

# Cambridge AICE Biology 11

- PS 1 Identify levels of ecological organization, energy flow through ecosystems, and the recycling of nitrogen.
- PS 2 Outline characteristics and functions of cells and cell structure.
- PS 3 Describe and explain the process of cell replication and nuclear division through mitosis.
- PS 4 Identify structure and function of certain biological chemicals in living organisms, such as carbohydrates, lipids, water, and other inorganic ions.
- PS 5 Describe and explain the structure and role of proteins in living organisms with reference towards hemoglobin.
- PS 6 Describe and explain the mode of action of enzymes.
- PS 7 Describe and explain the structure, function and movement within the cell membrane.
- PS 8 Describe and explain genetic control through DNA replication and protein synthesis.
- PS 9 Describe and explain the need for, and functioning of, a transport system in multi-cellular plants.
- PS 10 Describe and explain the need for, and functioning of, a transport system in mammals.
- PS 11 Describe and explain the need for, and functioning of, a heart in the mammalian transport system.
- PS 12 Identify the importance of gas exchange in the respiratory system, while enhancing knowledge on smoking and smoking-related diseases.
- PS 13 Describe and explain the development and outcomes of smoking and disease within the circulatory system.
- PS 14 Discuss the roles of social, economic and biological factors in the prevention and cause of cholera, malaria, tuberculosis (TB), and HIV/AIDS.
- PS 15 Identify the importance of immune response, vaccination, antibodies, and other specialized cells within the immune system.
- PS 16 Handling information and solving problems through the application within cellular processes.
- PS 17 Handling information and solving problems through the application within the transport system of animals and plants through basic transport processes and disease causing agents.
- PS 18 Successfully manipulate, collect, and present data and observations in a correct and meaningful scientific format.
- PS 19 Draw plan diagrams of tissues and calculate the linear magnification of drawings.
- PS 20 Successfully analyze, interpret and evaluate data or observations and identify sources of error.
- PS 21 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 22 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 23 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 24 11-12.WHST.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes

a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.

d. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.

e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).

PS 25 11-12.WHST.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

PS 26 11-12.WHST.9 Draw evidence from informational texts to support analysis, reflection, and research.