



# MARS MISSION AND NASA EDUCATOR RESOURCES

FEBRUARY 10, 2017 – MINOT STATE UNIVERSITY

CAITLIN NOLBY, MARISSA SAAD, AND JIM CASLER

NORTH DAKOTA SPACE GRANT CONSORTIUM



# MEET THE SPACE GRANT TEAM!

- Director of Space Grant, Jim Casler
- Deputy Director, Caitlin Nolby
- Coordinator, Marissa Saad



# WORKSHOP GOALS

## You will be able to:

- Confidently conduct today's activities in the classroom.
- Better understand concepts regarding space sciences.
- Effectively communicate in teams to successfully complete a mission to Mars.
- Save Mark Watney!
- Get excited about Mars!





# POCKET SOLAR SYSTEM



The image features a solid red background with decorative circuit-like lines in a lighter red color. These lines are located in the four corners, forming abstract patterns of lines and circles that resemble a printed circuit board or a network diagram.

ROCKETS TO THE RESCUE!























# ROCKETS TO THE RESCUE

- Goal: Build and launch a rocket, keep your payload intact, and save Mark Watney!
- Launch your payload to Mars!
- What will be *your* team's strategy?



4-H  
NATIONAL  
YOUTH  
SCIENCE DAY



4-H NATIONAL YOUTH SCIENCE DAY

**ROCKETS  
TO  
THE RESCUE**

# ROCKETS TO THE RESCUE

## CRITICAL THINKING QUESTIONS

1. Was your rocket successful?
2. Take a look at other teams' designs. What materials did they use? Did their results differ from yours? Describe the outcomes.
3. How did gravity affect your design?
4. What should scientists consider when selecting materials? (think of sizes, weight, composition of the atmosphere, etc.)
5. Extra consideration: Integrate this activity into the classroom – add budgets, weight restrictions, competition between NASA centers, etc.
6. What shapes were the most aerodynamic? Are these necessarily the best designs?



The image features a solid red background with decorative circuit-like patterns in the corners. These patterns consist of thin, light-colored lines that branch out and terminate in small circles, resembling a stylized electronic circuit board. The patterns are located in the top-left, top-right, bottom-left, and bottom-right corners.

# MARS ROVER LANDER

# MARS ROVER LANDER

- You've been selected by NASA to design a landing system that will safely land the NASA Insight Rover on Mars! NASA has provided you with an assortment of materials. Chose wisely; NASA is depending on you!



# MARS ROVER LANDER

## CRITICAL THINKING QUESTIONS

1. Did your rover land safely?

a. What caused it to land safely? (or) Why did your rover crash land? What could you have done differently?

2. Take a look at other teams' designs. What materials did they use? Did their results differ from yours? Describe the outcomes.

3. What could be the real-life consequences of using a compromised parachute?

4. What should scientists consider when selecting materials? (think of sizes, weight, composition of the atmosphere, etc.)

5. Extra consideration: Integrate this activity into the classroom – add budgets, weight restrictions, competition between NASA centers, etc.

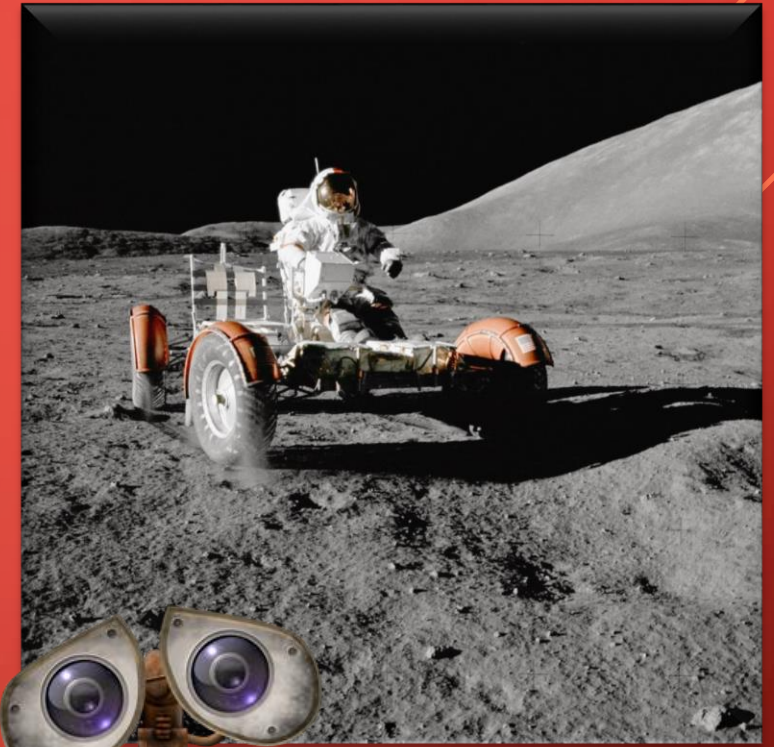
6. [Land on Mars](#)

# ORION TEST PARACHUTE FAILS, MOCKUP CRASHES

JULY 2008







- How can students relate to rovers?
- Mars, Moon, remote RC cars, drones, Roomba, etc.





# NASA EDUCATION

The screenshot shows the NASA Education website interface. At the top, there is a navigation bar with the NASA logo and links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. A search bar is located on the right. Below the navigation is a large banner featuring a pencil graphic with icons for science (flask), technology (circuit board), and mathematics (compass), along with the equation  $E=mc^2$ . The main content area is divided into several sections:

- Follow:** Includes social media icons for Facebook, Twitter, and YouTube, and links to About NASA Education, For Educators, For Students, NASA Kids' Club, Search Educational Resources, and Latest NASA Education News Releases.
- For Educators:** A list of grade levels: Grades K-4, Grades 5-8, Grades 9-12, Higher Education, Informal Education, and Current Opportunities.
- Related Topics:** A link for All Topics A-Z.
- Space Station:** A photo of astronauts in the International Space Station with the caption "NASA Astronauts Headline Public Events in Washington Area".
- EXPRESS:** A graphic with arrows and the text "Subscribe: Weekly Email Highlighting Education Opportunities".
- Current Opportunities for Educators:** A photo of a classroom with a projector screen and the text "Browse the STEM-related professional development opportunities, webinars, workshops, and ways for you and your students to get involved with NASA.".
- Search Educational Resources:** A section with a magnifying glass icon and text: "Search hundreds of resources by subject, grade level, type and keyword. These lesson plans and teaching materials support your STEM curriculum." Below this are links for "A-Z List of Publications", "A-Z List of Websites", and "Educator Resource Centers".
- Benefits to You:** A photo of an astronaut in a helmet with the caption "NASA, UN Photo Competition Highlights #WhySpaceMatters on".
- Journey to Mars:** A photo of a Mars rover in a desert landscape with the caption "NASA Celebrates Martian New Year in Mars, Pennsylvania".
- Educators K-4:** A photo of a young girl looking at a computer screen with a large "K-4" graphic.





Topics

Missions

Galleries

NASA TV

Follow NASA

Downloads

About

NASA Audiences

Search



# NASA for Students

## For Students



Follow

About NASA Education

For Educators

For Students

NASA Kids' Club

Search Educational Resources

Latest NASA Education News Releases

For Students: Grades K-4

Grades 5-8

Grades 9-12

Higher Education

Related Topics

All Topics A-Z



Explore This: Planetary Explorer



NASA Kids' Club



Explore This: Technology



### Now in Space! Expedition 44

Expedition 44 is part of a special mission. Scott Kelly and Mikhail Kornienko are staying on the space station for one year!

Planet of the Month: Jupiter -- King of the Planets



# Space Math at NASA

The screenshot shows the Space Math @ NASA website. At the top left is the NASA logo. To its right is the text "National Aeronautics and Space Administration" and "Goddard Space Flight Center". On the far right is a search bar with a "GO" button and the text "Flight Projects | Sciences and Exploration". Below this is a large blue header with "Space Math @ NASA" in a stylized font. Underneath is a navigation menu with tabs for "Home", "Problem Books", "STEM Modules", and "Inquiry". Below the navigation are several sub-sections: "Math by Grade Level", "Math in Science", "Math in Engineering", "Math in Press Releases", "Math by NASA Mission", and "Articles". The main content area is divided into three columns. The left column is titled "Space Math @ NASA" and contains an introductory paragraph, a "Partnering NASA Missions" section with sub-sections for "Astrophysics", "Earth Science", "Heliophysics", and "Planetary", and a "Partnering NASA Programs" section. The middle column is titled "SpaceMath@NASA News Updates" and lists recent news items with dates and links, followed by a "Math in the News" section with three problem entries, each featuring a small image and a brief description. The right column is titled "Multi-Media Math Modules" and includes a circular logo, a section for "Grades 6, 7 and 8" resources, and a "Problem Archives" section with a list of problem ranges.

**Space Math @ NASA**

SpaceMath@NASA introduces students to the use of mathematics in today's scientific discoveries. Through press releases and other articles, we explore how many kinds of mathematics skills come together in exploring the universe.

**Partnering NASA Missions**

**Astrophysics:**

- Chandra - [Click here](#)
- Kepler - [Click here](#)
- James Webb ST - [Click here](#)

**Earth Science:**

- SAGE-III - Under development

**Heliophysics:**

- Hinode - [Click here](#)
- IMAGE - [Click here](#)
- MMS - [Click here](#)
- RBSP - [Click here](#)
- THEMIS - [Click here](#)

**Planetary:**

- Cassini - [Click here](#)
- Dawn - [Mission Math](#)
- EPOXI - [Click here](#)
- InSight - [Click here](#)
- Juno - [Click here](#)

**Partnering NASA Programs**

- Eyes on the Solar System - [Click here](#)

**SpaceMath@NASA News Updates**

**March:** NASA Press Release about SpaceMath@NASA- [\[Read Press Release\]](#)  
**July:** New math guide to Mars Exploration and the Curiosity Rover - [\[Click Here\]](#)  
**August:** Expanded and updated math guide on Black Holes posted- [\[Click Here\]](#)  
**November:** SpaceMath@NASA served 6,000,000th math problem at the website!  
**December:** New multi-media Grade 6 Math Modules added- [\[Click Here\]](#)  
**February:** New multi-media Grade 8 Math Modules added- [\[Click Here\]](#)  
**April:** The 7 millionth Space Math problem is downloaded

**Math in the News**

A behind-the-scenes look at the math in NASA press releases

**Problem 517: A Distant Supernova Remnant Discovered**  
Students explore the size and speed of a distant supernova remnant nebula and compare it to the speed of the International Space Station. (PDF)

**Problem 516: Hinode Observes Solar Eclipse from Space**  
Students use the geometry of a solar eclipse to estimate the distance to the sun using simple proportional reasoning. (PDF)

**Problem 515: Telling Time on Mars**  
Students learn about the difference in time between a martian day and an Earth day, and use this to explore how work schedules change for scientists working with the Curiosity rover on Mars. (PDF)

**Problem 514: Solar Flares and the Stormy Sun**  
Students use simple averaging to explore the sunspot cycle and our sun's changing activity levels in 2012 and 2013. (PDF)

(More problems from 2012-2013)

**Multi-Media Math Modules**

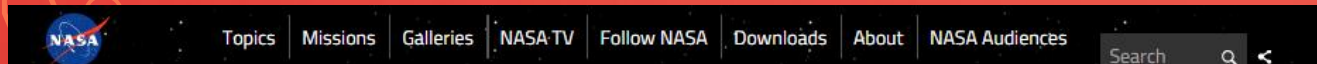
**Grades 6, 7 and 8:** Standards-based, multi-media math resources featuring NASA eClips video segments, readings from NASA press releases, online interactive resources, and of course math problems! [\[click here\]](#)

**Problem Archives**

- I - Problems 1 to 38
- II - Problems 39 to 64
- III - Problems 65 to 101
- IV - Problems 102 to 148
- V - Problems 149 to 233
- VI - Problems 234 to 342
- VII - Problems 343 to 428
- VIII - Problems 429 to 478
- IX - Problems 479 to Current



# International Space Station - Live!



**International Space Station**

Space Station Overview Images Videos Media Resources


Follow

- Space Station Topics
  - Research and Technology
  - Crews and Expeditions
  - International Cooperation
  - Launches
  - Ground Facilities
  - Space to Ground
- One-Year Crew
- SpaceX
- Orbital
- Commercial Crew Program
- Media Contacts
- Space Station Tour

Related Topics

- Commercial Resupply

**Space Station Updates**



Station Science Ongoing as SpaceX Launch Slips to June 28  
3 days ago  
The three inhabitants of the International Space

**Station Time in Orbit**

6058 : 10 : 19 : 10

**Tweets**

Scott Kelly @StationCDRKelly  
1h  
#MondayMotivation  
Color your world.  
Good morning from @Space\_Station!  
#YearInSpace  
pic.twitter.com/gp5sC  
Retweeted by Intl. Space Station

**Commercial Resupply**

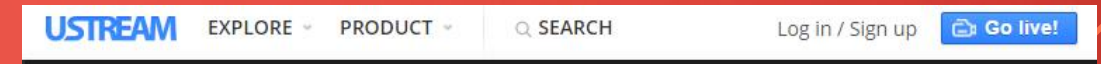

TV Coverage Set for Seventh SpaceX Resupply Mission to Space Station

**Who's on the Space Station Now?**

Expedition 44 & One-Year Crew


Commander Gennady Padalka  
Scott Kelly  
Mikhail Kornienko

**One-Year Mission**



**ISS HD Earth Viewing Experiment**

Follow 85,923 followers



1198 / 51,039,433

Loa Tweet 1151 8+1 22k

**Videos Social Stream**


Say something...

- jojkitten minertyler100: no problem there's more ahead 12 minutes ago
- minertyler100 darn missed the sunrise 18 minutes ago
- minertyler100 WOOOAH 18 minutes ago
- jojkitten love a good sunrise! 27 minutes ago
- orion Pedro1961: you have right

**EFLIGHT ASTRONAUTS INTERNATIONAL SPACE STATION RESEARCH**

ESA > Our Activities > Human Spaceflight > International Space Station

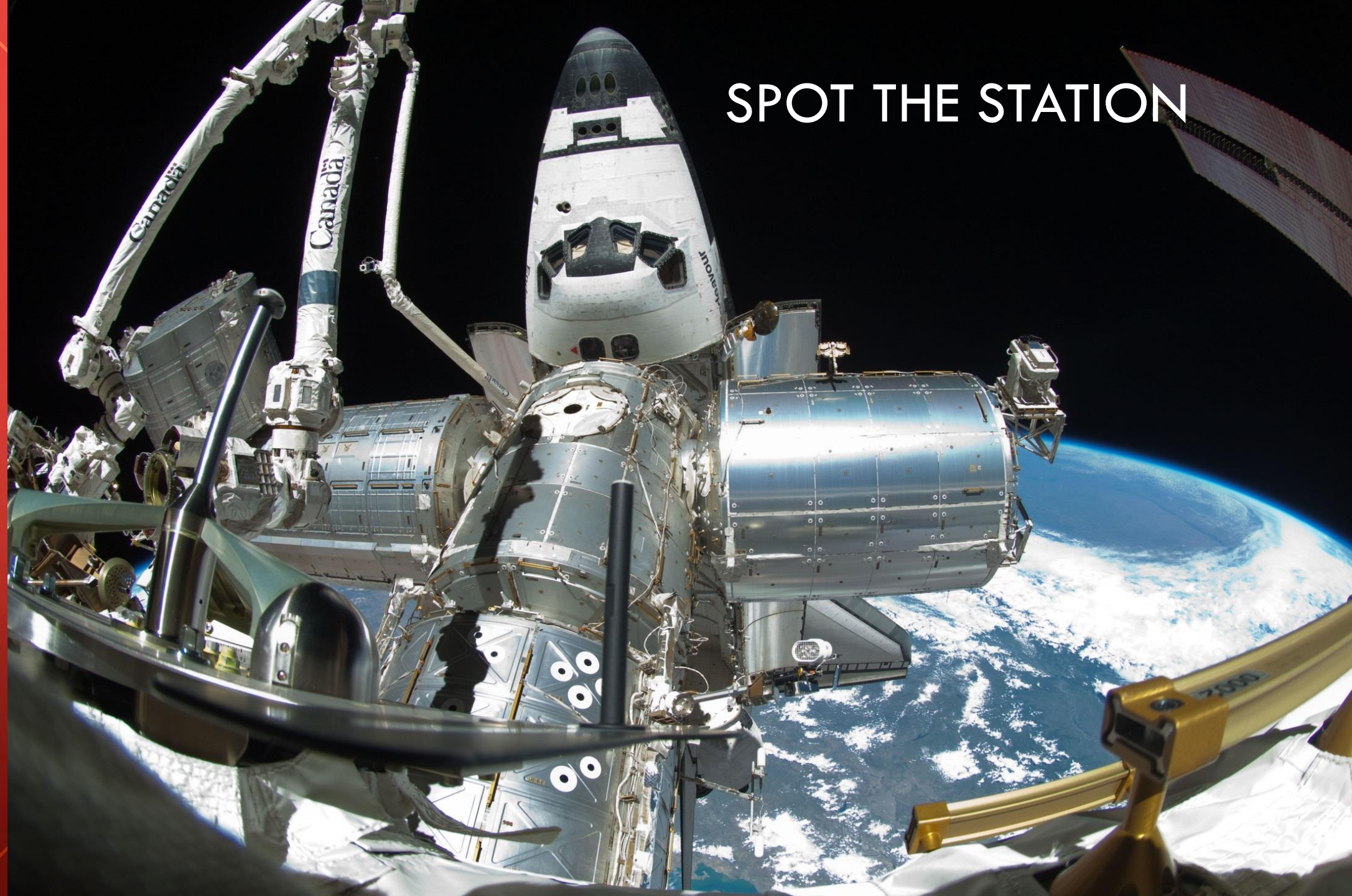
**WHERE IS THE INTERNATIONAL SPACE STATION?**



human spaceflight and operations cesa



# SPOT THE STATION





# Mars Curiosity Rover

**NASA Jet Propulsion Laboratory**  
California Institute of Technology

JPL HOME | EARTH | SOLAR SYSTEM | STARS & GALAXIES | SCIENCE & TECHNOLOGY  
BRING THE UNIVERSE TO YOU: JPL Email News | RSS | Mobile | Video

## Mars Science Laboratory Curiosity Rover

HOME | MISSION | NEWS | MULTIMEDIA | PARTICIPATE! | SEARCH | ALL MARS

FOLLOW YOUR CURIOSITY

Mars Missions to Pause Commanding in June, Due to Sun

Read More >>

More on Solar Conjunction >>

1 / 5

What's New? | Recent Videos | Fun | Ask Dr. C | Curiosity

FAVORITES

Raw Images | SEND A POSTCARD TO CURIOSITY

USA.gov  
Government. Made Easy.



# NASA – Lunar Reconnaissance Orbiter

NASA National Aeronautics and Space Administration  
Goddard Space Flight Center

Flight Projects | Sciences and Exploration

## LUNAR RECONNAISSANCE ORBITER

Home | The LRO Mission | Images and Multimedia | Science and Data | Education and Outreach

### LRO KIDS!

Get animations, streaming video, cartoon characters, audio narration, interactive games!

**Explore! Marvel Moon**  
Discover our scientific, cultural, and personal understanding of Earth's

NASA | Wall-E Learns About Proportions

**LRO CRAFTS**

Moon Concentration  
How Good is Your Memory?

Moon Quiz  
Is it a big hunk of cheese? Take quiz and find out!

Moon Cookies  
Make these tasty cookies (no baking required)

Unscramble  
Take the Challenge! Unscramble Moon-related graphics

Wordsearch  
Help Us Find Our Lost Lunar Words

Moon Calculator  
How much would you weigh you lived on the Moon?

Crossword Puzzles  
Answer clues and solve the puzzle

Ask Dr. Marc  
Dr. Marc answers questions asked by visitors about the orbiter and other topics.

Lunar Cryptograms  
Decode these important

Welcome to the Space Operations Learning Center (SOLC) [Back to Home](#)

SPACE OPERATIONS LEARNING CENTER

### BEGINNER

About Us  
Teacher Info  
Contact Us

Did You Know?  
Light from the Sun reaches Earth in around 8 minutes.

[Take Our Short Survey](#)

**Kids Zone 2 Earth Science** | **Kids Zone 3 Space Station** | **Kids Zone 4 The Moon** | **Kids Zone 5 The Sun** | **Kids Zone 6 Comets, Meteors and Asteroids**

### ADVANCED

[Launch & Deployment](#) | [Space Communication](#) | [Flight Dynamics](#) | [Information Processing](#) | [Mission Operations](#) | [Spacecraft Disposal](#)

Log In | Facebook | YouTube

Goddard Space Flight Center  
Computing Environments and Collaborative Technologies Branch / Code 585

- About Us
- Text-Only Version
- NASA Privacy Policy and Important Notices

SCaN



# Lunar and Planetary Institute

**LUNAR AND PLANETARY INSTITUTE** About Us Science Meetings Education Resources Analysis Groups The Moon Search

## EDUCATION *and* public outreach

TEACHERS AND FACULTY OTHER SCIENCE EDUCATORS PUBLIC ABOUT US

### Teachers and Faculty

LPI K-12 Teacher Workshops, Institutes, and Field Trips  
Exploration of the Moon and Asteroids by Secondary Students  
LPI Summer Intern Program  
Humans in Space Youth Art Competition  
Educator Resources  
Education Newsletter  
LPI Higher-Education Faculty Programs



Find upcoming LPI teacher trainings in Earth and space science topics, and connect to resources from past workshops and field trips.

### NEW AND UPCOMING

 <p><b>Cosmic Explorations: A Speaker Series</b> The Universe is Out to Get Us and What We Can (or Can't) Do About It</p>	 <p><b>Solar System Exploration Pre-Service Teacher Institute</b> June 23-27, 2014 Application deadline: June 2</p>	 <p><b>Mars Through Time Workshop</b> July 8-11, 2014 at the University of New Mexico</p>
--	--	--

# Explore!



# SciGirls Activities



[About](#)
[My Page](#)
[Activities](#)
[Video](#)
[en español](#)
[Groups](#)
[Learn](#)
[Program Resources](#)
[Forum](#)
[Photos](#)

## Activities

SciGirls has made a commitment to providing quality, gender-equitable, inquiry-based STEM activities that are fun for all! Check out the activities under the following topic areas:

- Earth & Space
- Engineering
- Health
- Life & Environmental
- Physics & Chemistry
- Technology

Download the complete guides from Season Three:



**SciGirls Participate: Citizen Science Adventures**  
 Public participation in scientific research, also known as citizen science, engages ordinary people (kids and adults) in the collection of data for use by research scientists. The activities in this book support and prepare your girls for participation in citizen science.

Download the complete guides from Season Two:

Welcome to SciGirls CONNECT

[Sign Up](#) or [Sign In](#)

SciGirls on Facebook

Like

SciGirls on Twitter

Tweets

Follow

PBS LearningMedia @PBSLmMedia 8h  
 What kind of stuff is preserved in a bog? @SciGirls activity/video describes functions of unique wetland environment.

**Activity 4: Star Power**  
**CREATE A STAR SHOW AND LEARN HOW YOU CAN PREVENT LIGHT POLLUTION.**  
 The stars in the night sky have fascinated humans since we first walked the Earth. But today, electric outdoor lighting threatens our ability to see the stars. Light pollution is a real problem, and not just for astronomers. Animals become disoriented from the excess light, and which can disrupt their mating, migration, and predation behaviors. For example, sea turtle hatchlings follow light from the moon to find their way to the ocean, but coastline lighting can lure them toward roads and predators.

**You'll Need:**

- room that can be darkened
- 1 desk lamp with lamp shade removed

**Part 1 (for each small group):**

- shoe box (the steeper, skinnier is best) or rectangular tissue box and tessa paperboard (e.g., cereal box)
- 3"x5" index card
- tape (duct or masking)
- scissors
- pushpin
- LED keychain flashlight
- optional: book that contains drawings of constellations, construction paper, glue, markers, crayons, colored pencils

**Part 2 (for each small group):**

- aluminum foil
- paperboard (e.g., cereal box)
- tape (duct or masking)
- scissors

**2 hours**

**Activity 5: Deep Sea Diver**  
**THINK LIKE AN OCEAN ENGINEER AND DESIGN YOUR OWN MODEL DEEP SEA DIVER.**  
 Buoyancy is the ability to float. When you put an object in water, it pushes water out of the way to make room for itself. An object floats when it weighs less than the water it displaces; it sinks when it weighs more than the water it displaces.

**You'll Need:**

- Items to adjust buoyancy: assorted metal washers, pennies, paper clips, binder rings, Styrofoam packing peanuts, small balloons
- Items for the body of the diver: (Styrofoam ball), plastic beverage drinking straw, craft sticks, wooden skewers, plastic foam, balloon, pipe caps, sponge, craft foam
- Items to hold the diver together: (rubber bands, duct tape, or hot glue gun)
- optional: objects that sink or float in water, metal spoon, Ping Pong balls, sponges, plastic spoon, pieces of fruit

**SMART START:**

Here's one way to start this activity. Get your girls thinking about buoyancy. Show them a group of objects and ask them to predict which will sink and which will float. Then, test their ideas using a plastic container filled with water. Do the girls' predictions match the results?

**Here's how:**

- 1. Explain buoyancy.** Can you think of things that don't float on the water and don't sink to the bottom (scuba diver, submarine, fully inflated beach ball, etc.)? This is called "neutral buoyancy." By buoyant, what it means for an object to be neutrally buoyant might be a situation where neutral buoyancy might be useful (surfing, using a submersible to study underwater creatures, taking measurements at different depths in the ocean)?
- 2. Design and build.** Engineers will often build models before they design full scale. The models help them understand the factors that may be key to the success of the design. Deliver the **SciGirls Challenge:** Build a small diver (no larger than 3 in. by 3 in.) that is neutrally buoyant. In small groups, have girls brainstorm what materials they'd like to use, then design and build their diver.

**45 min**

**Activity 2: Insulation Station**  
**DETERMINE THE BEST INSULATION TO KEEP ICE CUBES FROM MELTING**  
 Insulation in the home is used for different purposes in different parts of the country. In warmer climates, insulation keeps the cool air in and the hot air out; in cooler climates it has the opposite effect. The purpose of insulation is to slow down the conduction of heat from one side of a wall to the other.

**You'll Need:**

- large pitcher
- water
- several insulating materials (styrofoam, paper, bubble wrap, cardboard packing scraps or fabric)
- 2 ice cubes
- 1 91 radiator cylinder (50 ml. or larger)
- plastic wrap
- 2 large paper cups
- scissors
- rubber
- tape (masking or clear)
- paper and pencil
- 1 incandescent light bulb, 120 watt
- 1 work light with clamp (or desk lamp capable of holding a 120 watt bulb)
- 1 stopwatch or clock

**SMART START:**

Prepare one paper cup testing station to display by cutting off the top (approximately 1 cm) materials. Use the plastic wrap to cover and keep the material in place and secure with tape. Place whole cup (testing cup) inside the top of second cup. When the testing station is ready, place ice cubes in this testing station at the control with no insulation.

**1. Question.** Divide the girls into small groups, and introduce the idea of insulation. Have them brainstorm different materials that might provide good insulation for different needs (insulating clothing, food storage, etc.). Deliver the **SciGirls Challenge:** How can you keep ice cubes in a cup from melting?

**2. Design the experiment.** Show your example paper cup testing station and ask your girls to choose one material to test. Explain to the girls

**1 hour**



# NASA Summer of Innovation

## What to Consider When Selecting Content

### Themed Units



### Grades 4-6

#### Life Science

- Body
- Food
- Life Out There?
- Plants
- Survival

#### Physical Science

- Aeronautics
- Force and Motion
- Gravity
- Properties of Matter
- Waves and Optics

### Grades 7-9

#### Earth and Space Science

- Climate and Seasons
- Destination Mars
- Earth Moon Systems

#### Engineering

- Aeronautics
- Challenges
- Design Process

## Themed Camp Guides



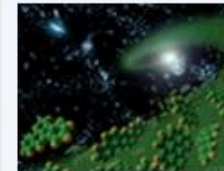
### Aeronautics Camp

This camp centers on the mathematical and design principles of flight design.



### Designing for Space Camp

This camp centers on developing an appropriate learning progression that focuses on the concepts necessary to learn about engineering.



### Life Science Camp

This camp centers on the characteristics of living things, astrobiology, exoplanets and adaptations to the space environment.



# NASA Discovery Program

## Discovery Program

- Home
- Program
- Missions
- News
- Education
- Multimedia
- Small Worlds

Upcoming Mission Events

Dawn Orbit Insertion



ART & THE COSMIC CONNECTION



Mission Milestone Interactive



Discovery & New Frontiers Newsletter Archives



Space Thrills POSTER

HOME

Search

GO



### Discovery & New Frontiers News

**Cosmic Art in Action!**  
New Activity Blends Science and Art, Spurs Creative Thought Processes

**Onward to Ceres**  
Ion Propulsion Powers Dawn Through the Asteroid Belt

**Looking Back at Us**  
MESSENGER Takes Image of the Earth

**MESSENGER to Snap Earth**  
Mercury Orbiter Will Take Images of Earth and Moon

[Read All about It!](#)  
Latest Discovery and New Frontiers Newsletter Now Online



**Space School Musical**  
The solar system comes alive!



**Exo's Discovery**  
Take the controls and explore with Exo's Discovery. Includes captions.

### Space School Musical

Hannah is trying to finish her science project - a model of the solar system. But there's a problem: it's due tomorrow, she's not finished yet, and it's past her bedtime. How will she get it done? With a little help from her friends - the most talented troupe in the Milky Way!

#### SONGS

WATCH VIDEOS & SING ALONG

#### ACTIVITIES

CROSS-CURRICULAR & FUN

#### GALLERY

PHOTOS & VIDEOS

#### PRODUCE

YOUR OWN MUSICAL



Watch ★ Laugh  
★ Learn ★ Perform ★

Join Hannah on a trip through the solar system in this ultra-cool edu-tainment "hip-opera" that is out of this world! Move and groove along with the planets, moons, meteors, comets, asteroids and even some rockin' scientists as they sing, dance and serve up the freshest facts in the galaxy. *Space is definitely one cool place.*

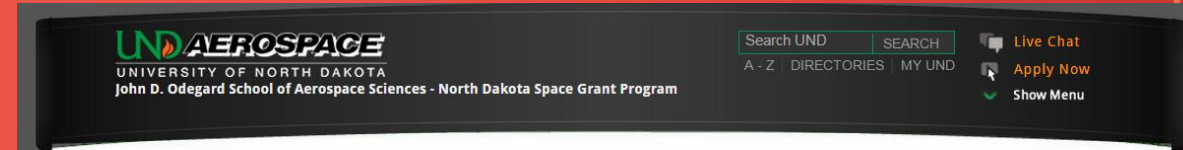




# North Dakota Space Grant Consortium



Facebook page for the North Dakota Space Grant Consortium. The page features a cover image of a satellite in space and the consortium's logo. The navigation bar includes 'Page', 'Messages', 'Notifications', 'Insights', and 'Publishing Tools'. The main content area shows a post from June 18 at 4:11pm in Grand Forks, ND, titled 'Rockets for 200 kids at Grand Forks Public Library! We survived!'. The post includes a collage of photos showing children and adults participating in a rocket launch event. The page also has a 'Promote Your Page' section and an 'ABOUT' section with a description of the consortium.



UND AEROSPACE  
UNIVERSITY OF NORTH DAKOTA  
John D. Odegard School of Aerospace Sciences - North Dakota Space Grant Program

Search UND SEARCH  
A - Z DIRECTORIES MY UND

Live Chat  
Apply Now  
Show Menu



Home

ND Space Grant Program

- UND Aerospace Home
- Home
- About
- Scholarships
- Followings

Welcome to the North Dakota NASA Space Grant Website  
Congratulations MPCG Science Geeks!



MayPort CG team members pictured are: Lance Johnson, Andrew Fugleberg, Marcus Dale, Gracy Leland, Sterling Minkler, and Joshua Weaver.



Twitter profile for NASA ND Space Grant (@NDSGC). The profile picture is the North Dakota Space Grant Consortium logo. The bio reads: 'Part of NASA Space Grant program promoting STEM education and research throughout North Dakota through K-12 and college programs and public outreach efforts.' The location is North Dakota and the website is ndspacegrant.und.edu. The profile shows 64 tweets, 3 photos/videos, 366 following, 123 followers, and 6 favorites. A recent tweet from June 6 says: '2mrw we're launching sensors 2 the #thermosphere! JK-it's a balloon not a spaceship! #spacejoke #cyainthestratosphere'. Below the tweet is a photo of a white balloon with a string of sensors attached, floating in the sky.





# NDSGC K-12 Educator Email Listserv

- Workshop opportunities
- New STEM education resources for the classroom
- NASA student contests/team competitions
- Professional Development opportunities
- Emails ~once a week





# NEAR-SPACE BALLOON COMPETITION

- Annual competition each fall semester
- Open to student teams grades 6-12
- Middle and high school students create their own science/engineering project
- Launches on a 1500-gram balloon, reaching 100,000 feet

