

Consultant – Aligning Heritage Science to the Science Curricula

1. Background

The National Archives (TNA) with the National Heritage Science Forum (NHSF) seek a consultant to research the connections between heritage science research and applications and the national curricula of England, Scotland, Wales and Northern Ireland.

Heritage science is the application of science and technology to the understanding and longterm management of heritage, and people's engagement with it. The field encompasses many disciplines, for example conservation science, archaeological science, and materials science.

The National Archives and other members of the National Heritage Science Forum have a shared vision to develop and sustain a skilled and diverse heritage science community. This ambition is central to the <u>Strategic Framework for Heritage Science in the UK</u>. To achieve our goal, we believe that engagement with heritage science at school age will provide more equitable opportunities for young people to discover heritage through scientific research, encourage them to think about the breadth of applications of STEM, and to consider career opportunities as a scientist or heritage scientist.

2. Project outline

The objective of this project is to research the alignment between five areas of heritage science research and its applications and the science curricula of England, Wales, Scotland, and Northern Ireland at key stages 1-2/P2-P7 (5-12). This research will demonstrate how heritage science can support the delivery of the national curricula and as a consequence, how heritage can be used to demonstrate the integral relationship of the sciences and the humanities.

The project will build on existing research (for example, the <u>Pye Tait research for Historic</u> <u>England</u> on the built historic environment, work by Historic Environment Scotland to support the Curriculum for Excellence through <u>The Engine Shed</u>, or <u>Historic England's Heritage Schools</u> <u>programme</u> which links to the English history curriculum). We are particularly keen that the research considers the opportunities provided by moveable heritage, i.e. heritage held in archives, libraries, museums and similar organisations. The consultant will be supported by a small working group drawn from members of NHSF and others in the heritage science and education field who will help identify existing resources and five key areas that heritage science can be mapped against the science curriculum.

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3. Project Deliverables

The key outputs required from this research are:

- Final report encompassing the findings of desk-based research and interviews. Report to be delivered in Word and pdf formats.
- A matrix showing how heritage science research/applications maps to the UK national science curricula; incorporating a list of existing resources and how they map to the science curriculum
- A presentation summarising findings to TNA and NHSF members

The research outcomes will assure a good understanding of the national curricula by the heritage science community through a clear framework (matrix) that shows how heritage science can deliver aspects of the curricula which can be used by learning providers to develop learning resources.

4. Methodology

We would like this research to include:

- 1. A desk-based literature review of pre-existing work provided by TNA/NHSF, including
 - Pye Tait
 - HES Engine Shed resources
 - BERA Research Commission 2015/2017 <u>Reviewing the Potential and Challenges of</u>
 Developing STEAM Education
- 2. Up to 10 online interview sessions with heritage science professionals, learning and outreach professionals and education providers (chosen to provide insight from a range of heritage organisations and heritage science specialisms, learning providers, national curricula) to establish how organisations make connections to the curriculum at the moment; to understand how widely existing humanities resources or learning programmes make use of science; and to research what would help to increase the use of science in humanities learning programmes in terms of resources/information/training. (TNA and NHSF can help to establish these connections).
- 3. Regular check-in meetings as part of project management.
- 4. A draft report and opportunity to comment prior to submission of a final report including a matrix of connections.
- 5. A presentation on findings (to be delivered virtually).

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TNA and NHSF will convene a small working group which will provide support to the appointed consultant in terms of identification of literature and existing curriculum mapping; interviewees; project oversight; comments on draft findings.

5. Budget

The budget for this work, inclusive of expenses, is £4,800 plus VAT.

Payments in three instalments: 40% on appointment, 40% following the delivery of the draft report and 20% on completion.

6. Timeframe

Work on this project should start the week of 21st February and all outputs should be delivered by 31st March 2022.

7. How to respond

If you are interested in undertaking this piece of research please email <u>research@nationalarchives.gov.uk</u> detailing your relevant experience and method outline by February 13th 2022 23:59. We envision to shortlist four candidates for an online interview February 18th 2021.

8. Contract Terms

The contract will be awarded subject to The National Archives standard terms and conditions, which can be found<u>here</u>.

TNA reserves the right not to award and to complete its objectives through other means.