NASA Citizen Science, Participatory Exploration, Collaboration & Social Networking Sites

**NASA Citizen Scientist**

http://science.nasa.gov/citizen-scientists/JMARS

**JMARS**

https://jmars.mars.asu.edu/wiki/students-space-enthusiasts

(Java Mission-planning and Analysis for Remote Sensing) is a Java-based geospatial information system developed by the Mars Space Flight Facility at Arizona State University. K-12 Students: Target a THEMIS image as part of the Mars Student Imaging Project. The Mars Space Flight Facility has developed a version of JMARS specifically for use by students and space enthusiasts. The Public Version contains all of the standard JMARS layers (i.e.: Map Layer, Stamp Layer, etc) and pulls data from the same servers at Arizona State University that supply data to the NASA THEMIS, MRO and LROC versions of JMARS. Users must register for a free JMARS account since the program requires access to the ASU servers. There are also public versions of the JMoon and JEarth versions of JMARS, which allow users to access remote sensing data of the Moon and the Earth within a JMARS interface.

**Galaxy Zoo**

http://www.galaxyzoo.org/?ticket=ST-1297385337r98D2B9CA9BFBD2BB

Galaxy Zoo is location where you can help astronomers explore the Universe. Galaxy Zoo: Hubble uses gorgeous imagery of hundreds of thousands of galaxies drawn from NASA's Hubble Space Telescope archive. To understand how these galaxies, and our own, formed we need your help to classify them according to their shapes — a task at which your brain is better than even the most advanced computer. If you're quick, you may even be the first person in history to see each of the galaxies you're asked to classify.

**Solar Storm Watch**

http://www.solarstormwatch.com/

Solar scientists need you! Help them spot explosions on the Sun and track them across space to Earth. Your work will give astronauts an early warning if dangerous solar radiation is headed their way. And you could make a new scientific discovery.
NASA SPONSORED CITIZEN SCIENTIST

**Become a Martian Citizen**

http://beamartian.jpl.nasa.gov/welcome

Participate as a citizen scientist to improve Martian maps, take part in research tasks, and assist Mars science teams studying data about the Red Planet.

**HiWish**

http://www.uahirise.org/hiwish/

You can help decide where the Mars Reconnaissance Orbiter will point its camera, HiRISE, next! Suggest a new target or browse the targets already in our database, including those for past HiRISE images.

**Lunar Impacts**

http://www.nasa.gov/centers/marshall/news/lunar/

NASA needs your help to monitor the rates and sizes of large meteoroids striking the moon's dark side. This data will help engineers design lunar spacecraft, habitats, vehicles and extra-vehicular activity (EVA) suits to protect human explorers from the stresses of the lunar environment.

**MY NASA DATA**

http://mynasadata.larc.nasa.gov/citsci_index.php

MY NASA DATA is a project to enable K-12 teachers and students, as well as citizen scientists, to explore the large volumes of data that NASA collects about the Earth from space.

**Night Sky Network**

http://nightsky.jpl.nasa.gov/resources.cfm

Whether you're just getting started or observe the skies at every opportunity, you'll find helpful this list of links from NASA's Jet Propulsion Laboratory (JPL). Includes resources for amateurs, students and educators.
Observable Comets
http://minorplanetcenter.org/iau/Ephemerides/Comets/index.html

This list, maintained by the Minor Planet Center (MPC), includes observable comets, comet ephemerides, orbit data and observation dates.

SOFTWARE TOOLS

Ephemeris Generator
http://ssd.jpl.nasa.gov/?

Horizons for all bodies in the solar system including comets and asteroids.

Small Body Orbital Elements
http://ssd.jpl.nasa.gov/?sb_elem

Provides the orbital elements for numbered asteroids, unnumbered asteroids and comets.

Object Identification
http://ssd.jpl.nasa.gov/sbfind.cgi

Given a date, location and region of sky, find all comets and asteroids matching the constraints within the region.

What's Observable Tonight?
http://ssd.jpl.nasa.gov/sbwobs.cgi

Given an observation date, location and other constraints, find all asteroids and comets that are observable on that night.

Finding Pre-discovery Observations With SkyMorph
http://skyview.gsfc.nasa.gov/skymorph/skymorph.html

SkyMorph enables searches for variable, moving or transient objects.

OTHER USEFUL RESOURCES

Solar System Simulator
http://space.jpl.nasa.gov/

NASA imagery and computer modeling combine to produce simulated pictures of solar system objects from any other object and from any time you choose.
<table>
<thead>
<tr>
<th><strong>Space Calendar</strong></th>
<th>The Space Calendar covers space-related activities and anniversaries for the coming year. Included are over 1,300 links to related home pages.</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www2.jpl.nasa.gov/calendar/">http://www2.jpl.nasa.gov/calendar/</a></td>
<td></td>
</tr>
</tbody>
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<tr>
<th><strong>Spacecraft Sighting Opportunities</strong></th>
<th>Find out when satellites, a space shuttle or the International Space Station are appearing overhead. You can search by city—or use Skywatch 2.0 (a Java Applet) to enter your exact location and see the path each spacecraft will take across the sky.</th>
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<tr>
<td><a href="http://spaceflight.nasa.gov/realdatal/sightings/">http://spaceflight.nasa.gov/realdatal/sightings/</a></td>
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<th><strong>NASA Chats</strong></th>
<th>Ask an expert your questions. See site for listing of upcoming events.</th>
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<td><a href="http://www.nasa.gov/connect/chat/index.html">http://www.nasa.gov/connect/chat/index.html</a></td>
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<th><strong>Learning Technologies</strong></th>
<th>The NASA LT team is active in several virtual worlds and is supporting the entry of NASA education projects into Second Life.</th>
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<td><a href="http://www.nasa.gov/offices/education/programs/national/ltp/home/index.html">http://www.nasa.gov/offices/education/programs/national/ltp/home/index.html</a></td>
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<th><strong>NASA Tweetup</strong></th>
<th>NASA Tweetup's provide @NASA followers with the opportunity to go behind-the-scenes at NASA facilities and events and speak with scientists, engineers, astronauts and managers.</th>
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<td><a href="http://twitter.com/nasa">http://twitter.com/nasa</a></td>
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<th><strong>NASA Challenge</strong></th>
<th>This site has a list of competitions sponsored by NASA.</th>
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<td><a href="http://challenge.gov/NASA">http://challenge.gov/NASA</a></td>
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<th><strong>Connect and Collaborate</strong></th>
<th>At this site you will find a list of social networking sites and collaborating with NASA sites. I.e. Facebook, USTREAM, Foursquare, Myspace</th>
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<td><a href="http://www.nasa.gov/connect/">http://www.nasa.gov/connect/</a></td>
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* For more information contact Aerospace Education Specialist sonya.r.williams@nasa.gov

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