Developments in on-screen assessment for IB programmes

Richard Penrose, head of marking
and Dr Robert Harrison, head of MYP development
Coming soon! E-assessments

• One of the most highly-anticipated outcomes of MYP: Next chapter...

• The first task trial is now in progress in about 50 schools around the world. After the incorporation of lessons learned, we expect to be able to demonstrate the look and feel of the on-screen examinations in the first quarter of 2014.

• Details about the 2015 examination offer, including example tasks and test blueprints, will be available in *Guide to MYP eAssessment* in August 2014.
Connecting the programme model to innovations in MYP external assessment
broad and balanced
global contexts
approaches to learning
programme alignment

First teaching September 2014
## MYP key concepts (interdisciplinary)

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Change</th>
<th>Communication</th>
<th>Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections</td>
<td>Creativity</td>
<td>Culture</td>
<td>Development</td>
</tr>
<tr>
<td>Form</td>
<td>Global interactions</td>
<td>Identity</td>
<td>Logic</td>
</tr>
<tr>
<td>Perspective</td>
<td>Relationships</td>
<td>Time, place and space</td>
<td>Systems</td>
</tr>
<tr>
<td>Subject group</td>
<td>Sample related concepts</td>
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<td>-------------------------------------</td>
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<tr>
<td>Language and literature</td>
<td>character, theme, genre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language acquisition</td>
<td>word choice, accent, idiom, voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals and societies</td>
<td>globalization, power, sustainability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciences</td>
<td>energy, transformation, evidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>measurement, pattern, representation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>composition, style, role, intent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical and health education</td>
<td>balance, movement, systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>form, function, innovation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Developing international mindedness

MYP global contexts

identities and relationships
dimensions of space and time
personal and cultural expression
scientific and technical innovation
globalization and sustainability
fairness and development
## ATL skill clusters - subject group objectives - eAssessment

<table>
<thead>
<tr>
<th>ATL skill categories</th>
<th>MYP skill clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>I. Communication</td>
</tr>
<tr>
<td>Social</td>
<td>II. Collaboration</td>
</tr>
<tr>
<td>Self management</td>
<td>III. Organization</td>
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<tr>
<td></td>
<td>IV. Affective</td>
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<td></td>
<td>V. Reflection</td>
</tr>
<tr>
<td>Research</td>
<td>VI. Information literacy</td>
</tr>
<tr>
<td></td>
<td>VII. Media literacy</td>
</tr>
<tr>
<td>Thinking</td>
<td>VIII. Critical thinking</td>
</tr>
<tr>
<td></td>
<td>IX. Creative thinking</td>
</tr>
<tr>
<td></td>
<td>X. Transfer</td>
</tr>
</tbody>
</table>
Curriculum benefits of eAssessment

- Additional IB resources for research and programme development
- Stronger and more reliable measures of accountability
- Modeling good internal assessment practice
- Building assessment expertise among IB educators
- Establishing global communities of practice in curriculum development, teaching practice and summative assessment
- Sharper focus on interdisciplinary learning, global engagement and the IB learner profile
Why eAssessment?

- Authentic and rigorous assessment of MYP objectives
- Current take up of MYP certificate
- Widespread use of alternative qualifications among MYP schools
- Wider recognition of MYP certificate
- Support progression to Diploma Programme
How eAssessment?

• On screen examinations for language and literature, individuals and societies, sciences, mathematics and interdisciplinary learning

• ePortfolios for language acquisition, arts, design and PHE
Demonstration of trial eAssessments
Please enter your personal details!

First name: Carolyn
Last name: Adams
School Code: 0000325467

SUBMIT
Question 1 (16 marks)

Choose one of the following prompts and write a response based on the image provided.

- a) Write an internal monologue expressing the thoughts and feelings of a narrator involved in this scene.
- b) Narrate the events which follow on from the moment shown in the image.
- c) Imagine you are the person in this image. Describe what you can see.

I am looking through a window.....5487
Background Resources

This task assesses your understanding of the concept of global interactions, and the ways that people come into conflict with each other. The task focuses specifically on exploring the causes and consequences of conflict. Please note: The following sources refer to specific conflicts such as the Second World War or the American Civil War. You do not need to have studied these specific conflicts to be able to answer the task questions.

Question 1 (6 marks)

According to the sources, what are 3 causes and 3 consequences of conflict?

Question 2 (12 marks)

Compare and contrast the origins, purpose, value and limitations of sources A and B.
Question 1 (6 marks)

According to the sources, what are 3 causes and 3 consequences of conflict?

**Causes:**

1. 
   (1 mark)

2. 
   (1 mark)

3. 
   (1 mark)

**Consequences:**

1. 
   (1 mark)

2. 
   (1 mark)

3. 
   (1 mark)

Causes of the American Civil War

“The Northern and Southern sections of the United States developed along different lines. The South remained an economy based mostly on agriculture, while the North became more and more industrialised. Different social cultures and political beliefs developed. All of this led to disagreement on issues such as taxes, tariffs and internal improvements as well as states rights versus federal rights. The burning issue that led to the disruption of the union, however, was the debate over the future of slavery.”


“Individual people are the main cause of wars and conflicts”.

To what extent do you agree with this claim? Answer with reference to the sources and also to your own knowledge of conflicts you have studied.
Question 2a (2 marks)

The following video shows bacteria dividing.

Construct a table to record time and population data. Count and record the number of bacteria cells present at suitable time intervals during the growth of this population.

<table>
<thead>
<tr>
<th>Time</th>
<th>Number of bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

Question 2b (2 marks)

Select the most appropriate method from the following choices and present your data. Label your graph and give it an
Question 2b (2 marks)

Select the most appropriate method from the following choices and present your data. Label your graph and give it an appropriate title.

- Bar Chart
- Line graph

**Labels**

<table>
<thead>
<tr>
<th>x-axis</th>
<th>Time</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>y-axis</td>
<td>Number of bacteria</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

**Title**

Please enter a title
Question 2c (2 marks)

The following graph shows a population growth curve model. This predicts the expected changes in the number of individuals in a population over time.

Population growth:

- (a) Exponential growth phase
- (b) Transition stage
- (c) Plateau stage

Compare the graph you drew in part (b) to the growth curve, indicating where it is similar.
A cholera epidemic followed the 2010 earthquake in Haiti. Cholera broke out in Haiti in October 2010. Since then there has been substantial medical research, including DNA analysis on the strain of cholera found in Haiti, which identified UN peacekeepers from Nepal as the source of the disease. Cholera is an infection in the small intestine caused by the cholera bacterium, Vibrio cholerae.

All of the materials used in this task are displayed opposite. Review them before answering the question below.

Evaluate two of the methods for preparing drinking water explored in this task.
Background

This task focuses on the key concept of relationships within the global context of globalisation and sustainability. In this real world problem, you will explore urban planning and infrastructure by studying the flow of traffic in cities around the world.

Question 1 (3 marks)

Traffic at a junction in Glasgow (Scotland). Record and estimate traffic flow.

Question 2 (6 marks)

Select a graph to present the traffic data and explain your choice.
The following video shows traffic at a junction in Glasgow (Scotland) for a twelve second period.

Write down the number of cars passing through the junction in this time period.

1a) 

Please enter your answer here

Question 1b (2 marks)

Calculate an estimate of the number of cars that would pass through this junction in the next five minutes.

Working Box:

Please enter your answer here
The following graphs show the number of cars passing through busy junctions in Paris and Dubai, again between 8:00 and 9:00 for the same seven-day period.

**Paris**

![Bar chart showing the number of cars in Paris from Monday to Sunday.]

**Dubai**

![Bar chart showing the number of cars in Dubai from Monday to Sunday.]

**Question 3a (3 marks)**

Compare and contrast the data for Paris and Dubai.

3a)

Please enter your answer here

**Question 3b (3 marks)**

Outline two factors which might affect the number of cars passing through the junctions.

**Factor 1:**

Please enter your answer here
A researcher counts the number of cars passing through a junction in Mexico City. As each car passes, the researcher registers the event with a click on an electronic tally counter. The counter automatically stores the number of clicks at the end of each 1 minute period. The following table shows the data that the researcher collected.

<table>
<thead>
<tr>
<th>Time of day at end of reading</th>
<th>Time period registered on counter</th>
<th>Number of cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:36</td>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>8:37</td>
<td>2</td>
<td>66</td>
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<tr>
<td>8:38</td>
<td>3</td>
<td>67</td>
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<tr>
<td>8:39</td>
<td>4</td>
<td>69</td>
</tr>
<tr>
<td>8:40</td>
<td>5</td>
<td>68</td>
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<tr>
<td>8:41</td>
<td>6</td>
<td>69</td>
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<tr>
<td>8:42</td>
<td>7</td>
<td>71</td>
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<tr>
<td>8:43</td>
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<td>8:44</td>
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<td>8:45</td>
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<td>70</td>
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<td>8:46</td>
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<td>8:52</td>
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<td>69</td>
</tr>
<tr>
<td>8:53</td>
<td>18</td>
<td>66</td>
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</tbody>
</table>

Write down the modal class.

Please enter your answer here.

Question 4b (5 marks)

Determine the quadratic function used to model the data.

\[ y = a + b \cdot t + \sqrt{t} \int dx \]
A researcher counts the number of cars passing through a junction in Mexico City. As each car passes, the researcher registers the event with a click on an electronic tally counter. The counter automatically stores the number of clicks at the end of each 1 minute period. The following table shows the data that the researcher collected.

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<td>69</td>
</tr>
<tr>
<td>8:53</td>
<td>18</td>
<td>66</td>
</tr>
</tbody>
</table>

Question 4b (5 marks)

Determine the quadratic function used to model the data.

\[ y = -0.0478x^2 + 1.02x + 64.5 \]
Congestion and Sanitation
About 600,000 people in Kenya's capital live in the Kibera neighbourhood, East Africa's largest informal settlement. Congestion is a major problem. There is not even the space to build toilets.

Question 1 (8 marks)
Describe four problems experienced by residents of the Kibera neighbourhood.

Question 2 (2 marks)
Write a 6-12 word home page headline that will engage readers and encourage them to read more of your website.
About 600,000 people in Kenya's capital live in the Kibera neighbourhood, East Africa's largest informal settlement.

Congestion is a major problem. There is not even the space to build toilets.

Some frustrated residents use polythene bags commonly known as "flying toilets" to dispose of human waste.
Deaths resulting from diarrheal cases per region

<table>
<thead>
<tr>
<th>Region</th>
<th>Diarrheal cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Asia</td>
<td>175,100,000</td>
<td>167,471</td>
</tr>
<tr>
<td>East Asia</td>
<td>194,700,000</td>
<td>124,063</td>
</tr>
<tr>
<td>Middle East</td>
<td>25,600,000</td>
<td>25,891</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>247,400,000</td>
<td>249,213</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>26,200,000</td>
<td>21,970</td>
</tr>
</tbody>
</table>

You are the subject matter expert responsible for organizing information that developers will use to create a web site for a new not-for-profit organization. The organization aims to improve the quality of life for residents of densely populated urban zones in low income countries.

Using the task background material and appropriate terminology from your study of more than one discipline describe four problems experienced by residents of the Kibera neighbourhood.

1) (2 Marks)

Please enter your answer here

2) (2 Marks)

Please enter your answer here

3) (2 Marks)

Please enter your answer here
You are the subject matter expert responsible for organizing information that developers will use to create a web site for a new not-for-profit organization. The organization aims to improve the quality of life for residents of densely populated urban zones in low income countries.

Write a 6-12 word home page headline that will engage readers and encourage them to read more of your website. State why developers should use this headline in their web page design.

Please enter your answer here

Due to the lack of a solid waste management system, flying toilets become a hazard during the rainy season, as water sources get contaminated. Children and women are most vulnerable to infections. A report by the aid agency Amref says incidents of cholera, typhoid and other waterborne diseases are rampant.

Amref has constructed safe water points within Kibera. At the moment, there is an average of one toilet for more than 2,000 people.
You are the subject matter expert responsible for organizing information that developers will use to create a web site for a new not-for-profit organization. The organization aims to improve the quality of life for residents of densely populated urban zones in low income countries.

Using the task background material and your own knowledge, suggest two courses of principled action that could improve the quality of life for people living in low-income urban environments.

1) (2 Marks)

Please enter your answer here

2) (2 Marks)

Please enter your answer here
Justify your two suggestions in part 3a)

Please enter your answer here

LifeStraw is an instant microbiological water purifier. Studies indicate that the product removes at least 99.9 per cent of all bacteria, viruses and parasites. It also removes dirt from water.

The technology does not require electricity or batteries, making it ideal for use in many rural settings. Those who receive the filter no longer need to treat water by boiling it using wood fuel – a traditional practice that results in greenhouse gases.

Evaluate one of your proposed courses of action in terms of its strengths and limitations.

Please enter your answer here
The assessment has now ended

Your time for completing the assessment has elapsed. Your responses have been saved and sent for marking.

Please leave the computer as it is. Do not attempt to logout or shutdown.

Follow any additional instructions from the invigilator.
October trial (English only)

Monday 7 October to Friday 25 October 2013
About 55 schools taking part
Two 40 minute tasks per school from:
   - English A
   - History
   - Biology
   - Mathematics (standard only)
   - Interdisciplinary

About 20 to 50 students per task in each school
Feedback from coordinators, teachers and students
Students’ responses returned to schools with markschemes
December trial (French only)

Monday 2 December to Friday 13 December
No restriction on number of schools (out of 102)
  96 in Canada
  5 in Morocco
  1 in Egypt
Also two 40 minute tasks per school:
  French A
  History
  Biology
  Mathematics (standard only)
  Interdisciplinary
Otherwise much the same as the October trial
How is Certification achieved?

To achieve the *IB MYP Certificate* a candidate must:
Obtain a grade 3 or higher in six subjects from different subject groups, including:
1. Language and literature  
2. Language acquisition  
3. Individuals and societies  
4. Science  
5. Mathematics (standard or extended)  
6. One from: Arts, Physical and health education or Design

Obtain a grade 3 or higher in interdisciplinary onscreen exam
Obtain a grade 3 or higher in Personal Project
Complete the requirements for Community Service
Gain a minimum of 28 points.