

# Evaluation of the Space Education Quality Mark

**For ESERO-UK**



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## 1. Executive Summary

Qa Research (Qa) was commissioned by ESERO-UK to conduct an independent evaluation of the Space Education Quality Mark (SEQM). The principal aims of the SEQM are to:

- Inspire students in STEM (science, technology, engineering and maths) using the context of space
- Work with external organisations
- Share resources
- Use space to support and enrich the curriculum

Applicants submit an action plan and build a portfolio of evidence which is marked against the awarding criteria by a SEQM assessor. Three levels of award can be achieved: Bronze, Silver or Gold.

The purpose of this evaluation is to:

- Determine what the impact of achieving each award level is
- Investigate whether there are commonalities in the characteristics of the schools who have been awarded each level of the SEQM
- Establish whether any impact of achieving SEQM status is sustained over time

Fourteen one-on-one interviews were conducted with staff from schools or colleges who have been awarded a Gold, Silver or Bronze. Three SEQM assessors were also interviewed one-on-one. The evaluation also included a review of 15 SEQM submissions.

### Key findings

The evaluation evidence demonstrates that achieving the SEQM has been beneficial for the schools involved. The submission process and method of assessment provides schools with a cost-effective and accessible way to achieve a science-based quality mark.

Evaluation feedback shows that the SEQM meets the expectations and aspirations of participating schools, and a range of impacts have been demonstrated common to all of the SEQM award levels.

- Engagement with the SEQM increases pupil enjoyment, interest and engagement in science, and helps to raise their aspirations.
- Participating in the SEQM helps to raise the profile of science within schools.

- Applying for the SEQM can act as a catalyst to develop and enhance the science curriculum by providing a framework for development.
- Schools achieving the Silver and Gold awards appear to be better at sustaining the impact of the SEQM long term due to more extensive embedding of space education across the curriculum and links with other science education organisations.
- Impact is also sustained in the longer term through continued use of resources developed during the SEQM application and assessment process.

## Conclusions

The evaluation identified that there is a tendency for the SEQM to be perceived as an award for primary rather than secondary schools, and the lower number of applications from secondary schools would seem to support this. This is perhaps due to a combination of reasons, such as a stronger focus on the curriculum and exams in secondaries meaning that cross-curricular application can be more challenging, and perhaps a lack of clarity around what the benefits are for secondaries. However, primaries also seem to experience their own limitations, such as being less likely to have a subject specialist who can devote time to the SEQM and sustain it in the long-term.

There is also some feedback to suggest that some new starter schools aiming for Bronze may benefit from enhanced support on how to get the most out of, and integrate, space education for long-term benefit. The pandemic has had an impact on participating schools, particularly those going through the submission stage. Some of the criteria emphasise outside involvement, trips and activities, and there have obviously been limitations on this for schools. Further support on engaging with other schools and the wider community may also be beneficial particularly in response to any ongoing COVID-19 restrictions.

## Recommendations

1. Consider enhancing the resources/support for first-time Bronze SEQM applicants, e.g. a short film/animation to help them to evidence their action plan and work to develop an integrated approach to space education for the long-term.
2. Consider how assessments could be reviewed/verified to ensure consistency, as a benefit for schools but also as an opportunity for reflection/development for assessors.
3. Explore the development of more guidance/support, or re-framing of the criteria, for schools that want to progress to the next level but are finding

they are limited by the amount or type of activity that they are able to do, particularly in relation to external trips and activities.

4. Consider how to raise the profile and benefits of the SEQM more generally and particularly amongst schools who are perhaps less likely to engage, e.g. secondaries, and those with a higher proportion of disadvantaged students.
5. Consider offering further support on how schools engage other schools or the wider community, particularly in response to ongoing COVID-19 restrictions.
6. Review approaches and materials to ensure they align to recent changes in Ofsted and curriculum frameworks.
7. Review assessment criteria to ensure they reward a positive mixture of quality and quantity of engagement.

## 2. Introduction

The European Space Education Resource Office in the UK (ESERO-UK) was established in 2009 and is funded by the European Space Agency (ESA), Department for Education (DfE), Science Technology Facilities Council (STFC), and the United Kingdom Space Agency (UKSA). Based at the National STEM Learning Centre, the largest provider of STEM support to UK schools and colleges, ESERO-UK aims to use the context of space to open doors for young people.

One of the programmes ESERO-UK runs is the Space Education Quality Mark (SEQM). Schools and colleges across the UK who want to inspire and engage students in STEM subjects through the use of space as a context can apply.

The principal aims of the SEQM are to:

- Inspire students in STEM using the context of space
- Work with external organisations
- Share resources
- Use space to support and enrich the curriculum

Applicants submit an action plan and build a portfolio of evidence which is marked against the awarding criteria by a SEQM assessor. Three levels of award can be achieved: Bronze, Silver or Gold.

- The Bronze award is aimed at schools and colleges who are beginning to integrate space education into their curriculum.
- The Silver award is aimed at schools and colleges who have integrated space

themes fully across the curriculum with a focus on STEM subjects.

- The Gold award is for those who have met all the criteria for the Silver award over a sustained period of time and are now impacting the wider education community.

The full criteria for each level are included in the Appendix.

Throughout the 2017/18, 2018/19, and 2019/20 academic years, 51 schools and colleges in total have been awarded the SEQM. The majority of these have been primary schools in the state sector, although there is some representation from the independent sector. In terms of award level, 56% of schools were awarded Bronze, 33% Silver, and 11% Gold.

The table below provides further detail on the number of schools applying to SEQM and sending in action plans and supporting evidence.

**Table 1: Number of SEQM applications**

Year	No. of schools applying for SEQM	No. of schools sending in action plans	No. of schools sending in evidence	No. of schools not awarded SEQM
2017-18	11	–	9	1
2018-19	198	37	28	1
2019-20	166	34	14	1
2020-21	86	37	8	–

Qa Research (Qa) was commissioned by ESERO-UK to conduct an independent evaluation of the SEQM.

### 3. Aims & Objectives

The purpose of this evaluation is to:

- Determine what the impact of achieving each award level is
- Investigate whether there are commonalities in the characteristics of the schools who have been awarded each level of the SEQM
- Establish whether any impact of achieving SEQM status is sustained over time

## 4. Methodology

Fourteen one-on-one interviews were conducted with staff from schools or colleges who have been awarded a Gold, Silver or Bronze. Three SEQM assessors were also interviewed one-on-one. The interviews followed a discussion guide developed by Qa Research and approved by STEM Learning. Participants were recruited via an email sent out by STEM Learning to SEQM assessors and schools that had been awarded the SEQM. The email invited them to register interest in taking part in an evaluation interview. The profile of schools taking part in the evaluation is shown below.

**Table 2: Profile of schools interviewed**

SEQM award level	School type	Year of award	Location
Bronze	Secondary	20/21	Lancashire
Bronze	Primary	19/20	Suffolk
Bronze	Secondary and post-16	18/19	Derbyshire
Bronze	Primary	19/20	Leicestershire
Bronze	Secondary and sixth form	20/21	Essex
Bronze	Primary	21/22	West Midlands
Silver	Primary	18/19	County Durham
Silver	Primary	18/19	West Sussex
Silver	Middle Years 5-8	18/19	Worcestershire
Silver	Primary	18/19	Staffordshire
Silver	Primary (Independent)	20/21	Somerset
Gold	Primary	18/19	Isle of Wight
Gold	Primary (Independent)	17/18	Wiltshire
Gold	Middle Years 5-8	16/17	Worcestershire

This broadly represents the range of award levels and types of school participating in the SEQM, and includes schools from various time points in the history of the SEQM. The interviews with assessors and schools took place via Microsoft Teams, Zoom or telephone and lasted around 30 minutes. Fieldwork took place during November and December 2021, and teachers were offered a £30 high street gift voucher as a thank you for participating.

To inform the discussion, Qa interviewers had access to each school's SEQM Action Plan, Reflections document, and the SEQM Assessor's report. This evaluation also includes a section reflecting on a review of these documents. A series of four case studies are also included within this report to illustrate the experiences of schools in more detail, and the impact of the SEQM.

## 5. Key findings

### 5.1 Review of submissions

A total of 15 SEQM submissions were reviewed as part of the evaluation. The profile of those reviewed is shown below. Fourteen of these schools were interviewed as part of the evaluation. While it was not possible to interview one of these schools, their submission has been reviewed.

**Table 3: Profile of submissions reviewed**

SEQM award level	School type
Bronze	3x secondary, 2x primary
Silver	5x primary, 1x middle deemed secondary, 1x primary independent
Gold	1x primary, 1x middle deemed secondary, 1x primary independent

#### 5.1.1 Observations

The level of detail within the submissions varied to some extent within the SEQM award levels; some action plans were more detailed than others. The range of activity across all of the award levels was very diverse, and it is clear that the SEQM criteria are sufficiently flexible to allow schools to include many different activities and approaches.

There was also some variation in the SEQM Assessor reports. Some followed the format of the Action Plan and comments/feedback were included on the plan itself. However, in other cases, a separate report had been prepared offering comments and feedback on the four SEQM criteria within the Action Plan.

There are clear differences between the Bronze, Silver and Gold submissions in terms of the amount and range of activity. The amount and range of activity was notably higher within the Gold submissions, particularly the amount of involvement from external organisations and programmes such as The Ogden Trust, STEM Learning, and Space and STEM Ambassadors. Frequent reference to ESERO-UK resources occurred across submissions for all of the award levels.

Some themes were apparent in relation to SEQM Assessor feedback. Prompts from Assessors to involve other subject areas such as Computing, DT and Maths featured quite frequently along with suggestions to involve other schools within a schools partnership, or more generally within the wider community.



## 5.2 Experiences of the SEQM application and assessment process

Schools had various reasons for applying for the SEQM. These included a desire to raise the profile of science within the school, broaden pupils' horizons and aspirations, and to enhance the curriculum using additional space-based resources.

*"I liked [SEQM] because it's a bit more specific. I enjoy teaching space, we've got space on the curriculum in year five and year seven. And I think it's just something really nice that we can get the whole school involved in. Rather than just a general science, it's something specific, and it's something that's quite challenging as well."* (Middle school, Silver)

*"I'm the science lead. In the school, I wanted science to be across all the classes and more involved in all of the subjects as opposed to just standalone science; this [SEQM] is a good way of getting it across everything, and make it cross curricular. So that's why I went for it."* (Primary, Bronze)

The majority of schools were very positive about the SEQM application and assessment process. Several had contacted ESERO-UK for help and advice and had found this support very useful. The example action plans provided were also useful in helping schools prepare their applications.

Most schools found the application process very smooth and the workload manageable; for some this was also a reason for applying for the SEQM. Compared to other quality marks the SEQM is perceived as a more accessible 'first step' and more manageable for schools – this view was expressed by both schools and SEQM assessors.

*"The real strength of [SEQM] is that it is achievable. So in comparison to other quality marks, it gives [schools] a framework to put some really great practices in place within the school with the support of the senior team, yet it's not going to push them over the edge workload wise... so I think it is accessible, yet still meaningful... you do need to have evidence of good practice in place."* (SEQM assessor)

Schools found that the amount of work involved in preparing their application was not too onerous, and they appreciated the PowerPoint format for evidence submission. This allowed them to easily collate pieces of evidence on an ongoing basis ready for submission. Some schools had continued to use the evidence they had collated for the SEQM for other purposes. SEQM assessors also liked the

PowerPoint format as it enabled them to develop a clearer picture of what a school was doing in practice.

*"I made sure throughout the year that I was keeping things like photographs... newsletters of things that we have done, and having the examples of what other schools have done to present their work... so I was able to plan out my time throughout the year to make sure that I had everything ready to go." (Primary, Silver)*

*"I've used those resources multiple times since, because I've now got a stack of PowerPoint slides that show us things that we've done, and I can go and grab images from there. And so it [goes beyond] the SEQM, it's been a really useful resource to go back to... rather than something you do to get the award, and then you never look at it again, I've returned to those documents frequently." (Secondary, Bronze)*

The Gold, Silver and Bronze criteria are seen as clear and schools found the example action plans useful. There were a couple of occasions where schools had applied for a Bronze or Silver award and been awarded the next one up, but within the sample of interviews for this evaluation, there were no instances of a school receiving a lower level than the one applied for.

*"I only originally wanted to go for the Bronze. But as time went on, I thought, oh, we could do more, because there were lots of suggestions on there as well, which I found really helpful. And I really liked the way that we could present it as well with the PowerPoint, and a certain amount of slides. I thought it was really, really clear and concise." (Middle school, Silver)*

Although most schools found the criteria manageable overall, the aspects that schools seem to find most challenging are the requirements for involving other schools (especially if they are not in the same place on their 'science journey'), and the wider community. This has been particularly problematic during the pandemic when schools have not been able to have their usual level of visitors or visits out / contact with other schools, as some of the criteria place an emphasis on this. However, some have made good use of virtual visits/contact and SEQM assessors have offered useful suggestions on this at the submission stage.

### **5.2.1 Suggestions for improvement**

Although schools and SEQM assessors were very positive about the submission process overall, some suggestions for improvement were made, mainly in relation

to the management of information and the potential to enhance support for schools making their first submission.

One school noted that the link to upload submissions seems to expire quite quickly and another felt it would be useful to have an online portal for the various SEQM supporting documents so that they could be downloaded rather than being sent by email and potentially getting 'lost' in inboxes.

*"Some sort of online web page... maybe through STEM Learning, where everything is centralised and where [schools] can ask questions and get answers and it's really clear... that would be helpful." (Primary, Gold)*

Most schools felt the criteria were appropriate, however one secondary school did express the view that the Gold and Silver criteria had a tendency to appear all-encompassing, particularly for secondary schools where it was perhaps not as easy to implement whole-school cross curricular activities in the same way.

*"I suppose anything I'd query possibly is just the criteria because I think you could be doing an awful lot that's really impactful around promoting space and STEM and still not meet the [Gold] criteria... It almost looks as if space had to take over the school... and I sort of appreciate that if you're going for a Gold maybe that is what that has to look like... but we do want our school to do other things as well. And perhaps quality rather than quantity is important." (Secondary, Bronze)*

Linked to this, there was a view that there is more appeal / ease of implementation in primary schools compared to secondaries, and the data on participation in the SEQM also suggests this might be the case.

*"Secondaries are under huge pressure with a knowledge rich curriculum, I'm not saying primaries aren't under pressure with curriculum - they've got different pressures though. If you look at the curriculum, sadly, there's hardly any statements in key stage 3 about space... and the same for key stage 4. So, if people are focusing on their curriculum it might not tie in with what they're doing." (SEQM assessor)*

*"I think it's a great scheme. And we want to continue to be involved. Even the award, and the logo kind of has a primary look to it a little bit. There's definitely a feel that this is more a primary thing than a secondary thing. Which in a sense is right, because I think that's where we've got to grab them... but there's a place for this in secondary, but it might need a slightly different branding or tweak to the branding." (Secondary, Bronze)*

Another point raised by schools (particularly those with a Gold SEQM) was around a need for more guidance for schools without much external support applying for the Bronze award. Gold SEQM schools tended to have contacts or some form of external support in place already from other organisations, i.e. The Ogden Trust was mentioned on a number of occasions, and other schools may have had support from a Space Champion or have had previous involvement in other ESERO-UK projects. This view was also expressed by SEQM assessors.

*"I do think that there's a need to give a little bit more structured support to people who are considering taking it on. Perhaps a video that can sit on the SEQM website and teachers can just access in their own time, and that talks through the expectations, perhaps with some examples... because they do have to put in their action plan what the evidence will be and they don't always match... so some structured support at the actual planning stage to consider what the evidence they might submit." (SEQM assessor)*

*"It could even be a pre-record that sits on the SEQM website... just before you fill in your form here are 10 top tips, or before you submit your evidence, use this to check." (SEQM assessor)*

*"Because I was working with companies like The Ogden Trust, I was brushing shoulders with people who had already been awarded the Silver award. So I had a lot of support, a lot of people who could say that's looking great. Now you should add a bit of this. And then we just slowly chipped away for about a year collecting evidence building up a portfolio." (Middle, Gold)*

Linked to the previous point, assessors noted that, in general, the majority of schools are clear about how to prepare their SEQM submissions and the type/amount of evidence required. However, sometimes schools will run a 'Space Week' and base their application on this alone, and additional guidance as described previously would be beneficial.

*"Some schools are much better than others. I think perhaps it could be made clearer as to the types of evidence that we would like; the majority of schools are fairly good, but I've had a few where they sort of do a Space Week. And they think that that's it, you know, so they do like one focus... whereas I get other schools who really go over and above what is expected. So I think maybe what is expected of them could be a little bit more obvious... some schools just really do the bare minimum, and then other schools go over and above what they need to do." (SEQM assessor)*



It was suggested that these schools tend to be applying for a Bronze award, sometimes following a Space Camp or Space Week type of activity.

There was also a view that the SEQM was perhaps not as well known as it could be.

*"I think one of the things I was quite surprised by is the lack of promotion of the award... it's not well known. I go into schools all the time as a teacher, trainer and supporter and helping to raise science capital in our local schools, and a lot of teachers and schools and departments have just never heard of it."* (Middle, Gold SEQM)

From the perspective of SEQM assessors, there have been advantages in being a Space Champion and then going on to assess SEQM submissions. Former Space Champion assessors feel well equipped to advise and support schools with their SEQM submissions.

*"It's helped knowing the sort of the background as to how they're assessed, because that in turn helps you prepare the schools as an assessor: I know exactly what they need to have, or [what] they need to prove, or what they need to evidence."* (SEQM Assessor)

Assessors, although happy with the SEQM approach overall, did note that there was a potential for inconsistency arising from them working in isolation.

*"I don't know what other assessors do, how they report it, so maybe it needs to be brought in line with one another, so that we're all doing the same thing."* (SEQM assessor)

*"I feel like I've got really clear guidelines. And I know exactly what to do, and it's all set out for me. But I don't know how my reports fit in with other people's."* (SEQM assessor)

### **5.3 Impact of the SEQM**

Overall, schools noted that achieving the SEQM resulted in the outcomes that they were aiming or hoping for when they applied.

#### **5.3.1 Engagement**

The main impacts of the SEQM noted by schools were around pupil engagement and enjoyment. Schools found that space education was a very effective 'hook' to engage pupils' interest and this had the potential to lead to an increased interest in

STEM subjects more generally, and provided the 'awe and wonder' that teachers were looking to introduce into the curriculum. Some teachers noted that the knowledge and experience gained has stayed with the pupils as they have moved up through the school.

*"I think it's a fantastic vehicle to promote passion for science. I'm very biased, because I love this subject anyway, but I've never met a single child who has not had an interest in space. And I think we can use this to help support our science teaching in schools, but also to validate the amazing science teaching that's going on in schools already." (Middle, Gold)*

*"[Pupil engagement] does [extend to other subjects] a bit with Maths... because it's calculating how far things are away in light years. And it just gets their brains kind of ticking over about the relative sizes of things... sometimes we do get the odd child getting really freaked out when they realise how small we really are. It does make them think a bit outside of the subject." (Middle, Silver)*

*"[Pupils] do have a much better knowledge... we focused largely on the moon landings [as a whole school topic], and the knowledge of that event has really filtered through into future science learning... it really gave the children below year five a little bit more background knowledge and a bit more of a foundation... and they have carried that knowledge through into the later years." (Primary, Silver)*

Some schools had found that enhancing their space education content had been a good way to re-engage the disengaged.

*"We have an alternative provision in school for some students who need more individual tuition for a whole variety of reasons. And as part of their science work, we got them to build and launch some rockets, so we're taking the space theme into that." (Secondary, Bronze)*

*"It raised engagement in lessons, and certainly in some of the more challenging classes improved behaviour. There was a massive improvement... We had a big issue with really disruptive boys. And that was massively improved. We were doing space themed learning. And it gave us an opportunity to go outdoors a little bit." (Primary, Gold)*

Another key outcome for several schools was 'broadening horizons'. Some schools had specifically enhanced their curriculum via the SEQM for this purpose, particularly in schools in more deprived or rural areas where pupil aspiration could potentially be limited. It was noted by some teachers that this increased aspiration was based

on fact and an increased understanding of careers in the space industry, rather than a stereotypical ambition 'to be an astronaut'.

*"In our key stage 3 to 4 GCSE options stage we included some information in [the option choice booklet] around space. We're getting students to look at where they could go eventually into industry, so we're just getting them to explore, and using resources like Unifrog, careers websites and videos, but deliberately using the space industry as an example." (Secondary, Bronze)*

### 5.3.2 Raising the profile of science

Several schools set out in pursuit of the SEQM with the aim of increasing the profile of science, raising 'science capital' within their school, and sometimes the wider community. In some cases, this was led by new STEM leads who wanted to have an impact and change how things had operated previously. The SEQM provided a useful vehicle for this, and with the added appeal for Senior Leadership Teams of an award.

*"It has really helped with raising our science capital in our school; it's really helped with promoting the love and the passion of science, not just within the lessons, but also outside of our lessons as well. It's helped us build much better links with mums and dads, and the local industry and community who wanted to support us when we did our award by coming into school and delivering talks. We had some funding, we have some sponsorships, we were able to make external links to science communicators and science companies outside of our school... the children come in through reception and see the plaque on the wall, parents can see the awards that we have, it's on our letter heads of our school as well." (Middle, Gold)*

*"Firstly, it put space on the map and space education on the map. And it meant that our SLT [Senior Leadership Team] had to buy into that. So I felt like, as a science leader, I had the support behind me, which meant that the teachers then engaged and joined in with things... I think maybe I would have come up against a bit more of a wall if it didn't have that backing behind it." (Primary, Gold)*

*"[The assessor] was very complimentary of everything that we had done, which was really lovely. I really appreciated the comments. I went rushing in to my head teacher, 'that's what he said about us'. And it was really uplifting." (Primary, Silver)*

Several schools noted the general appeal of space as a topic. There were some good examples of engaging with parents and the wider school community, and also in using space as a learning aid to assist the transition from primary to secondary.

*"And the parents as well, their engagement has increased... I think they feel more supported in knowing places to go to online, or things to do with their kids that are related around space now, because we've given them a bundle or box of resources that they can go to."* (Primary, Silver)

*"We've just bought a school telescope. And that's going to go out to various children doing really well in science, because they're so interested in space, so they can take it home and look at the stars at night with their parents and talk about the stars..."* (Primary, Bronze)

*"We moved our transition work to a kind of space focus, getting the students to think of themselves as astronauts going on a mission. So there's lots to worry about, lots of things to prepare for... and it just fitted brilliantly."* (Secondary, Bronze)

### 5.3.3 Curricular enhancement

Several teachers spoke about using the SEQM as a catalyst or framework to develop and enhance the science curriculum (e.g. introducing GCSE Astronomy), and also including cross-curricular activities including other teaching staff and extra-curricular developments.

*"It was really cross curricular because we did, in English, lots of links to chronological reports and fact pages... Maths came up a lot in looking at travel and distances and measurements. And music, we did The Planets, lots of pupils went to the hall and did dancing to The Planets by Holst."* (Primary, Silver)

*"I think that it broadened involvement... traditionally, you've got people from DT, science, computer science, who were involved in this kind of thing. And all of a sudden, we had English teachers running activities involving space themed text, you know, art got involved... geography, they were looking at the use of satellites, to gather environmental data."* (Secondary, Bronze)

In terms of extra-curricular development, some schools noted that working towards the SEQM had led to the introduction of clubs such as 'Rocketry Club' or 'Star Wars Club'.



## 5.4 Sustaining the impact of the SEQM

Schools included within this evaluation had been awarded the SEQM between 2017 and 2021. Most schools in the latter period had experienced a slow-down or interruption in their space education activities due to the pandemic, particularly in relation to receiving visitors, outside trips and activities that required mixing of year groups.

Some schools noted that it isn't always easy to keep the momentum going as there is a need to take into account other subject areas too, for example Art and History focus areas. Linked to this, some schools noted changing Ofsted requirements that were likely to limit the amount of freedom they had to choose whole school topics.

*"Unfortunately, because of the way that the curriculum and Ofsted has gone... the science focus has changed to a slightly different focus for us now, so we don't actually do a whole schools space topic... we do a human body whole school focus now. So unfortunately... [SEQM] just doesn't fit quite the way we need it to anymore." (Primary, Silver)*

Aside from this, most schools felt that the initial impact of the SEQM had been sustained to some extent, particularly in terms of the continued use of resources or themed activities being repeated year on year.

It was evident for some schools that the SEQM had been driven by one teacher with a keen interest or skillset in space, and in some cases they continued to be the main driver of sustained impact. However, some teachers were conscious of this and were working hard to embed their work and distribute it amongst other staff so that it could continue if these teachers were to leave the school.

The importance of embedding and integrating space education, beyond the initial activities and engagement, was emphasised by SEQM assessors.

*"Those one off opportunities don't necessarily have the biggest impact on the students because it's what goes on in the classroom week in week out that has the biggest effect." (SEQM assessor)*

From the perspective of assessors, the schools where the SEQM seems to have the most sustained impact tended to be the ones achieving the higher awards that are well-connected and have a lot going on already.

*"I think [particularly successful schools] are often schools that have access to other networks. So schools that might be involved as part of the Space Camp*

*UK network, or The Ogden Trust schools. So they're not working as an island, they've got this network of like minded people... the schools that are already very engaged are the schools that want to take more on."* (SEQM assessor)

However, encouragingly, most schools that were approaching their SEQM renewal date were intending to or seriously considering re-applying, in most cases for a higher level award where this was feasible. Some schools noted restrictions on future cross-curricular development; for example, specific literacy or maths schemes had been introduced post-SEQM which meant that they did not have free rein on including space topics.

From the perspective of assessors, the idea of (if practical) re-assessing schools that they assessed originally was appealing as it would be interesting to see their progression.

### **Summary of impact**

The evaluation evidence demonstrates that:

- Engagement with the SEQM increases pupil enjoyment, interest and engagement in science, and helps to raise their aspirations.
- Participating in the SEQM helps to raise the profile of science within schools.
- Applying for the SEQM can act as a catalyst to develop and enhance the science curriculum by providing a framework for development.
- Schools achieving the Silver and Gold awards appear to be better at sustaining the impact of the SEQM long term due to more extensive embedding of space education across the curriculum and links with other science education organisations.
- Impact is also sustained in the longer term through continued use of resources developed during the SEQM application and assessment process.

## 6. Conclusions

The evaluation evidence demonstrates that achieving the SEQM has been beneficial for the schools involved. The submission process and method of assessment provides schools with a cost-effective and accessible way to achieve a science-based quality mark. There is however some feedback to suggest that some new starter schools aiming for Bronze may benefit from enhanced support on how to get the most out of, and integrate, space education for long-term benefit. Further support on engaging with other schools and the wider community may also be beneficial.

The pandemic has had an impact on participating schools, particularly those going through the submission stage. Some of the criteria emphasise outside involvement, trips and activities, and there have obviously been limitations on this for schools.

Evaluation feedback shows that the SEQM meets the expectations and aspirations of participating schools and a range of impacts have been demonstrated common to all of the SEQM award levels. For example, the SEQM has a clear role to play in providing a framework for enhancing curriculum development and resources, engaging pupils, and raising the general profile of science within schools. However, it does appear that schools with a particularly well-connected science lead, or where links with other science education organisations are well established, are perhaps better placed to achieve the higher level Silver and Gold awards. These schools also appear to be better equipped to maximise and sustain the impact of the SEQM in the long term. Despite this, across all levels of the SEQM, there was evidence of schools repeatedly using resources that had been developed during the SEQM submission phase, and this in itself has sustained some of the initial impact over time.

There is also a tendency for the SEQM to be perceived as an award for primary rather than secondary schools, and the lower number of applications from secondary schools would seem to support this. This is perhaps due to a combination of reasons, such as a stronger focus on the curriculum and exams in secondaries meaning that cross-curricular application can be more challenging, and perhaps a lack of clarity around what the benefits are for secondaries. However, primaries also seem to experience their own limitations, such as being less likely to have a subject specialist who can devote time to the SEQM and sustain it in the long-term.

## 7. Recommendations

- a) Consider enhancing the resources/support for first-time Bronze SEQM applicants, e.g. a short film/animation to help them to evidence their action plan and work to develop an integrated approach to space education for the long-term.
- b) Consider how assessments could be reviewed/verified to ensure consistency, as a benefit for schools but also as an opportunity for reflection/development for assessors.
- c) Explore the development of more guidance/support, or re-framing of the criteria, for schools that want to progress to the next level but are finding they are limited by the amount or type of activity that they are able to do, particularly in relation to external trips and activities.
- d) Consider how to raise the profile and benefits of the SEQM more generally and particularly amongst schools who are perhaps less likely to engage, e.g. secondaries, and those with a higher proportion of disadvantaged students.
- e) Consider offering further support on how schools engage other schools or the wider community, particularly in response to ongoing COVID-19 restrictions.
- f) Review approaches and materials to ensure they align to recent changes in Ofsted and curriculum frameworks.
- g) Review assessment criteria to ensure they reward a positive mixture of quality and quantity of engagement.



## 8. Case studies

### 8.1 Sharples School, Bolton

- SEQM award level and year: Bronze 2020/21

Sharples School is a secondary school and the only Science Specialist College in Bolton. The school has its own observatory. In 2020/21 the school had 1078 pupils on roll. Just under 43% of pupils on roll did not speak English as a first language (substantially higher than the 2020/21 national average of 17.2%) and 32.7% of pupils were eligible for free school meals, again higher than the 2020/21 national average of 23.7%. The school's most recent Ofsted report in May 2019 rated Sharples as a 'good' school. The school's Progress 8 score<sup>1</sup> is 'well above average'. In 2019, 86% of pupils entered achieved GCSE combined science grades of 4-4 and above.

The Space Education Lead at Sharples School, Jake Harding, is relatively new to the school, having joined in September 2020. Jake teaches physics but also has a Masters in astrophysics and so was keen to revitalise the observatory. The observatory was built on school grounds in 2015 but had not been used following the retirement of a previous member of staff. With the support of the Headteacher, Jake explored the options to develop space education within the school and discovered the SEQM. Jake saw the SEQM as a potential 'framework' to help develop the space curriculum at Sharples School.

#### Experience of applying for the SEQM

Jake found the SEQM application process straightforward and made good use of the example evidence slides provided to ensure that the submission included the right level of detail. Jake gradually collated the evidence required for submission and valued the fact that this could be done over time without having a significant impact on his existing workload.

*"That's why I picked to do it [SEQM], because I knew that it wouldn't increase my workload throughout the year."*

Jake also appreciated feedback from a SEQM assessor on the draft action plan, particularly on ideas for visits and activities. The action plan was written during a period of increased COVID-19 restrictions in schools, and the assessor was able to

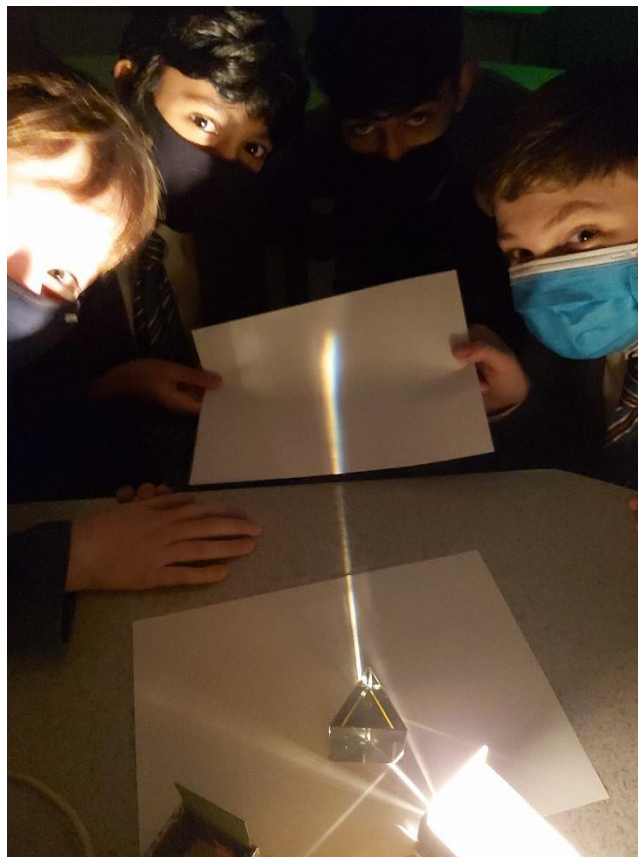
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<sup>1</sup> This score shows how much progress pupils at this school made between the end of key stage 2 and the end of key stage 4, compared to pupils across England who got similar results at the end of key stage 2.

offer suggestions around virtual alternatives to meet the SEQM criteria. The assessor awarded Sharples School a Bronze award.

Despite COVID-19 restrictions Sharples School has been able to offer pupils a range of virtual experiences, including a talk from a Canadian astronaut.

*"We had a Canadian astronaut talk to us from Houston, which was fantastic. That was the highlight of our space programme last year... that was really great, they were happy to do it, because it was virtual, of course."*



### **Impact of the SEQM**

Having the SEQM as a 'framework' for space education has enabled the school to increase the amount of space-themed learning across the curriculum. The school library also has enhanced space content so that interested pupils can be directed to this.

*"Every year group, across all abilities, have now some sort of space themed activity, whether it's in lessons or outside of lessons, throughout the year. And that will continue now as they go through, now that we have that programme."*

The feedback from pupils on the various events was very positive, and alongside the expansion of key stage 3 space resources in lesson time, this has stimulated interest in space. The increased focus on space has led to the introduction of GCSE Astronomy as an option with an initial cohort of 30 pupils, which has expanded to at least two more classes.

*"We've made Astronomy part of our actual curriculum now. So that was a big success for the school."*

In terms of extra curricular activities, the school runs a STEM Club and a Star Wars Club, which provides a fun route into space education and STEM more widely.

*"We found that [Star Wars Club] is a hook to get [pupils] into the more serious events that we run, and observatory sessions."*



Jake noted that space education plays a key role within the school as a source of 'awe and wonder' and has widened the aspirations of some pupils to consider a career in Astrophysics. Two pupils are currently putting letters together to see if they

can secure shadowing opportunities with a local university Physics and Astronomy department.

*"They're seriously considering now Astrophysics as a career. Whereas, you know, this time last year, it wouldn't have even been on their radar. So I think it's inspirational and aspirational."*

Some parental/community involvement has also happened on the back of the SEQM activities, for example a parent who volunteers as a Scout leader invited the school to organise an astronomy evening including activities that would count towards the Scouts Astronomy badge.

The SEQM award and subsequent introduction of GCSE Astronomy has sparked an interest amongst other STEM teachers. For example, a chemistry teacher has expressed an interest in teaching on the GCSE Astronomy course.

## **The future**

Sharples School is keen to build on the momentum that has been generated by the SEQM award and are in the process of applying for a Silver award. A key objective of Jake's is to engage more teachers with the delivery of space education to ensure that this becomes embedded within the school for the long term.

*"It has accelerated very quickly, and we're at a good place now. But I think now my goal is to sustain it. And that needs other people, rather than just me, involved with organising and facilitating these sessions."*



## 8.2 Sheepy Magna Church of England Primary, North Warwickshire

- SEQM award level and year: Bronze 2019/20

Sheepy Magna Primary is a small school with 107 pupils on roll (2020/21). The school is situated in a rural, fairly affluent area – with only 4.7% of pupils eligible for free school meals compared with 23% nationally. The most recent Ofsted report in February 2020 rated Sheepy Magna as a 'good' school. The school's progress scores in reading, writing, and maths are 'average' (2019).

The SEQM application was led by Emily Smith with the key aim of promoting space as a context for learning across the curriculum. Broadening the aspirations of pupils was also a key motivator behind the SEQM application. Sheepy Magna Primary is in an area where the main occupations are in agriculture and distribution, and as such future aspirations tend to be dominated by this context. Emily was looking online for space training and saw some information about the SEQM award and noticed that it was free – this was a key motivator in submitting an application for the SEQM.

*"I used it [SEQM] to interest the kids in science and to broaden horizons really."*

### Experience of applying for the SEQM

Emily experienced no major issues with the application process and valued the example action plans as a useful guide.

*"I think I made it more complicated than it needed to be. I wanted to be sure that I didn't mess it up. So I think I put way more information in than we needed...and then when I looked at the example, it was like, oh, it's like three sheets of paper that's much simpler than what I've done. So it wasn't actually too bad."*

Initially, Emily considered aiming for the Silver award, however due to the pandemic she felt that it would be difficult to achieve some of the Silver criteria around involving others from outside the school, so decided to aim for Bronze. The feedback from the SEQM assessor was also valuable in identifying the potential for future development.



### Impact of the SEQM

Emily explained that, initially, there was some work to do in encouraging teaching staff across the school to see the opportunities to use space as a learning tool more widely across the curriculum, rather than as one unit every two years. However, as time has progressed, space has become more embedded within the overall curriculum.

The process of applying for the SEQM prompted Emily to reach out to STEM Learning's network and she has been offered a range of support via their STEM Ambassador Hubs, including support with organising visitors (pre-COVID-19) and accessing training and equipment. Although not directly related to the SEQM, this has had a significant benefit for the school.

*"And [linking in with STEM Learning's network] has just been brilliant for us, not just with space. But the amount of training that we've received, the amount of equipment and stuff that, as a small school, we would just not be able to afford and we wouldn't even know existed. So, even though it's not directly related to the SEQM, the knock on impact it's had on science in our school has been phenomenal."*

In terms of direct benefits, access to resources has been important as well as providing the pupils with memorable learning experiences.

*"For example, there was an experiment in the Mission Starlight book which came from ESERO-UK, there was something that you did with ultraviolet beads, to test different materials and that's become part of our light unit of work. In the materials unit of science that they do in key stage 1, they've started looking*

*at materials for a space suit... and in Maths [the ratio topic] we use toilet rolls to measure how far away different planets are. So there's little bits filtering in. And I think as well, because we did the Space Week, the kids were so engaged, we had a company come in and do the virtual reality headsets taking us around space. And my year six class left last year, and loads of them said that Space Week was the week they remembered most in school."*



During 'Space Week', the school also engaged with the local community and parents by setting up a planetarium display in the local church.

Applying for the SEQM has also given the school confidence in applying for other schemes, such as Young Tree Champions run by the Tree Council.

## **The future**

The school is planning more space-related activities for the future, possibly including a trip to the National Space Centre. Emily feels that space themed learning is well-embedded within the school now and more staff have become involved in delivering activities.

*"Because we've been doing it for pretty much two years before we got the award... it's become a habit... I don't feel like I'm even leading it now. It's sort of become part of the culture."*

Emily hopes the school will go on to apply for higher levels of the SEQM in the future.

### 8.3 Heywood Prep School, Corsham, Wiltshire

- SEQM award level and year: Gold 2017/18

Heywood Prep is an independent non-selective school for pupils aged 2 to 11. The school has 229 pupils on roll (2018/19). The school is featured in [The Good Schools Guide](#) and noted for its small class sizes (max 16). The maths, science and computer science syllabuses are all linked and pupils have a weekly STEAM (science, technology, engineering, arts and maths) lesson.

The school's SEQM application was led by Camilla Evans, the science leader. The school initially worked towards the Silver award, but were awarded Gold by the SEQM assessor.

Camilla had taken on the role of science leader in 2016 and had been looking at the key stage 2 curriculum. Prior to this she had already done some work at a previous school around developing the topic of space within the curriculum. The SEQM seemed an ideal place to start as a 'motivator' for organising the curriculum. There was also a lot of interest from parents around what the school could offer to further enhance STEM subjects and the SEQM also met these requirements.

*"We have quite a lot of children that find space engaging. It's a particular love of mine anyway, so [SEQM] seemed like a really good fit for us to get started with."*

*"So we have, I would say, a really strong science interest in our cohort and our families in our community. We have so many families who are programmers, or engineers... they want the same for their children. So because the community is so keen and interested, you have to meet that demand."*



### Experience of applying for the SEQM

Camilla found the application process straightforward and the guidance clear. The process and collation of evidence was useful in itself in helping to reflect on and develop the curriculum.

*"It was easy to follow, and then the onus was on me to then collect the evidence and reflect and see where we could make more evidence. And that moment was where perhaps, you then created new content and experiences for children. So it did improve [the curriculum], because we were trying to get this award."*



## Impact of the SEQM

The SEQM award, and overall enhancement of the space curriculum topics across all age groups, has improved pupil's understanding of a wider range of 'real world' careers within the space industry.

*"Children have a really thorough experience from reception all the way through to year six of different aspects of the space industry. And we have children who now can more clearly articulate which bits of the space industry particularly interest them, we don't just have the generic 'I want to be an astronaut'."*

This impact on pupil's confidence and understanding of the space industry has included those with additional learning needs, for example, the school has quite a high proportion of pupils with additional learning needs such, dyspraxia, dyslexia, dyscalculia.

*"I have one particular [pupil] and they find reading quite challenging. They had said, 'I can't be an astronaut'. And then a few years down the line, they have now sort of picked things apart, and said 'I want to be part of the supporting team that works with astronauts, I want to be the voice on the other end of the phone'."*





## The future

Camilla has spent time ensuring that teaching staff have access to good space-themed resources that have been thoroughly prepared and can be rolled out repeatedly.

*"We have been working hard to make sure that where teachers are busy, they aren't always experts, or specialists, and we have a really high amount of pastoral care so teacher's time for academics is quite tight. So I have tried as much as possible as the leader and they have as well to make really good resources and planning that can be repeated, concise projects that are meaningful, and really thorough. And then you can roll them out again...so it really has become embedded in our curriculum."*

Camilla has a clear plan and focus for the future to develop an engineering curriculum, and to further develop the curriculum across all areas of science. She also plans to continue sharing this learning within the group of schools that Heywood Prep belongs to, and beyond. As such, the school is considering working towards the Primary Science Quality Mark in addition to potentially looking to renew the SEQM.

## 8.4 The Marchant-Holliday School, Somerset

- SEQM award level and year: Silver 2020/21

The Marchant-Holliday school is an independent special school and registered charity, providing education and residential provision for boys aged 5-13. The school had 48 pupils on roll in 2020/21, all with an SEN (special educational needs) Education Health and Care Plan mainly for Social, Emotional, and Mental Health needs. Pupils are funded by their local authority. The most recent Ofsted report in October 2021 rated Marchant-Holliday as a 'good' school.

The school is a member of the Association for Science Education and science is taught using a cross-curricular approach. Pupils follow a 2-year rolling programme planned to ensure that children are given opportunities to access the National Curriculum programmes of study from key stages 1 and 2.

The school science lead, Phoebe Tavenner, led the SEQM application. One of the main motivations for applying was to raise the profile of science within the school. Phoebe had led a successful SEQM application at a previous school and felt that Marchant-Holliday school would also benefit from the award. The original application was for a Bronze award, but the school was awarded a Silver by the SEQM assessor.

### Experience of applying for the SEQM

Having applied for the SEQM previously, Phoebe found the application process straightforward. Phoebe valued the manageable and clear application process.

*"[The application process] was easy, really straightforward... where it breaks down into gold, silver, and bronze, this was really helpful, because you could see what evidence you needed to show... it was an opportunity for me to reflect on what we've done. And it was good evidence for me as well as to show what I had achieved as science lead. It wasn't too onerous; it was manageable to complete. This was important because in a primary school you are responsible for class teaching and leading a subject area; this therefore doesn't give you much time to do extra bits."*

## Impact of the SEQM

The key benefits of the SEQM have been in raising the profile of science within the school, engaging the children, and enhancing staff CPD [continuing professional development] through sharing resources and 'Space Twilight' CPD sessions.

*"Science has definitely become more prominent across the school. The Science Week in particular was really full of 'wow' moments; we had lots of different visitors in and it really hooked the children into science and space. I think it's really important for my CPD, and other staff CPD... we used lots of resources from the website."*



The school made sure that the space topic was very cross-curricular, and has been successful in incorporating the topic to meet the needs of different age groups and abilities.

*"We did it through PE... we cycled to the moon, we had static bikes, and went to see how far we could cycle to the moon. We did lots of art using space... and some of the younger ones did cookery, they made planet biscuits."*

*"We had one boy who was new to the school and quite disengaged... through the Space Week and afterwards he wanted to find out more about space and looked at more books and did his own mini project... it was a good way of hooking him back into learning."*


The school also has some boarders and space has been incorporated into extra-curricular activities such as stargazing using the school's telescope.

## **The future**


Phoebe plans to build on the momentum created by the SEQM award and has recommended the SEQM to other science leaders within the local primary science cluster.

## 9. Appendix

### 9.1 The SEQM assessment criteria



**SEQM SELF-ASSESSMENT - PRIMARY**



Highlight all aspects of the criteria that your school already meets then decide which level award you will aim for and note key areas for development

School:				Date:
Strand	Bronze Criteria	Silver Criteria	Gold Criteria	Notes
<b>Leadership and Strategy</b>	There is a named member of staff leading the development of Space Education across the school. Schemes of Learning for Science and a number of other curriculum areas, reference Space when appropriate. An action plan is in place to develop using the context of Space throughout the curriculum.	The Space Education lead teacher brings together teachers regularly discuss and share good practice and to collaborate to develop new Space activities and projects into their planning. Quality assurance strategies are in place to reflect on the impact of Space Education across the school.	All subject leaders from STEM subjects collaborate to ensure that children across the school regularly encounter space for a context for their learning through Science, Mathematics, Computing and Technology. Subject Leaders use Space themes to develop engineering projects in the school. The sustained development of Space Science across the curriculum and beyond the school features in the school development plan.	
<b>Educators and Instruction</b>	The Space Education lead teacher has engaged in some Space Education CPD that impacts on both his/her teaching and the school. They use a range of teaching and learning strategies to build Space Education into their lessons and they are beginning to share these with others. The school has a variety of resources that can be used to develop Space Education across the curriculum and teachers have drawn on relevant resources from the ESERO collection in the STEM Learning eLibrary.	Groups of teachers have attended Space Education CPD either led by the lead teacher or external providers. There are a variety of teaching and learning strategies being used by teachers across the school to engage pupils of all ages in using the context of Space in STEM subjects. The school has resources specifically for the teaching of Space Science through STEM subjects and regularly draws on resources from the ESERO collection in the STEM Learning eLibrary.	The school leads Space Education CPD for schools and teachers in the wider community. Teachers in the school trial and help develop Space Education resources with outside agencies and/or create and develop original resources which they share with the wider learning community.	
<b>Students and Learning</b>	Groups of pupils in the school are actively engaged in learning through Space themes. Pupils are encouraged to develop their learning about Space at home. Pupils talk enthusiastically about the Space projects they have been involved in.	Pupils from all year groups are actively engaged in learning through Space themes. Large numbers of Pupils are encouraged to develop their learning about Space at home and participate in whole-school Space Education initiatives. A large proportion of pupils from across the school talk enthusiastically about their Space projects.	The school has systematically developed a whole school curriculum extending so that Space themes are a strong feature in every pupils learning experiences. The school has supported other local schools leading opportunities for their pupils to be actively engaged in learning through Space themes.	
<b>Enriching the Curriculum</b>	Extra curricular Space themed STEM clubs are in development. Some pupils have participated in Space themed field trips. STEM ambassadors such as Space scientists or engineers have spoken to groups of children about their work.	Extra-curricular Space themed STEM clubs are well attended by pupils. Groups of pupils have participated in a variety of Space themed field trips. Pupils from across the school get the opportunity to meet/interact with a range of people with space-based occupations and find out about their work.	There is a sustained programme of regular space visits/visitors as well as outreach experiences and workshops that pupils of different age groups attend. The school runs enrichment events for the wider community including parents and/or pupils and teachers from other schools.	
<b>Selected level of award</b>	<div style="display: flex; justify-content: space-around; font-weight: bold; font-size: 1.2em;"> <span>BRONZE</span> <span>SILVER</span> <span>GOLD</span> </div>			



### SEQM SELF-ASSESSMENT - SECONDARY



Highlight all aspects of the criteria that your school already meets then decide which level award you will aim for and note key areas for development

School:				Date:
Strand	Bronze Criteria	Silver Criteria	Gold Criteria	Notes
<b>Leadership and Strategy</b>	There is a named member of staff leading the development of Space Education across the school. Schemes of Learning for STEM subjects reference space when appropriate. An action plan is in place to develop space throughout the STEM subject curriculum.	The Space Education lead teacher brings together teachers from STEM subjects to regularly discuss and share good practice and to collaborate to develop new space activities and projects into their planning. Quality assurance strategies are in place to reflect on the impact of Space Education across the school.	All subject leaders from STEM subjects collaborate to ensure that students across the school regularly encounter space for a context for their learning. The sustained development of Space Science across the curriculum and beyond the school features in the school development plan.	
<b>Educators and Instruction</b>	The named teacher has engaged in some Space Education CPD that impacts on both his/her teaching and the school. The named teacher uses a range of teaching and learning strategies to build Space Education into their lessons and is beginning to share these with others. The school has a variety of resources that can be used to develop Space Education across the STEM subjects and teachers have drawn on relevant resources from the ESERO collection in the STEM Learning eLibrary.	Groups of STEM teachers have attended Space Education CPD either led by the named teacher or external providers. There are a variety of teaching and learning strategies being used by teachers across the school to engage students of all ages in Space Science. The school has resources specifically for the teaching of Space Science through STEM subjects and regularly draws on resources from the ESERO collection in the STEM Learning eLibrary.	The school leads Space Education CPD for schools and teachers in the wider community as part of a sustained programme. Teachers in the school trial and help develop Space Education resources with outside agencies and/or create and develop original resources which they share with the wider learning community.	
<b>Students and Learning</b>	Groups of students in the school are actively engaged in STEM learning through Science themes. Students are encouraged to develop their learning of Space at home. Students talk enthusiastically about the Space projects they have been involved in.	Students from all year groups are actively engaged in STEM Learning through Space themes. Large numbers of students are encouraged to develop their learning of Space at home and participate in whole-school Space Education initiatives. A large proportion of students from across the school talk enthusiastically about their Space projects.	The school has systematically developed a whole school curriculum extending beyond STEM subjects so that Space themes are a strong feature in every students learning experiences. The school has supported other local schools leading opportunities for their students to be actively engaged in learning through Space themes.	
<b>Enriching the Curriculum</b>	Extra curricular Space themed STEM clubs are in development. Some students have participated in Space themed field trips. STEM ambassadors such as Space scientists or engineers have spoken to groups of children about their work.	Extra curricular Space themed STEM clubs are well attended by students. Groups of students have participated in a variety of Space themed field trips. Students from across the school get the opportunity to meet/interact with a range of people with space-based occupations and find out about their work.	There is a sustained programme of regular space visits/visitors as well as outreach experiences and workshops that students of different age groups attend. The school runs enrichment events for the wider community including parents and/or pupils and teachers from other schools.	
<b>Selected level of award</b>	<div>BRONZE</div> <div>SILVER</div> <div>GOLD</div>			



## 9.2 Schools interview guide

### Evaluation of SEQM Schools Topic Guide

Interviewer:  
Participant:  
Organisation:  
Date:  
Time:  
Phone Number (if telephone interview):

My name is XXXX and I work for Qa Research. We are carrying out depth interviews as part of an evaluation of the Space Education Quality Mark.

We are interested to hear about your views and experiences of the SEQM, including what has worked well to date, what the challenges have been, and the impact for your school.

The interview will last 30-45 minutes depending on how much you have to say. I would like to record our discussion with your permission so I can listen back to it later. Would that be okay? This recording will not be passed on to anyone else. Qa follows the MRS Code of Conduct. As a thank you for your time, I will email you a £30 gift voucher (Argos).

#### **Background**

Please can you tell me a bit about yourself and how and why your school originally applied for the SEQM?

#### **The application/assessment process**

- Please can you describe how the application process and assessment process worked for the SEQM?
  - What worked well?
  - What were the challenges?
  - Experience of putting together the action plan and building evidence portfolio?
  - Views on any materials/guidance to support the assessment process? Any gaps?
  - Experience of/support received from the assessor?
  - Any improvements to the process? Particularly around streamlining or reducing workload?
- *Discuss/note any points of interest from the review of the school's application*

### **Impact**

- From your experience, what have been the main impacts for your school (and any for yourself?)
  - Inspiring students?
  - Inspiring other teachers to use space as a context
  - Any impacts around parental engagement?
  - Themed community events/working with external organisations/ theme
  - Sharing resources?
  - Using space to support and enrich the curriculum and/or STEM enrichment activities, e.g. STEM clubs
- Can you tell me about any specific examples of success arising from your involvement with the SEQM?
  - Use school's application as a prompt where necessary
- To what extent, would you say, have the impacts of the SEQM been sustained over time in your school?
  - What are the barriers to sustained impact?
  - What are the facilitators?

### **The future**

- Do you have any plans to work towards the next level of award? Or reapply (after the 3 years) (as appropriate)
  - explore reasons why/anticipated benefits
  - explore reasons why not
- Do you have any suggestions for the future development or improvement of the SEQM?

**Case studies**

As part of this evaluation we are hoping to develop some case studies to illustrate the impact of the SEQM within schools.

Would you be happy for your name and that of your school to be identified in the evaluation report and more widely by STEM Learning as a case study?

This would be based on the information given in this interview, elements of your application, and any supplementary information that you may wish to provide (e.g. photos)? We will provide you with a copy of the case study before it is finalised so that you can make any corrections.

**Thanks again for your time today.**

### 9.3 SEQM Assessor interview guide

## Evaluation of Space Education Quality Mark (SEQM) SEQM Assessors Topic Guide

Interviewer:  
Participant:  
Organisation:  
Date:  
Time:  
Phone Number (if telephone interview):

My name is XXXX and I work for Qa Research. We are carrying out depth interviews as part of an evaluation of the Space Education Quality Mark.

We are interested to hear your view on the SEQM in your capacity as an assessor and/or Space Champion supporting schools.

Your views are important in understanding what has worked well to date, what the challenges have been, and the impact for schools.

The interview will last 30-45 minutes depending on how much you have to say. I would like to record our discussion with your permission so I can listen back to it later. Would that be okay? This recording will not be passed on to anyone else. Qa follows the MRS Code of Conduct.

### **Background**

Please can you tell me a bit about yourself and how and why you originally became involved with the SEQM?

### **The application/assessment process**

- Please can you describe how the application process and assessment process works for the SEQM?
  - What works well?
  - What are the challenges?
- What are your views on the current materials/guidance available to support the assessment process?
  - Are there any gaps?
  - Are you aware of any resources that would help teachers with their submission/the assessment process?

- Have you observed any pattern/commonalities in the types of school that seem to apply for the SEQM?

### **Impact**

- From your experience, what are the main impacts for participating schools (and any for yourself?)
  - Inspiring students and other teachers in school?
  - Any impacts around parental engagement?
  - Working with external organisations?
  - Sharing resources?
  - Using space to support and enrich the curriculum?
- Can you tell me about any examples from schools that have been particularly successful?
- From your experience, to what extent are the impacts of the SEQM sustained over time in schools?
  - What are the barriers to sustained impact?
  - What are the facilitators?
- Have you observed any pattern/commonalities in the types of school that seem to experience a positive/sustained impact from achieving SEQM status?

### **The future**

- Do you have any suggestions for the future development, or improvement of the SEQM?

### **Contact with schools**

As part of this evaluation we will be speaking to a range of schools about their experiences of the SEQM. Can you suggest any specific schools that it may be useful for us to speak to?

### **Any other comments/suggestions?**

**Thanks again for your time today.**

This research has been carried out in compliance with the International standard ISO 20252, (the International Standard for Market and Social research), The Market Research Society's Code of Conduct and UK Data Protection law.

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