

STATEMENT OF REQUIREMENT

707819451 - STEM LEARNING RESOURCES FOR YOUNG PEOPLE

Introduction

1. The purpose of the Defence Nuclear Organisation (DNO) is to deliver nuclear capability to deter the threat and protect our nation. The DNO leads and enables the Defence Nuclear Enterprise (DNE) – a network of organisations, programmes, and people within government that together are responsible for delivering the UK's strategic nuclear deterrent.
2. The nuclear sector has a skills shortage, we need to inspire and attract the future workforce at an earlier age. To ensure that defence can attract more young people from diverse backgrounds into the sector the DNE need to raise awareness of the range of opportunities that are available across the sector. To achieve this aim, we need to engage with students at an earlier age with activities to enable them to think about choosing STEM subjects. The DNE need to raise awareness of the variety to young people of the benefits of the long-term benefits of developing their knowledge of studying STEM subjects and where this could lead to as a career of choice. By having a positive intervention, more young people will engage with STEM and continue to take up subjects that are STEM related. This in-turn will facilitate the creation of a healthy talent pipeline for the DNE to empower young people and under-represented groups to potentially have a career in the sector.

Background

3. The Government's nuclear ambition, across both the civilian and military sectors, is significant. The 2021 Integrated Review reaffirmed the Government's commitment to the nuclear deterrent, noting Parliament voted to renew the nuclear deterrent and replace the Vanguard Class submarines with four new Dreadnought Class submarines. Additionally, to ensure the UK maintains an effective deterrent throughout the commission of the Dreadnought Class, the Government intends to replace the existing nuclear warhead. People are essential to the successful delivery of these and future programmes of work.
4. The Defence Nuclear Enterprise People and Skills Transformation Programme was established to take an ambitious and step change approach to building existing and future skills. The primary aim is to ensure that there are sufficient people with the necessary skills and experience to deliver the Defence Nuclear Programme. Taking a whole force approach, the DNE Skills Transformation Programme considers both the specialist technical nuclear skills (Nuclear Skills) and the more generic, but equally important, skills to deliver outputs (Skills for Nuclear).
5. The DNE Skills Transformation Programme includes the Inspire and Attraction team who has responsibility for exciting the next generation of the future workforce. To achieve this ambition, we will be engaging with educational establishments across the UK and devolved administrations, which will include schools, colleges, and universities. Having a positive intervention with young people will help them to think more positively about potential career choices in the nuclear sector
6. The DNE Inspire & Attraction project will be implementing several interventions to engage, inspire, attract, and recruit the future workforce. This will require external engagement in schools and community organisations to ensure that young people are provided

with a range of learning interventions to provide activities aligned to the school curriculum and DNE brand awareness.

Intent – Learning Resources and Activities

7. The DNE needs to engage with young people, teachers, parents, and careers advisors to ensure they have good quality information pertaining to STEM and where learning interventions could lead young people when thinking about their career choices. Engagement with our future workforce at an early age will enable the DNE to demystify and dispel some of the misconceptions about the sector.
8. We are looking to engage the services of an organisation that will enable the DNE STEM Ambassadors to work with students by developing a nuclear and submarine themed book. The book will capture the imagination of young people and enable the DNE to extend its reach to this target audience. The book should link nuclear to submarine propulsion rather than the missile warheads. Additional areas of learning in the book could include, engineering, computer science and coding.
9. DNE must be an attractive proposition to young people in schools and community groups, to ensure they can make informed choices pertaining to their career destinations, which in-turn will enable the DNE to create a good future workforce pipeline and improve the diversity in the sector.
10. The DNE wish to hold the intellectual property rights to the book and learning materials designed and developed on its behalf to ensure it can be future proofed and updated to enable the DNE to have an enduring legacy
11. All learning resources should promote equity, diversity, and inclusion as an integral part of student engagement.
12. Suppliers must have a good understanding the sensitivities of dealing with negative perceptions pertaining to the nuclear sector.

Procurement Process

13. **CADMID Cycle.** The book procurement of the book will follow the MOD's Concept, Assessment, Demonstration, Manufacture, In-Service and Disposal (CADMID) process as follows.
14. **Concept Phase.** In the Concept phase the contractor will provide:
 - a. Design and development lead times
 - b. Volume of the book to be printed
 - c. Delivery lead times
 - d. Production costs
 - e. Intellectual Property agreement
 - f. Examples of content
 - g. Example Storyboards
 - h. It is expected the supplier will evidence feedback from STEM teachers.
 - i. Confirm and agree the schedule of delivery.
 - j. **Confirmation of the requirement – The key concept phase deliverable is an agreed User Requirement between the contractor and the Authority.**

- k. The concept phase is to be complete by: Contract Award plus **2 weeks**.

15. Assessment Phase

- a. The supplier is to present options for assessment and down selection to a preferred option. This could include more than one book option and or a series of options of content within a book.
- b. Selection criteria will consider how well the options reflect the DNE, the requirement and how well they are mapped across the school curriculum.
- c. The preferred option will be down selected by the authority.
- d. **The key assessment phase deliverable is selection by the authority of the preferred option to enter the demonstration phase.**
- e. The assessment phase is to be complete by: Contract Award plus **6 weeks**.

16. Demonstration Phase

- a. The supplier(s) to provide our copies of the book for proof reading and acceptance by the authority prior to full production.
- b. In this phase it will remain possible for the Authority to enforce changes to alter the content of the book prior to full production
- c. **The key demonstration phase deliverable is once the authority has accepted the book has met the requirement.**
- d. The demonstration phase is to be complete by: Contract Award plus **10 weeks**.

17. Manufacture Phase.

- a. Books printed and delivered to the destinations identified by the Authority.
- b. The key manufacture phase deliverable is the delivery of all books to the required locations.
- c. The manufacture phase is to be complete by: Contract Award plus **14 weeks**.

Reporting

- 18. Amendments or deviations from the schedule shall be formally recorded and reported to the Project Manager or delegated representative.
- 19. Amendments or deviations from the costs be formally recorded and reported to the Project Manager or delegated representative.

20. The supplier is to provide a written and virtual or live meeting weekly progress update to the Authority.

Security Requirements

21. The Supplier will comply with relevant Defence policies and procedures, including those related to security as specified in the MOD DEFCONs in the Contract Document Terms and Conditions, and relevant Defence Policy and Guidance.
22. Personal data should not be collected on any MOD representatives and must comply with GDPR requirements.

Annex A: User Requirement Document – STEM Book Learning Resource.

Annex A

To: Statement of Requirement – STEM Book Learning Resource.

Dated: 10 Feb 23

User Requirement Document – STEM Book Learning Resource.

	Requirement	Acceptance Criteria
6	I&A STEM Book	
6.1	The User requires a STEM book for young people 8 – 14 years of age	Young people 8- 14 years old
6.2	The User requires the STEM book to have a nuclear theme	Nuclear themed book providing nuclear education to ... age level.
6.3	The User requires the STEM book to use nuclear propulsion of a submarine as an example	Clear written and illustrated pages showing the application of nuclear power to propel a submarine.
6.4	The user requires the STEM book to explore the uses of nuclear power in the defence and civil sectors	Clear written and illustrated pages showing the application of nuclear power in the civil and defence sectors
6.5	The User requires the STEM book to be engage with its target audience	Evidence that the STEM book contents will engage with its target audience.
6.6	The User requires the STEM book to align with ... school curriculum	Evidence that the STEM aligns with the school curriculum.
6.7	The User requires the STEM book to engage teachers of the target audience.	Evidence that the STEM book will engage teachers of the target audience.
6.8	The User requires the STEM book to be selected by teachers as their nuclear STEM book of choice.	Evidence that the STEM book will be selected by teachers
6.9	The User requires the STEM book to remain in good condition after five years of Use	All books produced should be durable, cover intact, text is readable and ability to sustain minor water damage
6.10	The User requires to retain the STEM book's Intellectual Property rights.	All materials produce will identify the DNE as the IP holder
6.11	The User requires that the contractor is aware of the sensitivities of the nuclear sector when dealing with negative perceptions pertaining to the nuclear.	Content of the book should have the ability to dispel some of the myths and misconceptions. A positive and engaging tone to stimulate learning
6.12	The Use requires ... books to be printed.	Minimum agreed volume is 1000 printed books
6.13	The User requires the books to be delivered in boxes of ...number of books	Units of 50 books per box dispatched to the designated delivery address