

Cambridge AICE Biology 12

- PS 1 Describe how variation in a population occurs and how genetic information is passed down from parent to offspring.
- PS 2 Describe the different ways in which biotechnology is used to sequence and modify genes. Discuss the social, economic, and ethical implications of this technology.
- PS 3 Define biodiversity and describe the factors that affect the biodiversity of a region.
- PS 4 Explain the importance of homeostasis to mammalian organisms using the control of blood glucose and water content as examples.
- PS 5 Describe the communication systems mammals and plants use to respond to changes in their internal and external environments.
- PS 6 Describe how living organisms release energy from organic molecules.
- PS 7 Describe how the structure of the chloroplast is adapted to allow plants to produce organic molecules using solar energy, carbon dioxide, and water.
- PS 8 Compare the importance, structure and adaptations of different staple crops and describe the methods used to improve these crops for optimal human use.
- PS 9 Describe the various ways in which biotechnology is utilized by industry and the health sciences.
- PS 10 Describe the structure and function of the human reproductive anatomy and describe methods used to alter fertility.
- PS 11 Given a scenario and background information, define the scientific problem and make a prediction about the results.
- PS 12 Plan an investigation to address a given scientific problem.
- PS 13 Organize data collected from an investigation and analyze it by applying appropriate statistical tests.
- PS 14 Evaluate data and methods to make informed judgments about the reliability of an investigation and how much it can be trusted for testing the hypothesis.
- PS 15 Draw conclusions from an investigation, provide scientific explanations for these conclusions, ask informed questions and suggest improvements.
- PS 16 11-12.RST.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.
- PS 17 11-12.RST.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- PS 18 11-12.RST.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.
- PS 19 11-12.RST.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
- PS 20 11-12.WHST.1 Write arguments focused on discipline-specific content.
- Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
 - Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
 - Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and

between claim(s) and counterclaims.

d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.

e. Provide a concluding statement or section that follows from or supports the argument presented.

PS 21 11-12.WHST.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

PS 22 11-12.WHST.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.