



Subject: Grade 8 Natural Sciences
Topic: Natural Sciences: Term 2 - Exam 1
Total: 106 Marks

Name: _____

Date: _____

Question 1: Multiple Choice

4 marks

Which is the BEST description of carbon dioxide?

It consists of

- | | |
|----------|--|
| A | atoms of carbon and molecules of dioxide |
| B | molecules of carbon and atoms of oxygen |
| C | one molecule of carbon and two molecules of oxygen |
| D | one atom of carbon and two atoms of oxygen. |
-

Question 2: Multiple Choice

4 marks

The formula of ammonia is

- | | |
|----------|-----------------|
| A | AOH |
| B | NH ₃ |
| C | NH |
| D | NH ₂ |
-

This image refers to question: 3



Periodic Table of the Elements

1																		2																	
1 H Hydrogen 1.008																		2 He Helium 4.003																	
3 Li Lithium 6.941		4 Be Beryllium 9.012												5 B Boron 10.811		6 C Carbon 12.011		7 N Nitrogen 14.007		8 O Oxygen 15.999		9 F Fluorine 18.998		10 Ne Neon 20.180											
11 Na Sodium 22.990		12 Mg Magnesium 24.305												13 Al Aluminum 26.982		14 Si Silicon 28.086		15 P Phosphorus 30.974		16 S Sulfur 32.066		17 Cl Chlorine 35.453		18 Ar Argon 39.948											
19 K Potassium 39.098		20 Ca Calcium 40.078		21 Sc Scandium 44.956		22 Ti Titanium 47.867		23 V Vanadium 50.942		24 Cr Chromium 51.996		25 Mn Manganese 54.938		26 Fe Iron 55.845		27 Co Cobalt 58.933		28 Ni Nickel 58.693		29 Cu Copper 63.546		30 Zn Zinc 65.38		31 Ga Gallium 69.723		32 Ge Germanium 72.631		33 As Arsenic 74.922		34 Se Selenium 78.971		35 Br Bromine 79.904		36 Kr Krypton 84.798	
37 Rb Rubidium 84.468		38 Sr Strontium 87.62		39 Y Yttrium 88.906		40 Zr Zirconium 91.224		41 Nb Niobium 92.906		42 Mo Molybdenum 95.95		43 Tc Technetium 98.907		44 Ru Ruthenium 101.07		45 Rh Rhodium 102.906		46 Pd Palladium 106.42		47 Ag Silver 107.868		48 Cd Cadmium 112.414		49 In Indium 114.818		50 Sn Tin 118.711		51 Sb Antimony 121.760		52 Te Tellurium 127.6		53 I Iodine 126.904		54 Xe Xenon 131.294	
55 Cs Cesium 132.905		56 Ba Barium 137.328		57-71 Lanthanides		72 Hf Hafnium 178.49		73 Ta Tantalum 180.948		74 W Tungsten 183.84		75 Re Rhenium 186.207		76 Os Osmium 190.23		77 Ir Iridium 192.217		78 Pt Platinum 195.085		79 Au Gold 196.967		80 Hg Mercury 200.592		81 Tl Thallium 204.383		82 Pb Lead 207.2		83 Bi Bismuth 208.980		84 Po Polonium [209]		85 At Astatine [210]		86 Rn Radon [222]	
87 Fr Francium [223]		88 Ra Radium [226]		89-103 Actinides		104 Rf Rutherfordium [261]		105 Db Dubnium [262]		106 Sg Seaborgium [266]		107 Bh Bohrium [264]		108 Hs Hassium [269]		109 Mt Meitnerium [278]		110 Ds Darmstadtium [281]		111 Rg Roentgenium [280]		112 Cn Copernicium [285]		113 Nh Nihonium [286]		114 Fl Flerovium [289]		115 Mc Moscovium [289]		116 Lv Livermorium [293]		117 Ts Tennessine [294]		118 Og Oganesson [294]	
57 La Lanthanum 138.905		58 Ce Cerium 140.116		59 Pr Praseodymium 140.908		60 Nd Neodymium 144.243		61 Pm Promethium 144.913		62 Sm Samarium 150.36		63 Eu Europium 151.964		64 Gd Gadolinium 157.25		65 Tb Terbium 158.925		66 Dy Dysprosium 162.500		67 Ho Holmium 164.930		68 Er Erbium 167.259		69 Tm Thulium 168.934		70 Yb Ytterbium 173.055		71 Lu Lutetium 174.967							
89 Ac Actinium 227.028		90 Th Thorium 232.038		91 Pa Protactinium 231.036		92 U Uranium 238.029		93 Np Neptunium 237.048		94 Pu Plutonium 244.064		95 Am Americium 243.061		96 Cm Curium 247.070		97 Bk Berkelium 247.070		98 Cf Californium 251.080		99 Es Einsteinium [254]		100 Fm Fermium 257.095		101 Md Mendelevium 258.1		102 No Nobelium 259.101		103 Lr Lawrencium [262]							
Alkali Metal		Alkaline Earth		Transition Metal		Basic Metal		Semimetal		Nonmetal		Halogen		Noble Gas		Lanthanide		Actinide																	

Visit <https://www.ck12.org/periodic-table-of-elements/> for more information.

Question 3: Text Input

3 marks

On the Periodic Table, **Be** represents the element

Question 4: Text Input

3 marks

Complete the sentence with one word. Only type the missing word.

If you have a deflated balloon and you add enough air pressure to it, it will

Question 5: Text Input

3 marks

What is the **name** of the gas released during the decomposition of **potassium permanganate** by means of heat?

Type one word only.

Question 6: True/False

2 marks

When a material is cooled the particles move less. The space between the particles **gets smaller** and the material loses some of its particles.

Question 7: Multiple Choice

4 marks

Crystals of table salt are added to a beaker. When water is added to the beaker the salt dissolves because (Choose the best possible answer).

- | | |
|----------|--|
| A | the water is warmer than the salt |
| B | the water is colder than the salt |
| C | the forces between the salt particles are broken |
| D | water has spaces between its particles |

Question 8: Multiple Choice

4 marks

A block of iron weighs 5 kg and has a volume of 1 000 cm³.

What is the density of this block of iron.

- | | |
|----------|--------------------------|
| A | 0. 005 g/cm ³ |
| B | 5 g/cm ³ |
| C | 50 g/cm ³ |
| D | 0. 05 g/cm ³ |

Question 9: Text Input

3 marks

When a solid is heated the particles absorb the heat energy and this is converted to ... energy.

--

Question 10: Multiple Choice

4 marks

When a gas changes into a liquid, ...

- A. the particles have less energy.
- B. the particles move slower.
- C. the particles expand.
- D. the spaces between the particles decrease.

A	A and B
B	A, B and D
C	B and D
D	B, C and D

Question 11: Please Fill In The Blanks

4 marks

The (1) in a block of iron are packed much (2) than the particles in a block of plastic.

Possible Answers: looser | particles | volume | mass | closer

1		2	
----------	--	----------	--

Question 12: Text Input

3 marks

Complete the sentence with one word. Only type the missing word.

Pressure really measures the ... exerted on a certain area of a surface.

--

Question 13: Text Input

3 marks

Animals that eat both plants and animals are known as

Type one word only.

--

Question 14: Please Fill In The Blanks

4 marks

A (1) is a good example of a grazer, since it feeds mainly on (2) .

Possible Answers: giraffe | the leaves of shrubs | grass | buffalo

1		2	
----------	--	----------	--

Question 15: Multiple Choice

4 marks

Clear lime water is a solution of

- | | |
|----------|-----------------------------|
| A | calcium carbonate and water |
| B | sodium carbonate and water |
| C | calcium hydroxide and water |
| D | sodium hydroxide and water |

Question 16: Please Fill In The Blanks

4 marks

The mass number of an atom is the sum of the uncharged (1) and the charged (2) .

Possible Answers: electrons | nucleus | neutrons | protons

1		2	
----------	--	----------	--

Question 17: True/False

2 marks

When an electric current is passed through a solution of copper chloride, gas is produced at both electrodes.

Question 18: Text Input

3 marks

The position of each species within a food chain is called a

Type two words only.

Question 19: Text Input

3 marks

When different populations are together in an ecosystem they are referred to as a

Type one word only.

Question 20: True/False

2 marks

A molecule of ammonia is comprised of four elements.

Question 21: True/False

2 marks

The only gas that passes through the stomata of a plant is carbon dioxide.

Question 22: True/False

2 marks

Gases exert pressure outwards.

TRUE**FALSE****Question 23: Text Input**

3 marks

We call the change of **phase** when a liquid changes to a gas

Question 24: Text Input

3 marks

A food chain is a number of steps that show the transfer of ... between organisms.

This image refers to question: 25



Question 25: True/False

2 marks

There is 500ml of liquid in the measuring cylinder.

The level of the liquid on the measuring cylinder will be higher on a hot day, due to the expansion of the glassware.

TRUE

FALSE

Question 26: Multiple Choice

4 marks

Which of the following is true concerning a food chain?

A: It sometimes starts with a decomposer.

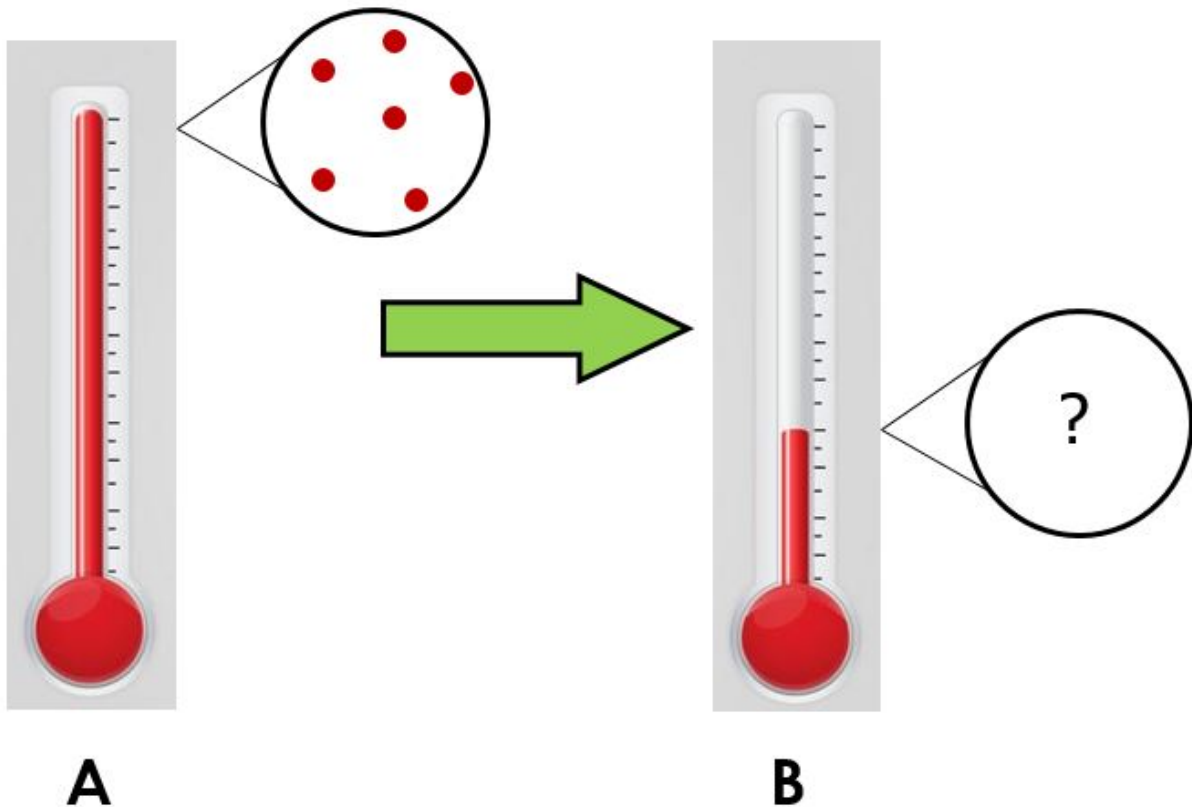
B: It always ends with a decomposer.

C: It always starts with a producer.

D: It sometimes ends with a producer.

- | | |
|----------|---------|
| A | A only |
| B | C only |
| C | B and C |
| D | A and D |
-

This image refers to question: 27



Question 27: Please Fill In The Blanks

10 marks

The particles in **A** are (1) due to (2) . To bring the temperature **down** to the level in **B**, the thermometer was placed in a (3) environment. This, then (4) causing the particles to (5)

Possible Answers: cooler | warmer | added energy | removed energy | further apart | move closer together

1	
3	
5	

2	
4	

Question 28: Please Fill In The Blanks

4 marks

Organisms that belong (1) species that live in a particular (2) are known as a population.

Possible Answers: to different | to the same | country | habitat

1	
---	--

2	
---	--

Question 29: Please Fill In The Blanks

6 marks

An experiment is conducted to investigate whether or not a solution of copper chloride can be broken down by means of electricity. Arrange the steps into the correct order.

Step 1: (1) .

Step 2: (2) .

Step 3: (3) .

Possible Answers: close the circuit | pour in enough copper chloride solution to cover the electrodes | place the electrodes into the glass beaker

1	
3	

2	
----------	--

Question 30: Please Fill In The Blanks

4 marks

When the forces of attraction between particles are very weak, the particles will have (1) kinetic energy and the (2) .

Possible Answers: more | less | spaces will be larger | spaces will be smaller

1	
----------	--

2	
----------	--

Total: 106 Marks