

Cells and Systems Rubric: Grade 8

Task

Students present a labelled model or report on cells and systems. The presentation demonstrates understanding of cell structure and function, the organization of cells into tissues and organs, and how body systems work together to support life processes.

Curriculum alignment

Students are assessed on their ability to investigate living things and apply scientific ideas to interpret their structure, function and organization ([Outcome](#)); investigate and describe the role of cells within living things ([Outcome](#)); and interpret the healthy function of human body systems ([Outcome](#)).

Rubric

Criterion	Beginning	Developing	Proficient	Exemplary
Accuracy of cell and system structures	Labels are missing or mostly incorrect; structures shown do not match the organism or system described.	Some labels are correct; most major structures are present but a few are misidentified or poorly positioned.	All major structures are labelled correctly and positioned appropriately for the cell or system shown.	All structures are labelled with precise terminology; minor structures are included and accurately placed; shows attention to scale or proportion.
Understanding of structure and function	Descriptions of function are absent, vague, or incorrect; no connection made between structure and what it does.	Some functions are described; limited connection between structure and function; explanations lack detail or contain minor errors.	Functions of major structures are described accurately; clear connection between structure and its role in the system.	Functions are explained thoroughly; shows how structures work together; demonstrates understanding of how the system supports life processes.
Organization and clarity of presentation	Information is disorganized or difficult to follow; labels are unclear or hard to read; presentation lacks visual coherence.	Information is mostly organized; most labels are legible; some visual elements support understanding but layout could be clearer.	Information is well organized; labels are clear and easy to read; visual elements (diagrams, colour, spacing) support understanding effectively.	Presentation is polished and logical; labels and visuals work together seamlessly; layout guides the viewer through the content in a natural sequence.
Use of scientific terminology	Few or no scientific terms used; language is informal or imprecise; cell or system vocabulary is absent.	Some scientific terms used correctly; mostly informal language; inconsistent use of vocabulary specific to cells or systems.	Appropriate scientific terminology used consistently and correctly throughout; vocabulary is accurate and grade-level appropriate.	Scientific terminology is used precisely and naturally; demonstrates command of cell and system vocabulary; terminology enhances explanation of concepts.

Scoring

Assign each criterion a level: Beginning (1), Developing (2), Proficient (3), or Exemplary (4). Add the four scores. A total of 12 to 13 indicates Proficient overall; 14 to 16 indicates Exemplary; 9 to 11 indicates Developing; and below 9 indicates Beginning. Use the overall result to guide feedback and next steps.

Notes for the teacher

- **Consistency in terminology:** Decide in advance which terms students must use (for example, "organelle" or "cell membrane") and which are optional. Clarify whether Grade 8 students are expected to name organelles beyond the nucleus and cell wall, or whether general descriptions of function are sufficient. Students investigate the internal systems of organisms and explain how they support vital biological processes.
- **Structure versus system:** Grade 8 students often confuse the parts of a single cell with the organs in a body system. If a student presents both, mark each separately using the same rubric, or clarify before the task whether the focus is cellular or organismal.
- **Labelled model or report:** If students choose a written report instead of a diagram, adapt the "Organization and clarity" criterion to assess paragraph structure, headings and the flow of explanation rather than visual layout. The other three criteria remain the same.
- Students investigate how the digestive, respiratory, and circulatory systems work together to supply oxygen and nutrients to the human body. For extension, ask students to explain how two systems interact (for example, how the circulatory and respiratory systems work together) or to compare plant and animal cells side by side.