

READING IS STEMSATIONAL



Context and Overview

To address Schedule 2 'Other Deliverables' of SAH Contract.

Targeted programmes of ambassador activities by key stage Hub to develop and deliver five programmes of support.

Includes work packages:

- Maths and English through Science at Key Stage 1 & 2
- Hands on activities at Key Stage 3
- Mentoring at Key Stage 4
- Employability skills at Key Stage 5

Brief summary of key interventions

Working in partnership with [Heather Wright](#), of [Reading Rocks](#) fame, the Reading is STEMsational, a STEM-focused, primary literacy project was launched.

At the heart of the project was the desire to use great books to inspire a love of STEM, and STEM topics to inspire a love of reading. Win-win.

We curated three whole-school sets of texts, themed around Conservation, Blue Planet and Engineering, each linking to the National Curriculum for Science for Years 1-6. Schools were then offered the loan of the book sets to use as the basis for a week of STEM activities in school.



The sets provide enough texts for a one-form entry school and consist of:

- A whole school text to use as the focus and launch of the topic (12 copies)
- Individual class sets for Years 1-6, consisting of:
- Class driver text (15 copies)
- Three sets of satellite texts (6 copies of each)
- A couple of supplementary texts (2 copies of each)

Outline notes are provided to support use of the texts, though not lesson plans. Teachers are encouraged to incorporate their own new ideas, or their existing planning, and mould a project that is appropriate to their school's intake and local area.

Schools use the texts to deliver their Literacy and Science curriculum for the week and as the springboard for planning their other subject lessons.

The driver behind the project, however, is not curriculum delivery. The curriculum, rather, becomes the vehicle for supporting the pupils' acquisition of **science capital** and development of **careers awareness and aspiration**.

Schools are provided with a two hour whole-staff CPD session, which briefly explores the importance of careers education at primary-age, the research behind the science-capital teaching approach, enrichment activities and the Reading is STEMsational model. Schools are then expected to develop a week of activities, focused on the STEM-theme of their loaned book set, enhanced by a range of student, parent and community enrichment and engagement activities, including **STEM Ambassador engagement**.

Key successes – what was achieved?

Ten schools have engaged with the project to date and have been able to deliver school STEM weeks with a wide range of activities that have supported students' acquisition of science capital and careers awareness. STEM Ambassadors from across the UK have been able to beam into classrooms remotely to share their knowledge and expertise in relation to the schools' STEM Week topics and to highlight the careers available within relevant industry sectors.

Teacher Impact

Pre- and post-activity surveys were completed by teachers in the first three schools that took part in the programme, the results of which showed an incredibly positive impact, on their attitudes to both curriculum and extra-curricular/careers education enjoyment and efficacy.

I enjoy teaching Science

	Agree	Strongly agree	Total
Pre	68%	4%	72%
Post	57%	43%	100%

I am good at teaching Science

	Agree	Strongly agree	Total
Pre	59%	5%	64%
Post	43%	43%	86%

I know how to encourage my pupils to engage with Science activities outside of school

	Agree	Strongly agree	Total
Pre	9%	0%	9%
Post	57%	0%	57%

I know how to encourage our families to engage with Science activities outside of school

	Agree	Strongly agree	Total
Pre	9%	0%	9%
Post	29%	14%	43%

I know how to use curriculum activities to develop careers awareness

	Agree	Strongly agree	Total
Pre	18%	0%	18%
Post	71%	14%	85%

Pupils / students Impact

Whilst impact was not as marked for pupils, the evaluation surveys still indicated a positive impact on their enjoyment and value of Science and on their interest in Science-based jobs.

I enjoy Science

	Agree	Strongly agree	Total
Pre	28%	43%	71%
Post	30%	49%	79%

Science is important

	Agree	Strongly agree	Total
Pre	26%	50%	76%
Post	25%	59%	84%

I'd like to do more science in school

	Agree	Strongly agree	Total
Pre	26%	42%	68%
Post	20%	55%	75%

I'd like to do more science activities outside of school

	Agree	Strongly agree	Total
Pre	23%	38%	61%
Post	27%	44%	71%

I'd like a job that uses science skills

	Agree	Strongly agree	Total
Pre	21%	26%	47%
Post	18%	37%	55%

Summary

It became clear very quickly that this programme required a lot of Hub time and resource to ensure its effectiveness, due to the demands of:

- Recruiting and liaising with interested schools
- Supporting engaged schools' Literacy/Science Leads
- Delivering training
- Delivering/collecting books
- Stock management/replacement (books/boxes/supporting materials)
- Supporting STEM Ambassador requests
- Sign-posting additional resources/activities

As a result, in the second phase of the project, All About STEM sourced funding from Unilever Port Sunlight R&D to enable delivery of the programme to three local primary schools as part of the company's Primary Excite outreach project. All About STEM provided consultancy support for the development of Unilever STEM Ambassador activities to complement the Conservation book sets and the funding provided helped to cover the additional costs of providing the project to the three schools.

This format of sponsorship of the programme will need to be the model moving forward to ensure that the benefits of the programme can be offered to a greater number of schools.

