



YouthAstroNet

F.A.Q.

Q. What is the target age range? Can I do different activities with my different grade participants?

A. YouthAstroNet targets students in grades 5-8. There is a wide variety of curriculum and activities available to educators that will allow you to customize your programming to fit your group of youth.

Q. What does the \$250 payment support?

A. This funding supports educator time spent participating in research surveys, and ensuring the collection of parental permission and student research survey data.

Q. Will the parent permission form to participate in the research be supplied?

A. Yes the permission form will be supplied by the CFA, with the ability to personalize it to your institution.

Q. How much personally identifiable information will you be collecting in the survey?

A. In order to keep the research anonymous we will not be collecting any personally identifiable information. Students will use avatars in the online portal.

Q. If there is no personal information tied to the students account when using the website, how will educators keep track of student images and participation?

A. Although students' online accounts will remain anonymous to staff at the Harvard-Smithsonian Center for Astrophysics through the use of avatars (space names), staff at the program institution will know which avatar matches which student.

Q. Is there a minimum number of students that selected organizations are expected to work with?

A. We expect each chosen institution to work with at least 10 students. For those programs working with only 10 students we hope that you will be able to create a more in depth interaction for your students.

Q. Is there a maximum number of students we can work with?

A. We will do our best to support you and all of your youth participants. Because YouthAstroNet utilizes an online portal, the biggest limiting factor will be at the program site providing computer access to all students. It is possible for students to work together on some of the activities, but there will be time when students will want to work on individual projects.

Q. How many hours should the programs be?

A. There is no maximum time frame set on these programs. We ask that each program include at least 8-10 contact hours, however it is up to the individual organization to decide what this will look like.

Q. Will there be lessons in the online training for the content areas?

A. Yes the online training will include lesson plans and support materials for the educators in all content areas.

Q. Does the curriculum align with NGSS?

A. Standards from the Common Core and the National Research Council's Framework for K-12 Science Education call for expanded learning opportunities that *integrate* the learning of knowledge and practices to prepare youth for today's technologically rich world (Devaney & Yohalem 2012; NRC 2012). *YouthAstroNet* is responsive to these recommendations and aligns with the following Next Generation Science Standards:

NGSS Disciplinary Core Ideas explored in YouthAstroNet activities (Earth Science; Physical Science)	YouthAstroNet youth engage in these Scientific and Engineering Practices	Cross-cutting Concepts encountered that apply across science domains
Earth's Place in the Universe (ESS1.A & B) Electromagnetic Radiation (PS4.B) Information Technologies and Instrumentation (PS4.C)	Asking questions Planning and carrying out investigations Analyzing and interpreting data Using mathematics, information technology, and computational thinking Constructing explanations Obtaining, evaluating and communicating information Developing and using models	Size, scale, & proportion Systems and system models

Q. Can we still participate if we don't have enough computers for each of our students?

A. Yes, students may work together on projects. It is also possible to borrow a set of classroom laptops that we can loan to you and your organization during your program.

Q. Will my students be given any information about career opportunities?

A. Yes! They will have the chance to meet and learn about many different professionals here at the CFA, as well as the different types of careers available to them.

Q. How long will we have access to these resources?

A. This NSF project is funded for through 2018, but we expect the YouthAstroNet online resources to continue to be available.

Q. Can students access the portal at home?

A. YES Absolutely! YouthAstroNet capitalizes on students' intrinsic interest in Astronomy, and we most certainly encourage them to use the YouthAstroNet portal outside of scheduled time with their programs if they so choose.

Q. We have multiple locations/classes. Will each one be able to have its own account?

A. Yes, it is possible to create separate group accounts for each of your classes or locations. We will work with you to create the best set up for you in our online portal.

Q. How do I get my youth excited to participate in YouthAstroNet?

A. One of the best ways to get your youth excited to participate in YouthAstroNet is to have them start looking up at the night sky. Ask them to start observing the moon every evening and keeping a moon journal, or watching for when and where the sun rises and sets. Their own curiosity about space, after they start looking up, should spark their interest to learn more!!

Q. Are there any specific activities to get youth excited about astronomy?

A. Hubblesite.org is a great place to introduce youth to astronomical images! The folks who operate NASA's Hubble Space Telescope produce the site. Astronomy Picture of the Day (<https://apod.nasa.gov/apod/astropix.html>), also shares fascinating images of our Universe daily!

We also like these hands-on activities developed by our colleagues at the Astronomical Society of the Pacific (ASP) in San Francisco:

<http://www.astrosociety.org/education/hands-on-astronomy-activities/>

In particular, I'd recommend the following activities on that page as the best introductions to astronomy for kids:

- Picture an Astronomer
- Astronomy in the Marketplace
- Constellation Detective
- Exploring Lunar Phases with a Daytime Moon
- Pocket Solar System
- Plotting the Apparent Daily Motion of the Sun

And finally, here's a great introductory activity ("Modeling the Universe") to elicit student ideas and preconceptions about "what's in the universe" -- and to talk about models.

<https://www.cfa.harvard.edu/seuforum/mtu/MTUmodeling.pdf>