NGCP Celebrates Citizen Science

Suzi Taylor

MSU Science Math Resource Center
Montana Girls STEM Collaborative
NASA AEROKATS and ROVER Education Network
Montana NSF EPSCoR
Early influences
My job rocks!
Citizen Science and Me (and You!)
Geocaching
NASA AEROKATS and ROVER Education Network (AREN)

We fly kites for science!
What time of day is it? What else might you want to know?
What is this?
NASA AEROKATS and ROVER Education Network (AREN)

We fly kites for science!
SMART FIRES: Sensors, Machine Learning, and Artificial Intelligence in Real Time Fire Science
GOALS:

- Grow a Citizen Science Network in Montana
- Explore possibilities for fire and air quality citizen science projects
My favorite citizen science projects
1. **GLOBE Observer**

- Free app – supported by NASA
- Take photos and observations of clouds, trees, the land and mosquito habitat
- Your data is sent to NASA scientists, and they use it to help our Earth
GLEBE Observer
• Use it whenever you are outside – playing in the park, taking a walk with your family, going on a trip to another town, etc.
• Connect with satellite observations
• Watch for special challenges and contests
<table>
<thead>
<tr>
<th>Observation</th>
<th>GLOBE</th>
<th>GOES-16 Satellite</th>
<th>NOAA-20 Satellite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Date/Time</td>
<td>2024-03-13 20:48:00</td>
<td>2024-03-13 20:33</td>
<td>2024-03-13 20:34</td>
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<tr>
<td>Latitude</td>
<td>19.69</td>
<td>19.37 to 20.01</td>
<td>19.31 to 20.11</td>
</tr>
<tr>
<td>Longitude</td>
<td>-98.85</td>
<td>-99.17 to -98.53</td>
<td>-99.21 to -98.41</td>
</tr>
<tr>
<td>Total Cloud Cover</td>
<td>Isolated (10-25%)</td>
<td>Isolated 24.53%</td>
<td>Scattered 40.41%</td>
</tr>
<tr>
<td>High Clouds</td>
<td>Cirrus</td>
<td>No Clouds</td>
<td>Cover: Few (4.39%)</td>
</tr>
<tr>
<td></td>
<td>Cover: Few (&lt;10%)</td>
<td></td>
<td>Altitude: 10.95 (km)</td>
</tr>
<tr>
<td></td>
<td>Opacity: Transparent</td>
<td></td>
<td>Phase: Ice 231.85 (K)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Opacity: Transparent</td>
</tr>
<tr>
<td>Mid Clouds</td>
<td>Altostratus</td>
<td>Cover: Isolated 24.53%</td>
<td>Cover: Scattered 36.02%</td>
</tr>
<tr>
<td></td>
<td>Cover: Few (&lt;10%)</td>
<td>Altitude: 3.23 (km)</td>
<td>Altitude: 5.44 (km)</td>
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<tr>
<td></td>
<td>Opacity: Transparent</td>
<td>Phase: Water 295.25 (K)</td>
<td>Phase: Water 272.69 (K)</td>
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<tr>
<td></td>
<td></td>
<td>Opacity: Translucent</td>
<td>Opacity: Opaque</td>
</tr>
<tr>
<td>Low Clouds</td>
<td>Cumulus</td>
<td>No Clouds</td>
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</tr>
<tr>
<td></td>
<td>Cover: Isolated (10-25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Opacity: Translucent</td>
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</tbody>
</table>
2. iNaturalist

- Observe and upload photos of almost anything in nature – trees, insects, mushrooms, etc.

- Others in the worldwide community will help identify them.
3. Photo Monitoring (ChronoLog)

Organizations set up a chronolog photo station.

A passerby aligns their phone, snaps a photo, and emails it to chronolog.

Their photo is automatically added to the right chronolog time lapse.

Chronologs engage your community and record environmental change.
Citizen Science Selling Points

• Anybody can do citizen science
• Participation is usually free and easily accessible
• Citizen science is a nice complement to other activities
• Whatever topic interests you, there’s probably a citizen science project attached to it
• You are contributing to something bigger than yourself
• Your observations and data can make your community a better place
Thank you!

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Montana Citizen Science Network
montana.edu/smrc/citizenscience.html

bit.ly/msucitizenscience

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