

























































Exhibitor	Activity	Girl Scout Patch	Girl Scout Req.	Boy Scout Badge	Boy Scout Req.	Cub Scout Badge/ Pin/Loop	Cub Scout Req.
<p>National Space Society of North Texas</p> 	<p>ISS (Periodic presentations) Richard W. Cree Main Exhibit Hall</p>	 	<p>3. Track a current space mission</p>		<p>6. Describe the purpose, operation, and components of the International Space Station</p>		
<p>Fort Worth Astronomical Society Texas Astronomical Society</p>  	<p>Solar Telescopes (All day – front of museum)</p>		<p>Complete Activity Worksheet</p>				
<p>Society of Women Engineers</p> 	<p>Electronics (All day) Richard W. Cree Main Exhibit Hall</p>					 	<p>1. Make a simple electric motor that works.</p> <p>1. Talk to an engineer...about the different occupations in engineering. Create a list that tells what they do</p> <p>6. Construct a simple working electrical circuit using a flashlight battery, a switch, and a light.</p>
<p>Monnig Meteorite Gallery</p> 	<p>Crater-making (All day) Richard W. Cree Main Exhibit Hall</p>						















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Dallas Mars Society 	Telerobotic Rover (All day) Richard W. Cree Main Exhibit Hall						
Dallas Personal Robotics Group 	Robotics (All day) Richard W. Cree Main Exhibit Hall				Various		
Perot Museum Portable Planetarium  Sci-Tech Discovery Center Portable Planetarium 	Planetarium Shows (All day) Richard W. Cree Main Exhibit Hall Mezzanine	 	Take a field trip to a planetarium to observe the stars in the night sky. 2. Visit a planetarium.		8a. Visit a planetarium or astronomical observatory. Submit a written report, a scrapbook, or a video presentation afterward to your counselor that includes the following information: 1. Activities occurring there 2. Exhibits and displays you saw 3. Telescopes and other instruments being used 4. Celestial objects you observed	 	7. Visit a planetarium or a local astronomy club. Give a report on what you learned to your den. Visit a planetarium.
Sci-Tech Discovery Center 	Engineering Exercises (All day) Mezzanine				5A. Design and build a catapult that will launch a marshmallow a distance of 4 feet. Then do the following: 1. Keep track of your experimental data for every attempt. Include the angle of launch and the distance projected. 2. Make sure you use the same force every time, perhaps by using a weight to launch the marshmallow. Discuss your design, data, and experiments – both successes and failures– with your counselor.	 	4. Use these simple machines to accomplish tasks: lever, pulley, wheel & axle, wedge, inclined plane, screw. 9. Build a catapult and show how it works.











Exhibitor	Activity	Girl Scout Patch	Girl Scout Req.	Boy Scout Badge	Boy Scout Req.	Cub Scout Badge/ Pin/Loop	Cub Scout Req.
<p>AMSAT Radio Amateur Satellite Corporation</p> 	<p>Satellite Overpass (Periodic – check at display) Richard W. Cree Main Exhibit Hall</p>		<p>Complete Activity Worksheet</p>		<p>4B. Discover the latitude and longitude coordinates of your current position. Then do the following:</p> <ol style="list-style-type: none"> 1. Find out what time a satellite will pass over your area. (A good resource to find the times for satellite passes is the Heavens Above website at www.heavens-above.com .) 2. Watch the satellite using binoculars. Record the time of your viewing, the weather conditions, how long the satellite was visible, and the path of the satellite. Then discuss your viewing with your counselor. 		
<p>Secret Science Society</p> 	<p>Chemistry Activities (All day) Mezzanine</p>						
<p>The Heinlein Prize Trust</p>  <p>HEINLEIN PRIZE TRUST</p>	<p>Spacesuit (All day) Richard W. Cree Main Exhibit Hall</p>		<p>Complete Activity Worksheet</p>				
<p>G’Nosh! Art Studio</p> 	<p>Space Art (Register @ Moon Day; Class 7/27 at G’nosh!) Mezzanine</p>		<p>5. Make Sky Art</p>				

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<p>Frontiers of Flight's Space Theatre (Moonwalk exhibit)</p> 	<p>Moon Rock Richard W. Cree Main Exhibit Hall</p>		<p>Complete Activity Worksheet</p>				
<p>Frontiers of Flight's The Tim Anthony Jackson Collection.</p> 	<p>Toy Story Richard W. Cree Main Exhibit Hall</p>		<p>Complete Activity Worksheet</p>				
<p>Frontiers of Flight's Reading Space Display</p> 	<p>Reading Space William W. Browning Gallery</p>		<p>Complete Activity Worksheet</p>				

Moon Academy	Activity	Girl Scout Patch	Girl Scout Req.	Boy Scout Badge	Boy Scout Req.	Cub Scout Badge/ Pin/Loop	Cub Scout Req.
<p>Dallas Area Rocket Society</p> 	<p>Rocket Building Class (Build @ Moon Day, Launch Aug. 17th at DARS site)</p> <p>Model Shop 1 - 4pm</p>		<p>3. Build a model rocket</p>		<p>3. Build, launch, and recover a model rocket.* Make a second launch to accomplish a specific objective. (Rocket must be built to meet the safety code of the NAR. Identify and explain the following rocket parts.</p> <p>a. Body tube f. Nose cone b. Engine mount g. Payload c. Fins h. Recovery system d. Igniter i. Rocket engine e. Launch lug</p>		<p>8. With adult supervision, build and launch a model rocket. Describe how Newton's third law of motion explains how the rocket is propelled into the sky.</p>
<p>Solar System Ambassador – J. David Hale</p> 	<p>Solar System 101</p> <p>Classroom A 11am, 1pm</p>				<p>5. Do the following:</p> <p>a. List the names of the five most visible planets. Explain which ones can appear in phases similar to lunar phases and which ones cannot, and explain why. b. Using the Internet (with your parent's permission) and other resources, find out when each of the five most visible planets that you identified in requirement 5a will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table. c. Describe the motion of the planets across the sky.</p>	  	<p>10. Make a model or poster of the solar system. Label the planets and the sun.</p> <p>2. Draw a diagram of our solar system – identify the planets and other objects.</p> <p>3. Explain the following terms: planet, solar system, comet, meteor, moon, asteroid.</p> <p>3A. Choose TWO of the following places and calculate how much you would weigh there.</p> <ol style="list-style-type: none"> 1. On the Sun or Moon 2. On Jupiter or Pluto 3. You choose a planet

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<p>Fort Worth Astronomical Society</p> 	<p>Telescopes 101 Classroom A 4pm</p>				<p>3. With the aid of diagrams (or real telescopes if available), do each of the following:</p> <ol style="list-style-type: none"> Explain why binoculars and telescopes are important astronomical tools. Demonstrate/ explain how these tools are used. Describe the similarities and differences of several types of astronomical telescopes, including at least one that observes light beyond the visible part of the spectrum (i.e., radio, X-ray, UV, IR). Explain the purposes of at least three instruments used with astronomical telescopes. Describe the proper care/storage of telescopes and binoculars both at home & in the field. 	 	<ol style="list-style-type: none"> Draw a diagram of a telescope and explain how it works. Set up and demonstrate how to focus a simple telescope or binoculars.
<p>AMSAT Radio Amateur Satellite Corporation</p> 	<p>Orbits 101 Classroom B 2pm</p>			 	<p>4. Discuss and demonstrate each of the following:</p> <ol style="list-style-type: none"> How satellites stay in orbit <p>3B. Discover. Explain to your counselor the difference between escape velocity (not the game), orbital velocity, and terminal velocity. Then answer TWO of the following questions:</p> <ol style="list-style-type: none"> Why are satellites usually launched toward the east, and what is a launch window? What is the average terminal velocity of a skydiver? (What is the fastest you would go if you were to jump out of an airplane?) How fast does a bullet, baseball, airplane, or rocket have to travel in order to escape Earth's gravitational field? (What is Earth's escape velocity?) 		

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<p>Fort Worth Astronomical Society</p>  <p>Texas Astronomical Society</p> 	<p>Constellations 101</p> <p>Classroom A 3pm</p> <p>Classroom B 1pm</p>	 	<p>4. Examine the night sky</p> <p>1. Identify 10 constellations and 8 noticeable stars, 5 of which are Mag. 1 or brighter. Learn how to find the North Star from the Big Dipper, and then how to use the North Star to find north.</p>		<p>4. Do the following:</p> <p>a. Identify in the sky at least 10 constellations, at least 4 of which are in the zodiac.</p> <p>b. Identify at least 8 conspicuous stars, of which 5 are mag. 1 or brighter.</p> <p>c. Make 2 sketches of the Big Dipper. In one sketch, show the Big Dipper's orientation in the early evening sky. In the other, show its position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made.</p> <p>d. Explain what we see when we look at the Milky Way.</p>	 	<p>2. Locate and identify five constellations</p> <p>Identify 2 constellations and the North Star in the night sky.</p>
<p>Brookhaven College – Chaz Hafey</p> 	<p>Moon Rock Disks</p> <p>Classroom B 11am</p>		<p>Complete Activity Worksheet</p>				
<p>Solar System Ambassador – Kelley Miller</p> 	<p>Moon 101</p> <p>Classroom A 2pm</p>		<p>Complete Activity Worksheet</p>		<p>6. Do the following:</p> <p>a) Sketch the face of the Moon and indicate at least five seas and five craters. Label these landmarks.</p> <p>c) List the factors that keep the Moon in orbit around Earth.</p> <p>d) With the aid of diagrams, explain the relative positions of the Sun, Earth, and the Moon at the times of lunar and solar eclipses, and at the times of new, first-quarter, full, and last-quarter phases of the Moon.</p>		
<p>Society of Women Engineers</p> 	<p>X-Planes</p> <p>Classroom B 4pm</p>						

Lunar University	Activity	Girl Scout Patch	Girl Scout Req.	Boy Scout Badge	Boy Scout Req.	Cub Scout Badge/ Pin/Loop	Cub Scout Req.
UT Dallas Geosciences – Dr. James Carter 	Moon Dust Simulant Conference A 3pm		Complete Activity Worksheet				
Brookhaven College – Chaz Hafey 	Moon Rock Disks Conference A 2pm		Complete Activity Worksheet				
Hamilton Auditorium							
“Exploration Uplink” 	Robotics Hamilton Family Auditorium 1pm, 4pm						
LADEE Meteoroid Impact Observation Program 	Science Hamilton Family Auditorium 2pm						
Lunar Mapping and Modeling Project 	Math Hamilton Family Auditorium 3pm						

PLEASE NOTE: Exhibits and activities may not exactly or entirely cover badge/patch requirements. Documentation is the responsibility of the Scout and their Troop leaders. Best efforts have been made to align Moon Day exhibitor and lecture general-public content to specific badge/patch requirements, however no warranties are expressed or implied as to their sufficiency in that regard.

Badges, Patches, Loops & Pins

Girl Scouts



Night Owl



Night Sky



GSNETX STEM Program



Special Moon Day STEM Patch

Cub Scouts



Science pin



Astronomy pin



Astronomy belt loop



Bear Cub Scout Space Electives

Webelos



Engineer



Scientist

Boy Scouts



Astronomy



Space Exploration



Robotics



Boy Scout NOVA Stem Program