

Report: Role Models in STEM

Sponsorship Prospectus



February 2017

The Importance of Role Models in STEM

Science, technology, engineering and maths (STEM) are of huge and global economic importance (Office of the Chief Scientist, 2014) yet employers report widespread and continuing difficulties recruiting people with the necessary STEM skills, with over half of UK businesses reporting a shortfall in experienced STEM-skilled staff (CBI, 2015). While there are many causes for this scarcity one reason is the lack of women in these notoriously male-dominated fields. In order to improve the number of women in STEM it is necessary to understand the causes of their absence. One cause that has been identified is the lack of female role models (Dasgupta, 2011).

“You can't be
what you
can't see.”

The importance of role models in recruitment and retention of women in STEM has been extensively researched and a large body of literature has been developed (Eccles, 2011). Research has found that finding the right role model is a complex issue. Role models who work to inspire young children are not able to achieve the same outcomes in college students (Drury et al., 2011). Choosing the right role model is critical because a bad choice does not simply have a neutral impact, it can have a negative impact, actively turning girls and women away from STEM (Cheryan et al., 2011, 2012).

Role models report

This project will review the existing scientific literature on role models and related topics, and provide a summary report of that evidence to help inform decision making in schools, businesses, government and in campaigning groups. It will include a set of evidence-based guidelines for the development of role models to encourage girls and women to choose and continue STEM careers. We already know that role models are not ‘one size fits all’, so the guidelines will be targeted for particular age and socioeconomic groups. Our planned outputs are:

- **Report:** An overview of the existing scientific literature
- **Guidelines:** An outline of the most important attributes of effective role models, split by age and, where necessary, other axes of diversity such as ethnicity and gender.
- **Infographic:** An easily digestible and shareable graphic representation of the guidelines.

Our aim is to publish the report, guidelines and infographic online mid-2017, though this deadline is subject to change.

Our audience

The report and guidelines are expected to be of use to a wide range of organisations involved in outreach and retaining women within STEM fields, including:

- **Schools:** Many schools invite external experts to speak to students in order to act as inspiring role models, but choosing speakers with the wrong attributes can have the opposite effect. The guidelines will help schools ensure that their external speaker programme is more effective.
- **Businesses:** STEM sector businesses will be able to use the guidelines to inform internal mentoring and championing programmes, and internal communications project aimed at female employee retention.
- **Government:** The STEM skills gap is an enormous policy issue, and this report will help policymakers understand how to develop meaningful policy interventions.
- **Campaigning groups:** There are many grassroots and industry-led groups that focus on supporting girls interested in STEM careers and which campaign for women in STEM. These groups will be able to develop more effective outreach programmes based on our guidelines.

Sponsorship package

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About Ada Lovelace Day

[Ada Lovelace Day](#) is an international celebration of the achievements of women in science, technology, engineering and maths. Its aims are to increase the profile of women in STEM, to create new role models to encourage more girls and young women into STEM careers, and to support women already working in STEM. Founded in 2009 by Suw Charman-Anderson, the day itself is held every year on the second Tuesday of October, with our flagship 'science cabaret', *Ada Lovelace Day Live!*, featuring entertaining talks from women across the STEM disciplines.

Ada Lovelace Day was founded because social and cultural pressures turn many girls away from STEM, and prevent many women from discovering, pursuing and succeeding in STEM careers. And those who do enter STEM fields face significant challenges because of their gender.

Studies show that:

- In the UK, [47 percent of the workforce are women](#), but women account for only [14 percent of the STEM workforce](#).
- 18 percent of IT professionals are women.
- 8 percent of engineers are women.
- 20 percent of physics A-Levels are taken by girls, a number that [hasn't changed for 20 years](#).
- [13 percent of computer science students were female](#) in 2014, compared to 14 percent in 2010.

Yet, businesses with women on their board of directors perform better than those with none, and “unleashing women’s full potential could be worth £23 billion a year to the Exchequer”.

There is no doubt that women are underrepresented in STEM, and that both business and society are losing out as a result. Furthermore, women are losing out on enjoyable, fulfilling and lucrative careers: Evidence shows that girls and women are capable, achieving higher grades than boys at A-Level in physics, for example. Indeed, they [outperform boys in STEM qualifications at all levels](#), and outnumber boys in degrees such as medicine and veterinary science, accounting for 60 percent of all medicine undergraduates and 75 percent of veterinary science undergraduates.



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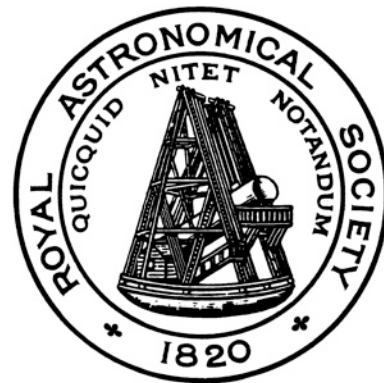
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