

Cells and Systems Rubric

Task

Students present a labelled model or report on cells and systems.

Curriculum alignment

The rubric assesses student understanding of:

- How cells function as the basic unit of life and how they organize into tissues and organs ([Outcome](#))
- Similarities and differences between plant and animal cells, and between single-celled and multicelled organisms ([Outcome](#))
- How organisms apply the concept of system to describe structure and function ([Outcome](#))
- The role of cells, tissues and organs in supporting healthy body systems ([Outcome](#))

Rubric

Criterion	Beginning	Developing	Proficient	Exemplary
Cell and Tissue Identification	Labels show few cell structures or tissues; missing major organelles or cell types.	Labels include some cell structures and tissues; may confuse plant and animal features or miss key organelles.	Labels correctly identify major cell structures, organelles and tissues; distinguishes plant from animal cells.	Labels are complete and accurate; shows understanding of how tissues form from cells and function together.
System Organization and Function	Describes isolated parts; does not connect cells to larger systems or explain function.	Describes some connections between cells and systems; explains function in general terms with limited detail.	Explains how cells and tissues work together in a system; describes function of major organs or body systems.	Explains how multiple levels (cells, tissues, organs, systems) interact; connects structure to function throughout.
Comparison of Organism Types	Shows limited awareness of differences between single-celled and multicelled organisms or plant and animal cells.	Identifies some differences between organism types or cell types; comparisons lack depth or clarity.	Compares single-celled and multicelled organisms; distinguishes plant and animal cells with accurate examples.	Analyzes similarities and differences across organism types; explains how different structures meet similar functions.
Accuracy and Presentation	Contains multiple errors; labels are unclear, incomplete or difficult to follow.	Contains some errors; most labels are clear but organization could improve.	Accurate and well-organized; labels are clear and easy to locate; presentation is neat and logical.	Highly accurate; presentation is polished; labels enhance understanding; work shows careful attention to detail.

Scoring

Add the level achieved in each criterion (Beginning = 1, Developing = 2, Proficient = 3, Exemplary = 4). A student working at Proficient in all four criteria scores 12 points total, which falls in the Proficient overall band below.

- 14 to 16 points: Exemplary overall
- 10 to 13 points: Proficient overall
- 7 to 9 points: Developing overall
- 4 to 6 points: Beginning overall

A student who reaches Exemplary in three criteria and Proficient in one scores 15 points, placing them in the Exemplary overall band, reflecting their strong mastery.

Notes for the teacher

- Check that labels match the task: a model should show physical structures; a written report should describe function and organization. Both formats must show understanding of cells and systems, not just vocabulary.
- When comparing single-celled and multicelled organisms, look for evidence that the student recognizes both types can perform life functions. A comparison of an amoeba and a grizzly bear, or a single-celled alga and a poplar tree, shows this understanding ([Outcome](#)).
- For body systems, students need only general understanding of respiration, circulation, digestion, excretion and sensory awareness. Do not expect detailed mechanism. Look for evidence they can name a system and describe what it does ([Outcome](#)).
- Distinguish between plant and animal cells by checking for mention of cell wall, cell membrane, chloroplasts or vacuoles. A student does not need to explain these structures in detail, only identify them correctly ([Outcome](#)).