Bob Gomersall

Chairman

Assessment and Learning

Moving towards advanced question types on screen

About BTL

- Est.1985
- UK Owned and run
- Independent
- Approx. 50 Staff
- 3 core business areas
  - e-Assessment systems
 - e-Assessment content
  - e-Learning content

Clients

We specialise in on-screen summative assessment, and our clients include……..

- SQA (Scottish Qualifications Authority)
- AQA
- TDA (Training and Development Agency)
- Cambridge Assessment
- WJEC
- EAL (EMTA Awards Limited)
- AAT (Association of Accounting Technicians)
- Institute of Actuaries
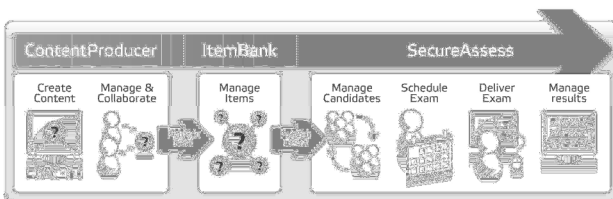- Edexcel
- OCR
- BCS (British Computer Society)

Summative Assessment - Create
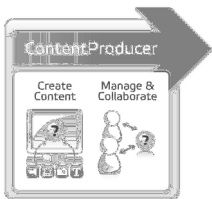
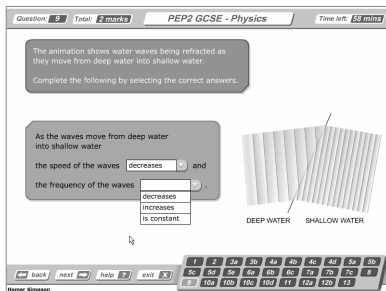## Summative - Create > Manage
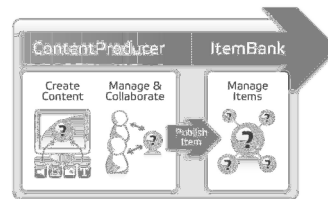
Create > Manage > Deliver

Multi-choice (1 of x)

Type: Standard Fixed Response

No. possible responses:

4

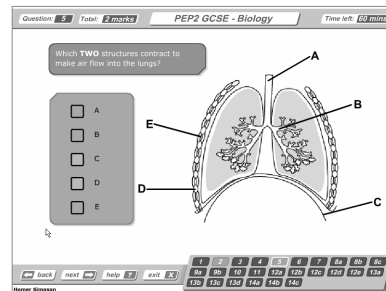**Probability of correct answer by chance: 25%**

Drop-down Lists with Animation

The animation shows water waves being refracted as they move from deep water into shallow water.

Complete the following by selecting the correct answers.

As the waves move from deep water into shallow water

the speed of the waves [decreases ▾] and

the frequency of the waves [▾] .

decreases
increases
is constant

DEEP WATER   SHALLOW WATER

Type: Standard Fixed Response

No. possible responses:

3 x 3 = 9

Probability of all answers correct by chance: 11%
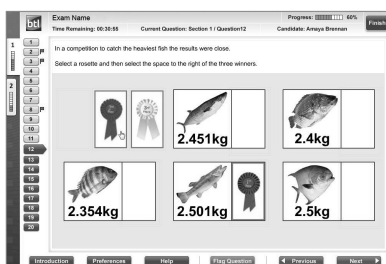

Multi-choice (n of x)

Which **TWO** structures contract to make air flow into the lungs?

☐ A
☐ B
☐ C
☐ D
☐ E

Type: Standard Fixed response

No. possible responses:

10

Probability of correct answer by chance: 10%

Drag and drop

Exam Name

In a competition to catch the heaviest fish the results were close.

Select a rosette and then select the space to the right of the three winners.

2.451kg   2.4kg

2.354kg   2.501kg   2.5kg

Type: Standard Fixed Response

No. possible responses:

5 x 4 x 3 = 60

Probability of all answers correct by chance: 1.7%

Drop-down Symbol Lists

Click on the drop-down lists to select the correct colour for each wire in the three pin plug.

[Select ▾]
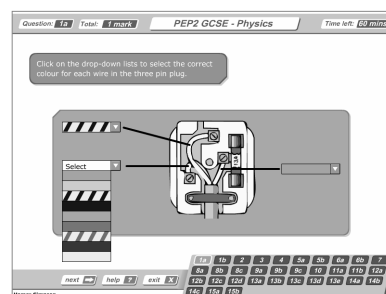
Type: Standard Fixed response

No. possible responses:

9 x 9 x 9 = 729

Probability of all answers correct by chance: 0.1%

Connect Items

Link each 'Program' in the list to it's main 'Function' by clicking on the 'Program' on the left, then the 'Function' on the right.
To change your answer click on the 'Program' again, then re-select another 'Function'.

Program	Function
Mailer	Calculates and charts numerical data
Database	Edits and formats textual data
Graphic	Stores and searches large quantities of related information
Desktop publisher	Creates and edits pictures
Search engine	Sends messages over a network
Spreadsheet	Looks for specified information stored on a network
Word processor	Places text and pictures on a page

Type: Standard Fixed Response

No. possible responses:

7! = 5040

Probability of all answers correct by chance: 0.02%

Matrix Multi-choice (1 of x)

	Input	Output	System	Communication
CPU			✓	
E-mail		✓		
Hard disk drive			✓	
Mouse	✓			
Modem		✓		
Screen		✓		
Scanner	✓			
Fax				✓
Internet				✓
Printer		✓		
Keyboard	✓			
Search engine				✓
Memory - RAM/ROM			✓	
Speech synthesiser		✓		

Select a category to indicate the main use of each entry in the list.

Do this by clicking in the appropriate box.

Type: Standard Fixed Response

No. possible responses:

268,435,456

Probability of all answers correct by chance: Very small indeed.

Free text response

Exam Name
Time Remaining: 00:30:55   Current Question: Section 1 / Question12   Candidate: Amaya Brennan   Progress: 44%   Finish

The diagrams show an investigation into the uptake of water by the stem of a plant.

Describe the changes in the plant that you can see and suggest why these changes have happened.

Type in here

Plant Stem

Oil

Water with red colouring

Replay

Introduction   Preferences   Help   Flag Question   Previous   Next

Type: Standard Open Response

Experiment and Respond

Question: 8   Total: 2 marks   PEP2 GCSE - Physics   Time left: 57 mins

Click the 'Start Experiment' button. The car moves across the screen at a steady speed.

Use the stop clock to time the car between the two marks G and H. To start the clock, click the 'Start/Stop Timer' button once. To stop timing click the button again.

G   H

5.9
TIMER

Start/Stop Timer   Start Experiment

RESET

How long does it take the car to travel between G and H? [ ] seconds

In real life the car is moving at 3 m/s.
How far apart are the two marks in real life? [ ]

back   next   help ?   exit X

Homer Simpson

Type: Advanced Open Response

Pay with Money
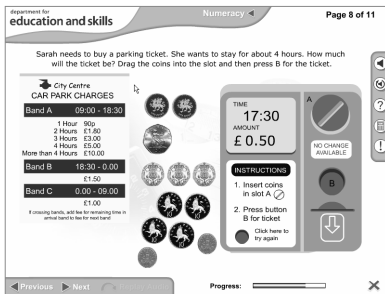
Type: Advanced Open Response

No. possible responses:

Lots
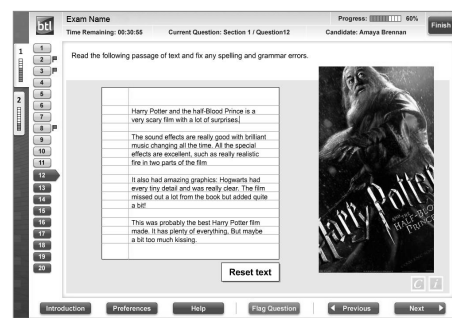
Profit and loss statement

Type: Advanced Open Response
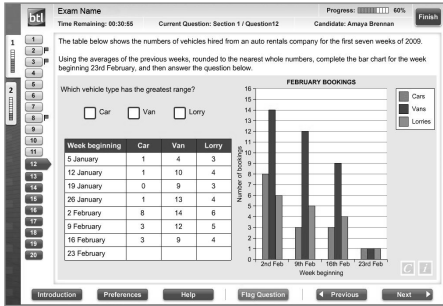
ICT Spreadsheet
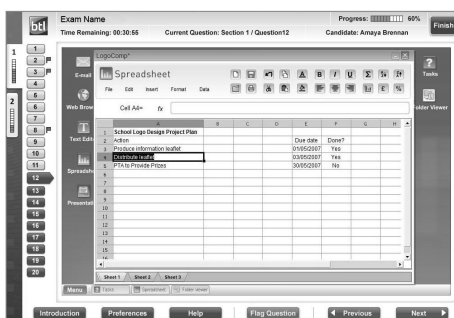
Type: Advanced Open Response

Proof read and correct

Type: Advanced Open Response

Bar Chart

Type: Advanced Open Response

Areas

Type: Advanced Open Response
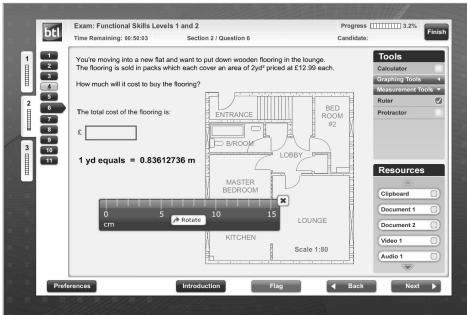
The Learning Journey

Delivering Skills for Life
The national strategy for improving adult literacy and numeracy skills

Don't get by get on

Signposting/Referral
indicates an aspiration

Initial Assessment
identifies a learner's level, allowing selection of the right learning programme

Diagnostic Assessment
leads to a detailed personal profile, providing the basis for an individual learning plan (ILP)

Skills Check
is a process that is used to check the literacy, language or numeracy skills of an individual

Individual Learning Plan
based on Diagnostic Assessment and the curriculum

Summative Assessment
takes place at the end of each learning episode, giving feedback on learning achievements; may be a qualification, test or a completed ILP

LEARNING PROGRAMME

Learning Materials
referenced to the curriculum and linked to a context that is meaningful and motivational for the learner

Formative Assessment
takes place regularly to review progress against the learning plan

department for
education and skills
creating opportunity, releasing potential, achieving excellence

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Initial Assessments

Highly successful onscreen
Benefits for students and tutors

Diagnostic Assessments

- On screen diagnostics can be adaptive i.e. change according to the responses given

- Already extensively used in Skills for Life

Initial Assessment NUMERACY

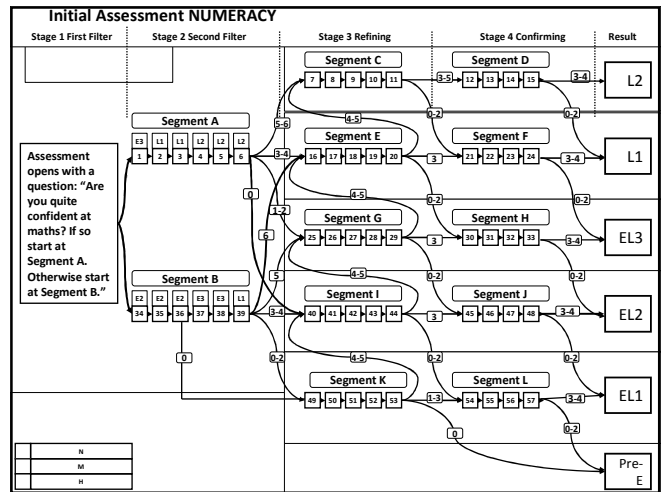---

Formative Assessments

- Feedback can be in real time – mistakes highlighted as they occur – or on completion of a series of questions
- Feedback to teacher and/or learner
- Learning driven by questions/cognitive conflict
- May be adaptive

Assessment results screen
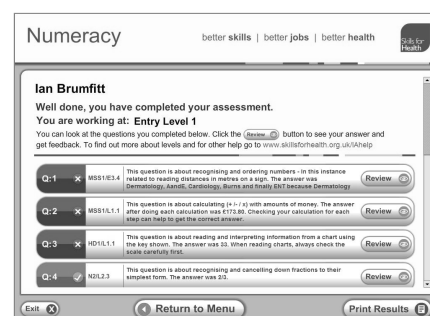
Question Types

- Standard Fixed Response (Multiple Choice, Pick list, drag and drop etc) – probability of correct answer by chance can be very low indeed

- Standard Open Response (Free text)

- Advanced Open Response ("Simulator" based)

No clear distinction – some "fixed response" questions offer a huge number of possible answers

Simulations

- In general learning materials look very different to assessment materials e.g. on screen multiple choice to assess paper based learning content.

- Simulation based learning materials are much the same as simulation based assessment materials – think flight simulator.

Conclusions

- Hundreds of new question types are possible on screen, most of which are not possible on paper.
- In many instances the probability of the correct answers being produced by chance are very low.
- These open up a vast range of new possibilities
  - When ready testing
  - Instant marking
  - Instant feedback to learners and teachers
  - Adaptive learning and diagnostics
  - Learning and assessment materials based on the same simulations
  - And many more!

Thank You

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