Royal Observatory Greenwich

Young Advisors Group

HANDBOOK

Welcome to the Young Advisors Group!

Hi,

We're excited to have you on board as a member of our Young Advisors Group! As part of the YAG, you'll be involved in the work that we do here at the Royal Observatory and you'll have the opportunity to participate in a number of onsite activities.

Inside this handbook you'll find some information related to the history of the Royal Observatory and the work that the staff at the Royal Observatory are currently involved in. The handbook also contains quite a bit of important information about the YAG, so make sure that you have a good read through it. If you have any questions about the YAG or about anything in this handbook, please contact the YAG coordinator at **youthadvisory@rmg.co.uk**.

We hope that you will enjoy your Young Advisors Group sessions at the Royal Observatory and we look forward to working with you!

The YAG Coordinator

Young Advisors Group – Session dates for 2019/2020

The dates for the YAG sessions are listed in the table below. Sessions will be held at the Royal Observatory and normally run between 2:30 – 4:30 pm (NOTE: The Royal Observatory **closes at 5:00pm**). Each session will include a short break.

IMPORTANT: The April session (15th – 17th April) is a mini-project week and the sessions will run at the Royal Observatory between at 10:30 am and 4:00 pm on each of those three days.

When you arrive on site, head to the Astronomy centre (see map) and wait inside in the area behind the meteorite. Your YAG coordinator will meet you there.

YAG session dates

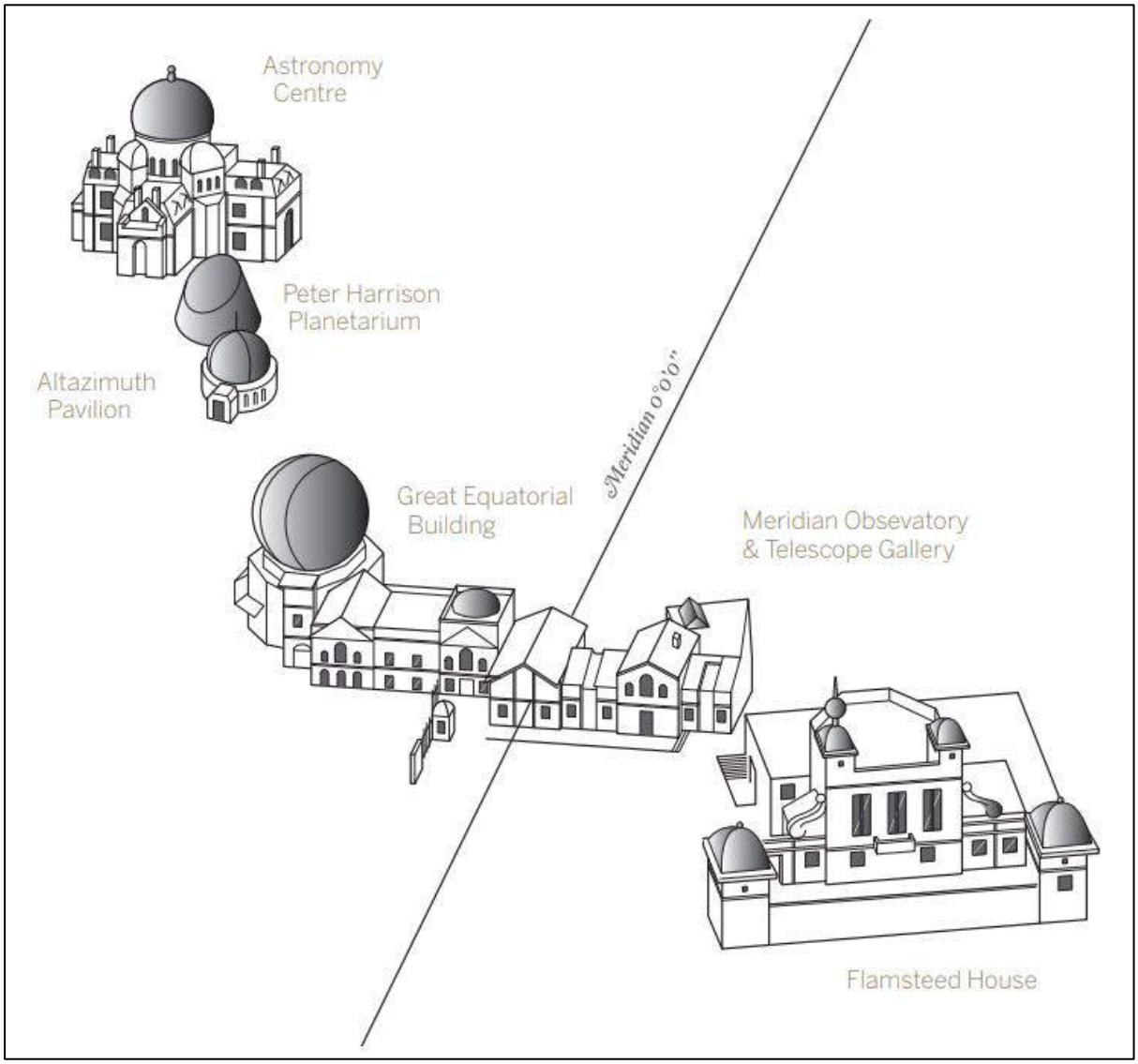
Date	Session
Saturday 18 January 2020	Exhibition Q&A with the public
Saturday 15 February 2020	Podcasting and research
Saturday 14 March 2020	Science communication
Wednesday 15 – Friday 17 April 2020	Blog – getting to know the observatory and astronomers
July / August (TBC)	TBC

Detailed information about each activity will be sent to you ahead of each session.

IMPORTANT: Although activities have been planned in advance, there may be situations where a planned activity can no longer take place due to factors beyond the control of your YAG coordinator. If this happens, your YAG coordinator will notify you.

The YAG coordinator will send an invite out for each session and you will need to reply to say if you want to attend. If you do not respond, we will assume that you're not attending.

Site map


Astronomy Centre
Peter Harrison Planetarium
Altazimuth Pavilion
Meridian 0°0'0"
Great Equatorial Building
Meridian Obsevatory & Telescope Gallery
Flamsteed House

Frequently Asked Questions

We have compiled a number of questions that we've been asked about our Young Advisors Group. If you have a question and it is not answered here, send it to the YAG coordinator who will be happy to answer it.

What will happen at a session?

Each session will begin with a "Welcome and introductions" where you will have the opportunity to meet / catch-up with your YAG coordinator as well as the other members of the YAG. After the introductions, there is generally some preparation or training time for the activity. Once the activity is completed and before the end of the session, you'll reflect on what you've done by updating your YAG journal.

What should I bring with me for each session?

We will provide you with a welcome pack which will contain some stationery which you can bring with you for each session. If you need something specific for an activity, we will tell you in advance.

There is a café in the Astronomy centre where you can purchase food and drinks, but you are welcome to bring your own with you. Bags will be stored in a locked space and they will be kept safe while you are onsite.

What if I'm running late or can't attend a session?

The YAG coordinator will send an invite out for each session and you will need to reply to say if you want to attend. If you can't attend a session, simply respond to the email and say that you can't attend. Note that if you do not respond, we will assume that you're not attending.

If you are running late, if possible, send an email to the YAG coordinator (**youthadvisory@rmg.co.uk**). Whether you're able to send an email or not, as soon as you reach the Astronomy centre, speak to one of the visitor experience staff members who will get in touch with the YAG coordinator.

What is expected of me as a member of the Young Advisors Group?

Be committed and do your best to attend each session.

Treat each other, and all the people you will interact with, politely and with respect. Any unfair or inappropriate treatment of others will not be accepted. No swearing, act sensibly and no rough games.

Who will I be working with? Will there be a supervisor?

Depending on the activity, you might end up working individually or more likely with other YAG members and in some cases the general public too. If you don't feel comfortable about doing this, let your YAG coordinator know.

Your YAG coordinator, or another member of staff, will always be with you onsite.

What should I wear?

Because you'll be working with members of the general public in some of the activities, we recommend the following

- Clothing should be neat, clean and modest.
- Clothing with inappropriate pictures, symbols, and/or wording should not be worn.
- Dresses may be worn provided they are not low cut and not too short in length.
- Jeans are acceptable provided they are not torn and do not hang low.
- Sneakers are acceptable, but comfortable shoes are advised as you may be standing for one-hour sessions.

May I bring a mobile phone with me?

Yes, and you may keep your mobile phone with you while you are busy with an activity onsite. However, your phone must be switched to silent. Keep texting to an absolute minimum and, if you need to make a call, speak to the YAG coordinator (reception in the Astronomy centre is patchy – your YAG coordinator will be able to tell you where you should stand if you need to make a call).

Staying safe onsite

While you are onsite, you will be accompanied at all times by your YAG coordinator or a designated member of staff. At the beginning of each session you will be given a lanyard to wear. This lanyard will identify you as a YAG participant and must be worn for the full duration of the session. At the end of the session, return your lanyard to the YAG coordinator.

The following are some guidelines that you should read through and follow while onsite:

- In the event of an emergency, listen to the instructions given by the YAG coordinator or a designated member of staff.
- If you notice an incident that requires the emergency services, notify your YAG coordinator or designated member of staff as the emergency services will need to be called from security who will be able to more efficiently direct them through Greenwich Park and the museum where the incident has taken place.
- While busy with an activity, do not leave the area without notifying another YAG team member or your YAG coordinator. The site is big and gets very busy on weekends.
- Do not leave the site earlier than the planned end-time without notifying your YAG coordinator.
- If you see any bags or boxes that are unaccompanied, notify your YAG coordinator. Do not inspect or pick up the items.
- Do not run/play around or throw things around.
- If you feel unwell or require First Aid, notify your YAG coordinator or a member of staff immediately.
- If you feel uncomfortable at any time, tell your YAG coordinator immediately. This could include someone talking inappropriately, touching you inappropriately or staring at you.

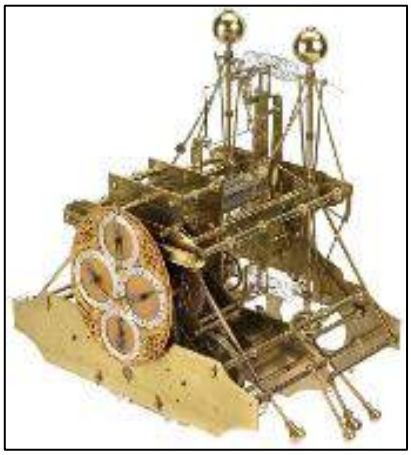
These guidelines are for your safety and to make sure that you can have fun, and not put yourself in a vulnerable situation. Please make sure that you understand them all – if not, speak to the YAG coordinator.

The Royal Observatory Greenwich

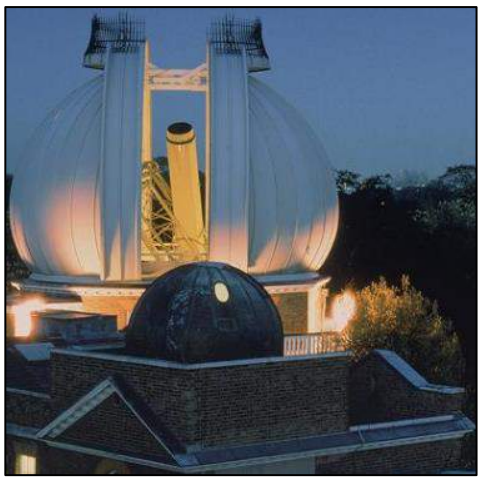
The Royal Observatory, home of Greenwich Mean Time and the Prime Meridian, is one of the most important historic scientific sites in the world. Commissioned in 1675 by King Charles II, the Observatory was the first government-funded scientific institution and the home of astronomy in the UK. Its purpose was to solve the problem of maritime navigation: there were a significant number of shipwrecks during the 17th century because sailors could not accurately determine their position east or west.

It was thought the sky could be used as an overhead clock as the Earth rotated, but to do this required an accurate map of all of the stars. John Flamsteed became the first Astronomer Royal; he lived and worked onsite, building instruments to measure the positions of the stars in the dark skies over Greenwich Park. Flamsteed's star catalogue was the most accurate and extensive catalogue of stars produced at the time.

After a huge disaster at sea in 1707, the Board of Longitude was established at Greenwich and an award of £20 000 (equivalent to £3.3 million today) was offered for a solution to the longitude problem. John Harrison won the award in 1759 for his 'sea watch', a clock designed to keep regular time over many months at sea despite the rocking and rolling motions on board.



Greenwich was established as a world leader in astronomy and navigation, and became the 'home of time' with the declaration in 1884 of the Greenwich meridian as the Prime Meridian of the world - a line dividing east and west. It is the official starting point for each new day. Other buildings have been added to the Observatory over the years, including the 18th century Meridian Observatory, housing most of the instruments that the astronomers used to observe the sky and the Great Equatorial Telescope (Britain's largest refracting telescope).



The Observatory became an astrophysical research facility for over 300 years; geomagnetism, spectroscopy, meteorology and solar physics were studied here. The work carried out at Greenwich continued to have practical implications in the navy and the physical sciences. The Observatory was closed during the Second World War and astronomers left for darker skies in 1948, moving to Sussex and then Cambridge. It reopened in 1960 as a museum highlighting historic astronomy and navigation. Since 2007 the new astronomy galleries and the Peter Harrison Planetarium have aimed to inspire visitors with modern discoveries in astronomy and space exploration.

In 2018, the Royal Observatory became a working observatory once again after the installation of the Annie Maunder Astrographic Telescope. Buildings, collections and facilities here help tell the story of what we know about our place in the Universe, how we have learned it and why astronomical research remains as important as ever.

Staff working at the Royal Observatory engage with members of the general public as well as schools and deliver workshops and planetarium shows. They are also involved in the development of world-class Astronomy and space exploration related programmes, resources and videos for visitors to the observatory.

The Astronomer Royal

The Astronomer Royal is the best-known and most prestigious post in astronomy.

What is an Astronomer Royal?

The title Astronomer Royal is an honour awarded to an eminent astronomer who is expected to advise the Queen on astronomical matters. The Queen makes the appointment with the advice of the Prime Minister of the day. It was a position created by King Charles II at the same time he set up the Royal Observatory. The Astronomer Royal receives a stipend of £100 a year and is a member of the Royal Household.

Edmond Halley

Astronomer Royal (1720 – 1742)

In 1972 Astronomer Royal became an honorary title. The astronomer royal still can however advise the monarch on scientific and astronomical matters.

Who has held the position of Astronomer Royal?

Astronomer Royal	Period
John Flamsteed	1675 – 1720
Edmond Halley	1720 – 1742
James Bradley	1742 – 1762
Nathaniel Bliss	1762 – 1764
Nevil Maskelyne	1765 – 1811
John Pond	1811 – 1835
Sir George Biddel Airy	1835 – 1881
Sir William Henry Mahoney Christie	1881 – 1910
Sir Frank Watson Dyson	1910 – 1933
Sir Harold Spencer Jones	1933 – 1955
Sir Richard van der Riet Wooley	1956 – 1971
Sir Martin Ryle	1972 – 1982
Francis Graham Smith	1982 – 1990
Professor Arnold W. Wolfendale	1990 – 1995
Martin Rees, Baron Rees of Ludlow	1995 – present

All about Astronomy

What is an astronomer?

An astronomer is a scientist who studies our Universe and the objects we find in it.

What subjects will I need to study?

Astronomy is about the physics of the whole Universe and how everything in it works, so astronomers need to have a good knowledge of physics and maths (chemistry is pretty helpful too!). You will need to get good grades in your GCSEs and A-levels or Highers if you want to go on and study further.

I've decided that I want to study Astronomy at University. What can I do in the meantime?

Immerse yourself in astronomy and find out all that you can. Consider joining your local astronomical society so that you have the opportunity to chat with other people who enjoy astronomy. As well as physics and maths, literacy and communication are also crucial to a career in astronomy. Astronomers need to be able to communicate about astronomy with their peers as well as with members of the public. Work experience is an excellent way to get a feel for a career and the skills you need for it, so if possible take advantage of any opportunities to see academics, science communicators and science writers at work.

Will I need a degree? Which one should I choose?

If you want to become an astronomer, you will need a degree in astronomy or physics. Many universities offer astrophysics which is a great option as it gives a good mix of physics and astronomy. There are ways into the field of astronomy that don't require a degree and you gain knowledge and experience by learning on the job. This often takes longer though and finding these opportunities can be challenging.

What is the career path of an astronomer?

There are a number of career paths available to astronomers. You may choose to work in a university, observatory or space agency in the UK but bear in mind that some positions may require you to have a PhD. You could also choose to travel and experience living and working all around the world. You may decide that you want to move into something else where you either use your degree/s directly (e.g. science communication) or apply your skills to a different discipline (e.g. in the finance sector).

Museum careers

Museums require many people in order to be run successfully. Here is a list and short description of some of the jobs that people have in museums.

Director

The director of a museum is in charge of the entire museum and all its operations. Directors work with all the different areas of a museum to ensure that everything runs smoothly. They need to make sure that a museum sticks to a budget and will also try to find extra funding to help with the costs of running a museum. Some of the skills required to become the director of a museum include having a degree in the field that the museum covers, an understanding of how museums work, enjoy working with people and a good problem-solver.

Conservator/Conservation officer

Conservators play an important role in museums – they preserve and restore historical objects, artworks and buildings. Without the hard work of conservators, many of the objects in a museum's collection would be damaged and lost. They use problem-solving to determine how to restore and preserve the objects as well as estimate how much it costs to make the necessary preservations. Conservators often train and teach curators and sometimes give tours. A degree in conservation is required for this job.

Curator

A curator is an expert who is responsible for a particular collection of objects in the museum, for example portraits, telescopes, ceramics. They are responsible for the care, display and information about the objects in the collection and know a great deal about those objects. To become a curator, you will need a relevant degree and you will need to be highly organised. Some of the skills required for a curator position include being creative, excellent at communication and being a great researcher.

Museum Educator

A museum educator, or a member of a museum's learning team, is responsible for the development and delivery of educational programmes at the museum. These programmes can be targeted at members of the general public or at schools. Having a degree in the museum's field and/or experience in education is essential for an education role in a museum.