

Isaac Biology

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Isaac Biology

- Currently A-level content only
- Question pages (~300)
 - Original
 - Past Papers (OCR, CIE)
 - Natural Sciences Admissions Assessment (NSAA)
- Concept pages (new/coming soon)




Question Finder

[Home](#) > [Choose your Questions](#)


Choose your Questions

[Help](#)


Topics: 
Biology

[Scroll to questions...](#)

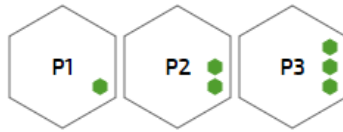
Click these buttons to choose your question gameboard

I am interested in stage... 

Select... 

I would like questions for... 

Practice

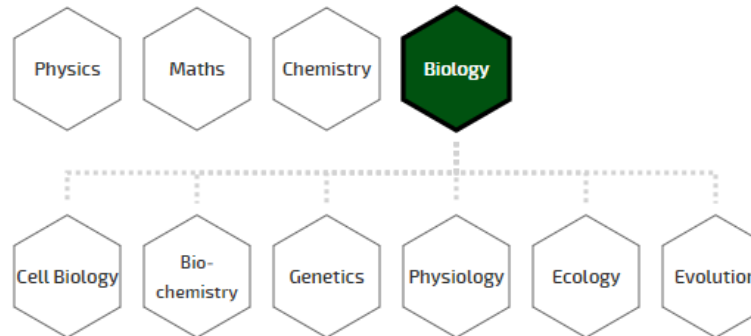


Challenge




☒ Include Isaac book questions

Topics:



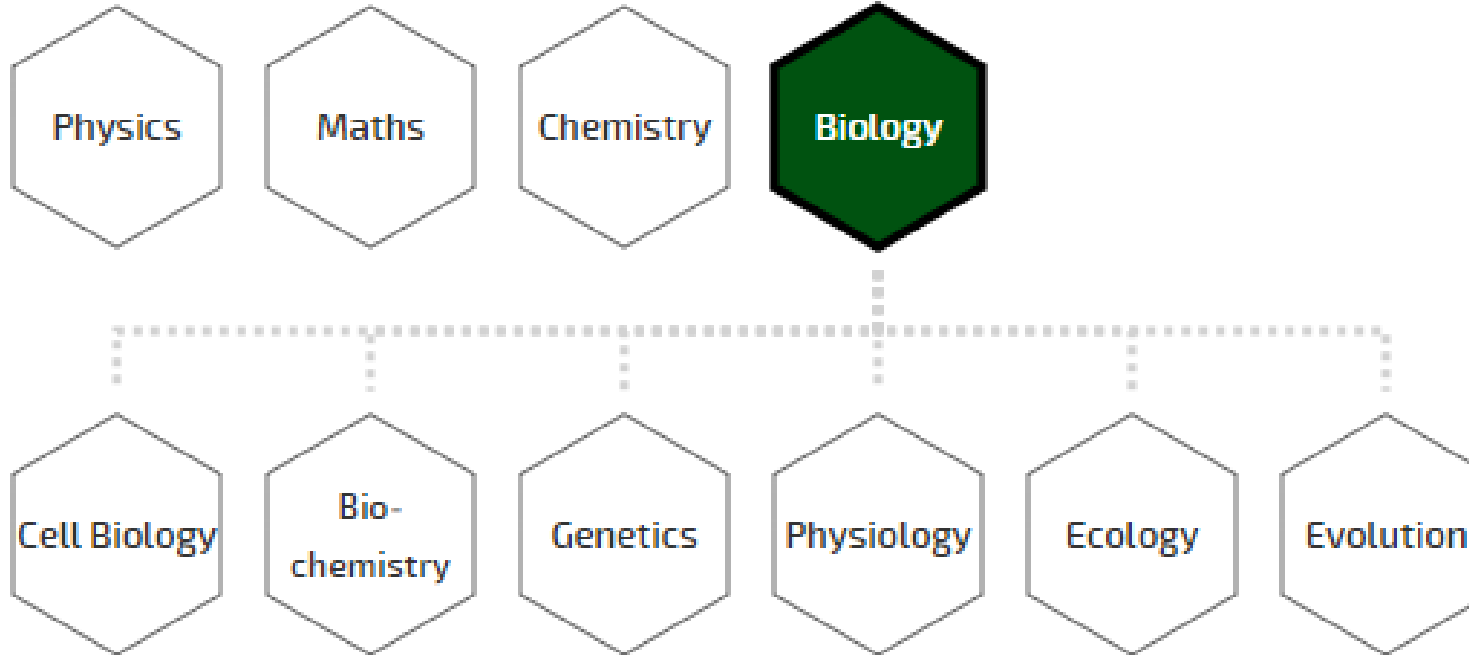
[Go to Questions...](#)

[Shuffle Questions](#) 



Question Finder

Topics:



- Cell Structure
- Mitosis
- Meiosis
- Viruses
- Membrane Transport
- Tissues

- Proteins
- Carbohydrates
- Lipids
- Respiration
- Photosynthesis

- DNA Replication
- Transcription
- Translation
- Genes & Alleles
- Inheritance
- Biotechnology

- Plants
- Breathing & Circulation
- Hormones
- Digestion & Excretion
- Sense & Movement
- Disease & Immunity

- Populations
- Ecosystems
- Nutrient Cycles
- Biodiversity

- Variation
- Theory
- Phylogenetics




Question Difficulty

[Home](#) > [Choose your Questions](#)

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Topics: 


Biology

[Scroll to questions...](#)

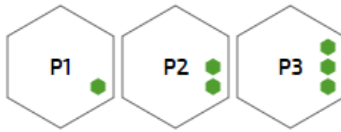
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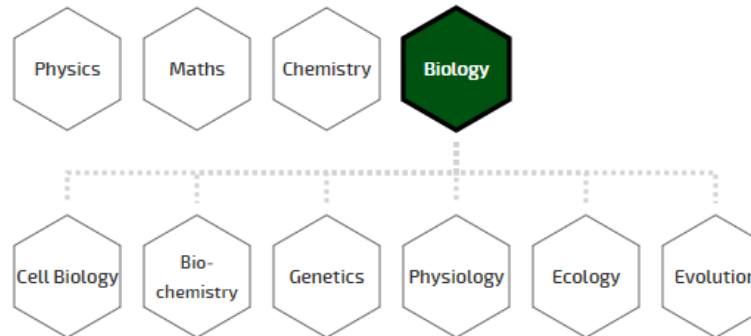


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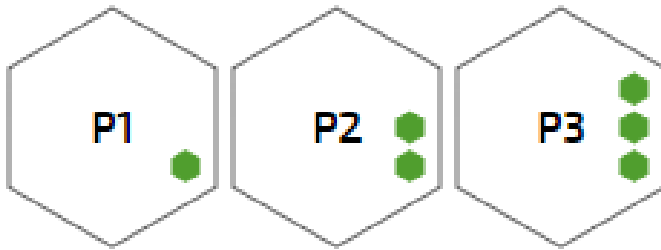
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Question Difficulty

Practice



Challenge



Recall questions

- *What is the name of this cell type/process/?*
- *Label the diagram*
- *Fill-in-the-blanks*





















Application questions

- *Interpret the graph*
- *Predict the outcome*
- *Statistical tests*



Example biology questions

Teacher Symposium 2024 KS5 Biology

	Types of Cells Biology > Cell Biology > Cell Structure	A Level 	>
	Cell Division and Cell Numbers Biology > Cell Biology > Mitosis	A Level 	>
	Sequence Transcription and Translation Biology > Genetics	A Level 	>
	The Cardiac Cycle Biology > Physiology > Breathing & Circulation	A Level 	>
	Antibody Structure and Function Biology > Physiology > Disease & Immunity	A Level 	>
	Ash Woodland Biodiversity Biology > Ecology > Biodiversity	A Level 	>
	Blood Types Biology > Genetics > Genes & Alleles	A Level 	>
	Light-dependent Labelling Biology > Biochemistry > Photosynthesis	A Level 	>
	Albino Rabbits Biology > Evolution > Theory	A Level 	>
	Sodium Ion Reabsorption Biology > Physiology > Digestion & Excretion	A Level 	>



Biology Boards by Topic

[Home](#) > [Biology Boards by Topic](#)

Biology Boards by Topic

Prepared boards for use in classroom or homework



Boards for Physics



Boards for Chemistry



Boards for Biology





For Maths boards, see [Practise Maths](#).

The Biology topics below are ordered to allow for progression of ideas from one board to the next (within each section). To find a board on a specific topic, use `Ctrl+F` in your browser. You can also click on the links below to jump to the relevant section.

- [Biochemistry](#)
- [Cell Biology](#)
- [Ecology](#)
- [Evolution](#)
- [Genetics](#)
- [Physiology](#)

The "**What it contains**" column lists the [difficulty levels](#) of the questions and how many there are: for example, "3×P, 6×C" means three "Practice" questions and six "Challenge" questions. Generally, "Practice" questions are recall-based questions that test basic knowledge of a topic, while "Challenge" questions are application-based questions that test the ability to apply that knowledge to an unfamiliar scenario. Some ratings are preliminary and subject to change, so feedback from teachers is very welcome. The table also shows which question types are used in each board:

-  **MCQ**: multiple-choice with only one correct answer
-  **Item**: multiple-choice with multiple correct options to select



Concept pages

[Home](#) > [Concepts](#)

Concepts

Search concepts

Search Results

Filter: ☐ Physics ☐ Maths ☐ Chemistry ☒ Biology



An Introduction to Statistics in Biology

Why we use statistical tests, when to use each test, and how to interpret the results.



Chi-squared Tests in Biology

When and how to use chi-squared tests in biology.



Spearman's Rank Correlation Coefficient in Biology

When and how to use Spearman's rank correlation coefficient in biology.



Student's t-test (Unpaired Samples) in Biology









































When and how to use Student's t-test (unpaired samples) in biology.





Example statistics questions

Teacher Symposium 2024 KS5 Statistics in Biology

 Selecting Statistical Tests Biology	A Level    >
 Fish Metabolic Rates Biology	A Level    >
 Heart Rate Medication Biology	A Level    >
 Goldfish Sizes Biology	A Level    >
 Snapdragon Flowers Biology	A Level    >
 Monohybrid Cross Phenotype Frequencies Biology	A Level    >
 Drosophila Dihybrid Cross Biology	A Level    >
 BCG Vaccine Biology	A Level    >
 Zebrafish Spawning Biology	A Level    >
 Habitat Rainfall and Species Diversity Biology	A Level    >

t-tests

chi-squared tests

Spearman's rank
correlation coefficient



Next steps for Isaac Biology

- GCSE Biology question pages
- Concept pages (A-level)
- More A-level questions
- “Stretch questions”
 - Collaboration with Andrew Catherall-Ostler (funded by Isaac Newton Trust)
 - e.g. *“How does a cell fit its genome into such a small space?”* and *“Why don’t humans photosynthesise?”*



Thank you!

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