OMSI ACTIVE LEARNING LOG: SPACE: A Journey to Our Future
Name:__________________________

Find the Gemini capsule and sit inside. What did it feel like? Do you think early astronauts were big and tall? Why or why not?
Answers will vary.
Interesting facts to share with students:
Yuri Gagarin, Russian cosmonaut and the first human in space, was 5’ 2”.
Today astronauts must be between 5’ 1” and 6’ 3”
(Information not presented in exhibit.)

How is a lunar rover tire different from an automobile tire? Why do you think it is different?
Found on “Lunar Rover Tire” copy panel next to the lunar rover tire.
The tire has an aluminum hub and aluminum wire mesh with titanium alloy treads for traction.
Answers will vary for differences.
The truth is the lunar rover could only carry so much weight, so the tires needed to be light. Air filled or rubber tires were too heavy!

Find a staff person at the Moon Rock.
How are moon rocks like Earth rocks? How are they different? Why is a moon rock different than a moon meteorite if they both came from the moon?
Information will vary depending on what staff person tells the students.
The moon rocks have similar materials to Earth’s rocks but have less iron and volatile elements needed to create an atmosphere and water. Moon and Earth rocks are made out of the same basic materials. Most of the moon and Earth are basalt.
A meteorite is a rock that has fallen to Earth from space. The moon meteorite is a moon rock that was launched into space due to a meteorite collision on the moon. Eventually that moon rock fell into Earth’s atmosphere and survived entry into Earth’s atmosphere and impact.

What is the Constellation Project? If you were in charge of NASA, where would your next destination be? Why?
Found on the copy panel “Ares: Back to The Moon” by the Ares I model.
The Constellation Project represents NASA’s plans for putting Americans back in to space, to the moon, and eventually the farther reaches of our solar system.
Answers will vary for destination wishes.
Play the “Packing for the Trip” game. What would you bring on a trip to space? What would you miss the most?
Answers will vary.
Examples of items to bring include: fuel, oxygen, food, water, tools, batteries, science equipment, first aid kit, space suits, treadmill, rover, DVD player, and game boy (iPod, etc., entertainment).

Visit the Lunar Habitat and team up with a classmate. Pretend you are both living in the lunar habitat together for six months. What would it be like to work and live on another moon or planet? How would you deal with living and working with others in a confined space for months or years?
Answers will vary.

Draw a picture of the Mars Rover. Label at least three of its tools.
Alpha Particle X-Ray Spectrometer (APXS)
Magnets
Microscopic Imager (MI)
Panoramic Cameras (Pancam)
Miniature Thermal Emission Spectrometer (Mini-Tess)
Rock Abrasion Tool (RAT)
Mossbauer Spectrometer (MB)

If you were designing the next Mars Rover, what tools would you add?
Answers will vary

What would happen to your body if you were in space for months?
How would you exercise?
Found on the copy panel “Space Bodies” by the Spacebike.
Your muscles shrink, bones lose calcium and weaken, backbone disks swell, legs shrink, head swells, and heart becomes smaller.
Astronauts use a treadmill, stationary bikes, and a spinning capsule that mimics Earth’s gravity to keep in shape.

What is your weight on:
Earth: Found on scales in “Your Weight on...” exhibit. Answers will vary.
Moon: About 1/6 of Earth weight
Mars: About 1/3 of Earth weight
Why do you weigh more on Earth than on the moon or Mars?
Information found at the moon, Earth, and Mars scales.
Weight measures the force of attraction between two bodies. Since the Earth is more massive than the moon or Mars, the force of attraction (and the weight) is also greater. Earth has three times the gravitational pull of Mars and six times that of the moon.

Where are some of the craziest places life on Earth has been found? What does NASA look for to find life on other planets and moons?
Found on “Extreme Life” copy panel close to exit of exhibit.
Life has been found: deep underground in hot springs, at the bottom of the ocean in volcanic vents, and far below solid Antarctic ice.
NASA looks for water and signs of water, like hydrogen and terrain that looks like river beds where water flowed. (Some of this information can also be found on the “Fire and Ice” copy panel next to the Design a Spaceship computer.)

Draw a picture of what you think that life could look like.
Answers will vary.