

Cells and Systems: Formative Check

Time: 20 min. 6 questions.

Instructions

Answer all six questions using what you have learned about cells, body systems and living things in Unit B. Write short answers in complete sentences where asked, and show your thinking for the numeric question. You may use your notes on cell structure and human body systems.

Questions

1. Which structure is found in plant cells but not in animal cells?
A) mitochondria
B) cell membrane
C) cell wall
D) nucleus
([Outcome](#))
2. In general terms, explain why gases and liquids move into or out of a cell during diffusion and osmosis. ([Outcome](#))
3. True or False: A grizzly bear and an amoeba both carry out the same basic life functions, but they meet these functions in different ways. ([Outcome](#))
4. Grade 8 Science describes several human body systems in general terms, including how blood circulates oxygen and nutrients throughout the body. How many separate body systems are named in this part of the curriculum? ([Outcome](#))
5. Which pair correctly matches a single-celled organism with a multicelled organism?
A) grizzly bear and poplar tree
B) amoeba and alga
C) amoeba and grizzly bear
D) alga and amoeba
([Outcome](#))
6. Describe one way the human body changes its function in response to a change in conditions, such as exercise or cold temperature. ([Outcome](#))

Curriculum coverage

Question	Outcome alias
1	Outcome
2	Outcome
3	Outcome
4	Outcome
5	Outcome
6	Outcome

Answer key

1. C) cell wall. Plant cells have a rigid cell wall surrounding the cell membrane, while animal cells have only a cell membrane ([Outcome](#)).
2. Gases and liquids move into and out of a cell because of differences in concentration between the inside and outside of the cell, moving from areas of higher concentration to areas of lower concentration ([Outcome](#)).
3. True. Different organisms carry out the same general functions, such as food gathering, but use different structures and methods to do so ([Outcome](#)).
4. Five. The curriculum names systems for respiration, circulation, digestion, excretion and sensory awareness ([Outcome](#)).
5. C) amoeba and grizzly bear. An amoeba is single-celled and a grizzly bear is multicelled, matching the curriculum's example comparison; the other pairs are either both single-celled or both multicelled ([Outcome](#)).
6. Accept any reasonable example, such as heart rate increasing during exercise to deliver more oxygen to muscles, or metabolism increasing in cold temperatures to help maintain body heat ([Outcome](#)).