Activity 24: Stuck On The Moon

You and your group must imagine that you are stuck on the moon. You are to survive on there while at the same time you must aim to be rescued. Below there is a list of things that you have. List them in order of importance and give reasons as to why they are important or not important.

Think carefully about the conditions on the moon.

- Box of matches
- Food concentrate
- Fifteen metres of nylon rope
- Parachute Silk
- Solar powered portable heating unit
- Two .45 calibre pistols
- One case of dehydrated milk
- Two 45kg tanks of oxygen
- Star map
- Self inflating life raft with CO\textsubscript{2} bottle
- Magnetic Compass
- Twenty litres of water
- Signal flares
- First-aid kit containing injection needles for vitamins, medicines, etc.
- Solar-powered FM receiver-transmitter

A piece of Information form Encarta

Moon-name given to the natural satellite of the earth, and sometimes applied to the satellites of the other planets in the solar system. The diameter of the moon is about 3480 km, or about one-fourth that of earth, and the moon’s volume is about one-fiftieth that of the earth. The mass of the earth is 81 times greater than the mass of the moon. Thus the average density of the moon is only three-fifths, and the pull of gravity at the lunar surface only one-sixth, that of the earth. The moon has no free water and essentially no atmosphere, no weather exists to change its surface. Features discernible on the surface of the moon include craters, mountain ranges, plains or maria, faults, domes, rilles, and rays. The highest mountains, in the Leibnitz and Doerfel ranges near the south pole of the moon, have peaks up to 6100 m (comparable to the Himalayas). Craters as small as 1.6 km.
Picnic on the Moon
What things would you pack for a picnic outside on the Moon? Think about how the moon is different from the Earth.

Activity
You can choose from these items in planning your picnic. Place the items on one of the two lists below.

- baseball and bat
- drums
- fishing pole
- insect repellent
- playground slide
- shovel
- bathing suit
- yo-yo
- fan
- pitcher of lemonade
- playground swings
- slingshot
- bicycle pump
- telescope
- flashlight
- kite
- umbrella
- sunglasses

Things I Could Use on the Moon

____________________  ______________________
____________________  ______________________
____________________  ______________________
____________________  ______________________

Things I Could Not Use on the Moon

____________________  ______________________
____________________  ______________________
____________________  ______________________
____________________  ______________________

Think about what you would like to do outside on the Moon. Make a third list “Other Things I Would Like to have on a Picnic” Describe what you would do with each of these items.

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<tr>
<th>Item</th>
<th>What I Would Do With It</th>
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Lunar Olympics
The Moon has a weaker gravity pull on its surface than the Earth does. Discover how your Emi-trained muscles will make you a super star athlete.

**Materials:** measuring tape, classroom books

**Activity**
How high could you jump?

Stand next to a wall and reach as high as you can. With a piece of tape, mark how high you can reach. Measure this height with a tape measure. This is your reach. Then jump and mark how much higher your hand can touch with another piece of tape. Measure the difference in heights between your jumping height and your reach. Fill in the table below.

On Earth:

Reach: __________________________  Jumping height: __________________________

Jumping height - reach = __________________________

Take this number and multiply it by 6. Add this number to your reach. This will be how high you can jump on the moon. Fill in the table below.

On the Moon:

Reach (same as on Earth): __________________________

Jumping height - Reach (6 times the Earth value): __________________________

Jumping height (value above + reach): __________________________

Could you dunk a basketball on the moon? __________________________

**How much can you lift?**

Sit in a chair with your back against the back of the chair and your hands in your lap. Ask a friend to place three textbooks in your hands. Try to lift these books about 20 centimetres. If you can lift them, add more books, one at a time.

What is the greatest number of books that your hands can lift? __________________________

On the Moon you could like six times as many books.

How many books could you lift on the Moon? __________________________

Imagine how strong you would feel if you could lift that many books with just your hands.

What sports would be the most fun on the moon?

When would you have to change the rules?

What would happen if you were born on the moon with only the muscle strength you need for the moon and decided to go to Earth?