

16+ PAST PAPER PACK

Cheltenham Ladies' College 16+ Biology 2026

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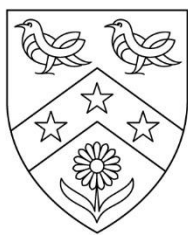
Cheltenham Ladies' College 16+ Biology. Work through this paper first.
Includes Paper Notes: overview, topics, revision tips, common mistakes.

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CHELTENHAM
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SIXTH FORM ENTRY IN SEPTEMBER 2026 BIOLOGY

Topics, skills and concepts that we would hope most SFC entrance candidates in Biology will have encountered by the time they take the entrance papers are as follows. The same material will be tested for both A level and IB candidates.

Human Biology

- The Circulatory, Breathing, Nervous, Endocrine, Skeletal, Reproductive and Digestive Systems.

Evolution and the Environment

- Adaptations for survival shown by Plants, Animals and micro-organisms
- Variation – basic ideas of inheritance, genetic crosses, types of reproduction, natural and artificial cloning, genetic engineering
- Evolution – the mechanism of natural selection leading to evolution and extinction.
- Basic ecological concepts such as food chains and webs, energy flow, losses and pyramids
- An understanding of the causes and impact of climate change on living organisms and their habitats

Cells

- Animal, plant and bacterial cell structure
- Specialised cells such as neurones, palisade and root hair cells
- Movement of substances into and out of cells – diffusion, osmosis and active transport.

Photosynthesis & Plant nutrition

- Chemical and word equations and key concepts in photosynthesis such as limiting factors
- Environmental factors affecting the rate of photosynthesis
- The need for minerals in plant growth (e.g. nitrates/phosphates) and deficiency symptoms

Enzymes & Respiration

- Enzyme basic structure and mode of function
- Factors affecting enzyme action (including graphing skills)
- Knowledge of aerobic respiration (chemical and word equations) and involvement of enzymes
- Processes during digestion (human and microbial) requiring enzymes

Fundamental Concepts in Practical Investigations

- Planning and designing a practical investigation
- Valid methods by controlling variables and use of control experiments
- Recording data
- Presenting data
- Analysing and Evaluating Data

The entrance paper is as much a test of academic potential as of factual recall and there will be opportunity for candidates to demonstrate both.

In summary, we are looking for:

- *an understanding of a range of basic biological concepts*
- *evidence of understanding of practical investigations*
- *the ability to use and interpret data*
- *the ability to plot and interpret graphs*
- *the ability to apply existing knowledge to unknown situations*
- *reasoning ability*
- *basic but secure mathematical skills such as calculating percentages*

Paper Notes: 16+ Biology Question Paper (16+ Biology Past Paper (2026))

Compiled by [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk) to help you get the most from this paper.

Overview

This document is a syllabus guide for the **Cheltenham Ladies' College Sixth Form Biology entrance examination**, designed for candidates applying for entry in **September 2026**. It outlines the topics, skills, and concepts that applicants are expected to have encountered before sitting the entrance papers, serving both those intending to study Biology at **A level** and those pursuing the **International Baccalaureate**.

The syllabus covers seven major topic areas: human biology systems, evolution and environment (including climate change and ecology), cell biology, photosynthesis and plant nutrition, enzymes and respiration, and fundamental concepts in practical investigations. Each area includes specific subtopics and skills, from understanding genetic crosses and natural selection to writing chemical equations for respiration and photosynthesis.

The document emphasises that the examination tests **academic potential as much as factual recall**. Candidates must demonstrate reasoning ability, apply knowledge to unfamiliar contexts, interpret data and graphs, and show secure mathematical skills alongside their understanding of core biological concepts. This makes it suitable for motivated students with strong GCSE Biology foundations who are ready to bridge into sixth form study.

How this paper is organised

This is not a question paper but a **detailed specification document** that describes what will be examined. It is organised into seven clear topic sections, each bulleted to show the specific content areas and skills candidates should have mastered. The sections progress logically from human anatomy and physiology through evolutionary and ecological concepts, then to cellular and molecular biology, and finally to practical investigation skills.

The syllabus explicitly states that **the same material will be tested for both A level and IB candidates**, ensuring a unified assessment standard regardless of the pathway chosen. Each topic heading is followed by three to six bullet points detailing the required knowledge, such as naming body systems, understanding limiting factors in photosynthesis, or applying principles of osmosis and active transport.

The final section outlines seven assessment objectives, highlighting the skills that examiners will be looking for: conceptual understanding, practical investigation design, data interpretation, graphing skills, application of knowledge to new situations, reasoning ability, and mathematical competence. This signals that the actual entrance paper will blend content questions with skills-based and analytical tasks.

Topics covered

- Human biology, including the structure and function of the circulatory, breathing, nervous, endocrine, skeletal, reproductive, and digestive systems
- Adaptations for survival in plants, animals, and micro-organisms, linked to environmental pressures
- Variation and inheritance, covering genetic crosses, asexual and sexual reproduction, natural and artificial cloning, and genetic engineering techniques
- Evolution and natural selection, including the mechanisms leading to speciation and extinction
- Ecological concepts such as food chains and webs, energy flow through trophic levels, energy losses, and ecological pyramids
- Climate change causes and impacts on living organisms and their habitats
- Cell biology, including the structure of animal, plant, and bacterial cells, and the features of specialised cells such as neurones, palisade cells, and root hair cells
- Movement of substances across cell membranes by diffusion, osmosis, and active transport
- Photosynthesis, including word and chemical equations, limiting factors, environmental influences on rate, and the role of minerals (nitrates and phosphates) in plant growth and deficiency symptoms
- Enzyme structure, mode of function, factors affecting enzyme activity (temperature, pH, substrate concentration), and graphing enzyme kinetics
- Aerobic respiration, including word and chemical equations, enzyme involvement, and digestion processes in humans and microbes
- Practical investigation skills: planning, controlling variables, using control experiments, recording, presenting, analysing, and evaluating data

How to use this paper for revision

- Revise all seven body systems in human biology, making sure you can explain the role of each organ and how systems interact (for example, how the circulatory and breathing systems supply oxygen to tissues).
- Practise genetic crosses using Punnett squares and ensure you understand the difference between genotype and phenotype, as well as the principles of dominant and recessive alleles.
- Learn the word equations and balanced chemical equations for both photosynthesis and aerobic respiration by heart, as these are frequently tested.
- Work through past practical investigation questions, focusing on identifying independent, dependent, and control variables, and writing clear method statements.
- Develop your graph skills by plotting data from experiments, drawing lines or curves of best fit, and interpreting trends, especially for enzyme and photosynthesis rate experiments.
- Read around climate change and its biological impacts, such as habitat loss, coral bleaching, and species migration, to prepare for application questions on ecology.
- Test your mathematical skills in a biological context by calculating percentages, means, rates of reaction, and magnifications, ensuring you can show working clearly.

Common mistakes to avoid

- Confusing diffusion, osmosis, and active transport. Remember that osmosis is specific to water movement across a selectively permeable membrane, whilst active transport requires energy and moves substances against a concentration gradient.
- Mixing up the raw materials and products of photosynthesis and respiration. Photosynthesis uses carbon dioxide and water to produce glucose and oxygen; respiration does the reverse.
- Failing to identify all variables in a practical investigation. Students often miss control variables (factors kept constant) or do not explain why a control experiment is necessary.
- Describing natural selection without mentioning variation, competition, differential survival, and reproduction. All four steps are essential to a complete explanation of how evolution occurs.
- Drawing graphs without labels on axes, without units, or with incorrect scales. Always include a title, label both axes with the quantity and unit, and plot points accurately.
- Assuming that enzymes work at any temperature or pH. Enzymes have an optimum temperature and pH; outside these ranges, they denature and lose function permanently.

Exam technique

Because Cheltenham Ladies' College explicitly states that the entrance paper tests **academic potential as much as factual recall**, you should expect questions that ask you to apply knowledge to unfamiliar scenarios. Read each question stem carefully to identify what biological principle is being tested, then draw on your understanding of core concepts to construct a reasoned answer. Do not simply list memorised facts; show your thinking.

Allocate time sensibly across the paper. If a question asks you to plot a graph or analyse data, take your time to be precise with scales and labels, as these skills are specifically assessed. For longer written answers, plan a brief outline before you write, ensuring you cover all required points (for example, if asked to explain natural selection, tick off variation, competition, survival, and reproduction as you write each one).

Practise using the specification as a checklist in your revision. Work through each bullet point, testing yourself on definitions, equations, and the ability to explain processes in your own words. When revising practical investigations, focus on why methods are chosen and how they ensure validity and reliability. The examiners are looking for

evidence of understanding, not rote learning, so aim to demonstrate reasoning and the ability to make connections between topics.

What to revise alongside this paper

To prepare thoroughly for this entrance examination, ensure your understanding of **GCSE Biology** is secure across all topics, particularly cell biology, organisation (tissues and organs), and bioenergetics. Revisit your notes on the carbon cycle and the nitrogen cycle, as these underpin ecological concepts and link to climate change. If you struggled with any practical work at GCSE, now is the time to revisit experimental design and data handling.

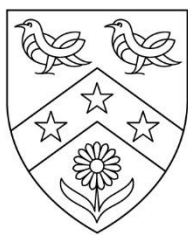
Beyond the specification, read introductory material on **A level or IB Biology** topics such as biological molecules (carbohydrates, proteins, lipids) and the detailed structure of DNA, as these provide context for enzyme function and genetic engineering. Familiarise yourself with more advanced graph work, such as calculating gradients to find rates of reaction, and practise manipulating units in biological calculations.

Consider exploring current issues in biology, such as antibiotic resistance, conservation efforts, or advances in genetic modification. The examiners value the ability to apply knowledge to new situations, so wider reading around ecology, evolution, and biotechnology will strengthen your responses and demonstrate intellectual curiosity.

Key terms

Diffusion, Osmosis, Active transport, Photosynthesis, Limiting factors, Aerobic respiration, Enzyme, Denaturation, Natural selection, Genetic variation, Cloning, Genetic engineering, Food chain, Trophic level, Climate change, Control variable, Specialised cell

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CHELTENHAM
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SIXTH FORM ENTRY IN SEPTEMBER 2026 PSYCHOLOGY

There will be one paper of 1 hour duration for candidates applying for either the A level or IB Psychology. No previous curriculum knowledge of psychology is required, although it is very helpful if the candidate is interested in human behaviour and human biology. Those who have studied psychology have no specific advantage over those who have not, but they should demonstrate their curriculum knowledge wherever relevant.

There is one section containing short answer compulsory questions and one section where candidates will have to write an essay from a choice of two questions. Questions will assess a candidate's interest in human behaviour, including their own, ability to put forward reasoned, evidenced, explanations and to be able to consider both sides of an argument. One of the questions in section 1 will include an excerpt from recent psychological research where candidates will be tested on their comprehension and interpretation of information. Candidates will be expected to be able to interpret charts and graphs, and to undertake some mathematical calculations – no advanced mathematics is required.

We are looking for evidence of genuine interest in the field of psychology, coupled with an ability to reflect, analyse and use evidence to support an argument.

Paper Notes: 16+ Biology Question Paper (16+ Biology Past Paper (2026))

Compiled by [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk) to help you get the most from this paper.

Overview

This is the **Cheltenham Ladies' College Sixth Form entry examination for Psychology**, designed for candidates applying to study either **A level or IB Psychology** from September 2026. The paper is **one hour in duration** and serves as an entrance assessment for Year 12 entry.

No prior curriculum knowledge of Psychology is required, making this accessible to all candidates regardless of whether they have studied the subject before. The examination assesses genuine interest in human behaviour and human biology, the ability to construct reasoned and evidenced arguments, and the capacity to consider multiple perspectives on psychological questions.

The paper comprises two distinct sections: compulsory short answer questions and an essay choice. Candidates will encounter an excerpt from recent psychological research and must demonstrate comprehension, interpretation of data (including charts and graphs), and basic mathematical calculations. The assessment looks for reflective thinking, analytical skills, and evidence-based argumentation rather than rote knowledge.

How this paper is organised

The examination is divided into **two main sections** to be completed within **one hour**. Section 1 contains short answer compulsory questions that all candidates must attempt, with at least one question including an excerpt from recent psychological research to test comprehension and interpretation.

Section 2 requires candidates to **write one essay from a choice of two questions**, allowing students to demonstrate depth of thinking on a topic that interests them. The short answer section will include questions requiring interpretation of charts and graphs as well as some mathematical calculations, though no advanced mathematics is needed.

The paper is designed to assess multiple competencies simultaneously: interest in human behaviour, ability to reflect on personal experience, capacity to construct evidenced explanations, and skill in considering both sides of an argument. The format balances structured responses with extended writing.

Topics covered

- Human behaviour and behavioural observation, including reflection on personal experience
- Basic human biology relevant to psychological processes
- Interpretation and comprehension of recent psychological research excerpts
- Data interpretation skills: reading and analysing charts, graphs, and research findings
- Basic mathematical calculations applied to psychological data (no advanced mathematics required)
- Constructing evidenced arguments and explanations for psychological phenomena
- Critical thinking: considering multiple perspectives and both sides of psychological debates
- Essay writing on psychological topics with reasoned analysis

How to use this paper for revision

- Read widely about human behaviour in reputable sources such as *New Scientist*, **Scientific American Mind**, or the British Psychological Society website to build genuine interest and familiarity with current research.
- Practise interpreting graphs and charts from psychology studies, paying attention to variables, sample sizes, and what conclusions can and cannot be drawn from data.
- Develop the habit of considering **multiple explanations** for behaviour rather than settling on a single answer, as psychology often involves competing theories.
- Work on structuring essays with clear arguments supported by evidence, ensuring you can write a well-organised response within limited time.
- Reflect on your own behaviour and experiences as examples, as the paper values personal insight alongside academic knowledge.
- Revise basic percentage calculations, averages, and simple statistical concepts that might appear in research excerpts.
- Time yourself writing short answers and essays to build confidence in completing both sections within the **one-hour time limit**.

Common mistakes to avoid

- Writing overly long answers in Section 1 and leaving insufficient time for the essay in Section 2, when planning time allocation across both sections is essential.
- Presenting one-sided arguments without considering alternative explanations or perspectives, when the paper explicitly assesses the ability to consider both sides of an issue.
- Misinterpreting graphs or charts by confusing correlation with causation, or drawing conclusions not supported by the data presented.
- Attempting to recall memorised psychology facts when genuine interest and reasoning are valued more highly than prior curriculum knowledge.
- Neglecting to use evidence to support claims, instead relying on unsupported opinions or generalisations about human behaviour.
- Rushing calculations or misreading numerical data due to nervousness, when taking a moment to check working would prevent errors.

Exam technique

Begin by reading through the entire paper to understand what is required in both sections, then allocate your time strategically. Aim to spend approximately **25 to 30 minutes on Section 1** and reserve at least 30 minutes for planning and writing your essay in Section 2, as extended writing takes longer than anticipated.

When tackling the research excerpt question, read it carefully and identify key findings before attempting to interpret charts or perform calculations. Show your working for mathematical questions even if answers seem obvious. For short answer questions, be concise but ensure each answer directly addresses what is asked, using evidence where possible.

For the essay in Section 2, spend **five minutes planning** your response before writing. Choose the question that genuinely interests you rather than the one you think you should answer. Structure your essay with a clear argument, use specific examples or evidence, and explicitly consider alternative viewpoints to demonstrate balanced thinking. Leave two minutes at the end to check your work for clarity and accuracy.

What to revise alongside this paper

Students preparing for this entrance examination should familiarise themselves with **basic concepts in human biology**, particularly the nervous system, brain structure, and how biological processes influence behaviour. Understanding how scientific research is

conducted, including study design and the difference between experiments and observations, provides useful context.

Reading introductory psychology texts or articles will help build confidence, even though prior knowledge is not required. Topics such as memory, perception, social influence, and developmental psychology frequently appear in entrance-level discussions. Consider exploring case studies of interesting psychological phenomena to develop the skill of analysing real-world examples.

Practise interpreting data from various sources, not just psychology, to strengthen graph-reading and numerical skills. Essay writing technique is transferable from other humanities subjects, so revising how to construct balanced, evidenced arguments in subjects like History or Religious Studies will support Section 2 preparation.

Key terms

Human behaviour, Evidence-based reasoning, Data interpretation, Research methodology, Charts and graphs, Correlation versus causation, Sample size, Variables, Psychological research, Critical analysis, Balanced argument, Reflective thinking, Human biology, Percentages and averages, Research excerpts

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