

Instructions:

- Number correctly.
 - Follow the mark allocation.
 - Rule a line after each section.
-

Section 1: Multiple choice

Choose the correct answer for each question. Write only the number and the letter. E.g. 1.1. E.

1.1. The atmosphere includes the:

- A) layers of gas surrounding the Earth.
- B) Earth's crust.
- C) oceans.
- D) underground water.

1.2. These animals are able to feed their young on milk from their mammary glands.

- A) Fish
- B) Amphibians
- C) Birds
- D) Mammals

1.3. A characteristic of this animal is that their bones are lightweight and usually hollow.

- A) Reptiles
- B) Amphibians
- C) Birds
- D) Mammals

1.4. A dicotyledonous plant is a plant with:

- A) One cotyledon
- B) Two cotyledons
- C) Three cotyledons
- D) Four cotyledons

1.5. Flowering plants are known as:

- A) Mosses
- B) Ferns
- C) Cone bearing plants
- D) Angiosperms

1.6. The municipality uses copper for electrical cabling because...

- A) ...it is a good conductor of electricity so it travels easily through the cables.
- B) ...it is cheap so the municipality does not lose too much money when it is stolen.
- C) ...it is an insulator of electricity so it travels easily through the cables.
- D) None of the above

1.7. Water has a boiling point of:

- A) 70°C
- B) 95°C
- C) 100°C
- D) 0°C

1.8. The method of separating a solution of different colours.

- A) Sorting
- B) Evaporation
- C) Chromatography
- D) Distillation

1.9. A substance that has a bitter taste and feels slippery is a/an:

- A) Base
- B) Acid
- C) Indicator
- D) None of the above

1.10. In the Periodic Table of Elements "H" represents:

- A) Helium
- B) Hydrogen
- C) Hassium
- D) Hafnium

Section 2: Terminology - Write the scientific term used to explain the following.
 Choose from the list of words provided below.

Excretion	boiling point	lithosphere	Classifying
non-metals	adaptations	reptiles	Mixture
Reproduction	Endoskeleton	texture	flexibility
pure substance	Biosphere	metals	Crustaceans

- 2.1. Grouping things according to their similar features.
- 2.2. Living things create similar copies of themselves.
- 2.3. Animals that have a hard outer skeleton and live in water.
- 2.4. Getting rid of waste products not needed by the body.
- 2.5. The ability for a material to bend easily.
- 2.6. Part of the Earth made up of all the rocks and soils on the Earth's crust.
- 2.7. Temperature at which liquids turn to gas.
- 2.8. A material which can be hammered into different shapes and is shiny.
- 2.9. Animals with a backbone.
- 2.10. A material made of only one kind of material (e.g. oxygen)

[½ x 10 = 5]

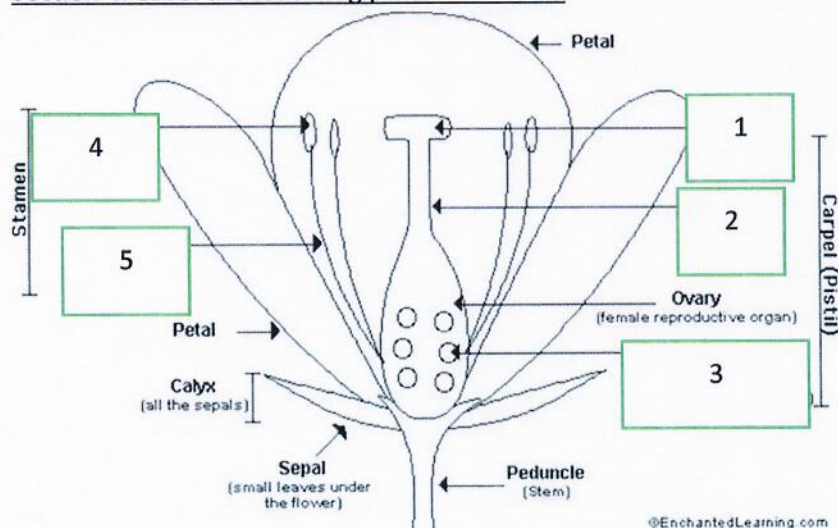
Section 3: State whether the following statements are true or false.

- 3.1. All plastics are biodegradable.
- 3.2. Only acids are corrosive, bases are not.
- 3.3. Carbon Dioxide released by burning fossil fuels can lead to global warming.
- 3.4. A mixture is made up of two or more substances that have different physical properties.
- 3.5. Your tongue can sense four different tastes: salty, sweet, sour and bitter.

(5)

Section 4: Label the following parts of a flower.

(5)



Section 5: Life and living

Look at the diagram on the previous page in Section 4 and answer the following questions.

- 5.1. Explain the importance of part 4 and 5 during pollination. (2)
- 5.2. This flower is a monocotyledon. In a table describe 3 differences between monocotyledonous and dicotyledonous plants. Compare the leaf, root and flower. (6)
- 5.3. Using examples, explain 2 ways in which seeds can be dispersed. (2)
- 5.4. Explain ONE way in which meerkats have adapted to live in hot deserts. (1)
- 5.5. Why does an aloe plant (cactus) have thick fleshy leaves? (2)
- 5.6. Explain what you understand about the term "inherited variation." (2)

Section 6: Matter and materials

- 6.1. Give an example of an object that would need to be smooth in texture.
Give a reason for your answer. (1)
- 6.2. Give an example of an object you would want to be an insulator of heat. (1)
Give a reason for your answer.
- 6.3 Explain what a Liebig Condenser is used for. (2)
- 6.4 Name two negative consequences of poor waste management. (2)
- 6.5 We use our sense of taste to determine if a substance is an acid, base or a neutral. What would an acid taste like? (Bitter or sour). (1)
- 6.6. Provide one example of a substance that is neutral. (1)

6.7. Complete the table below (a-d). State whether the substance is an acid or base and state what colour the litmus paper would turn if it were to be tested. (½ x 4) = 2

SUBSTANCE	ACID or BASE	RED or BLUE
Washing powder	a.	b.
Vinegar	c.	d.

Section 7: Periodic Table

7.1 Provide the term for the vertical rows in a Periodic Table. (1)

7.2 Name one gas from the periodic table. (1)

7.3 Identify the atomic number of the element **[Ni]** . (1)

7.4 What is the element represented by the symbol **[AU]**? (1)

Periodic Table of the Elements

1 H 1.01																	18 He 4.00
3 Li 6.94	4 Be 9.01											5 B 10.81	6 C 12.01	7 N 14.01	8 O 16.00	9 F 19.00	10 Ne 20.18
11 Na 22.99	12 Mg 24.31											13 Al 26.98	14 Si 28.09	15 P 30.97	16 S 32.07	17 Cl 35.45	18 Ar 39.95
19 K 39.10	20 Ca 40.08	21 Sc 44.96	22 Ti 47.87	23 V 50.94	24 Cr 51.99	25 Mn 54.94	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.55	30 Zn 65.38	31 Ga 69.72	32 Ge 72.63	33 As 74.92	34 Se 78.97	35 Br 79.90	36 Kr 84.80
37 Rb 84.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.95	43 Tc 98.91	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.6	53 I 126.90	54 Xe 131.25
55 Cs 132.91	56 Ba 137.33	57-71 Lanthanides	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.09	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po [208.98]	85 At 209.99	86 Rn 222.02
87 Fr 223.02	88 Ra 226.03	89-103 Actinides	104 Rf [261]	105 Db [262]	106 Sg [266]	107 Bh [264]	108 Hs [269]	109 Mt [268]	110 Ds [269]	111 Rg [272]	112 Cn [277]	113 Uut unknown	114 Fl [289]	115 Uup unknown	116 Lv [290]	117 Uus unknown	118 Uuo unknown
57 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm 144.91	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.06	71 Lu 174.97			
89 Ac 227.03	90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np 237.05	94 Pu 244.06	95 Am 243.06	96 Cm 247.07	97 Bk 247.07	98 Cf 251.08	99 Es [254]	100 Fm 257.10	101 Md 258.1	102 No 259.10	103 Lr [262]			

Section 8: Long Questions

Choose only ONE of the following questions to answer:

1. Write a paragraph explaining the impact of materials on the environment. You should discuss the impact of mining metals, plastics and fossil fuels. (Highlight at least two different impacts about each material).

OR

2. Explain, using examples, how we can be environmentally friendly by reusing, reducing and recycling.

(6)

The End