



ENTRY LEVEL EXAMINERS' REPORTS

**SCIENCE
ENTRY LEVEL**

SUMMER 2019

ENTRY LEVEL
SCIENCE – UNIT 1

General Comments

This is the second year of the Entry Level Certificate in Science qualification.

There were 553 entries for the unit 1 examination, across 58 centres. It was very pleasing to see that the majority of the candidates attempted all parts of the paper with only a very 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.

Comments on individual questions/sections

- Q.1** Facility factor (FF) 61.5, attempt rate 95.7%.
The most common errors in this question were that candidates identified the circuit as series, and they underlined that 'bulbs go off' in part (c). In this type of question, no marks can be awarded if the candidate underlines more than one of the given choices.
- Q.2** FF 50.1, attempt rate 99.5%.
This was the question with the lowest facility factor on the paper signifying that candidates found this practical-based question challenging. Part (a) was the section that caused most difficulty as candidates did not state a controlled variable. Many candidates simply stated 'temperature' instead of being more specific and stating 'starting temperature'. A significant number of candidates also failed to correctly calculate the temperature decrease for the blue teapot in part (b)(i). However, most candidates were able to compare values for the different teapots (parts (ii) and (iii)), and make a prediction (part (c)).
- Q.3** FF 77.8, attempt rate 99.6%.
This question was well answered by most candidates, with one of the highest facility factors on the paper. It was surprising to see that a significant number of candidates believed that the system of transformers and cables was called the internet. It was also common to see the answer of 12 noon in part (b)(ii) rather than identifying the peak of the graph.
- Q.4** FF 82.1, attempt rate 99.5%.
This was the question with the highest facility factor on the paper. Part (a) was where candidates were most likely to lose marks by not understanding why the global demand for water is increasing. Part (b) was generally well answered but some candidates did have difficulty labelling the scientific apparatus from the list provided.
- Q.5** FF 64.5, attempt rate 97.7%.
Part (a) of this question was generally well answered. Part b(i) was the most challenging to candidates, who showed little understanding of the need to repeat results. The majority of candidates however, were able to analyse the information given in the table and make simple conclusions for (b)(ii) and (iii).

- Q.6** FF 62.1, attempt rate 97.7%.
This question had one of the lowest facility factors on the paper. Many candidates did not understand the terms 'producer', 'herbivore', and 'carnivore' and therefore found part (a) difficult. A variety of food chains were suggested, using all the organisms in the given food web. Part (c) was generally well answered, with candidates being able to read the highest and lowest points on the graph. Parts (d) and (e) however required the higher order skills of 'give a reason' or 'explain' and so candidates found these parts more challenging and many failed to score on these sections.
- Q.7** FF 73.1, attempt rate 98.4%.
Part (a) of this question was well answered, with most candidates being able to complete the plot within a one small square tolerance for each bar. Most candidates were able to analyse the information given in the table in order to answer part (b). However, in part (c), a significant minority did not show any understanding of the planets in the solar system.
- Q.8** FF 74.8, attempt rate 97.5%.
The most common mistake in this question was the calculation in part (a), with some candidates leaving this section blank. Most candidates could label the pie chart successfully. Most candidates could use the information in the table to make judgements in part (c). Many, however, did not know how excess sugar could have adverse effects on the body.

Summary of key points

In summary, the PE was very pleased with the attempt rate and facility factors seen on the paper. The high degree of positive achievement on the paper was very encouraging. Some candidates were co-entered with GCSE Applied Science (Single Award).

ENTRY LEVEL
SCIENCE – UNIT 2

General Comments

In 2019 58 centres sent unit 2 work for moderation. This was an increase on the previous year.

The majority of centres sent in their sample in a timely manner and these were generally well organised. A large majority of centres had all the authentication sheets fully signed and dated by candidates.

A small number of centres sent in assessments for the 2018-20 season, rather than the 2017-19 season. They were not penalised again this year, 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?

Comments on individual questions/sections

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

- Ticks were placed where marks were awarded, and crosses were used to signify an incorrect answer. The number of ticks added up to the question total.
- Where the wording/spelling was unclear, the correct words were re-written by the marker.
- It was clearly annotated when a candidate had verbally answered the question and a mark was awarded.
- A second person in the centre had clerically checked the mark transfer and addition before submitting.

There were no questions on the 2017-19 papers that caused consistent errors in marking.

Summary of key points

The marking was generally accurate with no centre requiring adjustment. Marking and annotation were generally clearer in this year's samples. In some centres it was difficult to see where the marks were awarded as the marker used the same colour ink as the candidates. Marks were generally transferred accurately from questions to the front page of the test and onto the mark sheet but there were some errors in adding up individual questions and adding the total for the four papers.

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SCIENCE – UNIT 3

General Comments

In 2019, 58 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, it is still the case that some 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 to ensure that the date on the assessment is the date that the qualification will be awarded to the candidates in question.

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

Comments on individual questions/sections

Predictions

Most candidates can predict the outcomes of an experiment. It is not necessary for their predictions to be scientifically correct, but they should link the independent variable and the dependent variable with direction.

Safety

Candidates can often find hazards and risks from the method they are presented with. It is important however that they do not suggest extreme outcomes. For example, in the heart rate experiment it is not feasible to suggest that candidates are commonly at risk of a heart attack when carrying out mild activity for a few minutes, neither are they likely to faint. These extreme situations will not be credited. Many candidates did recognise that slips and falls were possible and gave a sensible precaution for this. It is also not reasonable for candidates to suggest that someone else deal with elements that could pose a danger e.g. hot water. Any precaution must suggest how the person carrying out the method can reduce their risk.

Variables

This section was carried out successfully in the majority of work sampled. Candidates can identify independent, dependent and controlled variables although at times they are not explained properly. When suggesting time as a variable it is usually given as a single word. Statements regarding time should be more that e.g. time taken to exercise or time the experiment was left to run.

Calculations

Most calculations are carried out effectively. It is important that candidates follow instructions carefully. Where candidates were asked to take their pulse for 15 seconds and they multiply by 4 to get their beats per minute some candidates did the reverse. A heart rate recorded over 60 seconds and divided by 4 can produce results with decimal places. This was not credit worthy as a heart rate can produce only whole numbers.

Displaying results

Candidates were very successful at selecting the correct type of graph to use and bar charts were usually drawn very well. Line graphs improved, and most candidates use pencil to draw lines or curves of best fit accurately.

Summary of key points

Candidates display various skills in this practical examination. It is important that the written method is followed as directed by the candidates as deviations may impact on their ability to correctly answer the questions. There are alternative suggestions for the experiments in the teacher guidance notes that hopefully provide solutions for most issues encountered when preparing to deliver the assessments.

Most candidates could create a linear scale, but more thought could be put into the size of the graph given the scale used on the y axis. An incorrect scale results in plots being cramped together when if the scale were doubled a far clearer graph could be produced. Candidates should be encouraged to use numbers other than zero or line breaks at the origin during teaching so that they are able to display these skills in the test.

It would be nice to see increased use of the correct terminology when discussing variables. The terms 'volume' and 'mass' were rarely used as candidates often referred to the 'amount' of substances.



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