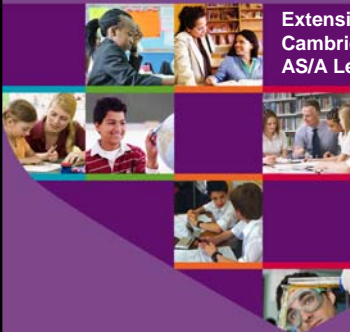


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Extension Training - Day 1
Cambridge International
AS/A Level Biology (9700)



A

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Session 1

Welcome and introduction.



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Housekeeping and general points

- Health and safety
- Fire safety – alarms and exits
- Washrooms
- Refreshments
- Mobile telephones
- Pack contents










Timetable

Day 1

08:00 - 09:00	Registration
09:00 - 09:15	Welcome and introduction
09:15 - 10:00	Review of the syllabus
10:00 - 10:30	Identifying underpinning knowledge
10:30 - 10:50	Break
10:50 - 12:30	The assessment and closing the loop
12:30 - 13:30	Lunch
13:30 - 15:30	Teaching approaches
15:30 - 15:50	Break
15:50 - 16:50	Appropriate challenge
16:50 - 17:00	Close









About us

Cambridge International Examinations prepare school learners for life, helping them develop an informed curiosity and a lasting passion for learning. We are part of Cambridge Assessment, a department of the University of Cambridge.

Our international qualifications are recognised by the world's best universities and employers, giving learners a wide range of options in their education and career. As a not-for-profit organisation, we devote our resources to delivering high-quality educational programmes that can unlock learners' potential.



What is the Cambridge programme?

Cambridge Primary 5 to 11 years*	Cambridge Secondary 1 11 to 14 years*	Cambridge Secondary 2 14 to 16 years*	Cambridge Advanced 16 to 19 years*
Cambridge Primary Cambridge Primary Checkpoint Cambridge ICT Starters	Cambridge Secondary 1 Cambridge Secondary 1 Checkpoint Cambridge ICT Starters	Cambridge IGCSE® Cambridge O Level	Cambridge International AS & A Level Cambridge Pre-U

- A global curriculum
- 21st century skills
- International perspective

*Age ranges are for guidance only

Extension course aims

The aims of this course are to:

- review the syllabus requirements
- explore different teaching strategies
- develop schemes of work
- understand the assessment process
- explore the use of assessment documents to inform teaching

Session 2 – the syllabus

The objective of this session is to ensure that you understand the objectives, content and structure of the syllabus.

Activity 1 – quiz

You have 20 minutes for the quiz. Please follow these instructions:

- answer all questions
- work in pairs
- use the syllabus document to help you
- ask if there are any words in the quiz or syllabus which you do not understand.

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Activity 1 – answers

1. b	9. b
2. a	10.a
3. c	11.c
4. b	12.d
5. c	13.b
6. c	14.d
7. b	15.b
8. a	16.d

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Activity 1 – answers

17.b
18.c
19.b
20.c

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The syllabus

- The Key Concepts outlined in the syllabus are the essential ideas, theories or principles that unify the subject.
- They help learners to gain a better understanding of the subject.
- They help learners to see 'the big picture' and make connections within the subject
- Please find these in the syllabus.

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The syllabus

- The subject content is divided into main subject areas - the syllabus topics
- Each of the 19 syllabus topics:
 - has an introduction to set the context
 - is divided into 2 or 3 sections, each with an introduction
 - has specific, detailed, learning outcomes which can be assessed in Papers 1-5.

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The syllabus

- Assessment option 1 = A Level qualification
 - linear approach - take all five papers at the end of the course (usually the second year of study)
- Assessment option 2 = A Level qualification
 - staged approach - take AS level (three papers) in one examination session and complete the A Level (two papers) in a subsequent session
- Assessment option 3 = AS level qualification
 - take only AS papers in one examination session

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The syllabus

Three assessment objectives assessed in a total of five examination papers for A Level.


AO1	40% of marks (knowledge with understanding)	Paper 1 and 2 (AS Level) Paper 4 (A Level)
AO2	37% of marks (handling information and solving problems)	Paper 1 and 2 (AS Level) Paper 4 (A Level)
AO3	23% of marks (experimental skills and investigations)	Paper 3 (AS Level) Paper 5 (A Level)

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Questions?

Please write on the post-it notes any questions that you would like to be answered by the end of the course.



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Session 3 – assessing knowledge

The objective of this session is to understand the underpinning knowledge of this course and how this is assessed.

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Learner strengths and weaknesses

It is important to assess areas of strength and weakness in your learner's knowledge.

You can do this by:

- using a checklist after topics have been taught
- focusing on areas you know are challenging either to teach or learn.

Activity 2

- Look at Topic 16.1 (Passage of information from parent to offspring) in the syllabus.
- The cards show the knowledge required to underpin this section.
- Rank the cards to show how essential this knowledge area is – cards may be ranked as equal and you may add your own cards.

Current ability and knowledge level

Please discuss in groups where you think most learners would have good previous knowledge or skills and where they would need most support.

Break

Please be back in 20 minutes.
Refreshments are available.

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Session 3 *continued*

Developing an initial assessment for a topic.

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Activity 3

Develop an initial assessment for the section of the syllabus looked at in Activity 2.

Please feel free to use the exemplar initial assessment material provided.

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Reviewing the initial assessment

Qn	Knowledge/Skill	RAG	Resource	Target	Reviewed
1					
2					
3					
4					

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Closing the loop

```

graph TD
    Assess((Assess)) --> Review((Review))
    Review --> SetTargets((Set targets))
    SetTargets --> TeachingLearning((Teaching learning))
    TeachingLearning --> Assess
  
```

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Using the learner checklist

Look at the extract from the learner checklist which can be used at two points in the learning:

1. Immediately following a unit of study – learners could be asked to RAG rate their understanding of the unit and possible then help each other to improve understanding.
2. Revision of the whole syllabus or sections of the syllabus in preparation for assessment.

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Activity 4

- Look at the teacher checklist that you have been given and RAG rate your confidence to deliver each area and how well you think your learners understand.
- In groups of three, each person should present a problem area (one rated red) and the groups should discuss potential solutions.
- Please spend 10 minutes discussing each problem area.

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Closing the loop – a reminder

```

graph TD
    A((Assess)) --> B((Review))
    B --> C((Set targets))
    C --> D((Teaching learning))
    D --> A
  
```

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Lunch

Please be back in 1 hour.

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Session 4 – teaching approaches

The objective of this session is to explore a variety of different teaching approaches.

Activity 5 – in groups:

- discuss the teaching approach on the slide you have been given and choose a suitable topic from the syllabus to apply this method to
- plan how you would create a logical progression of learning and assessment on this topic
- identify necessary resources
- you will be asked to present your delivery plan to your rainbow group at the end of this session.

Flipped learning

- Learners are given material – usually online – to introduce and/or research the topic before the formal classroom experience begins.
- This can be done either at home or in the classroom.
- Resources can be developed in school and/or found online.

Flipped learning example

- For homework, learners use the internet / library to research one example each of the use of monoclonal antibodies in the diagnosis of disease and in the treatment of disease (Topic 11.2c).
- At the start of the next lesson, learners discuss their findings in groups (different groups can be given different named examples).
- Learners can also self-assess how well they completed their homework.

Enquiry based learning

- Learners carry out research (enquiries) into the topic and look at questions and problems
- The 5 Ws and an H approach may be useful – **W**hat, **W**hy, **W**ho, **W**hen, **W**here and **H**ow
- Resources could include textbooks and the internet
- This can be done in collaboration with other learners or with teachers.
- The research tasks are open-ended enabling individual response

Group work 1

In this type of group work it is useful to assign roles. These roles are usually:

- facilitator
- recorder
- summariser
- presenter.

Group work 2

Think, pair, share is a co-operative discussion strategy. It works by:

- provoking **thinking** with a question, prompt or observation
- allowing learners to **pair** up and compare notes
- pairs can **share** their thinking with the rest of the class

Group work 3

Rainbow grouping is where learners work in groups of up to 6 on a topic:

- they are then given cards so that in each group each learner has a different coloured card
- groups then reform by colour and learners feedback to their new group.

Practising rainbow grouping

- You will have been allocated a colour while in your original group.
- Regroup with others of the same colour and explain the teaching method that you have been developing.

Break

Please be back in 20 minutes.
 Refreshments are available.

Session 5 – appropriate challenge

The objectives of this session are to:

- build a list of ideas to stretch and challenge more able learners
- create a list of ideas for supporting and encouraging less able learners.

Stretch and challenge

- How do you extend and stimulate the thinking of more able learners during whole-class teaching?

Activity 6 – stretch and challenge

- In your groups discuss the ideas that you have for stretch and challenge.
- List your ideas and be prepared to offer them to all delegates.

Stretch and challenge


- HOTs not MOTs
- Task wall
- Bloom's Taxonomy


Bloom's Taxonomy diagram



Useful website


<http://resources.depaul.edu/teaching-commons/teaching-guides/learning-activities/Pages/activities-for-metacognition.aspx>


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Supporting less able learners


- We will also discuss support for less able learners
- How can you support and encourage less able learners during whole-class teaching?


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Activity 7


- In your groups discuss the ideas that you have had for supporting and encouraging less able learners.
- List your ideas and be prepared to offer them to all delegates.


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Support strategies – some examples

- Oral rehearsal
- Exemplar pieces
- Provide a scaffold
- Modelling the thought processes required to solve the problem
- Paired peer support
- Praise achievements


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Four Bs

This is a classroom management idea to deal with large numbers of questions:

- Use your **B**rain
- Look in the **B**ook – or on the **B**web
- Ask a **B**uddy
- And only after doing these – ask the **B**oss


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Cambridge teacher support

There are many useful documents available from the Teacher Support Site: <https://teachers.cie.org.uk>

- syllabus
- examiner report
- schemes of work
- example candidate responses
- practical booklets
- learner guide.

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End of day 1

- Thank you for taking part in today's training.
- Please stay behind now if you have any further questions.