

Cells and Systems: Model or Report Marking Guide

Task

Students present a labelled model or report on cells and systems. The model or report shows the structure and function of cells, how cells combine into tissues and organs, and how body systems work together to keep an organism healthy.

Curriculum alignment

This task assesses the following outcomes from Unit B: Cells and Systems.

- Investigating living things and applying the concept of system to describe structure and function ([Outcome](#), [Outcome](#))
- Describing the role of cells as the basic unit of life, including differences between plant and animal cells and single-celled versus multicelled organisms ([Outcome](#), [Outcome](#))
- Explaining how cells, tissues and organs contribute to the structure of organisms ([Outcome](#), [Outcome](#))
- Interpreting the healthy function of human body systems and how the body responds to stimuli ([Outcome](#))
- Applying key concepts of the unit: organisms, cells, organs, tissues, structure and function, systems, and response to stimuli ([Topic](#))

Rubric

Criterion	Beginning	Developing	Proficient	Exemplary
Cell structure and function	Labels a cell with little accuracy; plant and animal cells are not distinguished (Outcome)	Identifies some cell parts; attempts to distinguish plant and animal cells with minor errors (Outcome, Outcome)	Accurately labels plant and animal cell structures and describes the cell as the basic unit of life (Outcome)	Accurately labels cells and clearly explains diffusion or osmosis in moving gases and liquids into cells (Outcome, Outcome)
Levels of organization	Does not connect cells to tissues, organs or systems (Outcome)	Names cells, tissues and organs but does not explain how they connect (Outcome, Outcome)	Explains how cells form tissues, tissues form organs, and organs form systems (Outcome, Topic)	Explains organization clearly and applies the concept of system to a specific organism's structure and function (Outcome, Outcome)
Human body systems	Names one body system with no description of its function (Outcome)	Describes one or two body systems in general terms with limited detail (Outcome)	Describes respiration, circulation, digestion, excretion or sensory systems accurately, including organ roles (Outcome)	Describes multiple body systems and explains how the body changes in response to stimuli, such as heart rate during exercise (Outcome)

Communication of the model or report	Model or report is unclear; labels are missing or inaccurate (Topic)	Model or report includes basic labels but explanations are incomplete or hard to follow (Outcome)	Model or report is clearly labelled and organized, with accurate scientific language (Outcome, Topic)	Model or report is clearly labelled, well organized, and uses scientific vocabulary precisely to explain structure and function (Outcome, Topic)
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Scoring

Score each criterion at one of the four levels: Beginning (1 point), Developing (2 points), Proficient (3 points), or Exemplary (4 points). Add the four scores for a total out of 16.

A total of 4 to 7 points indicates the student is beginning to understand cells and systems and needs targeted review. A total of 8 to 10 points indicates developing understanding with gaps in one or more areas. A total of 11 to 13 points indicates proficient understanding across most criteria. A total of 14 to 16 points indicates exemplary understanding, with clear, accurate explanations across all four criteria.

Record the level for each criterion separately, not just the total, so students and parents can see specific strengths and next steps.

Notes for the teacher

- Use the same sample answers for each level across all student work in one marking session to keep judgments consistent.
- A student may show Proficient understanding of cell structure but only Developing understanding of body systems. Score each row independently rather than averaging an overall impression.
- For students who submit a physical model, check that labels match the descriptions in an accompanying written explanation before scoring the Communication row.
- Keep a short bank of anchor examples (one per level, per criterion) from previous assignments to speed up consistent scoring in future units.