Grade 7 Natural Science Worksheet

Assessment Task: Biology: decomposition

Dead Matter

Part One: All living organisms eventually die

Read the following notes and insert the most appropriate word from the box below into the gaps.

All living organisms eventually die. Many plant species complete their life cycles within a year. This means that they germinate, grow, reproduce and die within one year. These plants are called (a)_____ . (b)_____ are plants that live longer than a year and they can reproduce many times in their lifespan. Some trees like yellow woods or (c)_____ can live for hundreds of years.

Animals are born; they grow, reproduce and also eventually die. Some animals like certain (d)_____ species have short life spans, whereas others like elephants or some (e)_____ can live for 50 or 60 years. Living things die due to (f)_____, injury, starvation, (g)_____ or old age.

What happens when an organism dies? The body of the organism (h)_____ and rots away – we say that the body (i)_____ . If this did not happen, the earth's surface would be covered in a deep layer of dead bodies and animals' wastes. Nature is never wasteful and dead organisms become food or a habitat for some other organisms. The lives of these creatures may depend on the death of others. (j)_____ , like (k)_____, vultures, foxes, (l)_____ and rats remove and scatter the bones and some have the ability to easily digest bones. Older organisms must die and decompose to make space and give new, young individuals a chance to grow, so there is less (m)_____ for resources.

We humans deal with death in many different ways, depending on (n)_____ and religion, but in the rest of the animal kingdom death seems to go unnoticed by the (o)_____.

Grade 7 Natural Science Worksheet

predation	decomposes	scavengers	competition	culture	perennials
parrots	hyenas	oaks	disease	survivors	decays
annuals	insect	crows			

[15 marks]

Part Two: Do some research

1. Do some research on the bearded vulture and the spotted hyena. These animals are scavengers that love to eat bones. Write three facts about each animal that relate to them being classified as scavengers.

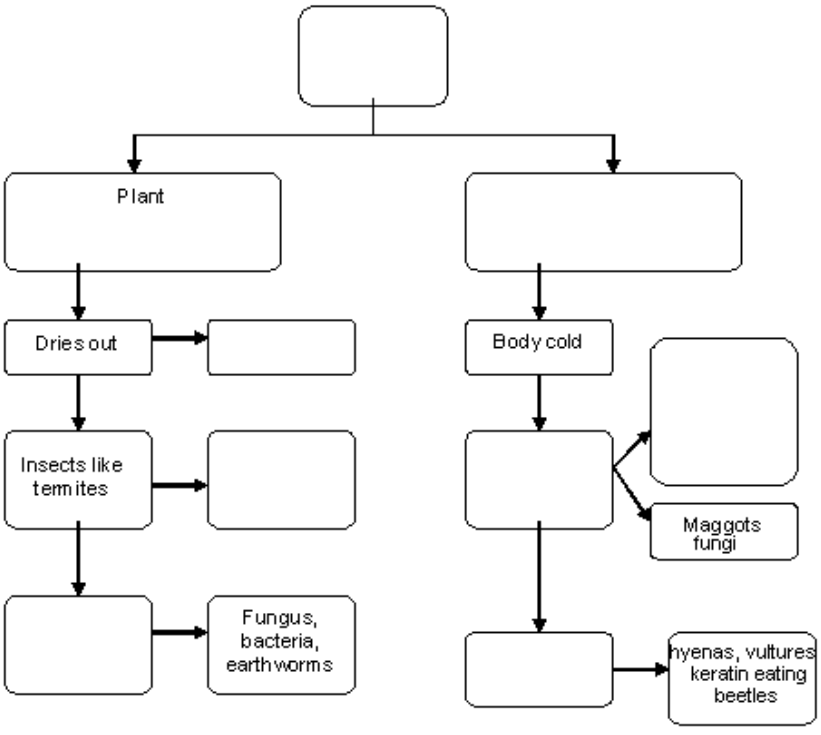
[6 marks]

2. What is the difference between a scavenger, a decomposer and a detritus eater?

[10 marks]

Part Three: Complete a flow diagram

Complete this flow diagram which shows what happens when plants and animals die.



Animal

Broken into smaller pieces

Broken down into nutrients

Soft tissues broken down

Bacteria inside release liquids and gases

Bones, skin and hair

Water is lost

Organism dies

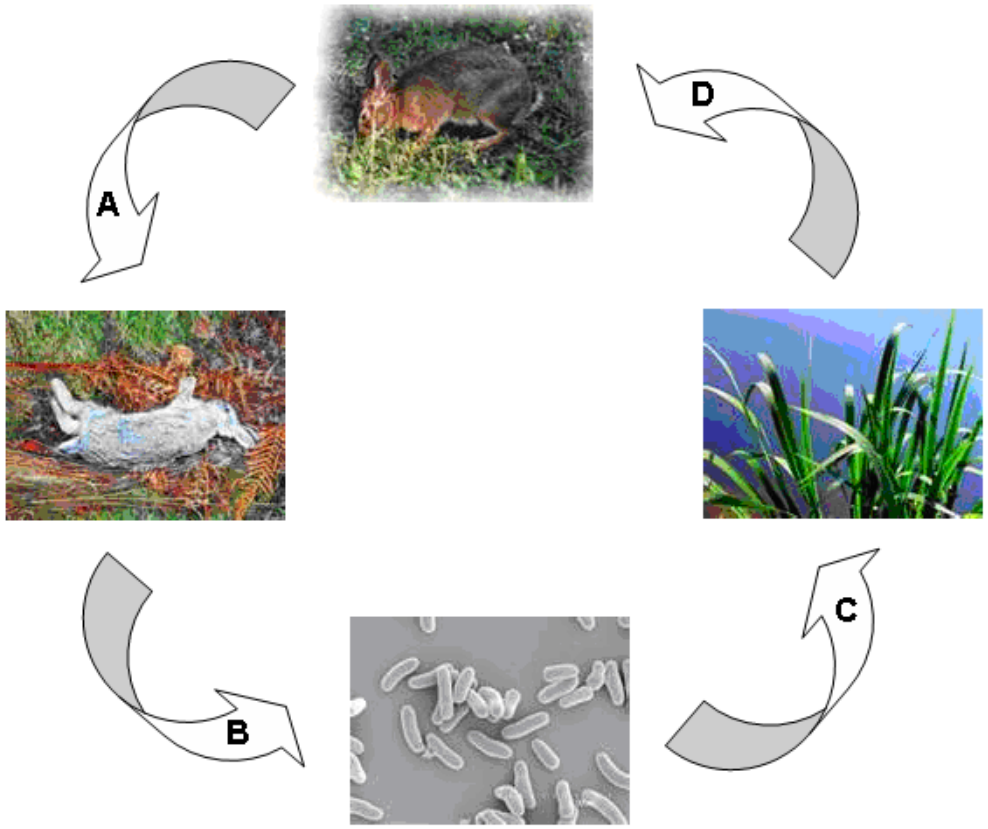
[16 marks]

Grade 7 Natural Science Worksheet

Part Four: Describe what happens in a flow diagram

Write a sentence to describe what happens in the following flow diagram at each of the letters A, B, C, D.

[8 marks]



Grade 7 Natural Science Worksheet

Part Five: Match the columns

Match Column A with Column B

Column A	Column B
1. Decomposers	This gas is always given off during decomposition
2. Decay	Fly larvae
3. Scavengers	Remains of a dead organism
4. Maggots	Breaking down organic matter
5. Mummification	Skin, hair and bones
6. Carbon dioxide	Embalming
7. Keratin feeding beetles	Hyenas, crows, vultures
8. Carcass	Bacteria, fungi and earthworms

[8 marks]

Grade 7 Natural Science Worksheet

Suggested Solutions

Question number	Possible marks	Solution
1		All living organisms eventually die. Many plant species complete their life cycles within a year. This means that they germinate, grow, reproduce and die within one year. These plants are called annuals. Perennials are plants that live longer than a year and they can reproduce many times in their lifespan. Some trees like yellow woods or oaks can live for hundreds of years. Animals are born; they grow, reproduce and also eventually die. Some animals like certain insect species have short life spans, whereas others, like elephants or some parrots can live for 50 or 60 years. Living things die due to disease, injury, starvation, predation or old age. What happens when an organism dies? The body of the organism decays and rots away – we say that the body decomposes. If this did not happen, the earth's surface would be covered in a deep layer of dead bodies and animals' wastes. Nature is never wasteful and dead organisms become food or a habitat for some other organisms. The lives of these creatures may depend on the death of others. Scavengers, like hyenas, vultures, foxes, crows, rats remove and scatter the bones and some have the ability to easily digest bones. Older organisms must die and decompose to make space and give new, young individuals a chance to grow, so there is less competition for resources. We humans deal with death in many different ways, depending on culture and religion, but in the rest of the animal kingdom death seems to go unnoticed by the survivors.
2.1	6	Learner notes will vary, but these are some guidelines: The bearded vulture is a scavenger that is specially adapted for eating bones. It finds a carcass, picks up a bone and flies high into the sky with it. It then drops it onto rocks below so the bone can break open. The vulture then picks out the bone marrow inside and even swallows large chunks of bone. The stomach acid of these birds is so potent that it can dissolve the bone. Hyenas have especially strong jaws to crack open bones. Like the bearded vulture, it has strong stomach acid to dissolve bone. The droppings of a hyena are characteristic – it is white instead of brown, because of all the calcium from the bones it eats.
2.2	10	A scavenger finds dead bodies of animals and eats the remains. ✓ Hyenas, jackals and vultures are scavengers. ✓ A detritus eater eats the waste matter ✓ produced by other animals. Shrimps, lobsters and prawns eat

Grade 7 Natural Science Worksheet

<table>
<tr><td></td><td></td><td>the faeces and waste matter of fish. ✓ Both scavengers and detritus eaters themselves produce faeces and waste matter. ✓ They rid the environment of waste matter and dead bodies, but produce waste matter themselves. ✓ A decomposer consumes dead matter or waste matter ✓ and then returns the mineral and chemical substances to the soil. ✓ A bacterium or fungus that rots fruit that has fallen on the ground actually breaks down the plant tissue and the minerals such as nitrogen are returned to the soil. ✓ Other plants can then absorb these nutrients. ✓</td></tr>
<tr><td>3</td><td>16</td><td>See flow diagram in Appendix of Assessment Tools.</td></tr>
<tr><td>4</td><td>8</td><td>Learner sentences may vary but the basic idea is given here:
A. Animal takes in nutrients when it feeds and then eventually it dies. ✓✓
B. Dead animal begins to decompose. ✓✓
C. Decomposers such as bacteria release nutrients back into the soil. ✓✓
D. Plants absorb nutrients from soil through roots, thus providing food for animals. ✓✓</td></tr>
<tr><td>5</td><td>8</td><td>
<table>
<tr><th>Column A</th><th>Column B</th></tr>
<tr><td>1. Decomposers</td><td>Bacteria, fungi</td></tr>
<tr><td>2. Decay</td><td>Breaking down organic matter</td></tr>
<tr><td>3. Scavengers</td><td>Hyenas, crows, vultures</td></tr>
<tr><td>4. Maggots</td><td>Fly larvae</td></tr>
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Grade 7 Natural Science Worksheet

Appendix of Assessment Tools

Flow diagram