

Citizen Science

Citizen Science Enhance Knowledge

- We are all citizen scientists
- We can extend our science knowledge through
 - Reading
 - Attending events or lectures
 - Accessing the incredible wealth of information online.
 - An email of upcoming events can be found by subscribing to
 - BayAstro@groups.io
 - SMCASnews@groupsio
- We can actively participate in science studies

Active Citizen Science

- Online opportunities to be a citizen scientist use the human ability to recognize patterns. Humans are better at pattern recognition than even the best computers.
- There are also many that involve direct participation

NASA

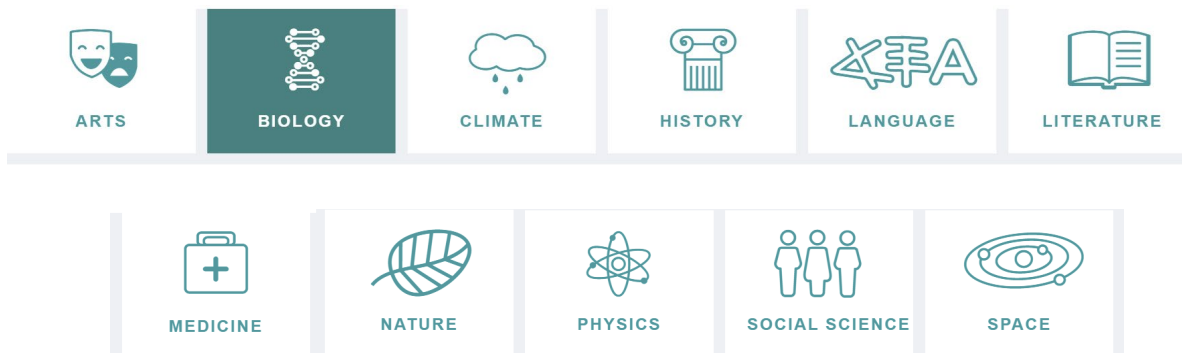
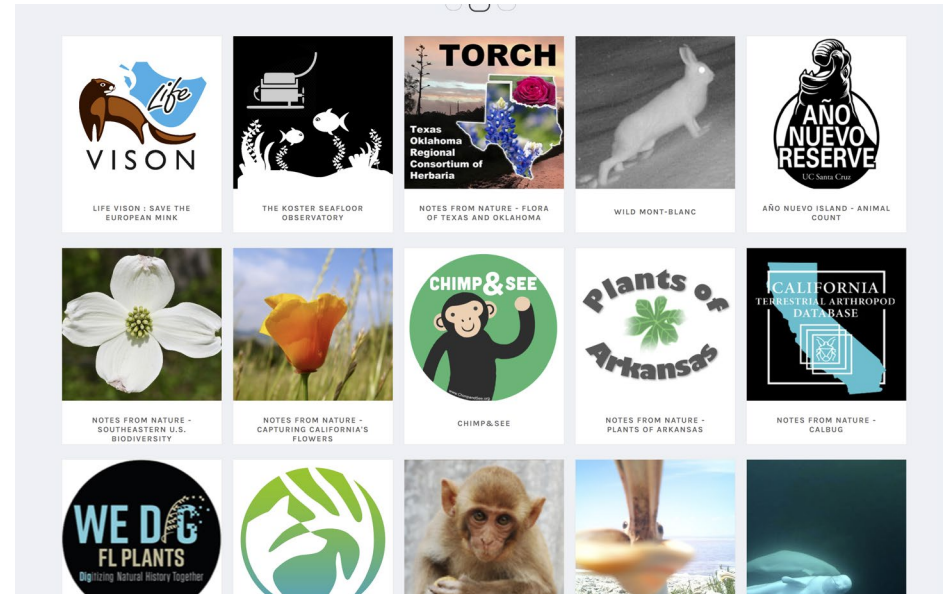
- Astronomy and Earth Projects

- <https://science.nasa.gov/citizenscience>
- Currently listing 27 projects
- Find an area you like, and check join the project.



Zoo Universe (Zooniverse)

- <https://www.zooniverse.org/>
- Lists 68 projects.
- Projects across scientific disciplines



US Government

- Various Projects – not all actively recruiting
 - [CitizenScience.gov](https://www.citizen-science.gov)
 - Search through hundreds of US government projects

Federal Crowdsourcing and Citizen Science Catalog

Projects listed in the catalog are validated by federal employees

Number of Projects: 493

[Download as CSV](#) [Download as JSON](#)

Mountain Rain or Snow Status: Active - recruiting volunteers Geographic Scope: 	ENC Update Pilot Project Status: Active - recruiting volunteers Geographic Scope: Entire U.S. 	Paddle the Gulf Status: Active - recruiting volunteers Geographic Scope: Gulf of Mexico coastal waters 	BeachCOMBERS Status: Active - not recruiting volunteers Geographic Scope: Coastal California
EPA Sanitary Survey App for... Status: Active - recruiting volunteers Geographic Scope: Nationwide 	Streamflow Monitoring Using Computer Vision... Status: Active - not recruiting volunteers Geographic Scope: Round 1 data submitted from the following... 	GPS on Bench Marks Status: Active - recruiting volunteers Geographic Scope: GPS data are collected at thousands of... 	Best Practices Guide for Library... Status: In Planning or Pending - recruiting volunteers Geographic Scope: Multiple locations including Los Angeles in Region...
Equipment loan program	Demonstration of Air	OMics Compendia	Youth Forest Monitoring

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Wikipedia

- Lists 297 Projects
- 130 projects in US or worldwide
- The list is helpful but not definitive

Examples of Internet Projects

- Penguin Watch – Count penguins and eggs in photographs
- Star Notes - Help transcribe the groundbreaking work of early women astronomers
- Count Fish off Hawaii – Count fish in pictures from NOAA's stereo-camera systems
- Dark Energy Explorers – Identify galaxies in noisy telescope photographs.

Examples of Hands-on Projects

- Community Collaborative Rain, Hail and Snow Network – Make and submit weather measurements to a national database.
- iNaturalist – Photograph organisms in nature and share with scientists.

Amateur Astronomy

- There are about 20,000 Professional astronomers worldwide but there are about 500,000 armature astronomers in the world.
- Until recently almost all comets were discovered by amateur astronomers.
- I used to say that astronomy was the only hobby in which you could make contributions to real science.

San Mateo County Astronomical Society

- Monthly Meetings at the College of San Mateo
- Star Parties in San Carlos twice monthly.
 - Free
 - Open to everyone
 - Information and schedule at <http://www.smcasastro.com/crestview-park.html>

Other Astronomy Functions

- Listing on Night Sky Network
<https://nightsky.jpl.nasa.gov/>

Clubs & Events

ASTRONOMY EVENTS IN YOUR AREA

Searching for events within 100 miles of Belmont, CA 94002, USA.

February 2022						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	01 4:48 PM Utah Skies 5:00 PM Star Party - Garland Ranc 7:30 PM Club Meeting	02 7:00 PM CCS online meeting	03 7:00 PM Virtual PAS Meeting 7:00 PM Monthly Club Meeting 7:30 PM Club Meeting on Zoom	04 7:00 PM Sian Proctor: Big Astrono	05
06 7:00 PM Constellation Tour 72 7:00 PM Constellation Tour 72	07 7:30 PM AAAP Club Meeting	08	09	10 2:00 PM The James Webb Space Tele 7:00 PM Club Meeting	11 7:30 PM WAA Lecture	12 1:00 PM Amateur Astro Series: 3 7:00 PM Second Saturday Astronomy
13 7:00 PM Constellation Tour 73 7:00 PM Constellation Tour 73	14 4:48 PM Utah Skies 7:00 PM Constellation Tour 73	15 6:00 PM NSN Webinar: Psyche	16 7:00 PM SFAA February Meeting 7:30 PM Dr. Alexandra Yep (Zoom)	17 7:00 PM Exploring Distant Worlds	18 8:00 PM Remote Imaging	19 7:00 PM Star Party
20 7:00 PM Constellation Tour 74 7:00 PM Constellation Tour 74	21 4:48 PM Utah Skies 7:00 PM SoVerA Special Event - Su 7:15 PM Gen Mtg: Star Wheels	22	23	24	25	26 1:00 PM Amateur Astro Series: 4 7:00 PM ASKC General Meeting
27	28	01	02	03	04	05

• observing event - public • club event - public • community event • virtual event - public

+ more events

Follow-up

- You can find this presentation and links www.astronomerEd.com
- Information on the San Mateo County Astronomical Society Events www.SMCASastro.com
- Observing and Planetarium Shows at the College of San Mateo collegeofsanmateo.edu/astronomy/
(Currently suspended due to Covid)

Star Parties

- Come prepared to see amazing sights and learn facts about the universe.
- Come at sunset if you want to watch telescopes being set up or want to learn about telescopes or use your own telescope.
- Come about an hour after sunset if you only want to look through the telescopes.
- Don't come more than three hours after sunset, the astronomers may have already left.
- Even if there is a scheduled star party, they may not happen if:
 - Cloudy
 - Too windy
 - Foggy

Star Party Etiquette

- Do not bring white lights of any kind – they damage the astronomer's night vision.
- Be quiet and respectful, the telescopes are the astronomer's personal property and cost thousands.
- Feel free to ask questions
- No spray products near the telescopes.

Come out and enjoy!



GREG
NANNARON
FIELD

Crestview Dates for 2022

Date	Sunset	Moon Phase
01/29/22	5:31	Waning crescent
02/26/22	6:00	Waning crescent
03/05/22	6:07	Thin waxing crescent
03/26/22	7:27	Waning crescent
04/02/22	7:33	waxing crescent
04/23/22	7:52	Third quarter
04/30/22	7:58	New Moon
05/21/22	8:17	Waning gibbous
05/28/22	8:22	Waning crescent
06/18/22	8:33	Waning gibbous
06/25/22	8:35	Waning crescent
07/02/22	8:35	Thin waxing crescent
07/23/22	8:26	Waning crescent
07/30/22	8:19	Waxing crescent
08/20/22	7:56	Waning crescent
08/27/22	7:45	New Moon
09/17/22	7:15	Third quarter
09/24/22	7:03	New moon
10/22/22	6:22	Waning crescent
10/29/22	6:14	Thin waxing crescent
11/19/22	4:56	Waning crescent
11/26/22	4:53	Thin waxing crescent
12/17/22	4:53	Waxing crescent



Questions?