

# The Federation of Astronomical Societies



## Guide To Why You Should Do Outreach


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# Document History

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## **1 Introduction**

Amateur astronomers and their societies represent a huge untapped resource of passion and knowledge in astronomy and space science. Public outreach and informal education is carried out regularly, sometimes without the expert realising that it is 'outreach' that they are doing. Many research scientists do not have the same skills as amateur astronomers in hands on, practical star gazing, astrophotography or telescope making, and the amateur astronomy field can contribute much to scientific observations and citizen science. However, although all amateurs love their hobby, not all feel it is appropriate to share their enthusiasm with others, through a varied programme of outreach, education and public events. Why should amateur astronomers do outreach, why don't they, and what are the benefits to the individuals and their societies?

## **2 Background**

There have been various surveys of amateur astronomical societies across the globe and it is pleasing to know that the majority are actively involved in some form of outreach, whether to the general public or to uniformed groups, and those that aren't able to do outreach still agree that it is important. Many amateur societies do include outreach as one of the aims of their society, formally documented in their constitution or otherwise.

Activities can vary from star parties, night sky observing and using telescopes, to school visits, club events, working with other organisations and creating specific resources or holding events for particular astronomical phenomena (such as an eclipse or meteor shower). Audiences can range from general public, to families, uniformed groups and the wider community.

Generally speaking those who do outreach have trained themselves and have become interested in outreach on an individual basis, but in some cases amateur societies do have outreach committees made up of core experts, often formed initially to aid membership efforts and recruitment. Some UK national programmes have involved amateur societies, such as 'Stargazing Live' and STEM Ambassadors, but often, amateurs are left to their own devices or have to seek their own resources or outlets to doing outreach.

Even if a small proportion of amateurs carried out some form of outreach on a regular basis this would amount to a huge number of experts conducting educational activities, with thousands of hours and people reached per year!

## **3 Why Isn't Outreach Done?**

For an individual it can be scary to start doing outreach initially, but once a toe is dipped into the water you will want to jump right in!

Individual reasons for not doing outreach include:

1. Lack of confidence or being shy in presenting
2. Worrying about being faced with questions you don't know the answer to
3. Not wanting to have to manage conflict, for example if someone asks an awkward or inflammatory question
4. Lack of access to skills and training
5. Not enough time or not being able to do these things on a voluntary basis due to the costs involved

Society reasons for not doing outreach include:

1. Lack of resources, including equipment, volunteers and a venue
2. Worries about formal documentation such as Public Liability Insurance and Disclosure and Barring Service (DBS) checks.
3. Not knowing what to offer if the weather is bad
4. Concerns about accessibility for your audience, and the level/depth/quality of the outreach you are providing
5. Not having a specific person in the society to drive this initiative

If you are doing outreach to large groups of people, you do not need a DBS check, although it is generally beneficial to have one anyway. It is easy to get checked for free through the STEM Ambassador scheme. There are also many small pots of money that can be applied for to do outreach, with organisations such as the Institute of Physics and the RAS offering regular outreach grants. Various training schemes exist, both online and face-to-face, and many offer free services for those interested in starting out in outreach. And outreach can be done on a budget – all you need is yourself and a clear night to do some basic night sky observing!

There are many reasons why outreach isn't carried out by individuals and societies, but many of these can be resolved with a small amount of training or signposting of useful information and resources, some of which are linked at the bottom of this document.

## **4 Why Do Outreach - Benefits To You**

Outreach is an extremely rewarding way of conveying your passions to other people. It is also highly beneficial to the individual for various reasons. You will find that outreach is fulfilling, as you are giving something back to the community you belong in. You will inspire and enthuse the next generation, and you will have fun too! If you are new to outreach you can use it as a way to challenge yourself, learn a new skill and break down personal barriers. Many outreach professionals began their careers with the same fears that you might have in terms of presenting and communicating to the general public, but with modest training and a lot of practise you will find you educate yourself too! If you spend some time doing outreach, ultimately all you are doing is spending more time doing your favourite hobby – so outreach is an excuse to do more astronomy! And when you talk to people and encourage healthy discussions about the Earth, the universe and everything, you might find it is better for your well-being, as you may create new relationships and connections with people that you didn't have before. Outreach may lead you down other avenues as well, and you may decide you enjoy it so much that you want to volunteer with your local Scout or Brownie group, write an astronomy book or even change careers!

## **5 Why Do Outreach - Benefits To The Society (Amateur & Wider)**

Outreach is a fantastic way to ensure the longevity of your amateur astronomy society. By doing outreach in the local area you are advertising your society and you may recruit new members, which will bring additional income to your organisation. Some societies are run as charities, and outreach is part of the charitable work status. By doing outreach, your organisation could get more recognition in the local area and with other organisations, helping your local community to flourish and thrive. Amateur societies could partner with local libraries, parks and recreation grounds, wildlife trusts or national trusts. Telescope loan schemes with local libraries are becoming more popular, and are an excellent way to provide telescopes to the public who might not usually have access to them. By doing outreach your society may also be able to improve the diversity of the membership and reach out to those who may not traditionally be involved in astronomy. This would provide a more sustainable future for your society, and the amateur astronomy community as a whole.

In addition to the benefits of doing outreach for the individuals and for amateur societies, the wider community can benefit too. Astronomy is a fantastic hook to get future generations interested in STEM subjects, and you will be able to inspire and educate the next generation of astronomers. There is nothing quite like that feeling when you show someone Jupiter and the Galilean moons through a telescope for the first time! That can stay with someone forever.

By engaging with the public you can advise and inform them in 'fake news' stories, controversial topics such as the 'flat Earth theory' and any moon landing conspiracies. A more knowledgeable wider society is good for everyone! Healthy and valid discussions can also be had on topics related to astronomy, such as climate change, light pollution and the importance of dark skies, space spinoff technologies and the value of space exploration, mining asteroids and the potential of, and ethical considerations for, humans living on Mars and other places in the solar system.

Astronomy is one of the few areas that can give people hope, in ways that other subjects cannot. Astronomy encompasses all human beings, it can link people together and gives people a common theme: we all share the same sky and Earth after all! By reaching out to the general public in your area you are probably increasing the science capital of the person you talk to. Science capital is a concept that allows us to measure a person's

exposure and engagement of science. It can be helpful in understanding the significance of people's knowledge about science, how and what exposure they have to science and their subsequent attitudes and feelings about STEM. The more we can increase the science capital of someone, the more relevance it has to that individual, and the more likely we are to inspire them to want to continue into STEM as a career.

Astronomy is unique in that it has a distinct ability to break down unexpected barriers: this has been seen to happen when you bring astronomy to unusual settings. There have been 'prison astronomy' projects that have opened up pathways for inmates to reconnect with their families, 'astronomy for the visually impaired' projects that recreate galaxies in tactile forms, and astronomy residential projects that allow young people from challenging backgrounds to relax and enjoy just 'looking up'. New evidence has shown that astronomy can act as an icebreaker for people to connect and converse, and there are positive effects on health and well-being too.

With all this in mind, there is simply no reason to not do outreach, so why don't you start today?

## **6 Some Useful Links And Resources**

- [www.ras200.org](http://www.ras200.org)
- <https://ras.ac.uk/education-and-careers/outreach>
- [http://www.iop.org/publications/iop/2011/file\\_50861.pdf](http://www.iop.org/publications/iop/2011/file_50861.pdf)
- <https://www.stem.org.uk/resources/elibrary/resource/411848/stem-ambassador-top-tips>
- <https://www.stem.org.uk/stem-ambassadors/training-support>
- <https://www.stem.org.uk/stem-ambassadors/who-are-stem-ambassadors>
- <https://jwst.org.uk/wp-content/uploads/2019/04/2019-03-18-Final-report-v3.pdf>
- <https://jwst.org.uk/wp-content/uploads/2019/04/2019-03-18-AstroBoost-Survey-report.pdf>
- <https://jwst.org.uk/resource-network/articles/astroboost/>
- <https://aas.org/education/moose-menu-outreach-opportunities-science-education>
- <https://astronomerswithoutborders.org/gam2019-news/gam-2019-blog/4937-how-to-do-astronomy-outreach.html>
- [https://nightsky.jpl.nasa.gov/download-view.cfm?Doc\\_ID=399](https://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=399)
- [https://nightsky.jpl.nasa.gov/download-view.cfm?Doc\\_ID=628](https://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=628)
- <https://www.schoolsobservatory.org/discover/stem-clubs>
- <https://www.stem.org.uk/esero/resources>
- <http://www.space-awareness.org/en/activities/>

# References