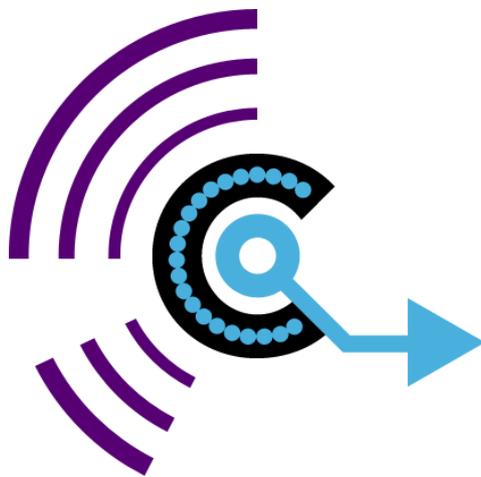# STEM Club Bursary

Application guidance notes

Chelmsford Science and Engineering Society

www.chelmsfordses.org.uk
@chelmsfordses

STEM Outreach Officer
Email: stem@chelmsfordses.org.uk

Issue 2.1

Last updated on 11 January 2019 by Adam Wood

Foreword from Sir Simon Burns

The Royal Academy of Engineering says that by 2020 we'll need twice as many engineering graduates and three times today's number of apprentices if the UK is to meet the needs of an advanced manufacturing sector. Britain needs many more great young engineers if it is to become successful in tomorrow's innovation-based economy.

There has never been a greater focus from Government on inspiring people, especially young people – boys and girls – to take up science, technology, engineering and maths. STEM disciplines are exciting career options and the heartbeat of the modern world.
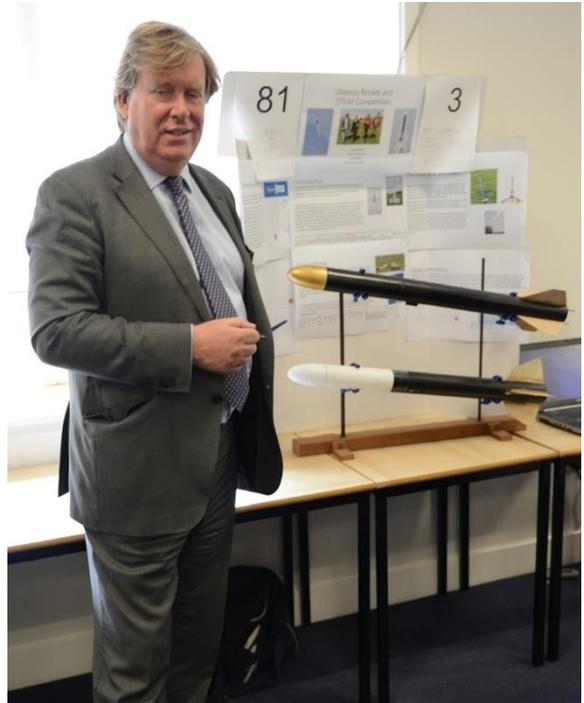
STEM clubs, STEM challenges, competitions and outreach events in schools and colleges, supported by local industry and universities, are an exciting way for budding young engineers to enjoy a creative experience and engage with science and technology.

I am delighted that the Chelmsford Science and Engineering Society, with financial support from Essex Community Foundation, is now able to offer financial and practical support to local schools who would like to start or grow a STEM club.

I enthusiastically recommend this scheme.

Rt Hon Sir Simon Burns
Member of Parliament for Chelmsford, 1987-2017

Contents

1 Introduction

1.1 What is the STEM Club Bursary?

The STEM Club Bursary is an annual support package that Chelmsford Science and Engineering Society (CSES) is making available to local primary and secondary schools to **help fund the start-up and growth of STEM Clubs**. We grant awards, which may include a mix of financial and in-kind support, to schools who make successful applications. This is a significant offering: depending on the application, we may provide support to the value of several hundreds of pounds.

For example, you may want to start a STEM club; start a new STEM activity or project; or introduce new activities to, and extend the reach of, your existing STEM club. To do this, you may need equipment, teaching materials or mentor support. **We will provide support tailored to your requirements**.

1.2 How does the Bursary work?

The first step is to apply online, via our website, at www.chelmsfordses.org.uk/bursary.

Once you have made your application, the panel of assessors is notified automatically. We will review your application and decide whether to make an award.

If we decide to grant an award, it will be tailored to the requirements expressed in your application. We may, at this stage, need to contact you with further questions.

In any case, we aim to respond to all applications within three weeks during term time. We will tell you if we have reached a decision, have any further questions, or are still deliberating.

1.3 On what conditions is support granted?

The STEM Club Bursary is linked to the annual CSES Schools' Engineering and Technology Competition. **We make Bursary awards on the condition that the school attends the competition** to show us what it has been able to achieve with the support provided, along with any other STEM work that may have been taking place. Details of the competition can be found on our website at www.chelmsfordses.org.uk/competition.

The award must be used for the STEM purpose for which it was intended. If requested, the school is required to give feedback on how the award was used and what benefit this had.

1.4   Can I get help with my application?

It can be difficult, especially in schools without an existing STEM club, to formulate ideas and articulate what is needed to achieve them. We therefore offer an **Application Adviser** who can help you with this, come into school to meet with the appropriate staff and/or students, and act as your CSES point of contact.

> **If you would like an Application Adviser to assist you with the application, please contact stem@chelmsfordses.org.uk.**

If you have keen students or pupils, why not get them to draft the application? We would be delighted to receive an application behind which they are the driving force, and are very happy to deal with them directly.

2 Guidance on the application form

The application form has three sections. These are explained in more detail below.

2.1 Contact details

All fields here are compulsory; please enter your details and those of the school, and the authorised payee for any cheques. Please use a **school email address**: the application must come from an authorised individual within the school.

2.2 STEM Club Bursary application

This is the content of your application. There are four questions, the last of which has two parts. All questions must be answered.

2.2.1 Question 1: Existing STEM activity

Only brief details are required here: the purpose is to give us an indication of the extent of involvement your school already has. There is no word limit in this (or any) section, but brevity is helpful! Some examples:

- We run an after-school club, two hours per week, designing and building electronic circuits. Last month we constructed a sound-to-light converter. 10 students took part.

- Five of us went to the Ideas Festival event to learn the basics of Raspberry Pi programming.

- Ad hoc email support is enlisted from <name, company> to assist with circuit design.

- <Name, company> gave a talk to our STEM club on mechanical construction techniques, so we now are aware of how to use workshop hand tools and a selection of different adhesives.

2.2.2 Question 2: Your proposal

This is where you tell us what you are trying to achieve. We will need to know, in summary, the nature of your proposal, and some basic details of the activities that comprise this.

It is likely that your application will have one or more of the following aims:

- Start a STEM club or activity that could evolve into a STEM club
- Measurably extend a STEM club's reach, membership or range of activities
- Improve the facilities available to a STEM club
- Fund a specific activity or project

Example answers, therefore, may include:

- We presently have no STEM club activities, and are proposing to start one up. <Teacher> has kindly offered a 2-hour session most Wednesday evenings after school, and seven students are keen to learn about electronics in this extracurricular session. In these sessions, the students will be designing and constructing a small robot controlled by a Raspberry Pi.

- We already have a STEM club at which six students built small air-powered drag racers last year. They wish to learn further, so want to construct and race a larger vehicle, a Greenpower electric racing car, handing our existing STEM club programme to the year below. The elder students will be mentoring the younger ones whilst working on their car.

- Facilitate six Year 9 students to be able to enter into the FIRST Lego League in 2015.

- Purchase a 3D printer so we can run a number of design-and-make electronics projects: <list of proposed projects>.

Include a statement on why you are looking to the STEM Club Bursary to support your stated aims (for example, budget or staff resource constraints).

An application should demonstrate an incremental improvement in your capabilities, encouraging greater participation by those already involved, or new participation by people not yet involved.

2.2.3   Question 3: Learning and development outcomes

Possible answers here could include:

- Within the next year, we expect to get six students with a grounding in electronic design and circuit construction techniques who otherwise would not have the opportunity.

- Year 12 will be able to bring their experience with this club to introduce STEM activities to Years 9 and 10, and will have learned useful mentoring skills.

2.2.4   Question 4a: Your support requirements

Support can take many forms. Initially you may be thinking of the purchase of a starter kit or similar, however we are keen to help in other ways, including but not limited to:

- Mentor or expert support, perhaps in the form of regular assistance at after-school clubs, *ad hoc* support remotely by email, or as a talk to students or pupils.

- Provision of teaching or learning material, which could be electronic, written or physical.

- Facilitating and covering the costs of trips, tours, lectures or industrial visits to local companies to see real-world application of STEM projects and techniques.

- Facilitating and covering the costs of an onsite STEM activity day to enthuse students or pupils in, and introduce them to, a particular topic.

- Covering the costs of entry into a scheme or competition, which may include registration fees, purchase of kits and travel costs to offsite events.

- Purchase of equipment and consumables – such as a workshop or laboratory appliance, Raspberry Pi or similar, hand tools, kits or components – to enable one or more projects to take place.

These examples are by no means exhaustive: if there is other support you believe would be beneficial, please include it. We may not have thought of it, but that does not necessarily mean we can't help!

If you are requesting external support (for example from a mentor), and know of any date or time constraints upon this, please identify these here.

If you are seeking specific items, please provide as many details as possible, with prices and suppliers where known. This is of course not limited to physical goods: such procurement could include a STEM activity day or professional presentation.

2.2.5   Question 4b: Mentor support checklist

If your requirements include external support, for example from a mentor or subject expert, please complete this checklist to enable us to assign appropriate support more easily.

2.3   STEM talk

This is an offer we make to help spread the STEM message to students and pupils who may be unaware of the benefits of a career or further education in a STEM subject. Acceptance or refusal makes no difference to the likelihood of your application being successful, and even if we are unable to provide Bursary support we can still deliver the STEM talk. If you indicate that you would like a talk, we will be in touch to arrange.

3 What happens next?

3.1 Submitting your application

Once you are happy with your proposal, please ensure that you have read and agreed to the declarations at the end of the application form.

If you wish, an account can be automatically created for you (if you do not have one already) to enter your Schools' Competition entries when the time comes. This saves you having to type your details again. If you would like this, please tick the box at the end of the form and you will receive an email with the account details.

Once you have submitted your application, the panel of assessors is notified automatically. We will review your application and decide whether to make an award.

We aim to respond to all applications within three weeks during term time. We will tell you if we have reached a decision, have any further questions, or are still deliberating.

3.2 Receiving Bursary support

If we decide to make an award from the Bursary we will tell you in detail what we can offer. We will then work with you to deliver the support in a way that is tailored to your needs.

And finally, good luck! We look forward to receiving your application.