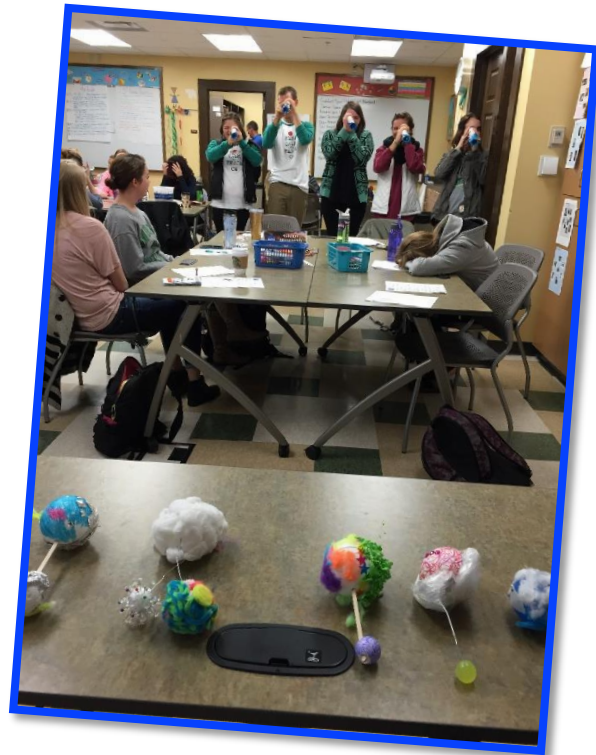
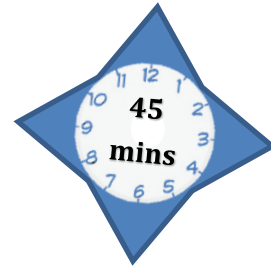


NDSGC Materials List

Strange New Planet

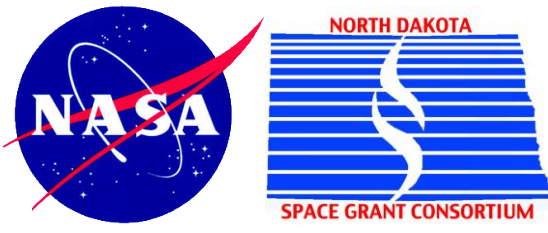
- [Worksheets](#) (students may also use a blank sheet of paper, splitting the page into 4 quadrants)
- Crayons/Markers**
- Astronomer and Satellite kit:**
 - PVC pipe telescopes (or paper towel tubes)
 - Rubber bands
 - Blue plastic wrap (available on Amazon [here](#))
- Planets:**
 - Styrofoam balls
 - Rubber cement
 - Elmer's Glue
 - Double-sided tape
 - Masking Tape
 - Duct Tape
 - Pom-Pom balls
 - Thumbtacks
 - Cotton Balls
 - Sequins
 - Glitter
 - Clay
 - Yarn
 - Pipe Cleaners
 - Markers
 - Crayons
 - Rhinestones
 - Aluminum Foil
 - Paint
 - Popsicle sticks/paper clips (to attach moons)



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NDSGC Materials List

Apollo 13 Mission

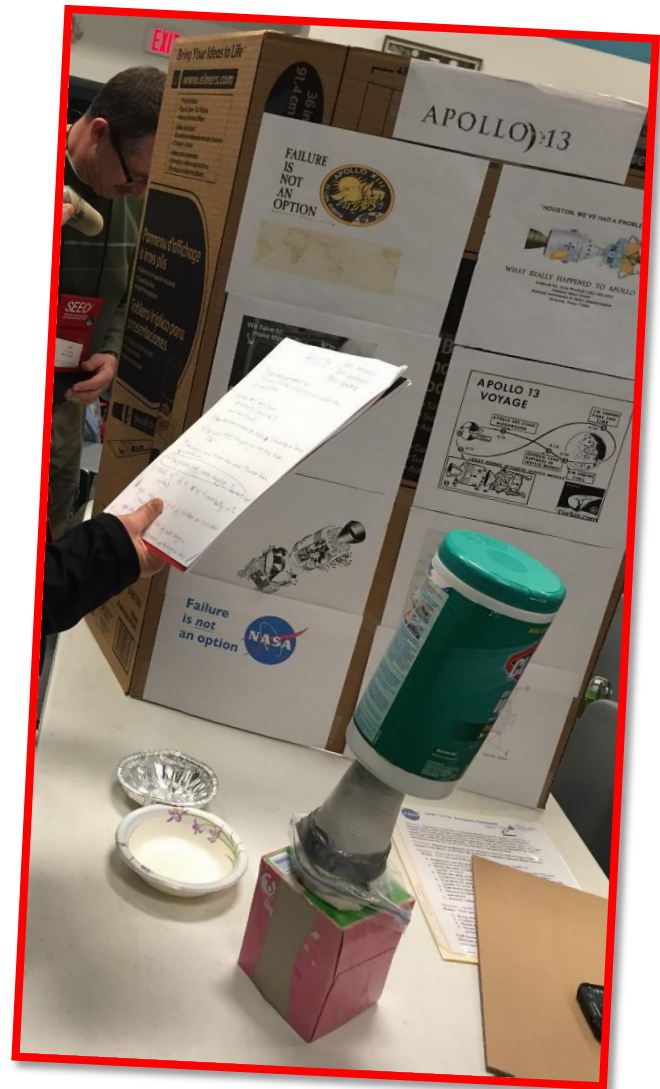


Creating the Simulation Board

- Poster Board (you may decorate each side)
- (or) Walkie-Talkies

Materials for Simulation (per group)

- Two pairs of socks
- Two cylinder canisters
- Two empty cubes (boxes)
- Duct Tape
- Masking Tape
- 2 Foil pie tins
- 2 large baggies
- 2 toilet paper tubes
- 1 PVC pipe for communication



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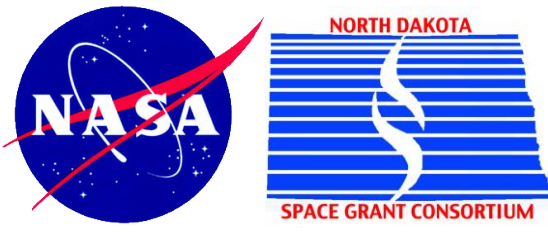
Super Sleuths

- ❑ **Asteroid Samples**
 - ❑ 4-6 film canister containers
 - ❑ 3-5 different types of glitter

- ❑ **Investigation Materials**
 - ❑ Magnifying glasses
 - ❑ Tweezers
 - ❑ 1 pad of sticky notes
 - ❑ Paper and pencil
 - ❑ 1-single hole punch
 - ❑ Transparent tape
 - ❑ 4-6 notecards
 - ❑ 4-6 paper envelopes
 - ❑ Tinfoil
 - ❑ Paper plates

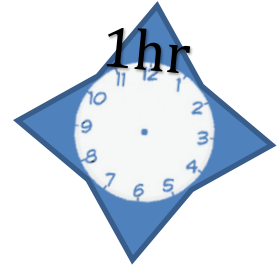
- ❑ **Dr. Mike Gaffey's Meteorites** (be careful!)





NDSGC Materials List

Bristle Bot Rovers



- 1.5V Cell [Batteries](#) (Also available at [Digi-Key](#))
- [Motors](#) (available at Digi-Key)
- [Bristle](#) (head) of a toothbrush (break off or cut off of the handle)

Additions

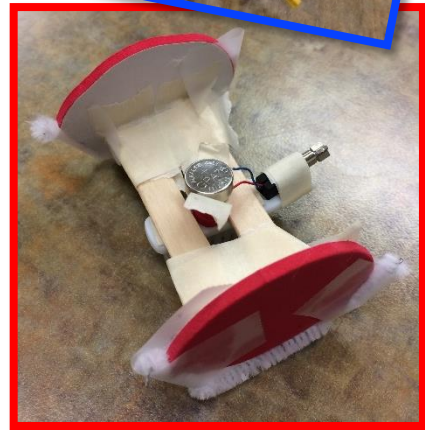
- Rubber bands (different sizes)
- Paperclips
- Foam stickers
- Bendable straws
- Wooden craft sticks (different sizes)
- Binder clips (different sizes)
- Pipe cleaners
- Cotton Balls
- Clothespins (different sizes)
- Legos

Tools

- Duct Tape
- Transparent Tape
- Double Sided Tape
- Masking Tape
- Scissors
- Glue
- Glue dots
- Tweezers
- Pliers

Martian Regolith/Solar Panels

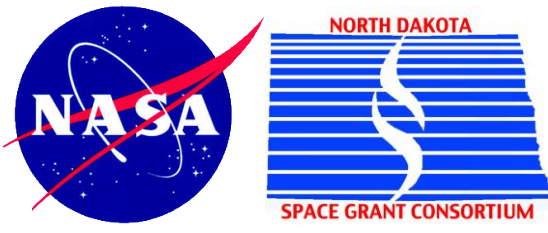
- Glitter
- Tinfoil



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NDSGC Materials List

Rockets to the Rescue



Rocket Body:

- Cardstock Paper with Rocket Print

Payload Materials:

Each team receives:

- 1 ft. of String
- 1 Sheet of Tissue Paper
- 3 Straws
- 3 Pipe Cleaners
- 4 Cotton Balls
- ~10 Rubber Bands (various sizes)
- Purchase raspberries (3 per team)**

Tools:

- Duct Tape
- Masking Tape
- Invisible Tape
- Protractors
- Scissors
- Markers
- Safety Goggles

Rocket Launchers:

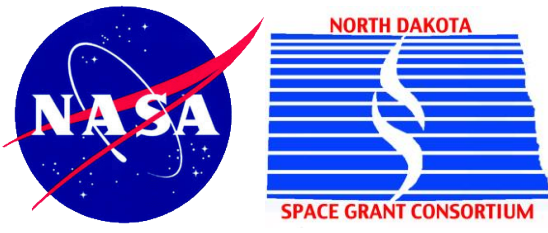
- PVC Pipe Launch Pads
- Hula Hoops
- Tape Measures
- Stompers (or 2 Liter Pop Bottles)



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NDSGC Materials List

Martian Rover Lander

MRL Materials:

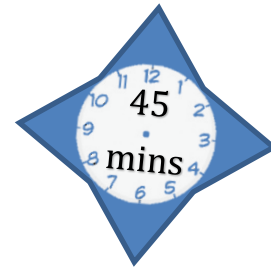
Each team receives:

- 1 ft. of String
- 1 Sheet of Tissue Paper
- 3 Straws
- 1 Paper Cup
- 2 Balloons
- 3 Pipe Cleaners
- 4 Cotton Balls
- 2 Binder Clips
- 2 Foam Stickers
- 2 Rubber Bands (various sizes)
- 1 Section of Netting
- 1 Spoon
- ~4 Paperclips
- Purchase Eggs** (1 egg per team)



Tools:

- Duct Tape
- Masking Tape
- Invisible Tape
- Scissors
- Tin foil (for wrapping eggs)



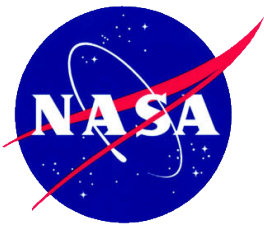
Drop Zone:

- Landing area (stairwell, ladder, something to stand on, etc.)
- Hula Hoops
- Tarp

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NDSGC Materials List

Martian Water

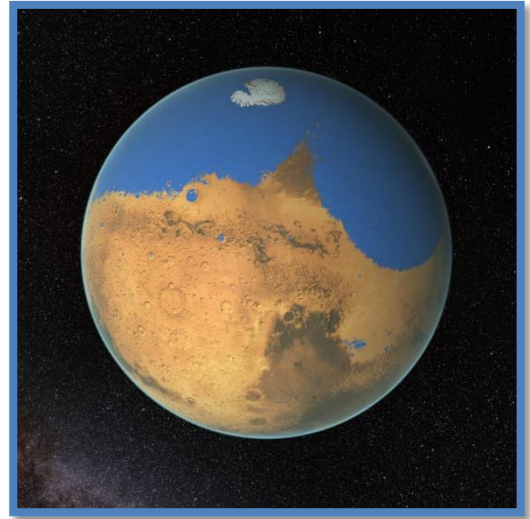


Clear Liquids (to be tested in containers numbered 1-7):

- Water
- White Vinegar
- Hydrogen Peroxide
- Corn Syrup
- Mineral Oil
- Clear Soda
- Alcohol
- Liquid Soap

Testing Materials

- Salt (solubility)
- Pepper (surface tension)
- Sugar (solubility)
- Corn starch (solubility)
- Wax paper (surface tension)
- Aluminum foil (chemical reactions)
- Benedicts solution (chemical reactions)
- pH/litmus paper (acidity)
- Paper clips (surface tension)
- Baking soda (solubility, chemical reactions)
- Toothpicks (density, surface tension)
- Scales (mass)
- Graduated cylinder (volume)



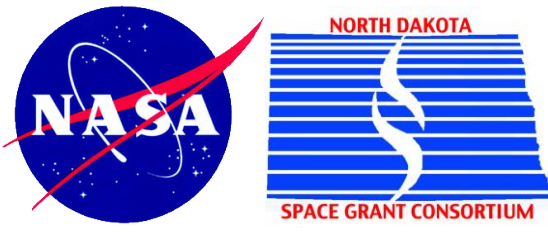
Testing Equipment

- Hot and cold water bath
- Pipettes
- Beakers or glasses
- Plates

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NDSGC Materials List

Washing Water

Up to 7 different materials for filtration layers

- Aquarium gravel
- Play sand (found at nurseries and improvement stores)
- Marbles
- Cotton Balls
- Coffee Filters
- Packing Peanuts
- Limestone (found at nurseries and home improvement stores)
- Activated carbon/activated charcoal (granules, found with aquarium supplies)

Note: Activated charcoal is safe and non-toxic, but be sure to check MSDS (<http://www.msdssearch.com/msdssearch.htm>).



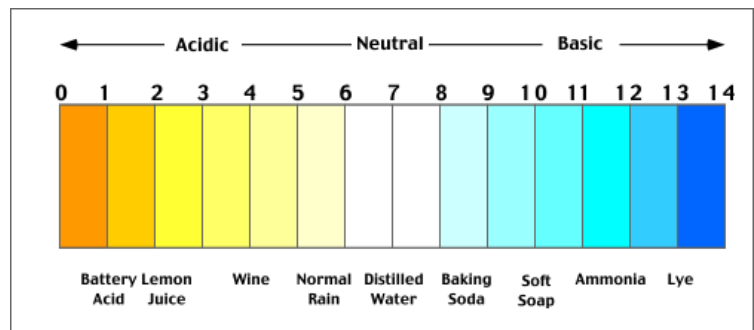
Grey Water

- Tap water
- Coffee grounds
- Italian salad dressing
- Soil
- Vinegar
- Salt
- Powdered Kool-Aid



Possible testing materials

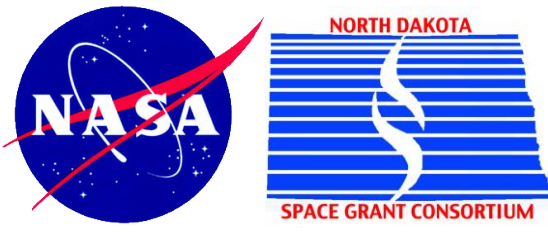
- Alum
- pH paper (litmus paper)
- Plastic cups
- Plastic spoons
- Charcoal
- Soil



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NDSGC Materials List

On Target!

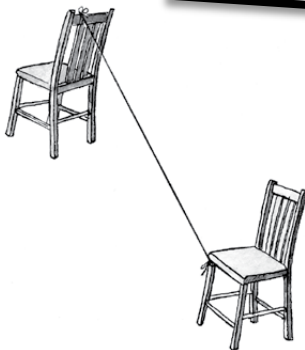
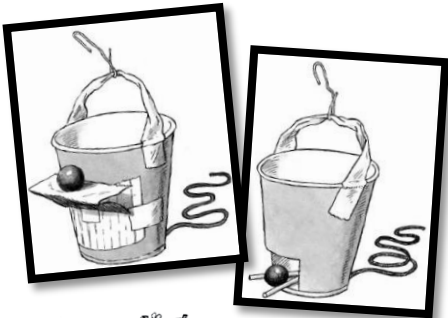


Materials per team:

- 9 feet (3m) of smooth fishing line or kite string
- Index card
- Marble
- Masking tape
- Paper clip
- 1 medium-sized paper cup
- Scissors
- Zip line: two chairs, table legs, pole, etc.*

Creating your target:

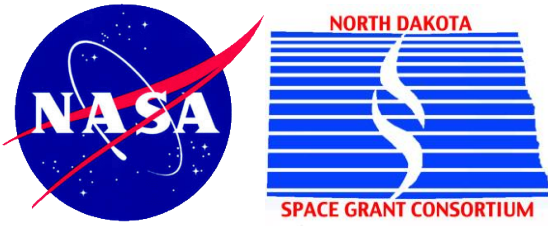
- Pan
- Flour
- Spray chalk



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NDSGC Materials List

UV Astronauts



Space Suit:

- Roll of tinfoil
- Roll of clear plastic wrap
- Apollo Cloths
- Gemini Cloths

Astronaut:

Each student receives:

- Three 4-inch pipe cleaners
- Three colorful beads
- Two clear, UV beads



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