

Transferable skills subject interpretation for the Pearson Edexcel International GCSE in Biology (9-1)

Transferable skills will help students cope with the different demands of degree study and provide a solid skills base that enables them to adapt and thrive in different environments across educational stages; and ultimately into employment.

A good international education should enable students to start developing transferable skills as early as possible. Developing these transferable skills where they naturally occur as part of the International GCSE curriculum can help build learner confidence and embed the importance of this well-rounded development. This builds the foundations to ensure students are ready for A-level and higher education.

Our approach to enhancing transferable skills in our International GCSEs ensures that it is not only the academic and cognitive skills that are developed, but those broader elements that universities highlight as being essential for success. Skills such as self-directed study, independent research, self-awareness of own strengths and weaknesses and time-management are skills that students cannot learn from a textbook but have to be developed through the teaching and learning experience that can be provided through an international curriculum.

To support the design of our qualifications, the Pearson Research Team selected and evaluated seven global 21st-century skills frameworks. Following on from this process, we identified the National Research Council's (NRC) framework as the most evidence-based and robust skills framework.

In the tables below, we have taken the NRC framework skills and provided an explicit definition of how each skill can be interpreted for this subject. This will enable teachers and learners to understand examples of how they can develop each skill through this International GCSE.

Intrapersonal skills		Interpersonal skills		Cognitive skills	
Intellectual Openness		Teamwork and collaboration		Cognitive Processes and Strategies	
Adaptability	Ability to select and apply knowledge and understanding of scientific processes, which is not prompted or provided to biology problems.	Communication	Able to communicate ideas to peers and teachers and to discuss the logic of algorithms and code (verbally or written).	Critical thinking	Using many different pieces of information from biology and synthesise this information to make judgements.
Personal and social responsibility	Appreciate ethical issues in biology.	Collaboration	Working with peers on shared tasks; giving feedback on peers on problem solving and other tasks.	Problem solving	Apply unifying patterns and themes in biology and use them in new and changing situations.
Continuous learning	Planning and reflecting on own learning-setting goals and meeting them regularly.	Teamwork	Working with peers to solve problems and create programs.	Analysis	Analyse and interpret data and experimental methods, drawing conclusions, which are consistent with evidence from experimental activities.
Intellectual interest and curiosity	Identifying a problem under own initiative, planning a solution and carrying this out.	Co-operation	Share ideas with peers and supports peers who are finding tasks difficult.	Reasoning	Evaluate information related to biology and make judgements on the basis of this information.
Work ethic/conscientiousness		Interpersonal skills	Giving feedback to peers that is appropriate and delivered in a way that encourages them.	Decision Making	Evaluate data and experimental methods, drawing conclusions, which are consistent with evidence from secondary sources and experimental activities. Suggest possible improvements and further investigations.
Initiative	Using knowledge of biology, independently (without guided learning), to further own understanding.	Leadership		Adaptive learning	Learn about unifying patterns and themes in biology and use them in new and changing situations.
Self-direction	Planning and carrying out investigations under own direction.	Leadership	Leading a group of peers to complete a task.	Executive function	Plan investigations using experimental and investigative skills based on correct and safe laboratory techniques. Evaluate the effectiveness of an investigation in terms of accuracy, validity and reliability.

Responsibility	Taking responsibility for any errors or omissions in own work and creating a plan to improve.
Perseverance	Actively seeking new ways to continue and improve own learning despite setbacks.
Productivity	Develop a fluency in technical language so sophisticated answers of depth are produced in extended answers to biology questions.
Self regulation (metacognition, forethought, reflection)	Developing and refining a strategy over time for applications of biology, to different contexts reflecting on the success or otherwise of the strategy.
Ethics	Producing output with a specific moral purpose for which one is accountable.
Integrity	Taking ownership for own work and willingly responds to questions and challenges.
Positive Core Self Evaluation	
Self-monitoring/self-evaluation/self-reinforcement	Planning and reviewing own work as a matter of course.

Responsibility	Taking responsibility for the progress and outcomes of a group task involving problem solving or similar.
Assertive communication	Leading the discussions in a group task ensuring that decisions are made and that group members are all involved.
Self-presentation	Presenting outcomes of a group or individual task to the whole class.

Creativity	
Creativity	Apply existing knowledge of biological processes to situations set in an unfamiliar context.
Innovation	Using a novel strategy to apply existing knowledge of biology concepts in unaccustomed situations.