

Chapter 1

Characteristics and classification of living organisms

1.1 Characteristics of living organisms

1. 0610_m22_qp_22 Q: 1

The diagrams show a test-tube containing pond water. The green colour is caused by microorganisms that have chloroplasts.



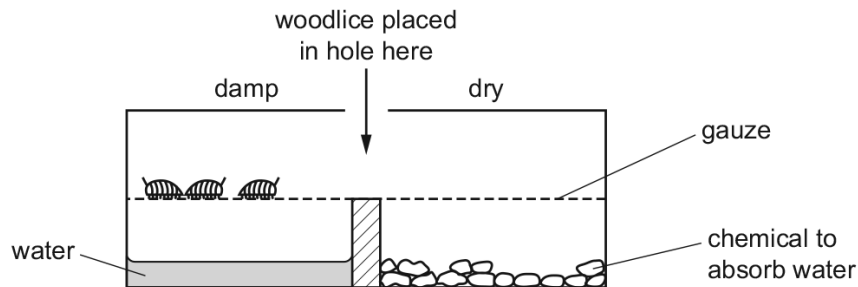
Which characteristics of living organisms are shown?

- A excretion, growth and movement
- B movement, nutrition and sensitivity
- C nutrition, reproduction and respiration
- D reproduction, sensitivity and growth

2. 0610_m21_qp_22 Q: 1

Woodlice are small organisms that live in damp places.

In an experiment, three live woodlice are put into a glass container. The diagram shows what happens after 30 minutes.



Which characteristic of living organisms is shown by this experiment?

- A growth
- B nutrition
- C respiration
- D sensitivity

3. 0610_s21_qp_21 Q: 1

What is a characteristic of all living organisms?

- A breathing
- B circulation
- C egestion
- D sensitivity

4. 0610_w21_qp_21 Q: 1

Which characteristics of all living organisms are needed to release energy for growth?

- A breathing and respiration
 - B excretion and nutrition
 - C excretion and respiration
 - D nutrition and respiration
-

1.1. CHARACTERISTICS OF LIVING ORGANISMS

5. 0610_w21_qp_22 Q: 1

All living things can remove toxic materials and other substances that are in excess of requirements.

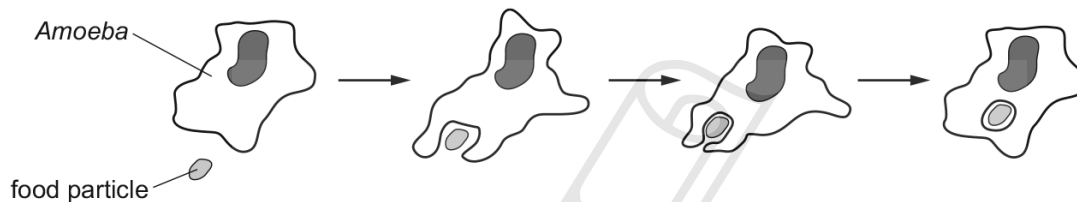
What is this process called?

- A egestion
 - B excretion
 - C nutrition
 - D respiration
-

6. 0610_w21_qp_23 Q: 1

An *Amoeba* is a single-celled organism.

The diagram shows an *Amoeba* engulfing a food particle.



Which characteristics of living organisms are shown?

- A excretion, movement and nutrition
 - B excretion, nutrition and sensitivity
 - C movement, nutrition and sensitivity
 - D movement, reproduction and sensitivity
-

7. 0610_m20_qp_22 Q: 1

Which characteristic do **all** living organisms show?

- A breathing
 - B excretion
 - C photosynthesis
 - D tropism
-

8. 0610_w20_qp_21 Q: 1

Hedgehogs are mammals. Touching a hedgehog causes it to roll into a ball to protect itself.

Which characteristics is it displaying?

- A excretion and movement
 - B growth and sensitivity
 - C movement and growth
 - D movement and sensitivity
-

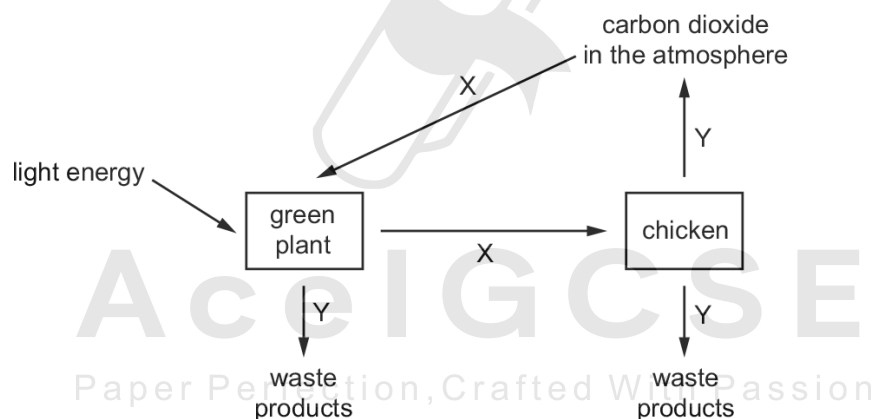
9. 0610_w20_qp_22 Q: 1

Which process is carried out by all organisms?

- A growth
 - B photosynthesis
 - C sexual reproduction
 - D transpiration
-

10. 0610_w20_qp_23 Q: 1

The diagram shows some of the processes carried out by living organisms.



Which two characteristics of living organisms are represented by arrows X and Y?

- A excretion and sensitivity
 - B nutrition and excretion
 - C respiration and growth
 - D sensitivity and reproduction
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1.1. CHARACTERISTICS OF LIVING ORGANISMS

11. 0610_m19_qp_22 Q: 1

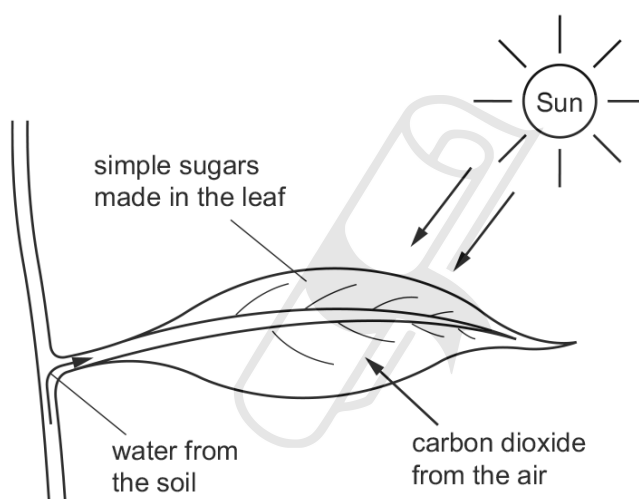
A living organism, X, can make its own food, get rid of toxic materials and detect and respond to stimuli.

What **other** four processes must organism X carry out to stay alive?

- A excretion, growth, movement, sensitivity
- B excretion, growth, nutrition, respiration
- C growth, movement, reproduction, respiration
- D movement, reproduction, respiration, sensitivity

12. 0610_s19_qp_21 Q: 1

The diagram shows a leaf on a plant.



Which characteristic of life is represented by this diagram?

- A excretion
- B nutrition
- C respiration
- D sensitivity

13. 0610_s19_qp_22 Q: 1

Carbon dioxide diffuses into a leaf.

Which characteristic of living things requires this?

- A excretion
 - B movement
 - C nutrition
 - D respiration
-

14. 0610_s19_qp_23 Q: 1

Students find a small organism in a pond. They catch it and put it into a large jar of water. They see that the organism swims away from light. It lays some eggs before they put it back into the pond.

Which characteristics of living things did the students see in this organism?

- A excretion, growth and respiration
 - B growth, nutrition and sensitivity
 - C movement, reproduction and sensitivity
 - D movement, reproduction and respiration
-

15. 0610_w19_qp_21 Q: 1

The diagram shows a plant.



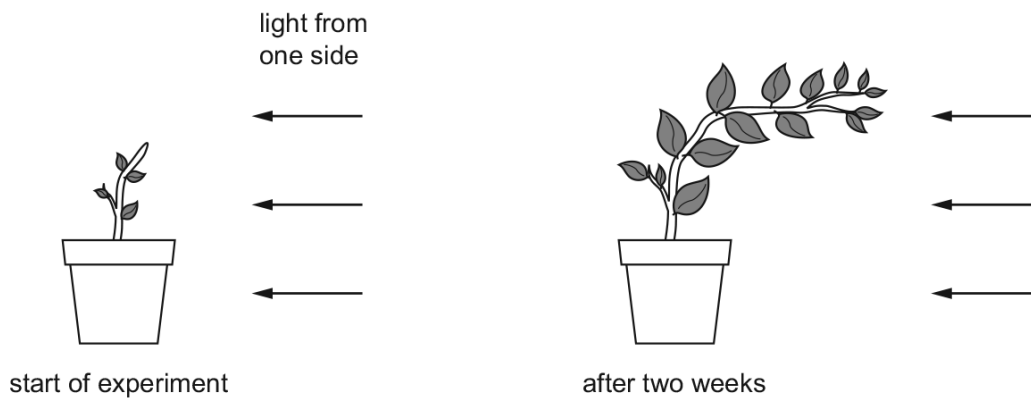
Which characteristic of living organisms is shown by the plant in the diagram?

- A excretion
 - B reproduction
 - C respiration
 - D sensitivity
-

1.1. CHARACTERISTICS OF LIVING ORGANISMS

16. 0610_w19_qp_23 Q: 1

The diagrams show a plant at the start of an experiment, and the same plant two weeks later.



Which characteristics of living organisms are demonstrated by this experiment?

- A excretion, growth, movement
- B excretion, movement, reproduction
- C growth, movement, sensitivity
- D sensitivity, growth, respiration

17. 0610_m18_qp_22 Q: 1

Biology is the study of living things.

Which characteristic applies to all forms of life?

- A able to move from place to place
- B able to reproduce
- C carry out photosynthesis
- D possess a nervous system

18. 0610_s18_qp_21 Q: 1

Which organisms carry out respiration, growth, movement and excretion?

- A all animals and all plants
 - B animals only
 - C arthropods and flowering plants only
 - D plants only
-

19. 0610_w18_qp_21 Q: 1

The sundew is a carnivorous plant that can trap small insects with sticky hairs and then digest them. When an insect gets stuck, other nearby sticky hairs bend over to trap the insect.

Which characteristics of living organisms are demonstrated when the sundew traps insects?

- A growth and excretion
 - B growth and sensitivity
 - C movement and excretion
 - D movement and sensitivity
-

20. 0610_w18_qp_22 Q: 1

A person drinks a glass of iced water and the volume of sweat they secrete decreases.

This is an example of which characteristic of living organisms?

- A growth
 - B movement
 - C respiration
 - D sensitivity
-

21. 0610_w18_qp_23 Q: 1

The Venus flytrap is a plant that feeds on insects. When a fly lands on the leaf, the leaf folds very quickly and traps the fly. The leaves produce enzymes which digest the fly.

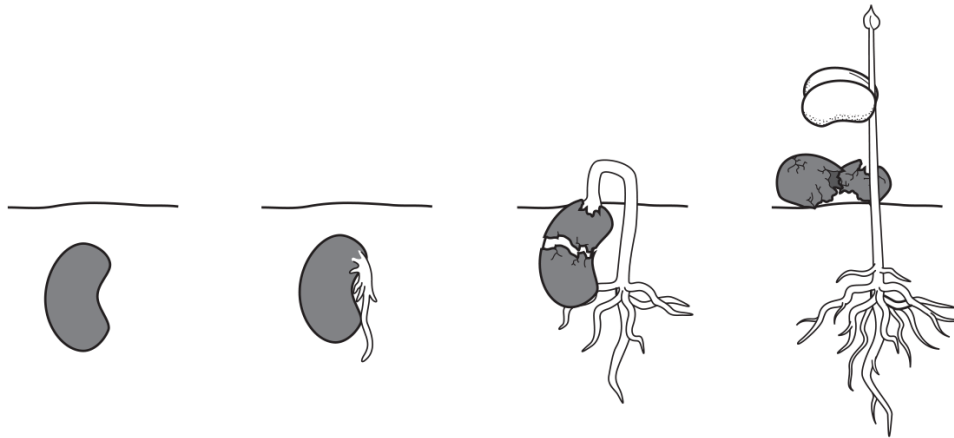
Which characteristics of living organisms are involved?

- A excretion, growth, nutrition
 - B movement, excretion, nutrition
 - C movement, sensitivity, growth
 - D movement, sensitivity, nutrition
-

1.1. CHARACTERISTICS OF LIVING ORGANISMS

22. 0610_m17_qp_22 Q: 2

The diagram shows how a seed changes after it is planted in soil and watered.



Which characteristics of living things are demonstrated by this sequence?

- A** excretion and growth
- B** growth and sensitivity
- C** nutrition and reproduction
- D** nutrition and sensitivity

23. 0610_w17_qp_21 Q: 1

Which term is defined as all the chemical reactions that occur in cells?

- A** photosynthesis
- B** protein synthesis
- C** respiration
- D** metabolism

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24. 0610_w17_qp_22 Q: 2

The diagram shows a section of DNA from a chimpanzee.

A	G	C	T	A	C	A	G	A	G
---	---	---	---	---	---	---	---	---	---

Which diagram shows a section of DNA from the organism that is most closely related to the chimpanzee?

A

A	G	C	T	A	C	A	G	A	T
---	---	---	---	---	---	---	---	---	---

B

A	G	C	T	A	C	A	G	T	T
---	---	---	---	---	---	---	---	---	---

C

A	T	C	A	A	C	A	G	T	T
---	---	---	---	---	---	---	---	---	---

D

A	T	C	T	A	C	A	G	T	T
---	---	---	---	---	---	---	---	---	---

25. 0610_w17_qp_23 Q: 1

The plant *Mimosa pudica* has leaves that fold in when touched.

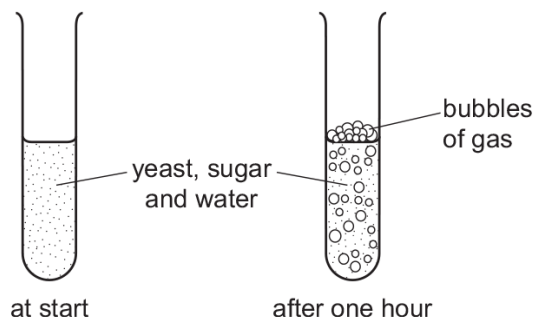
This demonstrates movement and which other characteristic?

- A** excretion
- B** growth
- C** nutrition
- D** sensitivity

1.1. CHARACTERISTICS OF LIVING ORGANISMS

26. 0610_s16_qp_22 Q: 1

Some yeast, sugar and water are mixed in a test-tube. The diagrams show the test-tube at the start and after one hour.



Which process causes this change?

- A growth
- B reproduction
- C respiration
- D sensitivity

27. 0610_s16_qp_22 Q: 3

In which part of the cell is oxygen used to release energy from nutrient molecules?

- A mitochondrion
- B ribosome
- C rough endoplasmic reticulum
- D vesicle

28. 0610_s16_qp_23 Q: 2

During the process of nutrition, all organisms need to absorb mineral ions and water from their environment.

Which other substances do plants and animals need to absorb during this process?

	plants	animals
A	carbon dioxide	inorganic compounds
B	carbon dioxide	organic compounds
C	oxygen	inorganic compounds
D	oxygen	organic compounds

29. 0610_s16_qp_23 Q: 4

What is the correct order of increasing size of the following structures, from smallest to largest?

- A chromosome → liver → white blood cell
- B chromosome → white blood cell → liver
- C liver → chromosome → white blood cell
- D white blood cell → liver → chromosome

30. 0610_w16_qp_21 Q: 1

The diagram shows a plant that has been placed near a sunlit window for a few weeks.



Which two characteristics of living organisms have affected the shape of the plant?

- A excretion and sensitivity
- B growth and reproduction
- C reproduction and excretion
- D sensitivity and growth

31. 0610_w16_qp_22 Q: 1

Which characteristic of living organisms is responsible for the production of oxygen in the leaf of a plant exposed to sunlight?

- A excretion
- B movement
- C nutrition
- D respiration

32. 0610_w16_qp_23 Q: 1

Breathing out combines which two characteristics of living organisms?

- A excretion and movement
 - B excretion and respiration
 - C movement and sensitivity
 - D sensitivity and respiration
-

Answers

SN	Paper	Q. No.	Answer
1	0610_m22_qp_22	1	B
2	0610_m21_qp_22	1	D
3	0610_s21_qp_21	1	D
4	0610_w21_qp_21	1	D
5	0610_w21_qp_22	1	B
6	0610_w21_qp_23	1	C
7	0610_m20_qp_22	1	B
8	0610_w20_qp_21	1	D
9	0610_w20_qp_22	1	A
10	0610_w20_qp_23	1	B
11	0610_m19_qp_22	1	C
12	0610_s19_qp_21	1	B
13	0610_s19_qp_22	1	C
14	0610_s19_qp_23	1	C
15	0610_w19_qp_21	1	D
16	0610_w19_qp_23	1	C
17	0610_m18_qp_22	1	B
18	0610_s18_qp_21	1	A
19	0610_w18_qp_21	1	D
20	0610_w18_qp_22	1	D
21	0610_w18_qp_23	1	D
22	0610_m17_qp_22	2	B
23	0610_w17_qp_21	1	D
24	0610_w17_qp_22	2	A
25	0610_w17_qp_23	1	D
26	0610_s16_qp_22	1	C
27	0610_s16_qp_22	3	A
28	0610_s16_qp_23	2	B
29	0610_s16_qp_23	4	B
30	0610_w16_qp_21	1	D
31	0610_w16_qp_22	1	C
32	0610_w16_qp_23	1	A