



Cambridge Assessment
International Education

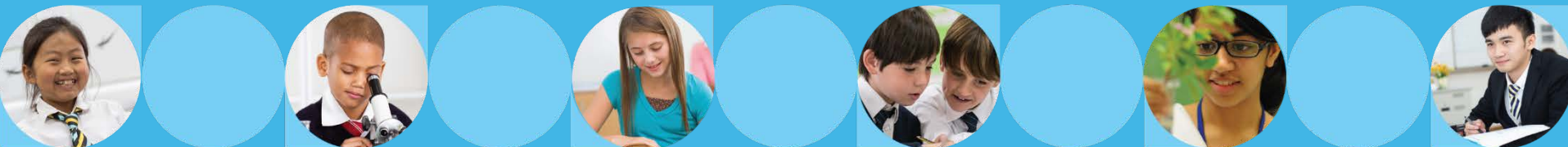
Cambridge International's vision of education in the future and its role in supporting schools

Cambridge Schools Conference

Sri Lanka November 2018

Dr Tristian Stobie

Director Education

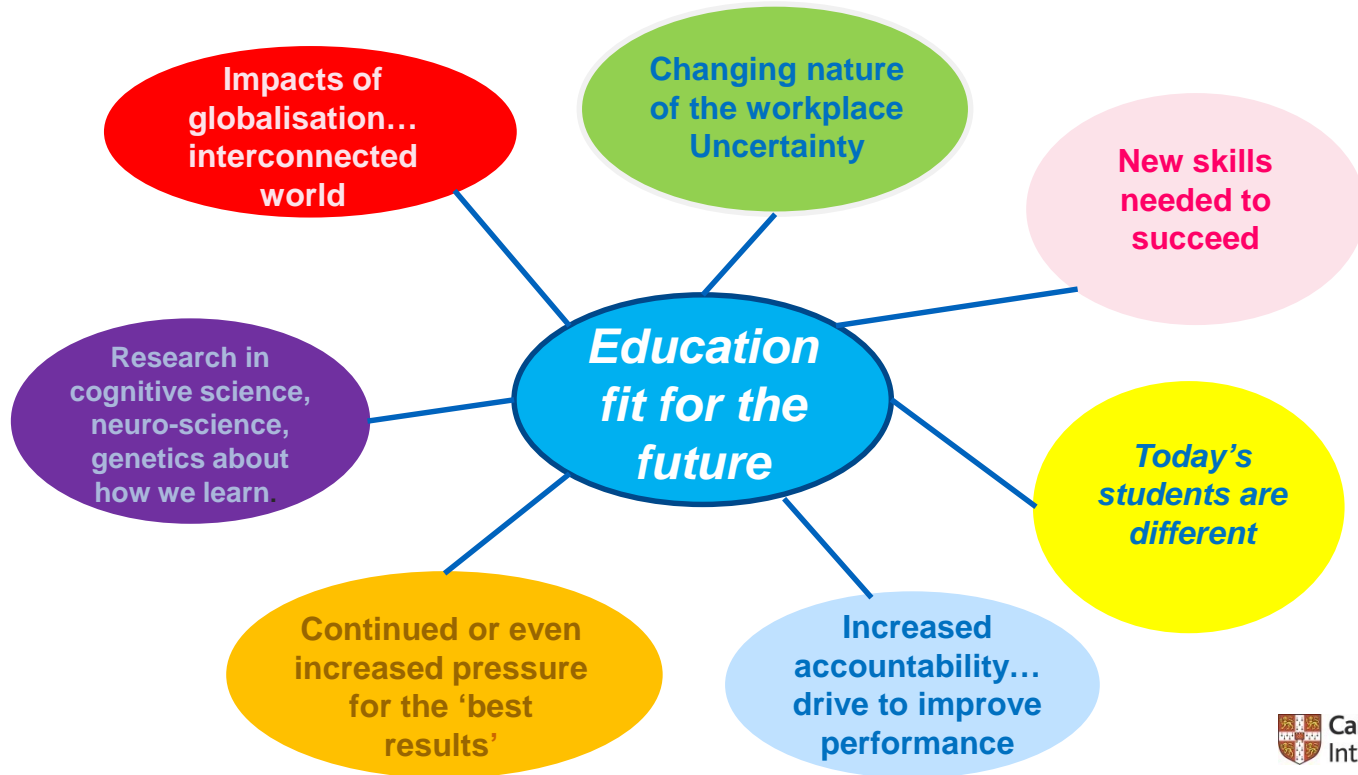


Presentation Content

1. The challenge
2. The characteristics of excellent, highly effective schools
3. Cambridge's strategy to support schools
 - ▶ Product developments. What is new?
4. The future of assessment
 - ▶ Product developments. What is new?
5. Questions and discussion

The Challenge: Education fit for the future

Schools are complex social organisations, an intricate web of interdependent parts, and they are becoming more complex...



What is an excellent, highly effective school?

Excellent, highly effective schools are schools that:

- ▶ Successfully progresses **the learning of all** of their students, **regardless of background, beyond their normal expected developmental rate of growth**
- ▶ Prepare students to **get on in life** not just to get into University
- ▶ **Measure impact.** Ensure the educational **experience students actually receive**, including the impact of the school curriculum, teaching approaches, the co-curriculum and the learning environment, closely **aligns to the school's vision** and educational aims.

Excellent schools have:

1. A broad and balanced curriculum

- ▶ Develop **Powerful Understandings**
- ▶ **Language development** is prioritised [both the mother tongue / best language of the student and the language of instruction in the school] All teachers are language teachers.
- ▶ **Less can be more** [the curriculum is not overcrowded with content so that depth is emphasised].
- ▶ **Engaging** and **challenging** content.
- ▶ The development of **learner attributes** [Cambridge's and those the school identifies]
- ▶ **Consistent** [stages build logically on the previous stage based on a learning spiral]

Excellent schools have: 1. A broad and balanced curriculum

Qualifications are only one part of the Curriculum

School mission and vision

sport

music

Hidden and Informal Curriculum

Interstitial learning

Cambridge learner attributes

School culture

community work

competitions

Duke of Edinburgh's award

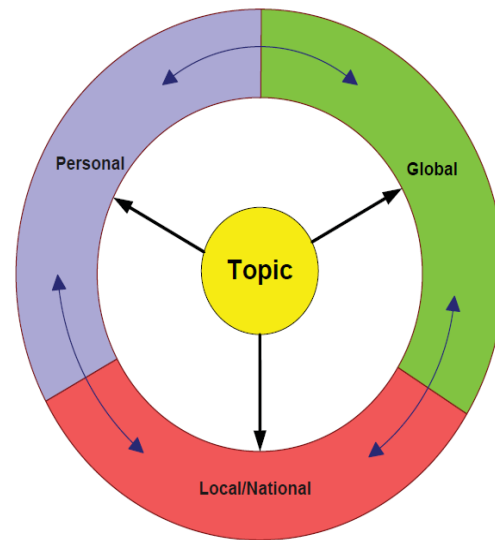
Student leadership



1. A broad and balanced curriculum : Interdisciplinary understanding that is based on disciplinary understanding

Example: Cambridge Global Perspectives aims to develop learners who are:

- ▶ “independent and empowered to take their place in an ever-changing, information-heavy, interconnected world”
- ▶ “enquire into and reflect on issues independently and in collaboration with others from a variety of different cultures, communities and countries”
- ▶ “can support judgements with lines of reasoning”
- ▶ “can communicate sensitively with people from a variety of backgrounds”
- ▶ “work independently as well as part of a team, directing much of their own learning with the teacher as facilitator”



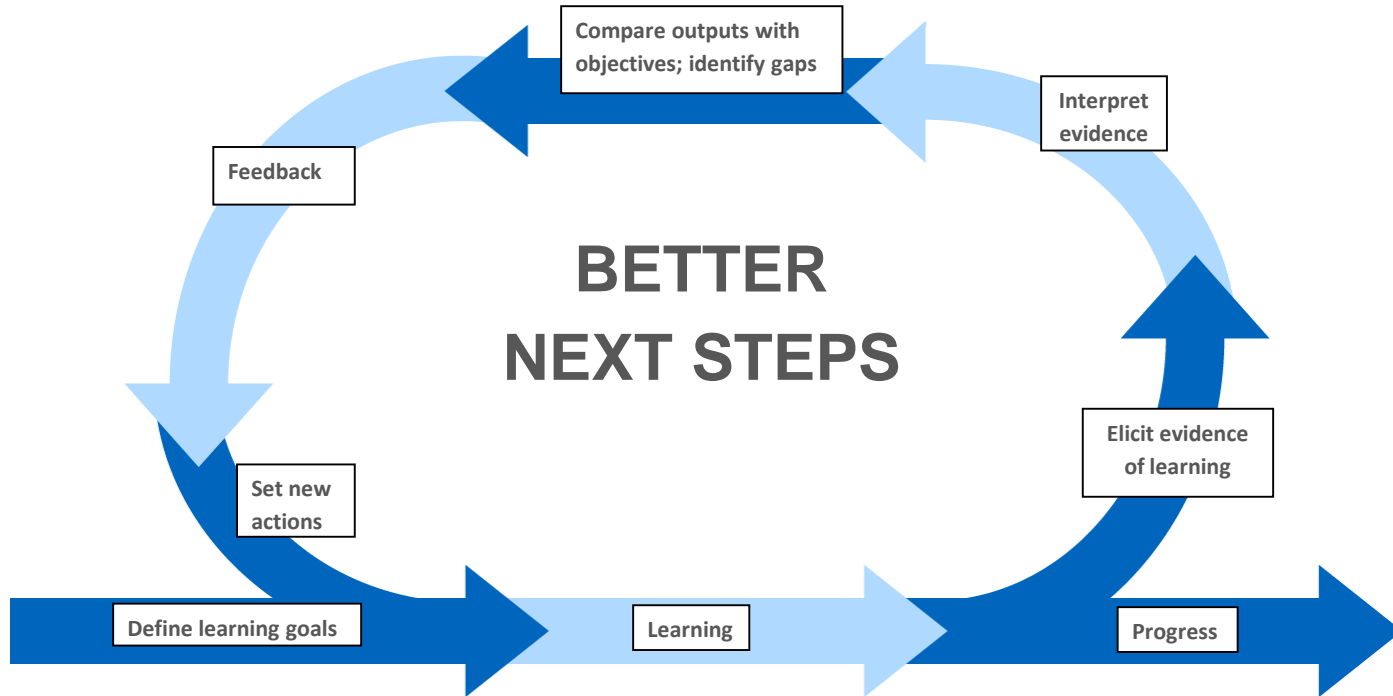
Excellent schools have:

2. A learning rather a performance orientation [Chris Watkins]

- ▶ Goal orientation: learning goals are primary
- ▶ **Learning becomes an object of learning**
- ▶ Locus of control: sense of student being in control of their learning. **Learning how to learn**
- ▶ Self-esteem and self-efficacy
- ▶ Self-regulation (take responsibility for own learning)
- ▶ **High expectations** of all learners
- ▶ Valuing broader educational experiences that are not assessed through examinations

Excellent schools:

3. Make thinking and learning Visible. Formative assessment as a cycle

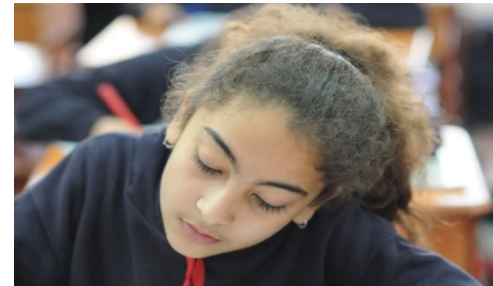


3. [continued]: Most assessment should be about making learning and thinking visible to help guide future learning

Through assessment for learning, the learner:

1. comes to hold a concept of performance similar to that held by the teacher
 - ▶ *i.e. develops the notion of a standard*
2. monitors the quality of his/her own performance
 - ▶ *i.e. can compare own performance with the standard*
3. sees how the quality of performance can be improved
 - ▶ *i.e. engages in the action that closes the gap between own performance and the standard*

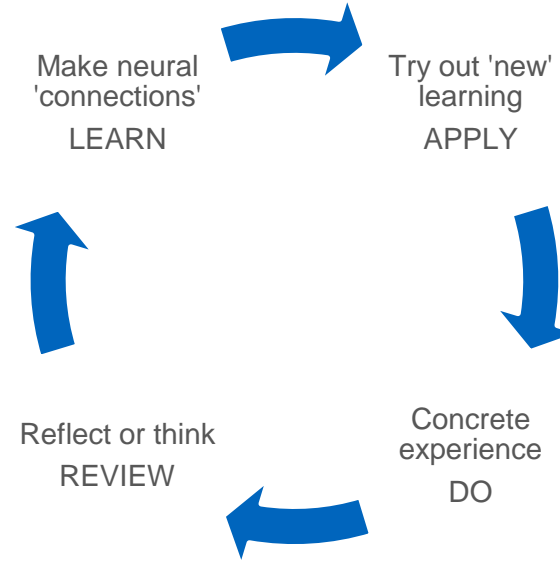
[adapted from Professor David Hargreaves]



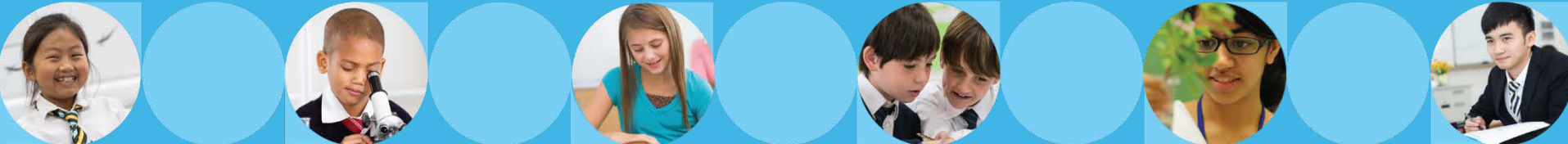
Excellent schools:

4. Have a culture of continuous improvement

- ▶ Professional Development
- ▶ Measuring impact
- ▶ Evaluation
- ▶ Marginal gains



How we support schools



Cambridge's strategy to support schools

Cambridge will provide:

- ▶ flexibility and choice to schools
- ▶ School support and a learning community
- ▶ An aligned instructional system
- ▶ clear, thoughtful and useful standards
- ▶ valid, reliable and fair assessments that prepare students for the next stage
- ▶ as far as humanly possible, right grade first time and on time
- ▶ inspiring and relevant professional development opportunities
- ▶ School improvement support
- ▶ Research in support of practice

flexibility and choice for schools

Cambridge Pathway:

Primary and lower secondary

[English / English as a second language, Maths, Science, GP, ICT starters]

70+ IGCSE subjects

40 O level subjects

55 A level subjects

24 Pre U subjects



Support guides and other resources

See the **implementing the curriculum with Cambridge guide [2nd Edition]**, **developing your school with Cambridge** and the **developing the learner attributes** and other resources:

<http://www.cambridgeinternational.org/support-and-training-for-schools/teaching-cambridge-at-your-school/>

<http://www.cambridgeinternational.org/teaching-and-learning/school-leader-teacher-standards/>



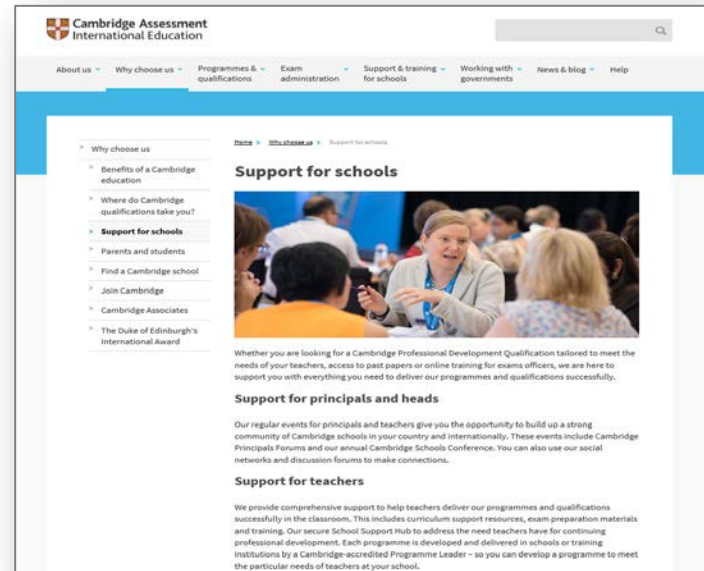
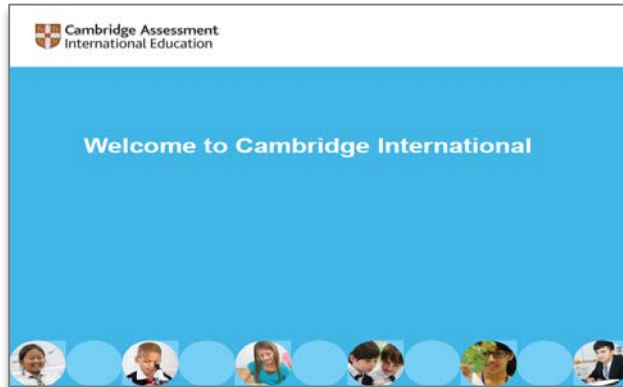
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Orientation for schools new to Cambridge

Orientation is an induction package for newly registered schools. The package includes:

- ▶ A PowerPoint [presentation](#)
- ▶ An [information pack \(PDF\)](#)
- ▶ A new area on the [website](#)
- ▶ Follow up support



The school support hub

A secure, online site for Cambridge Upper Secondary and Cambridge Advanced available to all registered schools.

- ▶ Each user has own individual account linked to a unique email address.
- ▶ Teachers can use the site to access resources including:
 - ▶ Online discussion forums
 - ▶ Schemes of work
 - ▶ Specimen papers & past papers
 - ▶ Syllabuses
 - ▶ Teacher guides.

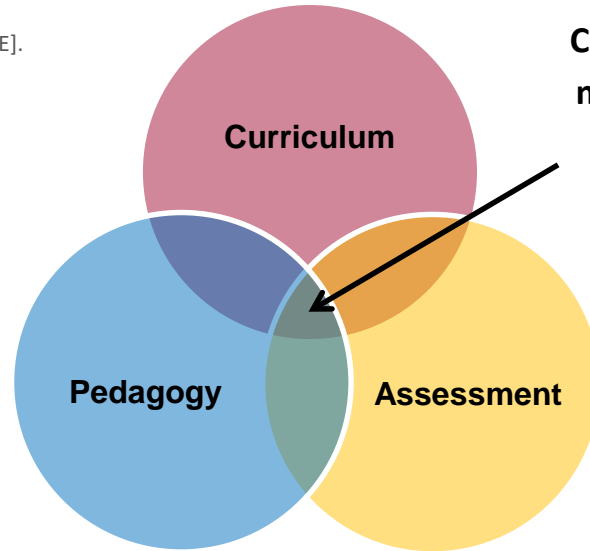
In each school, there should be two types of School Support Hub user:

- ▶ School support coordinator (one account per school).
- ▶ Teacher (one account per teacher)

Cambridge offers an aligned instructional system

See also: National Center on Education and the Economy [NCEE].
Marc Tucker <http://www.ncee.org/>

The content of the curriculum, the pedagogical approach and the assessment approach must be aligned in order to maximize learner achievement

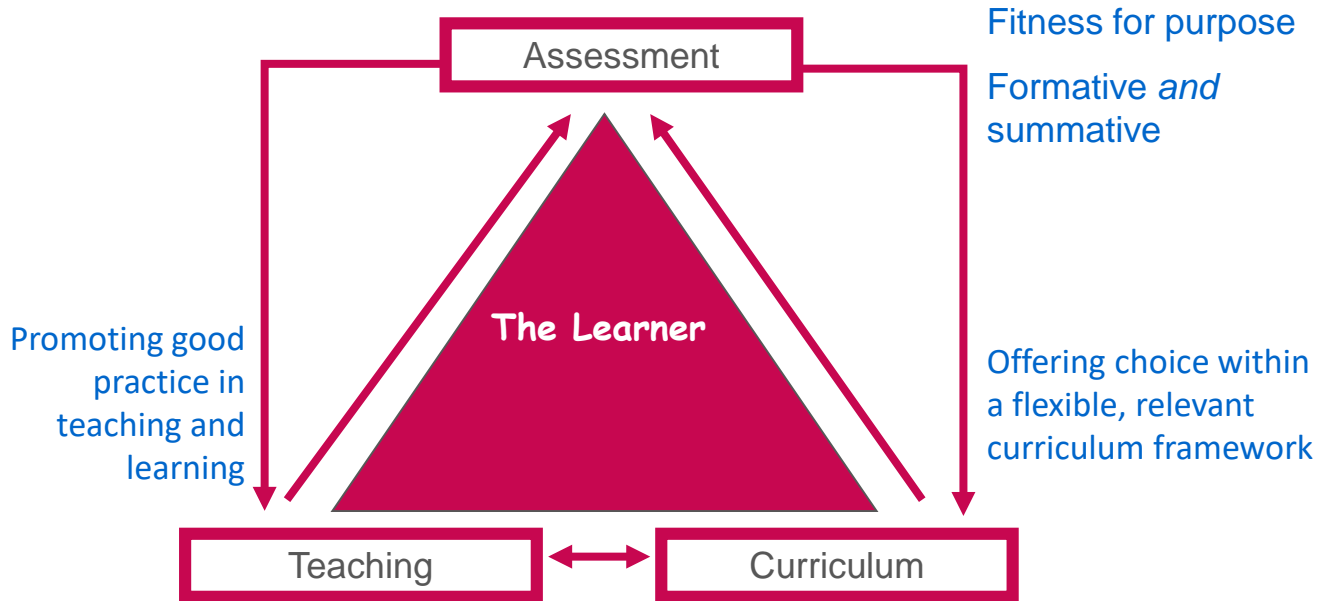


Coherence:
maximizes
learners'
progress

Roach, A. T., Niebling, B. C., & Kurz, A
Evaluating the alignment among curriculum, instruction and assessments: Implications and applications for research and practice.

Consistent curriculum and assessment standards

Benchmark to clear **standards** that are the **same over time** and **wherever in the world** students complete Cambridge programmes



Cambridge curriculum-based standards

Content standard

- ▶ What has to be learned (i.e. the curriculum/syllabus)?
 - does not include concept of demand or difficulty

Demand standard

- ▶ How demanding are the questions/tasks (in terms of the skills and knowledge that are required)?
 - does not include concept of the level of performance required

Marking standard

- ▶ How are responses rewarded?

Awarding standard

- ▶ What quality of performance is required (e.g. for a grade/pass)?

Attainment standard

- ▶ Preparedness for further progression to study/employment

Valid, reliable and fair assessments examination series

How our processes and procedures ensure the robust delivery of each:

Two key Documents

1. The Cambridge Approach to Assessment:

<http://insite.ucles.org.uk/our-group/about-our-group/purpose-and-values/cambridge-approach/Documents/cambridge-approach-to-assessment.pdf>

2. The Code of Practice:

<http://www.cambridgeinternational.org/images/416992-code-of-practice.pdf>

Ensure the robust delivery of each examination series.

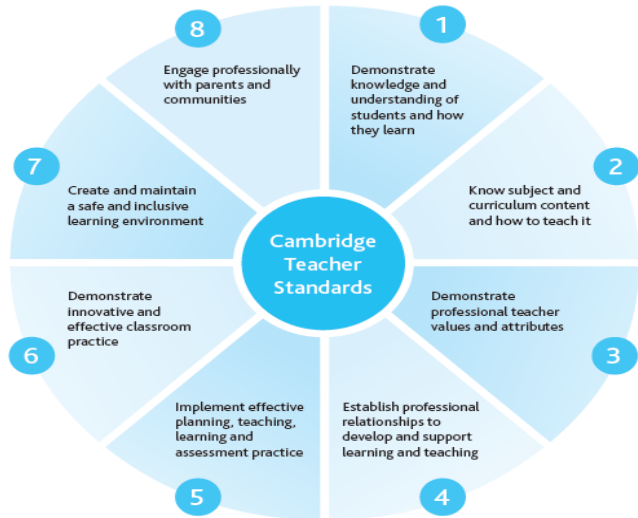
Getting it right matters



Non-assessment related Cambridge standards

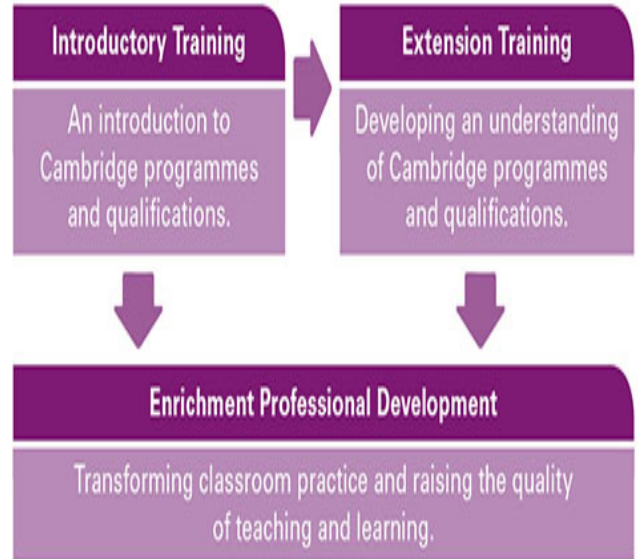
- ▶ Registration Standards for schools
- ▶ Teacher and School leader standards:

<http://www.cambridgeinternational.org/teaching-and-learning/school-leader-teacher-standards/>



Expand our global training offerings with quality

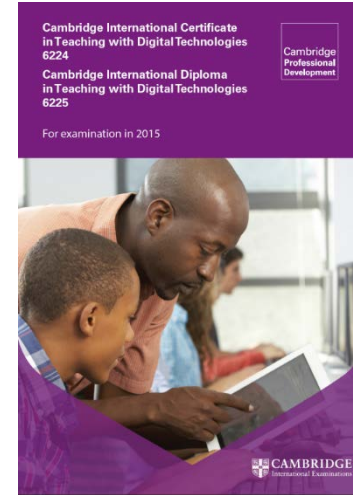
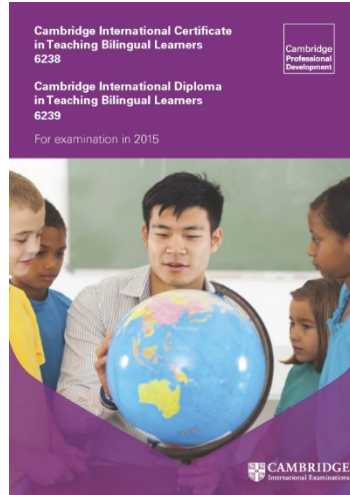
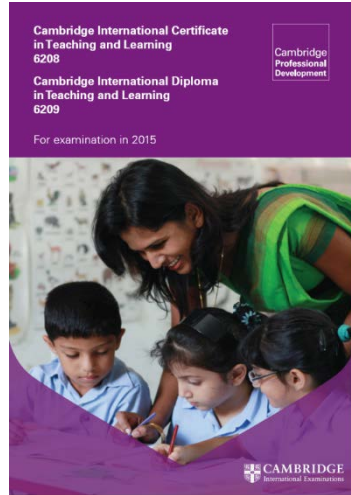
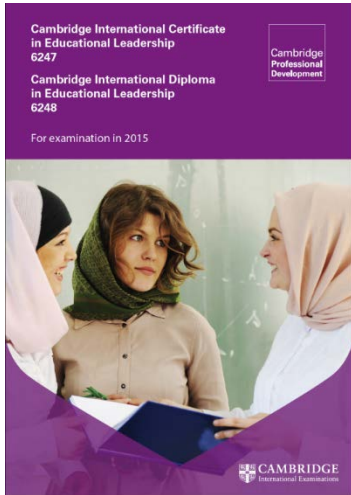
1. Running about 1000 training events each year
2. Training architecture:
 - ▶ Introductory, Extension and enrichment
3. We are developing in country training capacity by selecting and training trainers based in different countries
4. Introduced quality assurance standards and processes into the training of trainers
5. New online tutor led introductory and extension training.



Professional Development Qualifications

New: Teacher Award

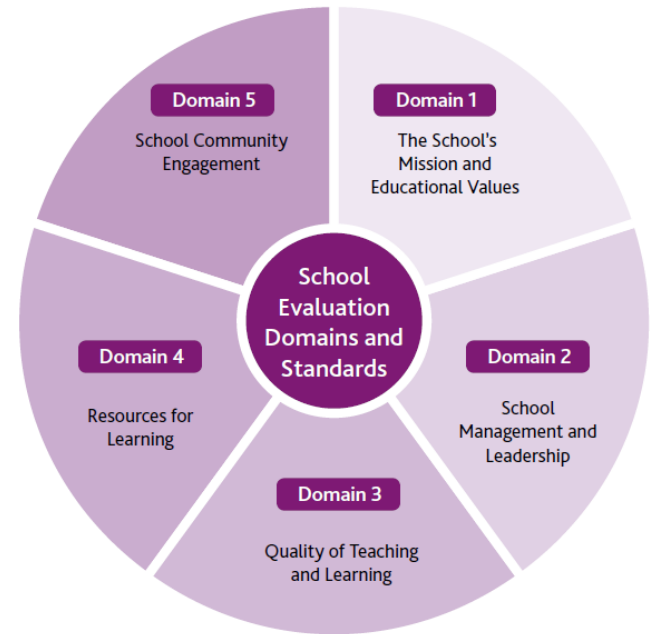
Certificate and Diploma Levels in educational leadership, teaching and learning, teaching bi-lingual learners and teaching with digital technologies



School Improvement services: School Self-Evaluation

What are our standards for school self-evaluation?

- ▶ Describe what an effective school looks like
- ▶ Tailored to the needs of Cambridge schools
- ▶ Grouped into five domains:
 1. The school's mission and educational aims
 2. School management and leadership
 3. Quality of teaching and learning
 4. Resources for learning
 5. School community engagement.



School Self-Evaluation

Based on these standards, three surveys have been designed to gather feedback from:

- ▶ parents/carers
- ▶ teachers
- ▶ students

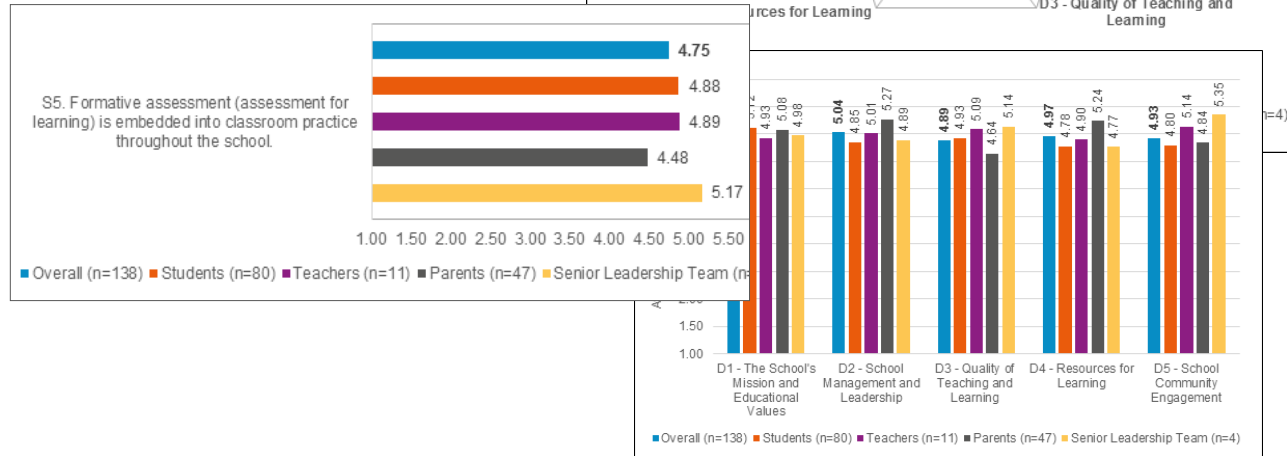
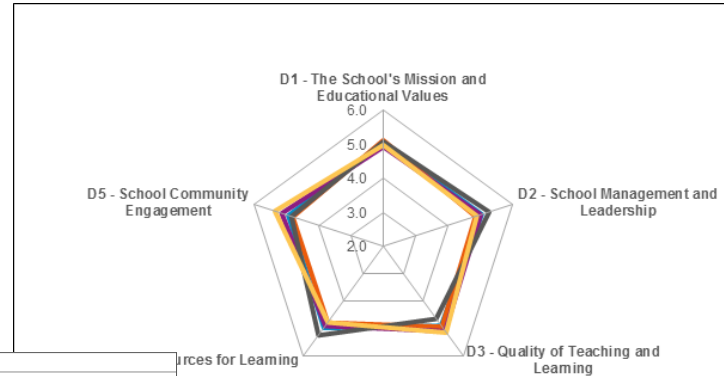
After the online surveys are completed, school receives a report which shows their performance overall and in each area, based on responses from parents, students and teachers.

This helps them to:

- ▶ highlight and celebrate strengths
- ▶ identify challenges and areas for improvement
- ▶ establish priorities for future development.

School Self-Evaluation

Examples of charts included in the Self-Evaluation report, showing school performance based on feedback.



School Improvement services: School Consultancy

We also have a team of consultants that can help schools with specific areas of their school improvement process, including:

- ▶ School improvement planning
- ▶ Improving the quality of teaching and learning
- ▶ Teacher appraisal and development
- ▶ Student assessment and tracking
- ▶ Resourcing the school
- ▶ Engaging the school community.

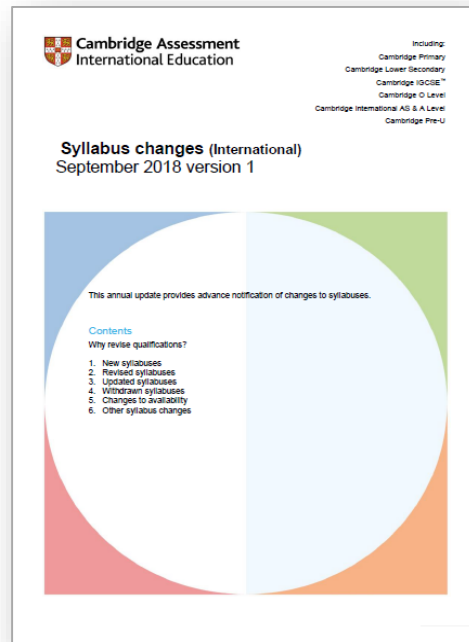
cambridgeinternational.org/school-improvement

Curriculum product developments

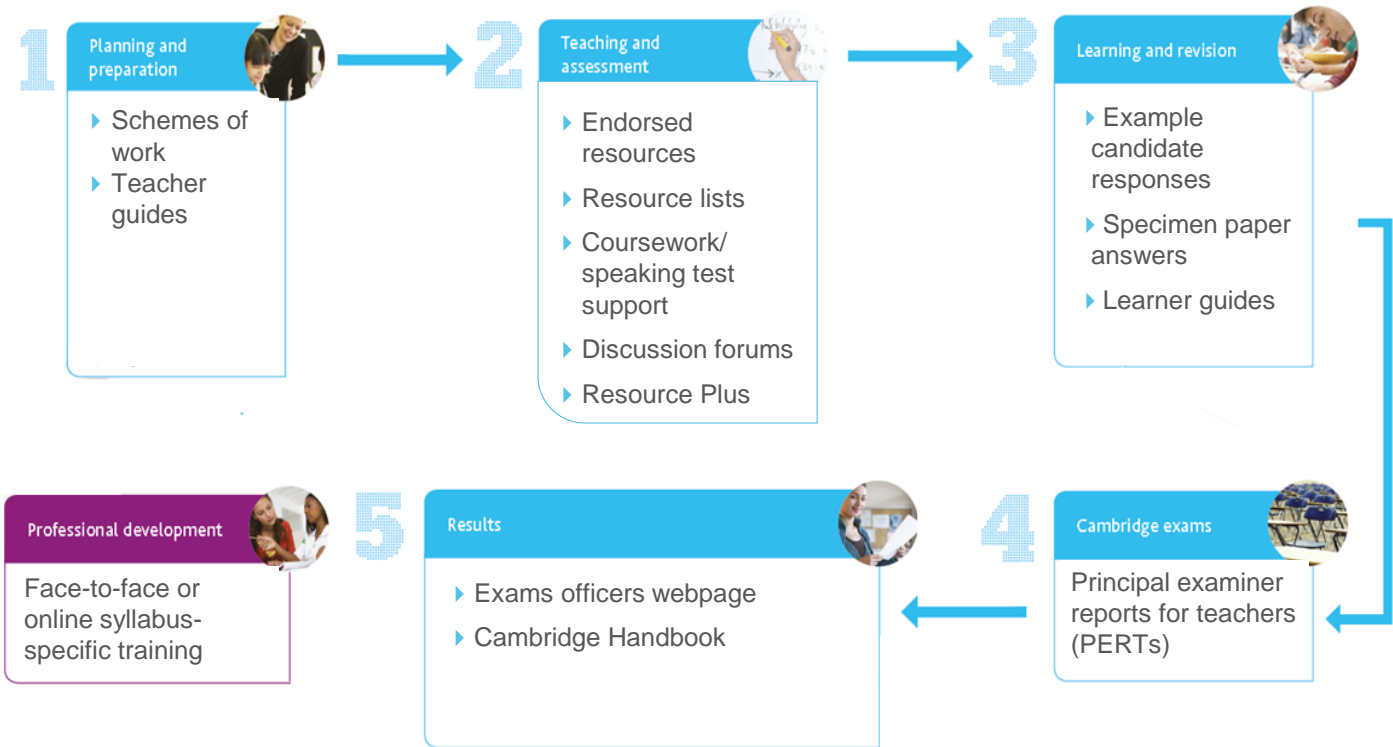
Finding out about *'What's new'*

We provide advance notice of changes to syllabuses a year before first teaching.

- ▶ Visit the *'What's new'* pages on our public website.
- ▶ Download our Syllabus Changes guide for full details of updated syllabuses.
- ▶ Sign up for e-Updates to keep up to date with changes to syllabuses.
- ▶ www.cambridgeinternational.org/new



Support for updated syllabuses



Updated Cambridge International AS & A Levels

We worked with teachers, subject expert panels and universities around the world to update these Cambridge International AS & A Level syllabuses for assessment in 2021, 2022 and 2023:

- ▶ Computer Science 9618
- ▶ English Literature 9695
- ▶ English Language and Literature 8695
- ▶ English Language 9093
- ▶ History 9489
- ▶ Islamic Studies 9488
- ▶ Media Studies 9607
- ▶ Sociology 9699
- ▶ Hinduism 9487 (*October 2018*)



A stand-alone, project-based qualification, students can take Cambridge IPQ in addition to Cambridge International AS & A Levels:

- ▶ Typically for students aged 16 to 19 years.
- ▶ 5000 word research project.
- ▶ Students choose topic - to complement Cambridge International AS or A Levels, or a subject they are passionate about.



Helps students increase value of university application:

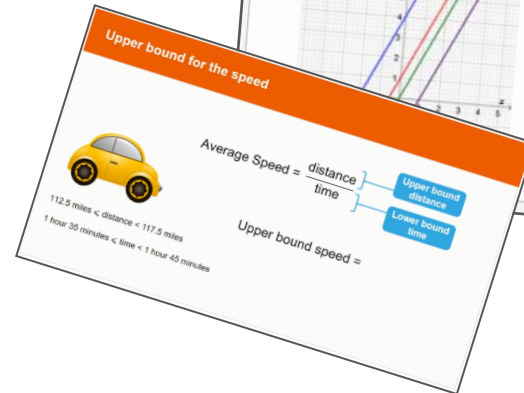
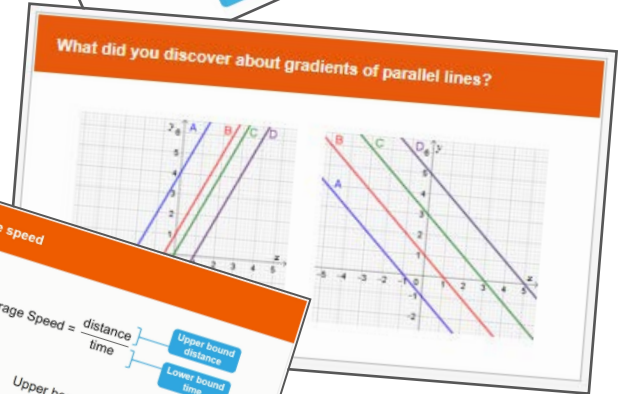
- ▶ show in-depth interest in course they are applying for.
- ▶ demonstrate 'college readiness' (independent learning, research and 'dissertation style' report skills)

Resource Plus

- ▶ Additional teaching and learning resources created by subject experts.
- ▶ Help teachers deliver challenging topics and skills in some of our most popular syllabuses.
- ▶ Available through our Online Learning area.

Resource Plus materials are slightly different for each syllabus, but all include:

- ▶ Ready-made lesson plans and activities
- ▶ Teaching materials
- ▶ Activities for learners
- ▶ Video content and multimedia
- ▶ Worksheets
- ▶ Schemes of work



What's available in resource plus?

Cambridge IGCSE

- ▶ IGCSE Literature in English 0475
- ▶ IGCSE Mathematics 0580
- ▶ IGCSE Biology 0610
- ▶ IGCSE Chemistry 0620
- ▶ IGCSE Physics 0625

Cambridge International AS&A Level

- ▶ Biology 9700
- ▶ Chemistry 9701
- ▶ Physics 9702

For 2019 we are also working on Resource Plus for IGCSE English Language, IGCSE Business Studies and A/AS Level Maths.



Introducing the Cambridge Upper Secondary Science Competition

NEW

A competition for Cambridge Upper Secondary learners (typically 14 to 16 years)

- ▶ Students choose a team and a topic for their project.
- ▶ Produce a portfolio of work.
- ▶ Completed over 20-25 hours.
- ▶ Present portfolio to teacher and peers.



Who marks the projects?

NEW

- ▶ Teachers assess projects using mark scheme provided.
- ▶ Marks awarded for investigation, collaboration & communication.
- ▶ Teams awarded a Participation, Bronze, Silver or Gold certificate.
- ▶ Schools produce these certificates using the templates provided.
- ▶ Gold projects submitted to Cambridge International.

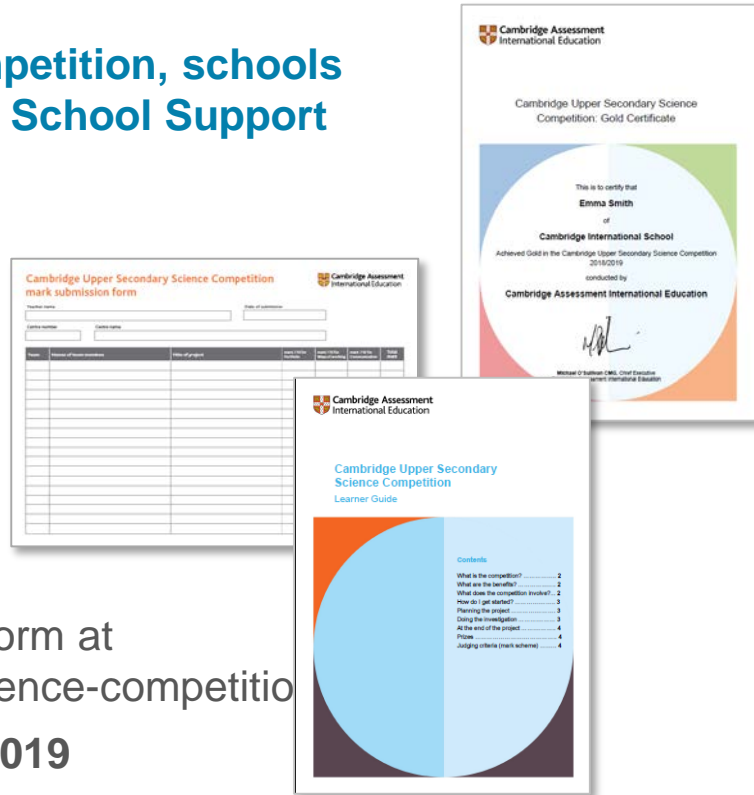
Participation	Bronze	Silver	Gold
1 to 5 marks out of 15	6 to 9 marks out of 15	10 to 12 marks out of 15	13 to 15 marks out of 15

What support is available?

NEW

Once students are entered for the competition, schools can find supporting documents on the School Support Hub:

- ▶ Teacher guide
- ▶ Learner guide
- ▶ Example projects
- ▶ Mark submission forms
- ▶ Certificate templates.



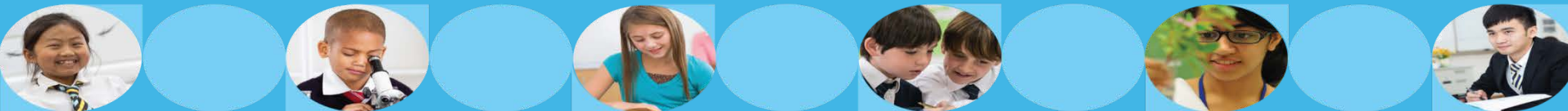
Next steps:

- ▶ To apply, complete the application form at www.cambridgeinternational.org/science-competition
- ▶ **Next entry deadline: 31 January 2019**



Cambridge Assessment
International Education

The Future of Assessment



Facts and figures

In August 2018,

Cambridge International issued about **1.2 million certificates**.

To generate each grade, over **2 million candidate scripts** were processed, more than **3 million components** (question papers) were marked, which involved about **8000 trained examiners**.

A majority (over 75%) of candidate scripts were marked using an on-screen interface.

Are examinations evil and outdated?

“Existing models of assessment typically fail to measure the skills, knowledge, attitudes and characteristics of self directed and collaborative learning that are increasingly important for our global economy and fast changing world.”

Darling-Hammond L [2000]. Education Policy Analysis Archives . 8 [1]



Where do you think this Cambridge exams is being administered?



Fair, reliable and valid assessments

Why Cambridge insists on high standards of security:

India students caught 'cheating' in exams in Bihar

Source: <http://www.bbc.co.uk/news/world-asia-india-31960557>



Different forms of summative assessment

- ▶ Written exams:
 - ▶ Multiple choice
 - ▶ Short answer questions
 - ▶ Extended response question
- ▶ Oral exams
- ▶ Coursework
- ▶ Practical work



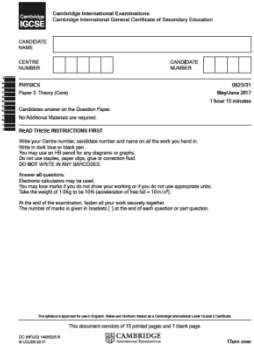
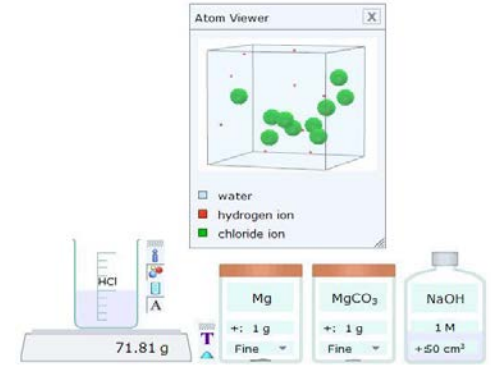
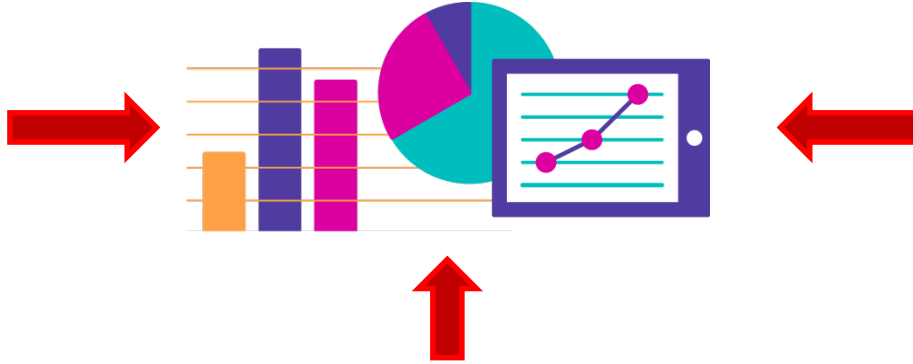
Assessment is criterion referenced and synoptic

The future is digital

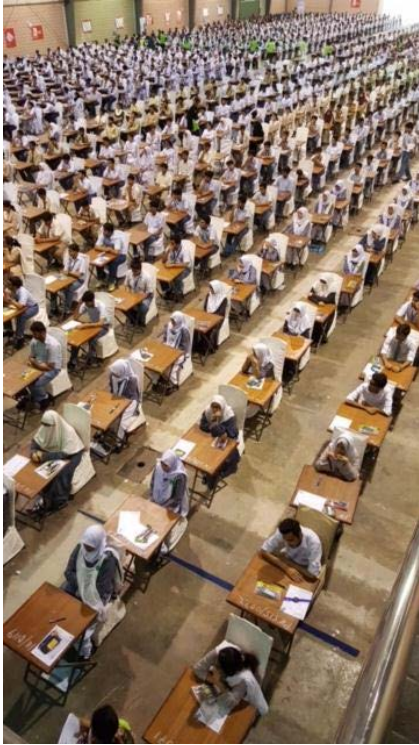
- ▶ Technology is set to transform education, including educational assessment.
- ▶ It is possible to imagine a future in which examinations and tests are 100% digital.
- ▶ Ours will be a gradual evolution led by good practice rather than what is technologically possible.



What is e-assessment?



On-screen marking



Assessor

https://marking.ca.scoris.rm.com/Assessor.Web/Marker.aspx

scoris ASSESSOR Home 24/10/2007 : A123 / 01 2340/01 GCSE Mathematics M10 Part...

Response ID: 120506

Stop Marking Save & Close Submit Full Response View Tag Discard Mark by: Candidate Question Auto

Standardisation Setup

(e) Using your answer to part (a), or otherwise, solve $x^2 + 8x - 6 = 0$.
Leave any surds in your answer.

$x^2 + 8x - 6 = 0$

$(x + 4)^2 - 22 = 0$

$(x + 4)^2 - 6 = x^2 + 8x + 16 - 6 - 16$

$(x + 4)^2 - 22$ ✓

$(x + 4) \sqrt{22} - 4$

$x = \sqrt{22} - 4$

$\sqrt{22}$
 $\sqrt{2} \times \sqrt{11}$

(e) $x = \pm \sqrt{22} - 4$ ✗

Provisional Standardisation

Total: 10 100% Marked

Expanded Auto-Collapse

Question	Current Marks
1a	1/2
1b	1/2
2a	1/2
2b	1/1
2c	1/2
3	1/6
4	1/3
5a	1/3
5b	1/2
5c	1/2

5c

1 / 2

No Response Reset

RIG Comment Item Comment

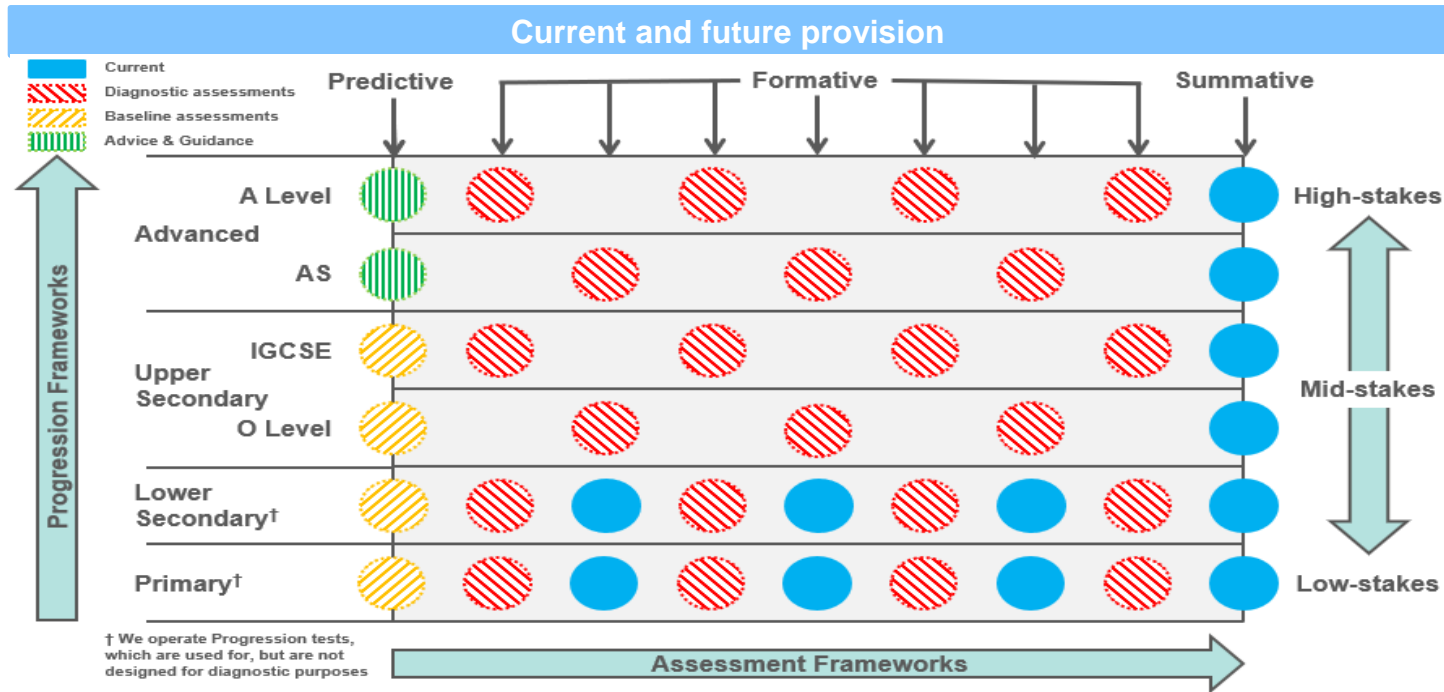
Good for practice 2b

Online

Fit Width Fit Height Default Zoom 45%

Future of Assessment Strategy

Aim: to extend the purposes we support with our assessments with new product types



- ▶ New digital service for Cambridge teachers
- ▶ Create high-quality, customised practice papers using Cambridge questions
- ▶ Choose from 500 questions for each syllabus – sort questions by topic, number of marks and level of difficulty
- ▶ The first release of Test Maker will include these Cambridge IGCSE syllabuses:
 - ▶ Biology
 - ▶ Chemistry
 - ▶ Mathematics
 - ▶ Additional mathematics
 - ▶ Physics

Coming in 2019: Advanced Level Sciences & Mathematics

Test Maker

Features

- ▶ Up to 500 Cambridge questions per syllabus
- ▶ Questions are indexed into topics and subtopics tagged to unique Cambridge taxonomies.
- ▶ Dynamic content with more questions to be added after every exam series

Functionality

- ▶ Easy to drill down through topics and subtopics to find questions.
- ▶ Simple, one-click test construction.
- ▶ Mobile enhanced design means it works on any device.
- ▶ Ability to save tests.
- ▶ Easily display a question on-screen.

Preview question

Class 9

0610 | Organisation of the organism

Select a topic | Choose questions | Edit and export

Back | Save | Continue to edit options

Sort by: Marks - Highest

Levels of organisation Multiple topics x2 Jun 14 Paper 2 13 marks Grade C-D	Add
Cell structure and organisation Organisation of the organism Jun 15 Paper 3 3 marks Grade E-G	Add
Size of specimens Organisation of the organism Jun 14 Paper 6 3 marks Grade A*	Add

Question

1

A biologist made a slide of some epidermal cells from a scale leaf of an onion bulb.
The diagram below is a drawing that the biologist made of one of the cells.

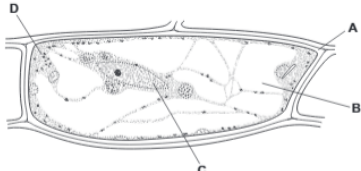



Fig. 4.1

The table below shows the functions of the structures within a plant cell.
Complete the table by:
naming the part of the cell that carries out each function
using the letters from the diagram to identify the part of the cell named.

Full screen

Preview mark scheme

Back Save  Continue to edit options

Sort by Marks - Highest v

Concept and use of a classificatory system Add

Multiple topics x2

Jun 14 | Paper 3 4 marks Grade C-D

Characteristics of living organisms Add

Multiple topics x2

Jun 15 | Paper 3 3 marks Grade C-D

Dichotomous keys (core only) Add

Characteristics and classification of living organisms

Jun 15 | Paper 3 3 marks Grade E-G

Features of organisms Add

Characteristics and classification of living organisms

Nov 14 | Paper 3 3 marks Grade C-D




Question Mark scheme

- Mark scheme Full screen


Question	Answer	Marks	AO Element	Notes	
1	<div style="border: 1px solid #ccc; padding: 2px;"><p style="text-align: center;">go to 2</p><p style="text-align: center;">go to 5</p><p style="text-align: center;">Gymnopsis multiplicata B</p><p style="text-align: center;">go to 3</p><p style="text-align: center;">Thilurus cristatus C</p><p style="text-align: center;">go to 4</p><p style="text-align: center;">Necturus maculosus D</p><p style="text-align: center;">Ambystoma tigrinum G</p><p style="text-align: center;">go to 6</p><p style="text-align: center;">Creophrymella queichui E</p><p style="text-align: center;">Polypeolates huochrysalis F</p><p style="text-align: center;">Rana temporaria A</p></div>	3			max [3] 5 / 6 right = 3 3 / 4 right = 2 1 / 2 right = 1 0 right = 0

[Total: 3]


Add questions and make your test

Back Save  Export test  Export mark scheme 


Your test summary


Test difficulty  ■ A* - B ■ C - D ■ E - G	Questions 5	Marks 14	Topics ⓘ 3
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Edit your test


Move your questions using the  icon.


1. Concept and use of a classificatory system

Multiple topics 

Jun 14 | Paper 3 4 marks **Grade C-D** 

2. Characteristics of living organisms

Multiple topics 

Jun 15 | Paper 3 3 marks **Grade C-D** 

3. Dichotomous keys (core only)

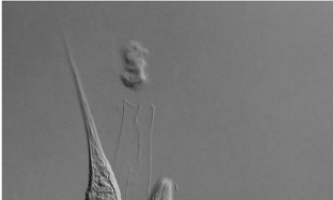
Characteristics and classification of living organisms


Test preview

Question

Page 1 of 5 1 [Full screen](#)

1 The diagram below shows the nematode, *Caenorhabditis elegans*.

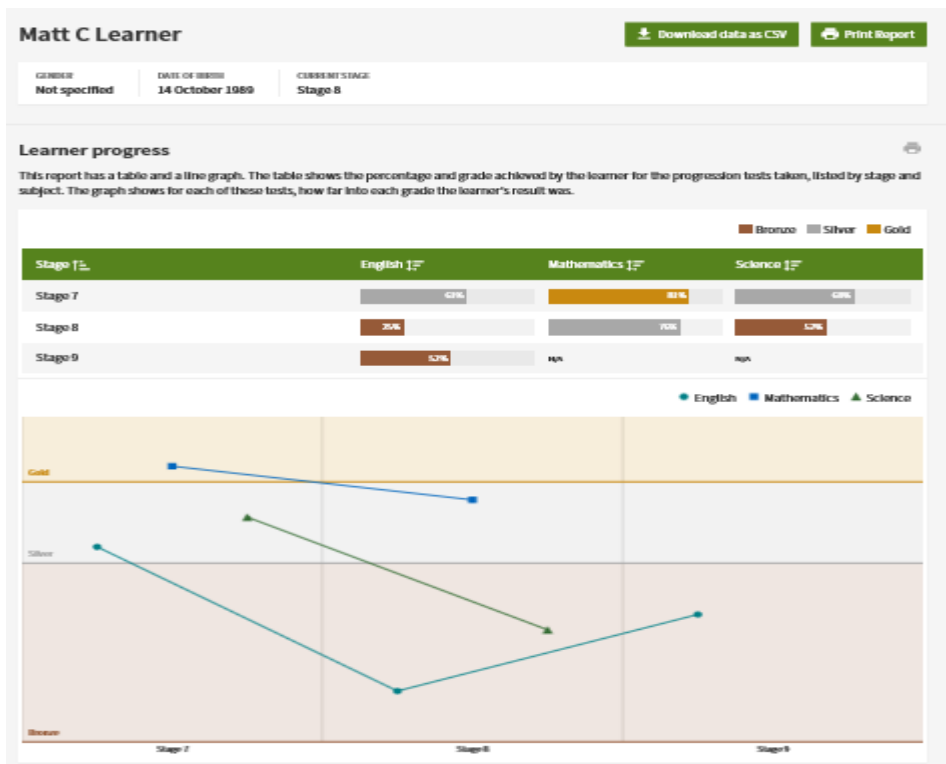


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Any Questions? Discussion



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