 7

The following picture shows how the different phases of matter are related to each other. It also shows what the different state changes are called.



7.1 Compare the different states of matter. Complete the following table.

Process	Explain the process
7.1.1 Evaporation	
7.1.2 Melting	
7.1.3 Freezing	
7.1.4 Condensation	

(4)  
[18]



**SECTION C**

**QUESTION 8**

Complete the table below by giving reasons why we add other ingredients when preparing beef stew.

<b>Additives</b>		<b>Reasons for additives</b>
<b>Meat</b>		<b>Meat has protein and iron</b>
8.1	<b>Water</b>	
8.2	<b>Salt</b>	
8.3	<b>Potatoes</b>	
8.4	<b>Carrots</b>	
8.5	<b>Onions</b>	

**(5)**

8.6 Provide TWO (2) reasons why we process food.

8.6.1 \_\_\_\_\_

8.6.2 \_\_\_\_\_

**(2)**

**[7]**

**TOTAL: 50**

**END**