1 Draw lines to match each word to the correct definition.

Word
Respiration
Sensitivity
Excretion

Definition
The removal of waste products from a living thing.
A chemical reaction that releases energy inside living things.
The ability to detect chemicals, light, heat, pressure or sound.

2 Tick the statements that apply to **all** living things.

a They sense their surroundings.

b They can only store waste products for a short time.

c They are able to make their own food.

d They release energy using chemical reactions.

e They are able to produce offspring.

f They are capable of movement.

g They increase in size during their lifetime.

h They must feed their offspring.

3 Living things have three ways of getting nutrients:

i They make their own nutrients using a gas from the air and water.

ii They obtain their nutrients by eating plants and other animals.

iii They absorb nutrients from their surroundings.

Decide whether the organisms below use method i, ii or iii.


tree


fungus


snake


krill


house plant

a ..... b ..... c ..... d ..... e .....

4 Write three pieces of evidence that support the idea that trees are living things.

.....

.....

.....

E

Life on other planets may be too small to see. There may be tiny living things hidden in the soil or rocks. To detect life, scientists look for evidence of respiration.

Suggest two pieces of evidence that could show that respiration was occurring.

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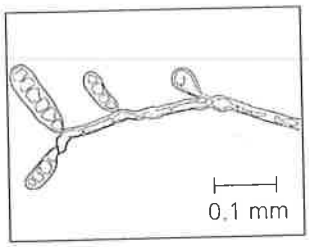
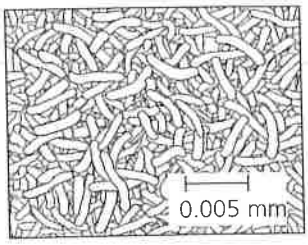
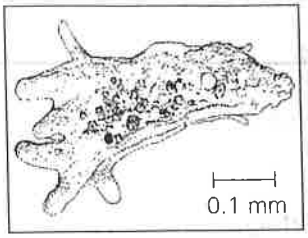
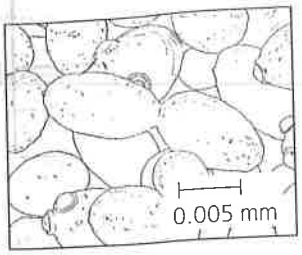
1 There are four types of micro-organism: fungi, protozoa, algae and bacteria. Identify the type in each of the following images. Each type may appear more than once or not at all.









a ..... b ..... c ..... d .....

2 Read the statements below and identify each type of micro-organism.

a It is made of long, thin threads and takes nutrients from its surroundings. It is a: .....

b They are very small and reproduce rapidly by splitting in two. They are: .....

c They are larger than bacteria and reproduce by budding. They are: .....

d It moves around in water and cannot make its own food. It is a: .....

e They can be small and round, or form long green strands. They are: .....

3 Write the letter of each statement in the correct part of the Venn diagram. For example: statement a is true for light microscopes and TEM microscopes so we write a where these circles overlap.

a The specimen slice must be very thin.

b It magnifies the object up to 1000 times.

c It can magnify the object more than 1000 times.

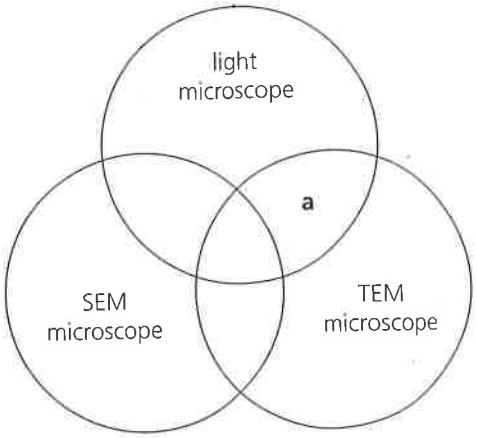
d The images can be coloured artificially.

e It shows the surface of specimens.

f Light passes through the specimen to make a magnified image.

g Used to look at organisms that are too small to see.

h Uses electrons to produce magnified images.



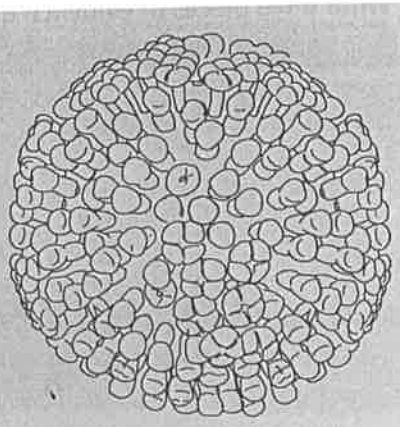
E

These are virus particles.

The particles cannot move but they can be carried around in the air. They can enter your lungs when you breathe. The virus makes you use nutrients and energy to produce more virus particles. The process damages your tissues and makes you feel ill. The new particles escape when you sneeze and infect other people.

a Write one fact that *suggests* viruses are living things.

b Explain how you can tell they are *not* living things.



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