

Assessment Prep with Kognity

IBDP Biology

What is this guide for?

This guide is designed to help you make the most out of Kognity as a tool to prepare students for success both in formative assessments and IBDP exam preparation.

How does Kognity help with assessment preparation for IBDP Chemistry?

According to [John Hattie](#), Professor of Education and Director of the Melbourne Educational Research Institute at the University of Melbourne, Australia, feedback is an important driver for improving teaching and learning. Formative assessments play a large role in consistent feedback throughout the year as students prepare for their IBDP exams. Kognity provides efficient tools for immediate feedback to both the student and teacher.

“

*Think of feedback
as received,
not given.*

”

- John Hattie

For students:

Students can test their problem solving, interpretation and analysis skills in Biology through completing worked examples and receiving immediate feedback on their responses. In addition, at the end of each section, students can complete section questions that are auto-graded, allowing them to receive feedback right away on their progress.



For teachers:

Teachers get immediate feedback on their students' progress through the performance overview dashboard, located on the statistics page. Here, teachers can view a visual representation of student quiz and assignment scores. Teachers can then easily identify those students who need help, which makes intervention fast and efficient.



Below you will find some ways teachers can use Kognity's resources to successfully prepare their students for IBDP Biology assessment components. Click on each picture to explore more in Kognity Biology!

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How does Kognity help with formative assessments?

Revision Quizzes

Kognity's [question assignments](#) can be used as revision quizzes for review at the end of a unit. Teachers can drill students on specific techniques and tools using multiple examples. All question assignments are auto-graded, so students and teachers can immediately receive the results. Teachers can then revise any common mistakes before starting to teach new content.

2. Molecular biology				
146 questions		Add question		
<input type="checkbox"/>	Sent	Question	Topic	Type
<input type="checkbox"/>		The start codon on mRNA is always _____ and this codes for the addition of _____ as the first amino acid in every polypeptide	2.7	
<input type="checkbox"/>		Which of the following would form an enzyme-substrate complex?	2.5	

Exam Practice Tasks

Kognity provides exam-style questions, marks schemes and model answers that teachers can use in a variety of different ways with their students. For example, teachers can go over a practice paper as a class, write the answer together, and focus on examiner comments.

Question preview

3 of 98 Paper: 2 Marks: 15

Question

(a) Explain why there is a 50% chance of every baby born being male and a 50% chance of the baby being female. [4 marks]

(b) Describe how sex is determined in males. [3 marks]

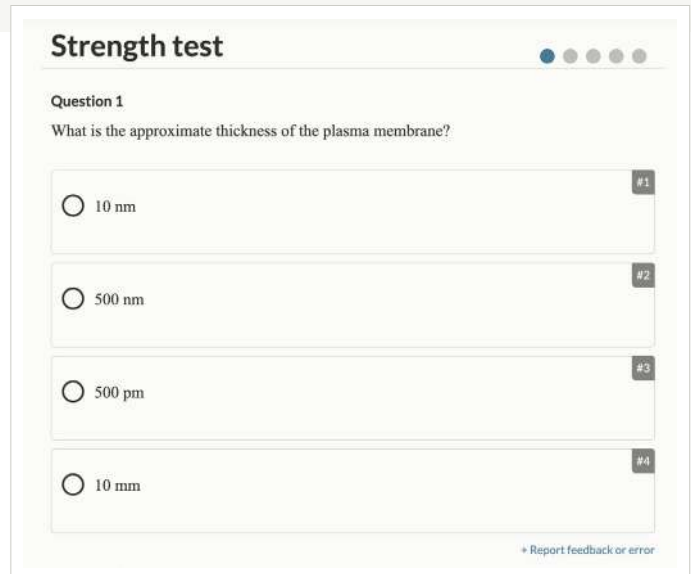
(c)

```
graph TD; P1(( )) --- P2[ ]; P1 --- C1(( )); P1 --- C2[ ]; P1 --- C3(( )); P1 --- C4(( )); P1 --- C5[ ]; P1 --- C6[ ]
```

How does Kognity help with formative assessments?

Self-Study

To provide students with resources for self-directed active recall study, use Strength tests and battles. Students can also use self-assessment checklists before a test or exam to help students identify areas of weakness.



Strength test

Question 1
What is the approximate thickness of the plasma membrane?

10 nm #1

500 nm #2

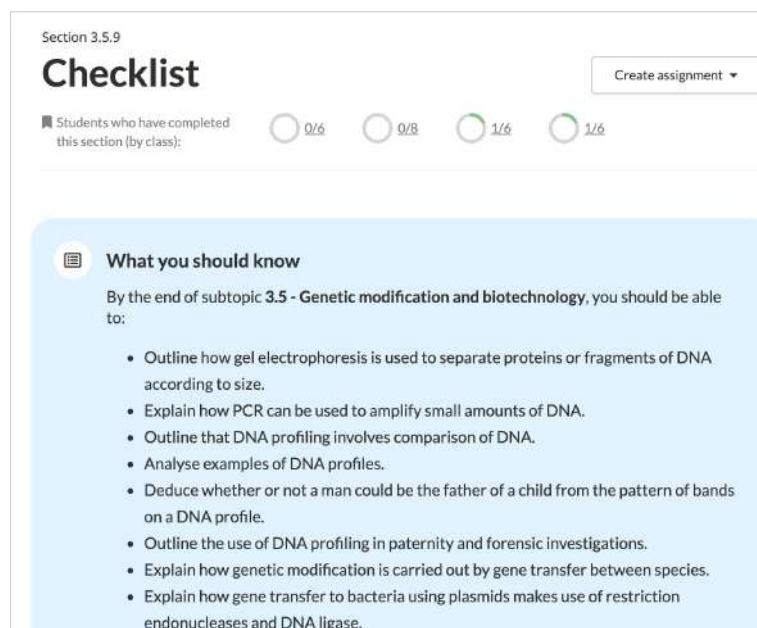
500 pm #3

10 mm #4

[+ Report feedback or error](#)

Notebook and Checklists

Kognity's notebook feature allows students to make their own notes and print out if necessary for consolidation. Students can use the notebook feature when they are performing self-assessment of knowledge and understanding at the end of each chapter with the checklists.



Section 3.5.9

Checklist

Create assignment ▾

Students who have completed this section (by class):

0/6 0/8 1/6 1/6

What you should know

By the end of subtopic 3.5 - Genetic modification and biotechnology, you should be able to:

- Outline how gel electrophoresis is used to separate proteins or fragments of DNA according to size.
- Explain how PCR can be used to amplify small amounts of DNA.
- Outline that DNA profiling involves comparison of DNA.
- Analyse examples of DNA profiles.
- Deduce whether or not a man could be the father of a child from the pattern of bands on a DNA profile.
- Outline the use of DNA profiling in paternity and forensic investigations.
- Explain how genetic modification is carried out by gene transfer between species.
- Explain how gene transfer to bacteria using plasmids makes use of restriction endonucleases and DNA ligase.



How does Kognity help with IB Assessment Preparation?

Internal Assessment (IA)

To ensure success in the IA, teachers must spend time introducing and explaining the criteria and responsibilities to their students. Kognity's IA topic is a great resource for both teachers and students to understand the requirements and see clear and detailed examples for each criterion, as well as formats for planning and reviewing their drafts.

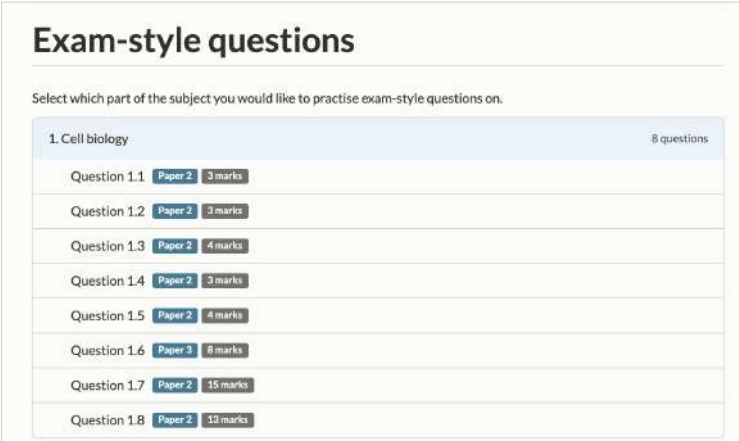


The screenshot shows the 'Internal Assessment guide' for Subtopic IA.1. It features a 'Create assignment' button and a progress indicator showing 'Students taking questions in this subtopic (by class):' with four progress bars, each labeled '0/6'. Below this is a 'Contents' list:

- IA.1.0 Introduction
- IA.1.1 Getting started
- IA.1.2 Personal engagement
- IA.1.3 Exploration
- IA.1.4 Analysis
- IA.1.5 Evaluation
- IA.1.6 Communication
- IA.1.7 Checklist for final report

IB Exam Papers

Exam tips are written by IB examiners and provide students with an understanding of what is expected of them in their exams. Kognity's exam-style assignments are all based on Papers 2 and 3 and contain questions, example answers and commented mark schemes that provide students tips for success that are written by examiners. Just add a timer when using an exam-style assignment to model real exam conditions!



The screenshot shows the 'Exam-style questions' interface. It prompts the user to 'Select which part of the subject you would like to practise exam-style questions on.' Below this, a list of questions is shown for '1. Cell biology' (8 questions total):

Question	Paper	Marks
Question 1.1	Paper 2	3 marks
Question 1.2	Paper 2	3 marks
Question 1.3	Paper 2	4 marks
Question 1.4	Paper 2	3 marks
Question 1.5	Paper 2	4 marks
Question 1.6	Paper 3	8 marks
Question 1.7	Paper 2	15 marks
Question 1.8	Paper 2	13 marks

How does Kognity help with IB Assessment Preparation?

Prescribed Practicals

For the prescribed practicals, Kognity has examples of practicals for each of the topics. Each experiment has a detailed procedure together with a list of apparatus and chemicals. There are also practice questions that cover the skills and calculations required in each experiment.

Section P.1.1

Using microscopes to investigate stomata

Create assignment ▾

Students who have completed this section (by class): 0/6 0/8 0/6 0/6

Part of the wonder of biology is the complexity of some of the smallest structures in different organisms. The sperm cell is often the smallest cell in most organisms but the humble fruit fly (*Drosophila bifurca*) has a remarkable sperm cell that is supercoiled (very much like DNA itself) and, when uncoiled, is actually 15–20 times longer than the fly's body (**Figure 1**)!

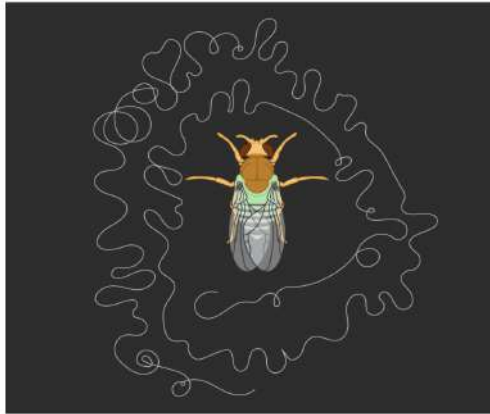


Figure 1. Comparison of the size of a fruit fly and its unravelled sperm cell.