Unit 1

This is the first paper for the new Entry Level Certificate in Science qualification. There were 358 entries for the unit 1 examination, across 36 centres.

It was very pleasing to see that the majority of the candidates attempted all parts of the paper with only relatively few leaving whole questions blank.

All the questions were accessible to candidates with all marks achievable and generally well-answered. Facility factors are included in the commentary on individual questions below.

Question 1: Facility factor (FF) 69.6, attempt rate 93.5%
Some candidates did not read the stem of the question which required them to complete the table using the given phrases. These candidates often either added or subtracted the values in the table.

Question 2: FF 70.7, attempt rate 99.1
This question was well answered by most candidates.

Question 3: FF 53.1, attempt rate 97.8.
This was one of the questions with the lowest facility factor on the paper showing that many candidates found this difficult.
For parts (a) and (b) some of the candidates used their own knowledge (not always correct) to answer, rather than take information from the diagrams as instructed and thus received no credit.

Question 4: FF 71.4, attempt rate 97.8
This question was generally well answered. Candidates found parallel circuits the most difficult aspect of this question.

Question 5: FF 53.5, attempt rate 97.8
This question was one of the more challenging on the paper. In part (a) less than half of the candidates scored all three marks.

Question 6: FF 84.3, attempt rate 97.8
This was the best answered question on the paper.

Question 7: FF 76.2, attempt rate 97.8
This question was well answered, although lots of candidates lost marks in part (b) by not qualifying sulfuric acid or magnesium. E.g. 'magnesium' alone would gain no credit, but 'length of magnesium' would gain 1 mark. Similarly for sulfuric acid the term 'volume' or 'concentration' was needed for a mark.
The graph was well done with most candidates achieving at least 5 marks. 
Question 8: FF 53.1, attempt rate 94.1
this was the other question with the lowest facility factor which candidates found most challenging.

Question 9: FF 68.1, attempt rate 97.2
This question was generally well answered.

Question 10: FF 67.6, attempt rate 96.6
This question was well answered with the majority of candidates getting 3 or more marks for interpretation of the graph.
Unit 2

In 2018, 35 centres sent unit 2 work for moderation.

The work of most centres was sent in a timely manner and these were generally well organised. Most centres had all the authentication sheets fully signed and dated by candidates. Please note that it is a JCQ requirement for candidates to authenticate their work – one cover sheet is required per set of 4 tests per candidate. Authentication sheets can be downloaded from the WJEC secure website, from the same folder as the unit 2 tests.

A small number of centres sent in assessments for the 2017–19 session, rather than the 2016–18 session. They were not penalised this time, but in the future, would centres take care to ensure that candidates complete the correct set of assessments according to the year that they cash-in?

The marking was generally accurate with no centre requiring adjustment. Annotation was varied across centres, and sometimes inconsistent within the same centre. Some annotation was excellent, some was very difficult to see where the marks were awarded. Marks were generally transferred accurately from questions to the front page of the test and on to the mark sheet.

The following best practice was seen which helped the moderators support the marking of the centre.

- Ticks were placed where marks were awarded, or crosses were used to signify an incorrect answer. The number of ticks added up to the question total.

- A cross used for an incorrect answer to make it clear that question had been assessed. Several centres just crossed through the possible mark on an incorrect question which caused uncertainty.

- Where the wording/spelling was unclear, the correct words were re-written by the marker.

- Where alternative wording from the mark scheme was awarded, annotations were used to explain why the mark was given. E.g. where a candidate wrote ‘no home for animals’ the marker annotated ‘=loss of habitat’ and the mark awarded.

Points to note for similar questions in the future.

- Topic 1 Question 3(b): candidates need to use the letters of the corresponding instructions as per mark scheme.

- Topic 1 Question 4(b)(i): The line mark could not be awarded for a free-hand line as the question clearly stated to use a ruler. A clearly disjointed line cannot be awarded. The line mark can be awarded without going through 0,0 as this was not given in the table. The line is long enough if it goes between the first and last point.
- Topic 2 Question 4(a)(iii): ‘the magnesium’ was insufficient for a mark. The candidates should reference 'length', 'amount' or 'mass'.

- Topic 3 Question 2(i): An answer based on personal knowledge of the animals cannot be credited. It must be something from the pictures provided.

- Topic 4 Question 2(a)(ii): If a candidate underlines more than one response the mark cannot be awarded.
Unit 3

In 2018, 35 centres sent unit 3 work for moderation.

Centres can access the practical assessments from the secure website and are required to print copies of the assessments for candidates. In most cases this was efficiently carried out, however, in some cases centres have selected the incorrect set of assessments to use. Centres are advised to check the dates on the front of the assessment before preparing class sets.

Moderated work shows that candidates of appropriate ability are being entered for this qualification. Some specific points regarding the practical assessments are given below.

Safety
Whilst most candidates can correctly identify task-specific hazards and risks, in far too many cases the precautions suggested were generic laboratory rules. Candidates should be encouraged when teaching the skills required for a risk assessment to consider ways to minimise the specific risk identified.

It is not reasonable for candidates to suggest not touching the apparatus as a precaution as this would render them unable to carry out the task at all.

Variables
This section was carried out successfully in the majority of work sampled. Candidates can identify independent, dependent and controlled variables although many use the term 'amount' rather than describe the volume or mass of a substance.

Displaying results
Candidates are very successful in constructing bar charts and the majority use a linear scale and identify the axes and bars. In line graphs the marks most commonly lost were for the drawing of a line through plotted points. A line or curve of best fit is appropriate in most cases but too often lines seemed to attempt to be plot to plot and were free-hand, broken, wobbly lines rarely linking all plots. Also, candidates should have a number at the origin of a graph.

Concluding
Whilst candidates were mostly able to describe a trend or form a conclusion from results obtained, they struggled to use correct science to give a reason why these results may have been obtained.

Evaluating
The majority of candidates were able to suggest areas of inaccuracy in their work and suggest improvements.

WJEC Entry Level Science (New) Report Summer 2018/LG