

Cells and Systems Rubric

Task

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

Curriculum alignment

The rubric assesses student progress toward the following outcomes:

- Investigate and describe the role of cells within living things ([Outcome](#))
- Apply the concept of system in describing familiar organisms and analyzing their general structure and function ([Outcome](#))
- Examine plant and animal structures and identify contributing roles of cells, tissues and organs ([Outcome](#))
- Interpret the healthy function of human body systems and illustrate ways the body reacts to internal and external stimuli ([Outcome](#))

Rubric

Criterion	Beginning	Developing	Proficient	Exemplary
Accuracy of cell and system structures	Labels are missing or incorrect; structures shown do not match the organism or system studied.	Most structures are labelled correctly; minor errors in placement or identification of cell parts or system components.	All major structures are labelled accurately; cell parts or system organs are correctly identified and positioned.	Structures are labelled with precision; includes appropriate detail such as organelles, tissues, or interconnected system pathways.
Understanding of structure and function	Descriptions of function are absent or do not connect to structures shown.	Some structures are linked to their functions; explanations are incomplete or partially accurate.	Each major structure is connected to its function; explanations are accurate and appropriate for Grade 8.	Explanations show how structures work together as a system; describes how form enables function in the organism.
Distinction between cell types or organisms	No comparison made between cell types or organisms; or comparisons are inaccurate.	Attempts to compare plant and animal cells, or single-celled and multicelled organisms; some differences identified but incomplete.	Clearly distinguishes between plant and animal cells, or compares single-celled and multicelled organisms with accurate examples.	Compares cell types or organisms and explains how structural differences relate to different functions or environments.
Clarity and organization of presentation	Model or report is difficult to follow; labels are unclear or missing; information is disorganized.	Model or report is mostly clear; most labels are legible; organization could be improved.	Model or report is clear and well-organized; all labels are legible and positioned logically.	Presentation is polished and easy to follow; labels are clear; layout enhances understanding of relationships within the system.

Scoring

Assign each criterion a level: Beginning (1), Developing (2), Proficient (3), or Exemplary (4). Add the four scores to find the total out of 16.

- 13 to 16: Proficient to Exemplary
- 10 to 12: Developing to Proficient
- 7 to 9: Beginning to Developing
- 4 to 6: Beginning

Notes for the teacher

- Look for evidence that students understand the relationship between structure and function. A student may label structures accurately but still score lower if they cannot explain what each part does.
- When comparing cell types or organisms, accept general comparisons appropriate to Grade 8 (for example, "plant cells have cell walls, animal cells do not") without requiring molecular detail.
- For models, check that three-dimensional representations or diagrams show realistic proportions and spatial relationships. A hand-drawn diagram with clear labels meets the standard if accuracy and understanding are evident.
- Students working on human body systems should show how organs and tissues work together. A circulatory system diagram, for instance, should indicate how the heart pumps blood to deliver oxygen, not just label the parts.