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Unit 2 Cells and organisms



Exercise 2.1 Characteristics of living organisms

Doing this word search will help you to learn and remember the seven characteristics of living things, and how to spell them.

Find the words with each of these meanings.

- a** Being able to sense and respond to stimuli.
- b** A chemical reaction that takes place in all living cells, releasing energy from food.
- c** Changing the position or shape of part of the body.
- d** Getting rid of waste products from the chemical reactions taking place inside body cells.
- e** Taking in nutrients that are needed to keep the organism alive.
- f** Making new living organisms.
- g** A permanent increase in size.

z	q	x	u	e	e	b	c	y	s	t	n	p	r
r	a	c	h	p	x	e	l	h	t	w	o	r	g
e	m	q	u	a	l	w	h	t	r	e	i	n	e
s	j	u	z	c	k	e	m	n	i	x	t	f	s
p	g	n	w	y	a	o	o	m	t	c	c	x	e
i	m	p	c	b	l	i	v	k	d	r	u	s	t
r	h	c	t	i	t	o	e	c	e	e	d	r	l
a	u	p	b	i	e	i	m	o	u	t	o	w	t
t	e	r	r	v	s	c	e	p	s	i	r	r	e
i	n	t	r	e	s	k	n	f	f	o	p	e	r
o	u	y	t	i	v	i	t	i	s	n	e	s	g
n	h	i	j	t	u	f	v	j	e	a	r	d	e



Unit 2 Cells and organisms

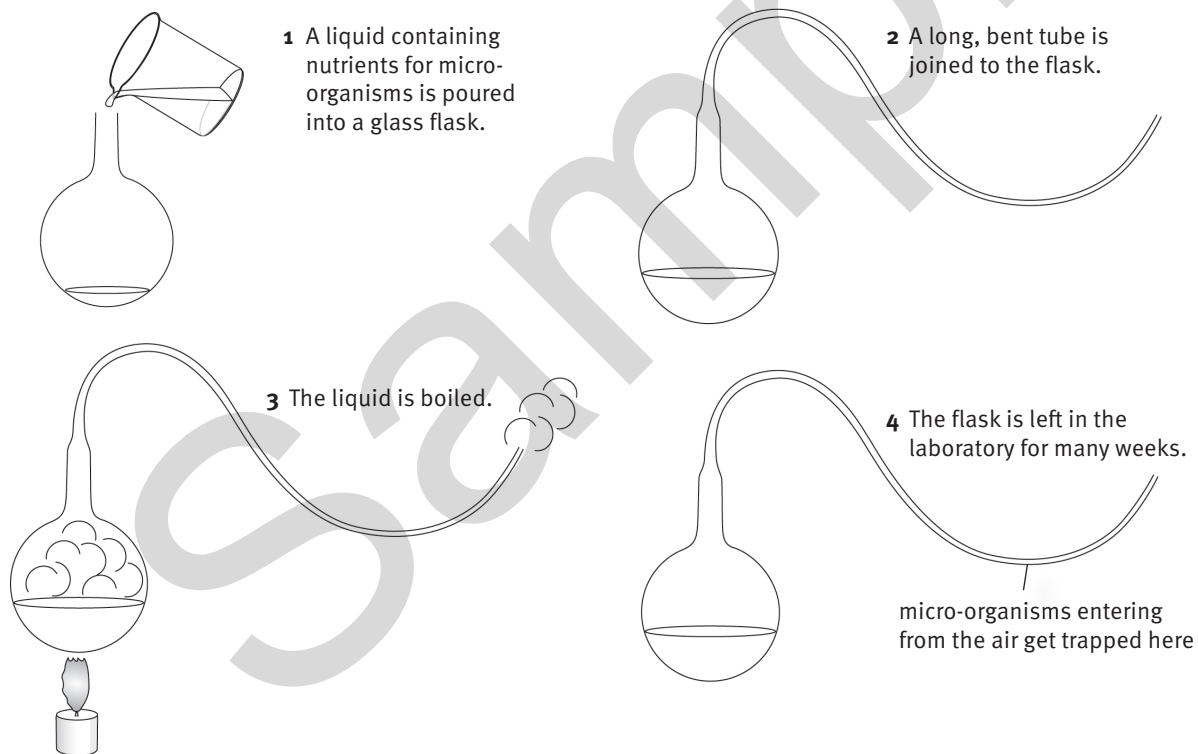
Exercise 2.2 Pasteur and spontaneous generation

Louis Pasteur was a brilliant scientist. He lived at a time when people were only just beginning to understand anything about micro-organisms. This exercise will help you to learn about one of his most famous experiments. You will also think about using evidence to make conclusions.

In the nineteenth century, many people believed that micro-organisms could just appear from non-living material. This was called spontaneous generation.

Louis Pasteur thought that this idea was wrong. He thought that micro-organisms could only be formed when other micro-organisms reproduced. He planned an experiment to test this idea.

Pasteur used some very special glass flasks for his experiment. The diagram shows what he did.



1 Explain how Pasteur made sure that there were no micro-organisms in the flask before he left it in the laboratory.

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2 Explain how Pasteur made sure that any micro-organisms that appeared in the flask had food and oxygen.

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3 Pasteur found that the liquid in the flask stayed unchanged for many months. Do you think that this provides evidence against the idea of spontaneous generation? Explain your answer.

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4 After several months, Pasteur cut the curved neck off the flask. He found that the liquid went bad in just a few days. Suggest why this happened.

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5 Do you think that the result of cutting the curved neck off the flask provides evidence that the idea of spontaneous generation is not correct? Explain your answer.

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