

SANDRA F. PRITCHARD MATHER PLANETARIUM NEWS

2022-2023 Season

The Mather Planetarium at West Chester University



Greetings! We hope everyone has had a wonderful holiday season. We'll be opening our doors for the spring in just a couple weeks. You'll be seeing some new faces at the movie shows as we train some more students. And we are looking to have a special presentation on Mars later this semester. You'll get an email with details as our plans firm up. Thank you for your continued support of our programs. As always, we look forward to seeing you under the dome!

Contact Info:

Mather Planetarium
750 S. Church St.
West Chester, PA 19383

Dr. Karen Schwarz, Professor
Planetarium Director

planetarium@wcupa.edu
(610) 436-2788

SSI Ticket Office
(610) 436-2266

On-line Ticket Sales
<http://www.wcupatix.com>

<http://www.wcupa.edu/planetarium>

**** Follow us on Facebook ****

*"Do not look at stars as bright spots only.
Try to take in the vastness of the universe."*

– Maria Mitchell

Remaining Shows for the 2022-2023 Season

January 27, 2023 – Jupiter: King of the Planets*

March 24, 2023 – Astronaut

February 10, 2023 – Asteroid: Mission Extreme

March 31, 2022 – Our Amazing Sun*

February 24, 2023 – Black Holes Don't Suck*

April 14, 2023 – Black Holes: The Other Side of Infinity

March 3, 2023 – Birth of Planet Earth

April 28, 2022 – Twinkle, Twinkle Little Star*

*Indicates a live show.

Check our website for details about the types of shows and movie information.

Becoming A Citizen Scientist

What is citizen science?

For well over a century, professional scientists have asked average citizens to assist with their research. For projects that require large amounts of data, recruiting members of the public makes a lot of sense. Some of the earliest citizen science projects involved bird counting and monitoring the weather. With the advent of the internet, researchers now have easy access to volunteers all over the globe.

What does it involve?

There are all kinds of projects that you can get involved in, spanning all types of science. Some projects, like the bird counting example, involve making and recording observations. Other research might only involve looking at images or data on your computer.

There's no specific time commitment for these projects; you can do as much or a little work as you like. Projects do eventually wrap up and then you'll have to find something new to work on, but there's so much research going on that's never a problem.

Who can participate?

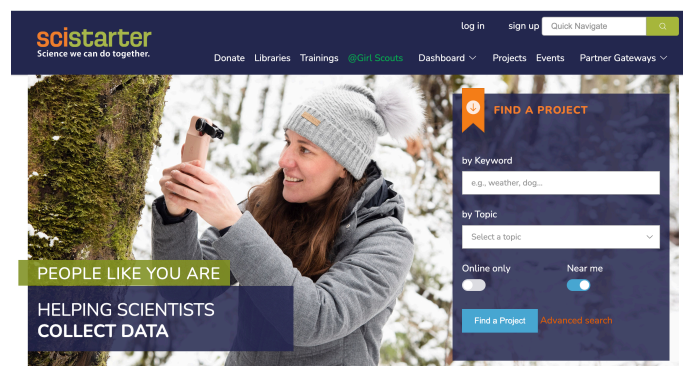
Anyone can be a citizen scientist! Some projects may have a short training program (typically on-line) that an individual will need to complete before working with actual data, but then you'll be up and running. Most projects give a suggested age range for participants. This is especially helpful if you have a young scientist at home that is eager to get involved and you want to make sure it's a good fit for them.

In fact, citizen science projects can be used in the classroom to provide a hands-on experience that supports learning. Sometimes volunteers will have access to the entire data set (not just the data they take themselves), which could be the basis for a science fair project. There are many benefits to getting involved in citizen science projects beyond assisting the researchers.

How do I get started?

All you really need to do is to find a project that interests you. You can find a searchable catalog of

citizen science projects at <http://scistarter.org>. There are filters to allow you to search by topic, age range, etc. Each project has its own site where you can read about the research being done and what your role would be should you choose to join the team.



One of my favorite citizen science projects is **Globe at Night**, which has been gathering data from citizen scientists since 2006. This program is working to raise awareness about the impact of light pollution on people, animals, and astronomical research. This is a great project that the whole family can get involved in. The observations are easy to make and don't take a lot of time. Plus, it gets you outside looking at the sky! The first observing period of 2023 is January 13-22 in case you want to check it out.



A related project is **Satellite Streak Watcher**. Just like excess light makes it harder to see the stars, man-made satellites cruising through the sky cause problems for astronomers looking at faint, fuzzy things in space. This project uses cell phone images of the sky to track the increase in the amount of these satellites in our skies.

Regardless of which projects you choose, you can be assured that you will be helping researchers learn more about the world around us. You'll be learning about the process of science and how scientists find the answers to their questions. You'll be a part of a community of curious people who are excited to explore and discover. You'll be a citizen scientist!



Looking Up: Cassiopeia

If you're brave enough to go out on a cold winter night, you'll have no trouble locating Cassiopeia, just after dark, about 70 degrees above the northern horizon. The constellation is often referred to as the "w" in the sky as the five brightest stars make a slightly stretched W shape. However, we might need a bit of imagination to turn it into a woman sitting in a chair.

The Greek story of Cassiopeia says that she was the queen of Ethiopia, ruling the kingdom with her husband Cepheus. Cassiopeia was very vain and one day declared that she and her daughter, Andromeda, were more beautiful than the Nereids, the water nymphs. Poseidon, the God of the Sea, was furious when he heard of Cassiopeia's boast. Poseidon sent the sea monster Cetus to destroy the city.

As the monster wreaked havoc on the town, Cassiopeia and Cepheus were beside themselves. They consulted an oracle who told them the only way to save the city was to sacrifice their daughter Andromeda to the sea monster. What a horrible choice! But Cassiopeia couldn't let the entire city perish. So, Andromeda was chained to a rock on the shore as an offering to the sea monster, with the hopes that the city would be spared.

About this time, a hero by the name of Perseus arrived on the scene. He was traveling on the back of a winged horse named Pegasus. Perseus and Pegasus were not residents of the city but happened to be in the right place at the right time. Perseus slayed Cetus, rescued Andromeda, and saved the city. Taken with her beauty, Perseus then married Andromeda and they lived happily ever after.

Poseidon was unhappy that Cassiopeia had escaped punishment, so he placed her on her throne and put her in the sky. At first this might not sound so bad – who wouldn't want a chair among the stars? – but remember that the sky slowly turns. Half of the time Cassiopeia sits comfortably in her throne but the other half of the time she's upside-down and must hold on to avoid falling to the Earth. Not the best seat after all!

The other characters in the story – Cepheus, Andromeda, Cetus, Perseus, and Pegasus – can be found all around Cassiopeia in the sky, with varying degrees of difficulty. However, the W is typically easy to find and it's a nice reminder of the perils of vanity. Hang on tight, Cassiopeia!