

ROYAL
GREENWICH
HERITAGE
TRUST

‘Making Woolwich’ Exhibition Learning Workshop Brief



THIS PROJECT IS
SUPPORTED BY:

Royal Artillery Museums Ltd
Friends of Firepower Museum
Royal Artillery Historical Trust



1. Project Title

‘Making Woolwich – The Royal Regiment of Artillery in Woolwich 1716-2016. New Gallery, New Approach.’

2. Overall Project Description and Outline

“To commemorate the tercentenary of the Regiment, ‘Making Woolwich’ at Greenwich Heritage Centre (GHC) will tell the story of the Royal Artillery (RA) in Woolwich, exploring the influence of the RA in many aspects of our community.

This new gallery will offer a prototype of display methodology as the museum continues a period of transformation, testing themes and approaches that will continue to inform development of the museum.

Visitors will achieve a new understanding of the history of our borough. The project will inform the future development of the museum as it approaches its centenary in 2019.”

3. Project Measures

1. Recruitment of a full-time Project Officer and 10 volunteers
2. 7 volunteers to be trained in facilitation skills, audience engagement, communications; with 3 further volunteers trained in research
3. Appointment of at least 2 advisory panels, from 10 members of target audiences, to evaluate exhibition content
4. 8 ‘Community Days’ targeting 240 people; facilitated event engaging the community with the themes, stories and objects of the project
5. Exhibition (installed in November 2016), including a touch-table map of Woolwich, a 2-minute video of the history of the RA
6. Development of ‘Rocket Workshop’ for Primary Schools
7. Creation of ‘Where in Woolwich’ app
8. Members of the public invited via social media to contribute their memories about events and sites
9. New wayfaring to GHC on Royal Arsenal Woolwich

4. Learning Workshop Sub-Project Outline

This purpose of this project is to create a practical, hands-on, National Curriculum based workshop for Key Stage 2 pupils, where they will learn about STEM subjects through an activity based on Sir William Congreve’s rockets. This activity will be developed for, tested with and then taught to RGHT’s Learning & Engagement team, in order for them to be able to deliver it to groups of pupils themselves.

The requirements of the project (which all tenders should answer) are:

- This workshop should allow for practical experimentation with the principals of rocketry, based around STEM (Science, Technology, Engineering and Mathematics) subjects. A basic introduction to rocketry, placed in a Historical context, should also be included
- It must be demonstrably aimed at Key Stage 2 pupils.

- Demonstrate in detail the National Curriculum links of the workshop
- The workshop should be:
 - Approximately 75 minutes long (fitting into an overall school visit of 90 minutes),
 - Be suitable for up to 30 pupils to do in groups
 - Cost no more than £60 per session for materials
- Clearly state ways in which the practical results of the workshop can be tested by the pupils onsite at Greenwich Heritage Centre
- Before- and after-workshop sessions should be developed (e.g. an introduction to the history of rocketry pre-visit session and a post-visit analysis session), in order to increase teacher/pupil value for the visit
- Outline the approach that would be taken to both test and then teach the delivery of this workshop to RGHT staff (this includes the planning and delivery of a pilot session with a local primary school, in order to test the workshop; alterations should then be made where required before RGHT staff are taught the workshop)
- Demonstrate how the workshop could be easily repurposed to be used as a family workshop activity, in order to increase the potential for its future usability

Low continuing running costs are an essential part of this workshop, as its future delivery will be funded out of RGHT's core budgets. Part of the budget that is being made available for this project to develop the workshop should be spent on ensuring that there are sufficient amounts of materials for testing and teaching it.

One possible concept for the workshop would be to take Congreve's designs for rockets (which were notoriously inaccurate) and ask the pupils, working in small groups, to demonstrate their understanding of forces and aerodynamics to make their rockets more accurate. These would then be constructed and tested, with the results being analysed to work out what the most-effective way of improving the rockets' accuracy is. (Please note that this is just one concept that might be used for the workshop. Please feel free to develop and submit your own concept. This is just to give an idea as to the type of engagement that we are looking for pupils to have through this workshop.)

For basic information about Sir William Congreve and his research into rocket development, please see Appendix 1. We recommend that you undertake further research, but we will be happy to answer any specific questions that you may have relating to the historical content of the workshop, and the wider exhibition that it will be part of.

5. Deadline

All tenders must be received by **12pm (midday) on Friday 28 October 2016**. Please contact Mark Tindle on the contact details below if you are interested in submitting a tender for this project, but cannot do so for that date.

6. Budget

The budget to develop, test, provide initial materials for and train RGHT staff in delivery of this workshop is: **£1,800**.

The successful submission will demonstrate a breakdown of the costs of their tender, including realistic costs for the elements outlined above (e.g. the daily costs of development and training etc.)

7. Timetable

Task	Date
Submission date for tenders	28 October
Appointment of project deliverer	2 November
Workshop concept agreed	Mid-November
Workshop development	Mid-November – Mid-December
Delivery of completed workshop	Mid-December
Testing of and training for workshop	Early-January 2017
Workshop launch	Mid-January 2017
Workshop development and snagging	Mid-January – Mid-February 2017
Workshop Evaluation	Mid-February – Mid-March 2017

(This timetable is indicative only. If the tenderer has prior commitments which would require the dates to be changed, or can, for example, suggest other opportunities which might be taken to encourage the schools' uptake of this workshop, then they are welcome to suggest amendments to it.)

8. Tenderer's Examples of Previous Projects

Please provide at least two (2) examples of similar projects/workshops that you have developed and delivered, providing information on:

- Subject
- Institution/venue it was developed for
- Cost (of development and, if possible, delivery of sessions)
- Staff training

9. Tender Return Details and Contact for Further Information

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10. Information

Royal Greenwich Heritage Trust is a registered charity, formed in 2014, to look after the key structures, objects and historic records within the Royal Borough of Greenwich. We care for important historic buildings, such as Charlton House, Tudor Barn and Greenwich Heritage Centre, as well as a number of war memorials. Our aim is to ensure the future of the Royal Borough's rich heritage, whilst bringing that heritage to life for everyone, through exhibitions, tours, walks and activities.

RGHT organises a range of formal and informal learning and family activities all across its sites, mostly focused on our core audiences of Primary School pupils and families. Most of these activities are currently history-focused, so this workshop is providing an important opportunity to broaden our offer to include STEM subjects.

For further information, visit: www.greenwichheritage.org or @GreenwichHC

Appendix 1: Sir William Congreve and Congreve's Rocket Information

The Congreve rocket was a British weapon designed and developed by Sir William Congreve in 1804, based directly on the rockets used by the Kingdom of Mysore, India. These were used as weapons against the British and the British East India Company and several were sent to the Royal Arsenal in Woolwich for studying and reverse-engineering.

Sir William Congreve's father (also Sir William) was the Comptroller of the Royal Arsenal, meaning that the younger Congreve had access to these rockets to experiment with them. Despite this, he still had to fund the project himself when he began work in 1804. The first demonstration of his solid fuel rockets was in September 1805 and they went on to be used by both the Royal Navy and British Army in the Napoleonic Wars (1789-1815), the War of 1812 and the First Anglo-Burmese War (1824-1826).

Congreve's rockets (which he spent "several hundred pounds" of his own money developing) were, by spring 1806, up to 32 pounds in weight and had a range of 3,000 yards. They were extremely inaccurate, as they did not have stabilising fins, which limited their effectiveness as weapons. Despite this, Congreve had the support and friendship of the influential Prince Regent (the future King George IV), helping to ensure that his rockets were used by the British Armed Forces. Congreve ultimately registered two patents and published three books on rocketry.



The main user of Congreve rockets was the Royal Navy, and the men of the Royal Marine Artillery became experts in their use. They were found to be useful area bombardment weapons, for attacking ports and the wooden ships in harbours. Their lack of accuracy and inability to hit specific targets being less of an issue here.

The British Army was less enthusiastic to use them and only had a small number of rocket detachments, which became, on 1 January 1814, two Rocket Troops, Royal Horse Artillery. These units did see some service, including at the famous Battle of Waterloo on 18 June 1815.

The most famous use of Congreve rockets was during the bombardment of Fort M'Henry in the USA in 1814. Being fired by the Royal Navy from specially-converted vessels, their explosions inspired the fifth line in the US national anthem, 'The Star-Spangled Banner': "and the rockets' red glare, the bombs bursting in air". This was written by Francis Scott Key, who witnessed the bombardment and wrote the poem 'The Defence of Fort M'Henry', the lines from which were later set to music.