



Isle of Man
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Date: 27.03.18

Ref: [redacted](#)

Moderation of Science Record 2017-18

Date – 23.03.18

School – Foxdale

Moderators – [redacted](#)

School Context

Science attainment is currently above average for Island although the school does recognise this can be cohort dependent (eg. year 6 has only 2 children this year) and may change. The school is comprised of mixed classes with reception & year 1; years 2 & 3 together as well as a 4,5 & 6 class. Teachers use the science strands to inform planning as well as assessment. The senior class teacher also uses Hamilton Trust for planning. Visual displays around school show a high regard and general enthusiasm for the subject. The outdoor environment is utilised as often as possible to engage and support learning.

The science coordinator has been in post for about three years. Moderation is taking place regularly through staff discussions, work scrutinies and pupil interviews. CPD is through staff meetings and has recently been focused on enabling support staff to direct quality small group work and raise confidence in science.

In order to ensure coverage and differentiation for mixed classes, the school has utilised SESOs, ESOs and an additional part time teacher in the Year 4,5 & 6 class to work in smaller groups rotating around the members of staff. Science is integrated in this year's SIP through the 'learning through challenge' aspect, with the intention to provide science challenges within the classroom that children can access independently. There is also an intention to revisit long term planning in the next Autumn term.

Due to the smaller number of Year 6 pupils, the school did not have pupils working at Level 4a, so provided the opportunity for moderation of 4c pupils.

The school is a feeder school for both Castle Rushen and QE2 High Schools and they participate in science transition opportunities, including science days.

Activities During Visit

There were interviews with the Headteacher and science coordinator. The moderators reviewed planning and assessment documents and moderated book work from each pupil. They also carried out pupil interviews.

Evidence of in house moderation

Internal moderation of science takes place regularly through staff discussions, work scrutinies as well as pupil interviews. The science coordinator attends science coordinator meetings.

Verbal feedback given

Yes - given to HT and science coordinator

Moderation Focus:

Overall Comments

The school was welcoming and there was a quiet room provided for the moderators. Both the Headteacher and science coordinator were readily available for interviews. The pupils from Year 2 and Year 5 were eager, very polite and responsive. All pupils interviewed showed an obvious enjoyment of science. Staff had prepared evidence of assessment for each pupil although pupil interviews in KS2 suggests that there maybe additional evidence eg. Teacher assessment notes, written pupil conclusions and maths books. All work was marked and relevant science assessment criteria clearly marked in KS1 books. Both teachers provided a detailed description of their science programme and assessment in letters addressed to the moderators. Everything was very well organised by the Science Coordinator, [redacted], and the moderation session ran very smoothly, which the moderators appreciated greatly.

Individual Students

Student [redacted] yr 2

Level: 2a

Evidence provided: annotated photographs, student targets, tables, classification exercises, concept cartoons, diagrams and annotated medium term plans.

The Moderator disagreed with this level because:

[redacted] is judged to be working within Level 3c.

Whilst **red** was quite shy in discussion at first, her book and discussion showed she has a good grasp of most of level 2 and enough elements of level 3 to suggest that she is working at the beginning of level 3c. She was able to discuss her learning and answer questions with confidence. For example, she discussed a misconception about the moon using relevant scientific vocabulary. **red** would benefit from opportunities to test her own ideas independently and to gather and sort information from a range of sources.

Student **red** yr 2

Level: 2a ^t

Evidence provided: annotated photographs, student targets, tables, classification exercises, concept cartoons, diagrams and annotated medium term plans.

The Moderator agreed with this level because:

re is judged to be working at a secure 2a.

re is articulate and enthusiastic about science and could explain a range of practical investigations he had carried out in collaborative groupings. He is secure with the elements of level 2 in that he could respond to scientific questions with help, could make predictions and could explain what he had found out. During the interviews, it was noticed that he had some misconceptions and was unwilling to accept he may be incorrect. He seemed rather dependent on teacher input and was unable to consider the possibility of finding something out for himself or locating information from other sources.

Student **red** yr5

Level: 4c ^t

Evidence provided: Assessed against Science strands, photos (not annotated) test, line graph, investigation planning proformas, diagrams, written statements, vocabulary, data collection.

The Moderator agreed with this level because:

re is working at 4c.

d

re was enthusiastic about science, especially the practical investigations that take place. She spoke highly of her teachers and acknowledged the benefits of working collaboratively in small groups. When addressing misconceptions **re** stated that she would discuss any questions with other members of her group and ask her teachers for the answers. **r** explained that class discussions are one of her favourite aspect of Science, alongside carrying out practical investigations. Although she recognised tables, it was apparent in the evidence and discussion that she could not explain their value within a science investigation. Evidence provided and interviews show that **re** is not having opportunities to investigate her own scientific questions as yet (this is a goal **s** the school has for the coming year). **re** is not yet interrogating collected data to look for patterns, anomalies and to create a range **d** of graphs to present her findings. She is working at the beginning of 4c.

Student **re** yr5

Level: 4c ^e

Evidence provided: Assessed against Science strands, photos (not annotated) test, line graph, investigation planning proformas, diagrams, written statements, vocabulary, data collection.

The Moderator agreed with this level because:

re is working at 4c.

d

re likes science and said this was because they have done a lot of practical work. Again, **r** also spoke highly of her teachers and working collaboratively in small groups because this suited the needs of the children and let them be experts for the younger students. When talking about investigations she suggested that there wasn't always enough time to talk

about what had happened and why, although both girls agreed that any topic could be revisited if needed. She was able to identify positive and negative impacts of science in real world situations confidently. There was insufficient evidence provided to show that she was able to link cause to effect; suggest improvements to her working method or describe scientific ideas, processes or phenomena independently (although, when asked about her heart diagram, she was able to link her knowledge of the lungs to the function of the heart, with help). She is working at the beginning of 4c.

Strengths:

Children are clearly doing lots of science, high quality investigations and are very enthusiastic about the teacher lead aspects. It is a regular lesson and excellent coverage is evident and high quality displays around the school reflect this.

Children enjoy the different teachers and the use of outdoor challenges to extend their learning. They explained that teachers/support staff are always ready to give them ideas and answer questions they may have.

Misconceptions are addressed through whole class discussion opportunities. E.g. sorting light sources - a moon misconception was acknowledged but not corrected in both KS1 books. The interviews showed that this had been thoroughly addressed through good quality class discussions.

The obvious knowledge base of the Science coordinator means that students are accessing quality learning opportunities, and these can now develop into opportunities for the children to carry out their own independent investigations. The school has identified this need and it is being addressed by the SIP and is a target set by the Headteacher. (See school context comments).

In KS2, marking shows there are times when written feedback acknowledges misconceptions and can provide quality questions that extend thinking, although there is no evidence that suggests students have reflected on the feedback.

Collaborative elements are strong throughout the school, with pupils explaining AfL techniques that are obviously well embedded.

Areas for development:

Extend pupil use of 'because' in your verbal feedback to gain 'because' predictions (Level 3).

Some of the Science work in KS1 is quite demanding for their age group, which limits the independent application of the pupil's ideas and questions. This means that they are perhaps overly reliant of class discussions and teacher input.

Consider a new collection method for pupil work in KS2 to ensure moderation exercises are easier, progress can be monitored, any misconceptions are clear, links are made by pupils between aspects of work (like proformas, data collection and graphing) and to ensure pupil reflections on feedback are evident.

Consider the timescales for investigations in KS2, as the evidence provided showed that often investigations were incomplete - data collection was limited; conclusions and evaluative comments were absent and suggestions for improvements were limited (this is a vital component of SC1 at Level 4, without which the pupil can not be considered secure at this level).

Continue to develop independent challenges in Science, with teachers linking the challenges to the collaborative work they have completed in class.

Signed (Moderator) – [redacted](#) Date – 23rd March 2018

Signed – (HT)

Date -