

Unicellular Organisms

KS3 Biology · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Is a euglena a living organism? Use the life processes to decide.

Step 1 · List the life processes

Movement, respiration, sensitivity, growth, reproduction, excretion and nutrition (MRS GREN).

Step 2 · Match them to euglena

It swims with a flagellum (movement), senses light with its eyespot (sensitivity), photosynthesises (nutrition), and splits in two (reproduction).

Answer: Yes — one cell carries out all the life processes

Check: A unicellular organism is a whole organism, not part of one.

2. Now try one with the steps

Explain how an amoeba feeds.

Step 1 · Detect and move

Step 2 · Engulf

Step 3 · Digest and absorb

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. What does 'unicellular' mean? [1]

2. Name the tail-like structure a euglena uses to swim. [1]

3. What are the 'false feet' of an amoeba called? [1]

4. Which structure lets a euglena make its own food? [1]
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5. What is the job of the eyespot in a euglena? [1]
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6. What is the job of a contractile vacuole? [1]
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7. Give ONE way an amoeba is like an animal cell. [1]
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8. Give ONE plant-like and ONE animal-like feature of euglena. [2]
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9. Why can't an amoeba photosynthesise? [1]
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10. Explain why a single-celled organism does not need lungs or a gut. [2]
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11. A bacterium splits in two every 20 minutes. Starting with 1, how many are there after 1 hour? [2]
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12. An amoeba is 0.5 mm across. A student draws it 50 mm across. What is the magnification of the drawing? [2]
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13. Suggest why scientists in the past could not agree whether euglena was a plant or an animal. [2]
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4. Before you hand it in

"An amoeba is a cell, not an organism."

It is both: one cell that carries out every life process on its own.

"Euglena is a plant because it is green."

Euglena has chloroplasts but also a flagellum and no cell wall. It belongs to a group called protists, not plants or animals.

"Pseudopodia are legs."

They are temporary bulges of cytoplasm that form and disappear cell moves.