



Ambassador Space Science Master

Pillar: STEAM

Outcomes: Display a strong sense of self

Ambassadors will earn their badge by exploring, observing, designing, and communicating their space science discoveries—just like scientists and engineers.

1. Discover Worlds Beyond Earth

- a. Take a journey with NASA scientist and Planetary Geologist, Katie Sack, Mars Curiosity Rover! <https://accessmars.withgoogle.com/>
- b. Access Mars lets you explore a 3D replica of the martian surface exactly as it was recorded by the curiosity rover. Learn how humans use technology like NASA's Curiosity to collect data and images to map terrain. Explore with your browser or VR goggles!!

2. Dive into NASA Science

- a. Check out NASA Science to pique your interest! - <https://www.nasa.gov/ezscience>
- b. The National Air and Space Museum's Dr. Ellen Stofan and NASA's Dr. Thomas Zurbuchen created "E.Z. Science." Dr. E and Dr. Z share new discoveries being made by NASA and others. #EZscience
 1. Explore the Moon with Apollo - <https://youtu.be/ethlD9moxyl>
 2. The Search for New Planets - <https://youtu.be/C4C8JsgGrrY>
 3. Our Favorite Star - The Sun - <https://youtu.be/Zx4uqkgLyUE>
 4. The Path to Mars 2020 - <https://youtu.be/uc7rl3EXFS4>
 5. Balloon Science - <https://youtu.be/yW38YH3oFi0>
 6. For NASA TV and Upcoming Events - <https://www.nasa.gov/multimedia/nasatv/schedule.html>

3. Explore Your Interests

- a. Found something that piqued your interest?
- b. Check Out NASAs Missions and Future Launch Schedule!
- c. Search A-Z Search or By Topic - <https://www.nasa.gov/missions>
- d. Explore NASA's Website - <https://www.nasa.gov/missions>

4. Dig Deeper

- a. What does it mean? Dig Deeper means to make a lot of effort with all one's resources. Utilizing as much information as possible, really learn about a topic of space that you are passionate about! Check out some cool citizen science opportunities!
 1. Planet Four - Help explore the surface and weather of Mars' South Polar Region <https://www.zooniverse.org/projects/mschwamb/planet-four>
 2. Rainfall Rescue - Help climate scientists understand past rainfall variations <https://www.zooniverse.org/projects/edh/rainfall-rescue>
 3. Radio Galaxy Zoo: LOFAR - Help astronomers locate and identify supermassive black holes and star forming galaxies <https://www.zooniverse.org/projects/chrismp/radio-galaxy-zoo-lofar>
 4. Star Notes - Help transcribe the groundbreaking work of early women astronomers <https://www.zooniverse.org/projects/projectphaedra/star-notes>
 5. Galaxy Zoo: Clump Scout - Help find regions where stars are being born <https://www.zooniverse.org/projects/hughdickinson/galaxy-zoo-clump-scout>
 6. Galaxy Zoo: Morphology - To understand how galaxies formed we need your help to classify them according to their shapes. If you're quick, you may even be the first person to see the galaxies you're asked to classify. Look at telescope images of distant galaxies. Explore the sky. What will you find? <https://www.zooniverse.org/projects/mikewalmsley/galaxy-zoo-mobile>

7. Muon Hunters 2.0 - Help astronomers find elusive muons disguised as gamma rays using a clustering approach.
<https://www.zooniverse.org/projects/dwright04/muon-hunters-2-dot-0>
8. SuperWASP Variable Stars - Help discover the weirdest variable stars
<https://www.zooniverse.org/projects/ajnorton/superwasp-variable-stars>
9. COSMIC - Help classify surface features on Mars
<https://www.zooniverse.org/projects/wkiri/cosmic>
10. Supernova Hunters - Help discover supernovae from Pan-STARRS1
<https://www.zooniverse.org/projects/dwright04/supernova-hunters> Exoplanet Explorers - Discover new planets orbiting other stars in our galaxy
<https://www.zooniverse.org/projects/ianc2/exoplanet-explorers>
11. Radio Meteor Zoo - Help us identify meteors in radio data
<https://www.zooniverse.org/projects/zooniverse/radio-meteor-zoo>

5. Share What You Learn

- a. Make a PowerPoint or video presentation of a project you participated in. Share with your family, troop, classmates, or your council!

Additional online resources:

- Meet a scientist: Planetary Scientist; [Nathalie A. Cabrol](#)
- Meet a scientist: Heliophysics; [Dr. Madhulika Guhathakurta](#)
- Meet a scientist: Earth Science; [Margaret Glasscoe](#)
- Learn about others in the STEM fields here: <https://steminist.com/>
- Our wonderful community partner, The Arvin Gottlieb Planetarium, has live and recorded Facebook videos studying the sky, constellations, planets, and more <https://www.facebook.com/watch/KCplanetarium/>; check them out!

When you're finished: Congratulations, you have earned your badge! You can purchase by emailing shopdept@gksmo.org or at <https://www.girlscoutshop.com/ambassador-space-science-master-badge>

