

Biological Diversity: Marking Guide

Task

Students present a labelled model or report on biological diversity. The work demonstrates understanding of diversity among and within species, reproductive processes, genetic inheritance, and human impacts on species survival.

Curriculum Alignment

- Investigate and interpret diversity among species and within species, and describe how diversity contributes to species survival ([Outcome](#))
- Investigate the nature of reproductive processes and their role in transmitting species characteristics ([Outcome](#))
- Describe, in general terms, the role of genetic materials in the continuity and variation of species characteristics ([Outcome](#))
- Identify impacts of human action on species survival and variation within species ([Outcome](#))

Rubric

Criterion	Beginning	Developing	Proficient	Exemplary
Diversity within and among species	Identifies one or two types of variation but lacks detail or accuracy.	Describes variation within species or among species, but not both clearly.	Describes variation within species and among species with accurate examples.	Explains how variation enables species to occupy different niches and survive in the same ecosystem.
Reproductive processes	Names reproduction types without explanation or with significant errors.	Identifies sexual and asexual reproduction; describes one mechanism with limited detail.	Describes mechanisms of both sexual and asexual reproduction with appropriate examples.	Compares advantages and disadvantages of sexual and asexual reproduction; includes examples of organisms using both.
Genetic inheritance and variation	Attempts to link inheritance to variation but reasoning is unclear or incomplete.	Identifies some heritable characteristics; distinguishes heritable from non-heritable with gaps.	Identifies heritable and non-heritable characteristics; explains how offspring inherit traits from parents.	Distinguishes heritable from non-heritable characteristics; recognizes role of environment; identifies dominant and recessive traits.
Human impacts and species survival	Mentions human activity affecting species with minimal explanation.	Describes one human impact or one conservation strategy; limited depth.	Describes human impacts on species survival; identifies one or two conservation strategies.	Analyzes multiple human impacts and evaluates effectiveness and limitations of conservation strategies.

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 developing work; 14 to 15 indicates proficient work; 16 indicates exemplary work.

Notes for the Teacher

- **Accuracy over detail:** A student at Proficient level with fewer examples is stronger than a student at Developing with many inaccurate claims. Check that examples are real and correctly described.
- **Labelling in models:** If the work is a model, verify that labels name structures or organisms, not just point to them. A label should answer "What is this?" or "What does this show?"
- **Linking ideas:** Look for evidence that the student connects diversity to survival, reproduction to inheritance, or human action to species loss. Isolated facts do not reach Proficient.
- **Consistency across criteria:** A student may be Proficient in one criterion and Developing in another. Score each independently; the overall result reflects the pattern across all four.