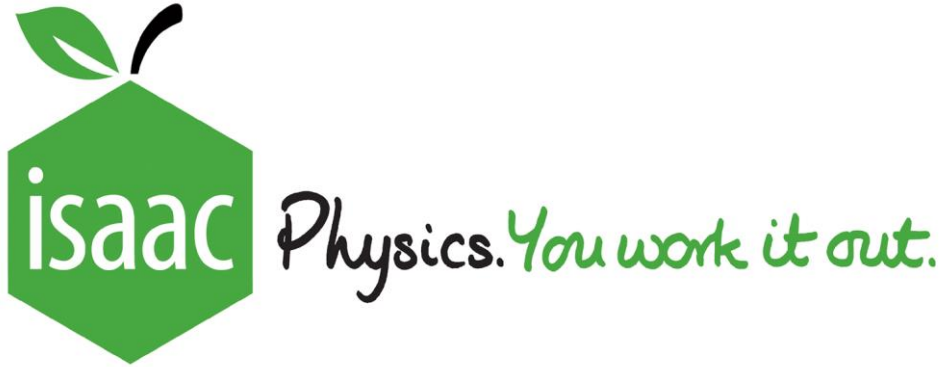

Isaac Biology

Lewis Thomson

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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

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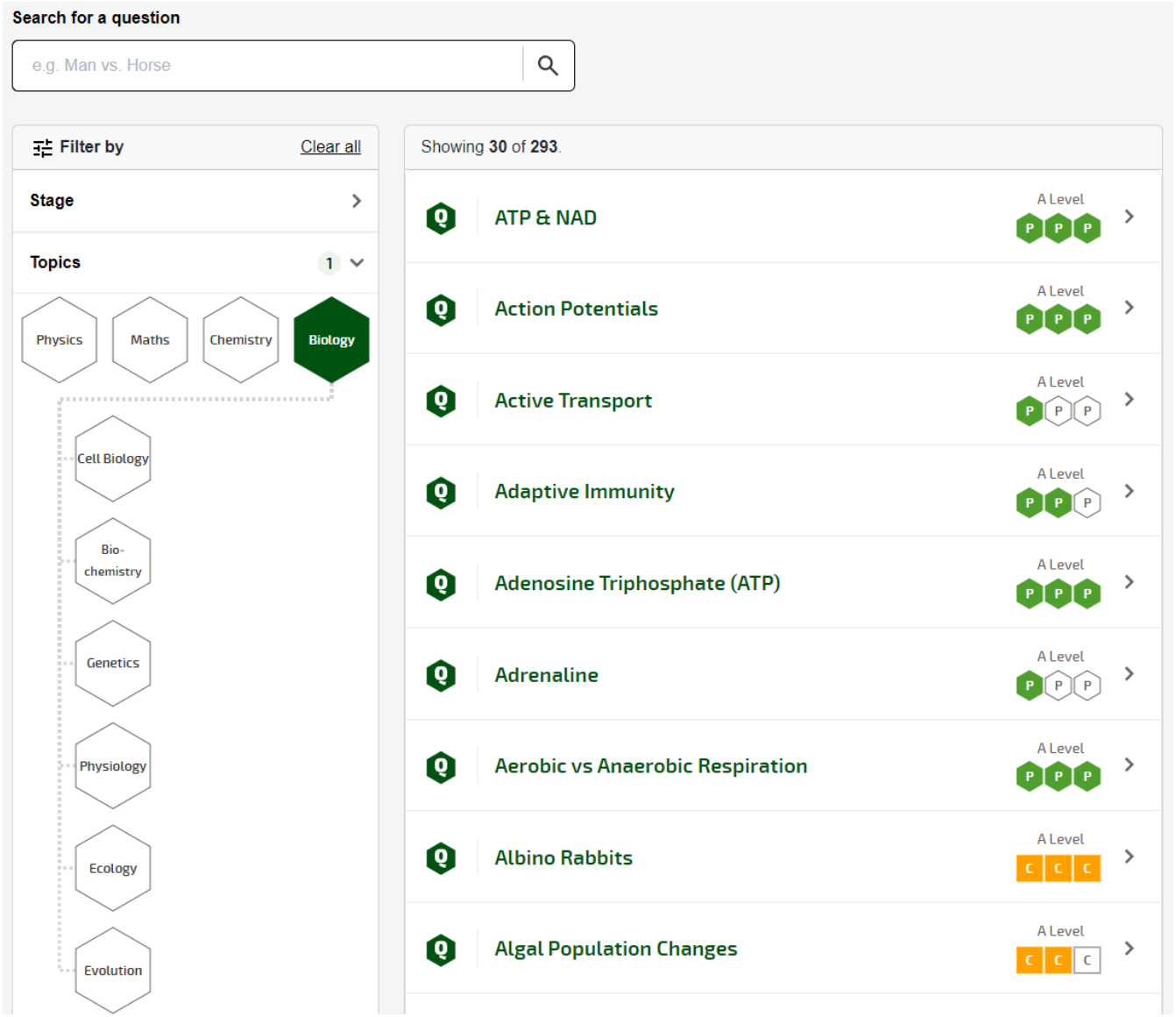
Question Finder



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Question Finder

- 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

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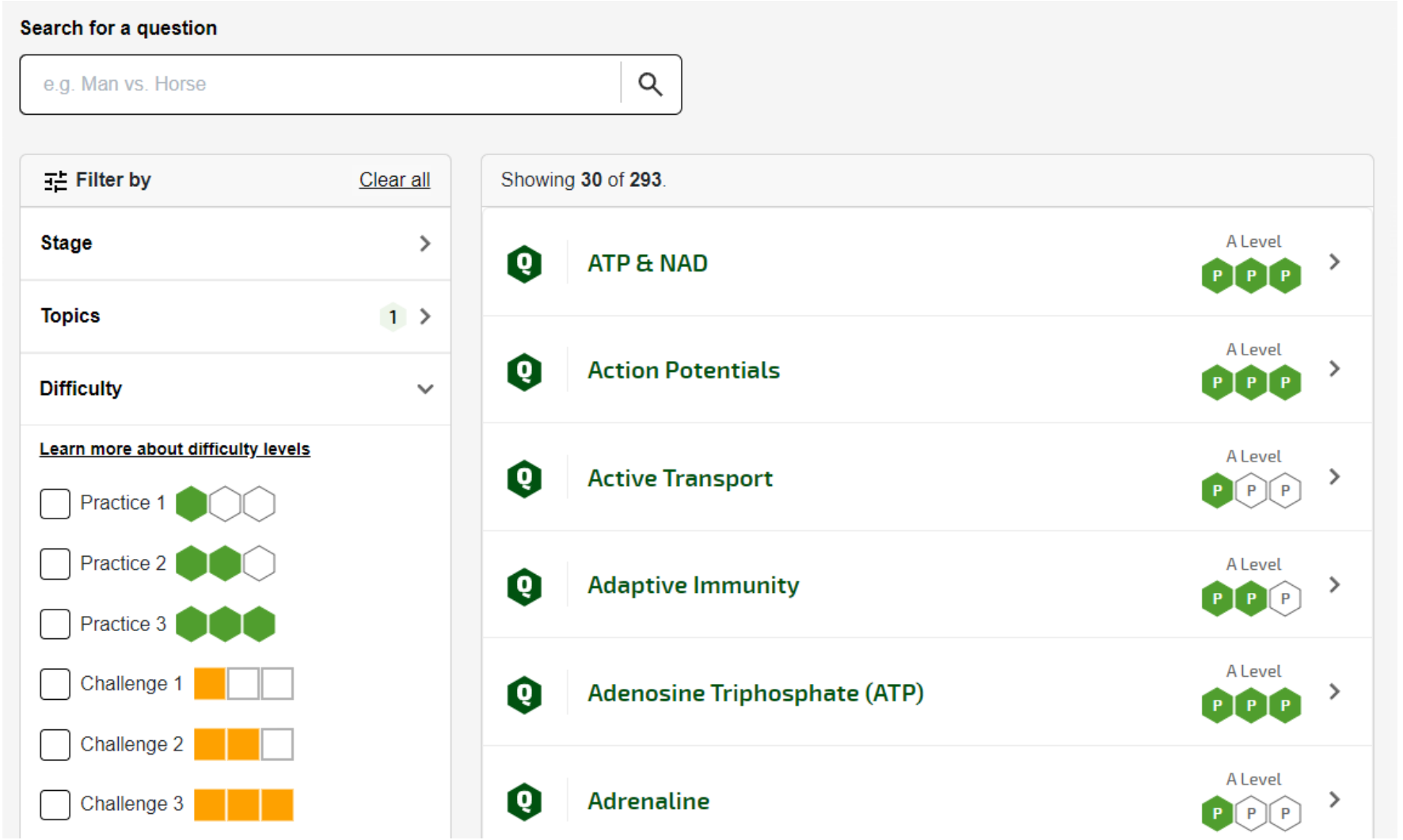
Question Difficulty



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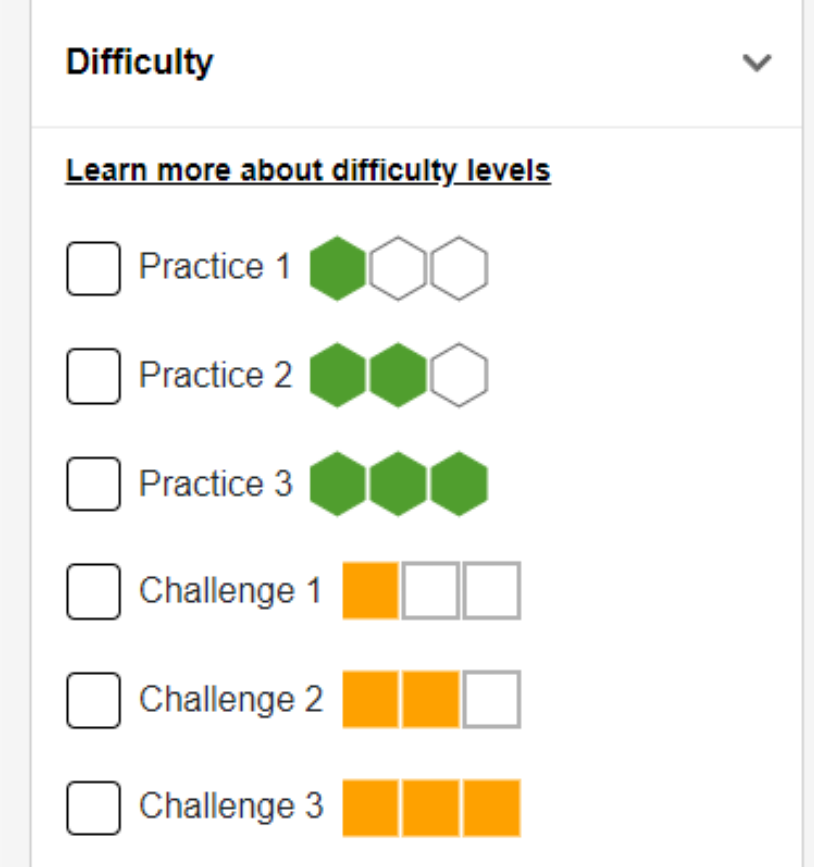
Question Difficulty



Practice: Recall questions

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

Challenge: Application questions

- *Data interpretation*
- *Logic & reasoning*
- *Problem-solving-style questions*

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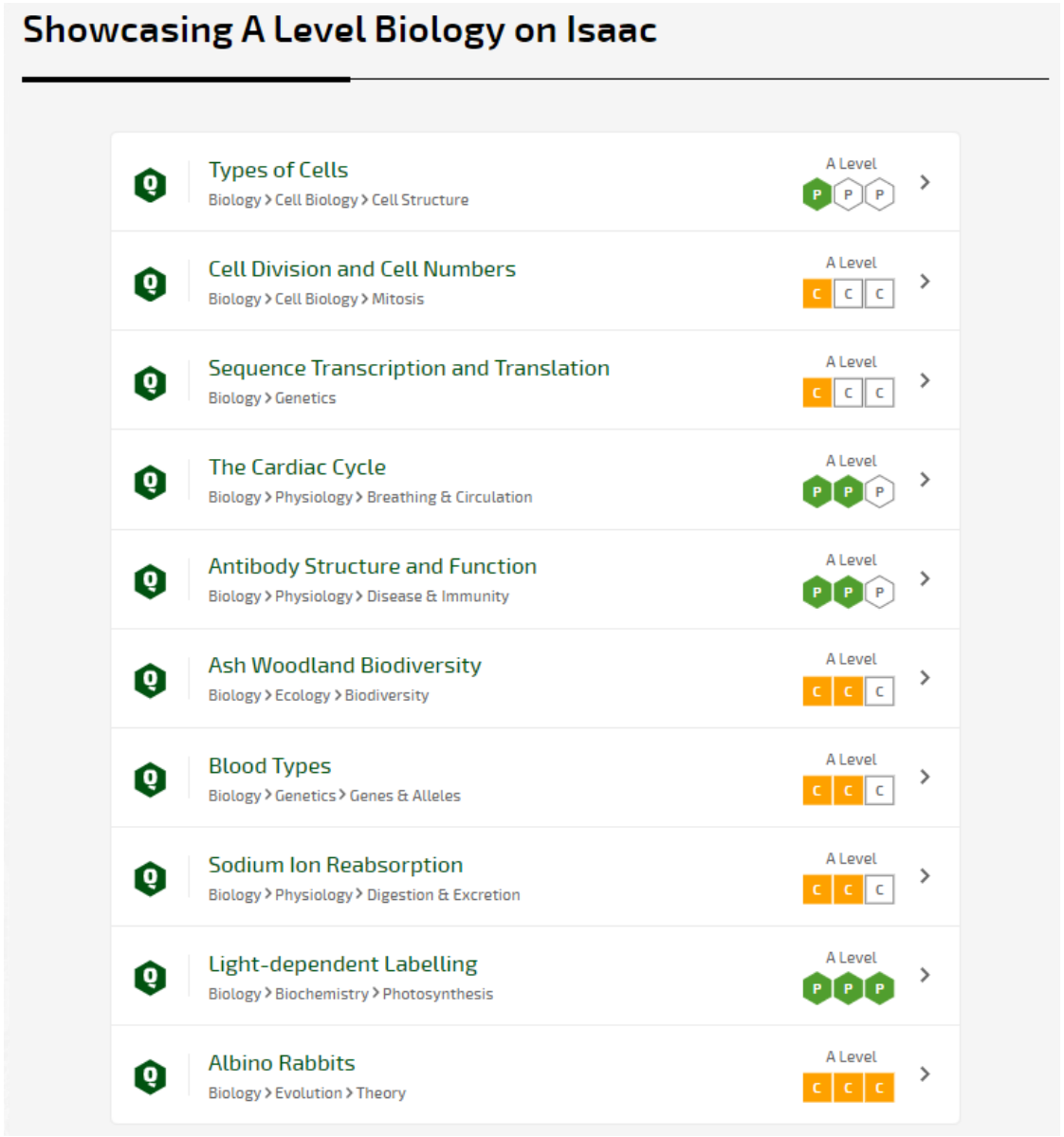
Example biology questions



https://isaacphysics.org/gameboards#isaac_bio_sample_2

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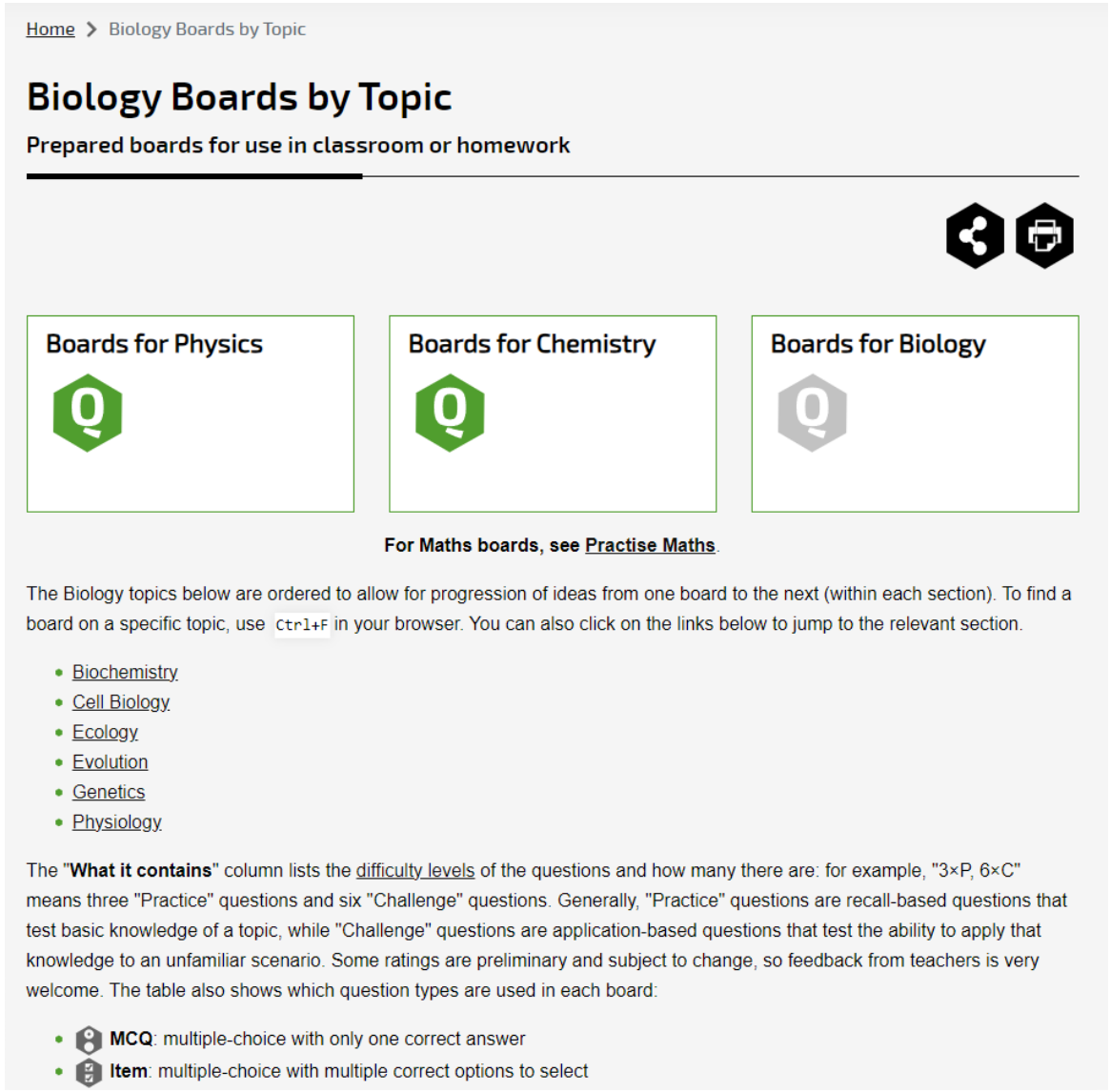
Biology Boards by Topic



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

https://isaacphysics.org/pages/boards_by_topic_bio

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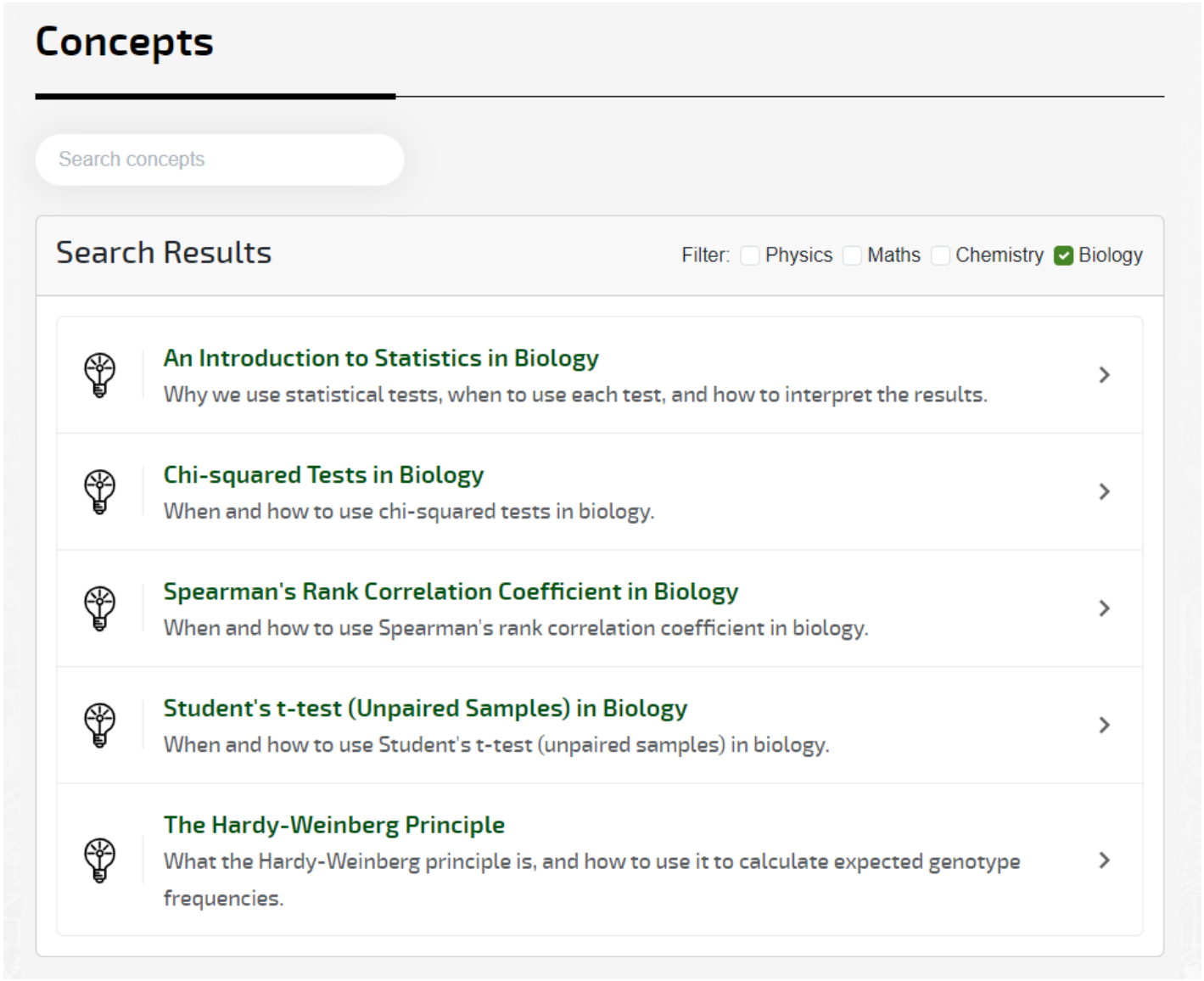
Concept pages



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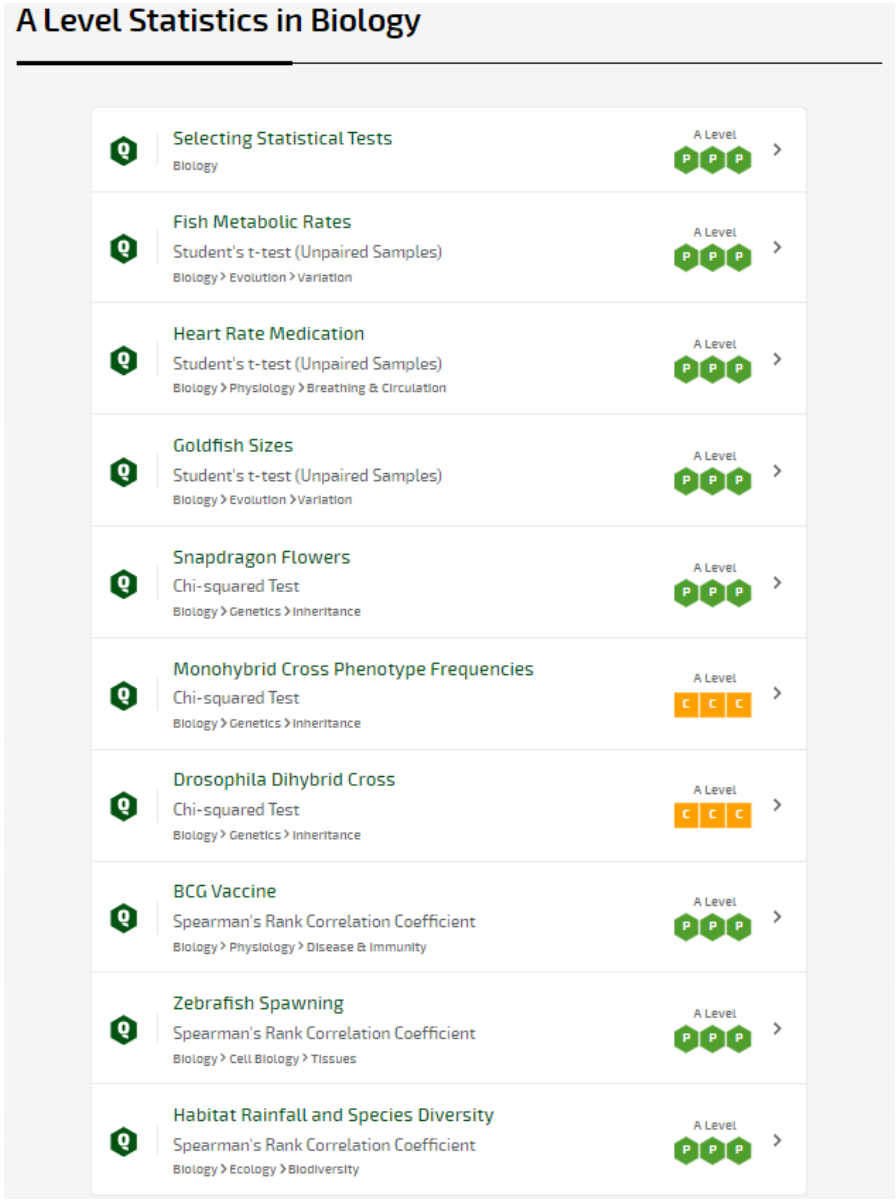
Example statistics questions



t-tests

chi-squared tests

Spearman's rank correlation coefficient

https://isaacphysics.org/gameboards#isaac_bio_stats_sample

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Next steps for Isaac Biology

- More A-level questions & concept pages
- A-level biology book
- GCSE content
- "Stretch questions" (A-level)
  - 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?"*

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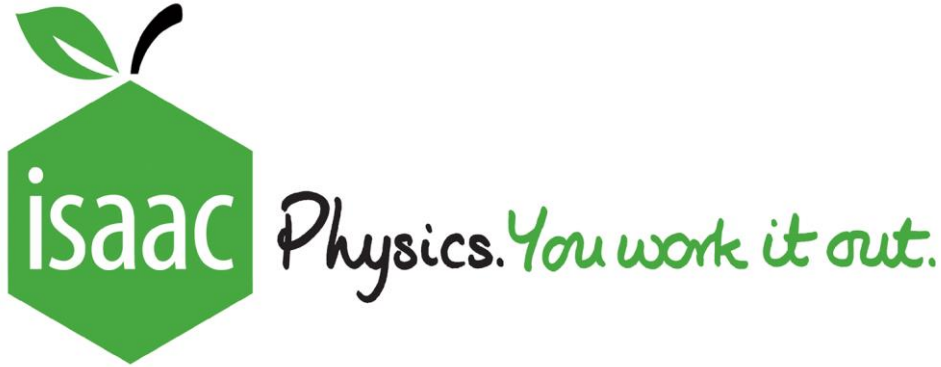

Thank you!

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