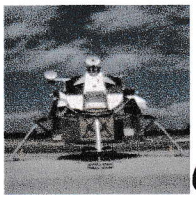

CRASH LANDING!!!!

In today's activity we want you to start thinking about the Moon as a real place where people live just like we do on Earth. There is no right answer to the challenge, although some answers are better than others. The activity helps you to think about the environment on the Moon so you can determine what you would need for survival on the lunar surface.

Imagine a time in the future when there are lunar bases. People are living and working on Moon, exploring and learning about it, and doing other kinds of research that can't be done on Earth. On a routine journey from Earth to a lunar base, there is an accident. Something has gone wrong and you crash land on the Moon's surface, sixty miles from the nearest base. It is daylight on the Moon and will be for the next few days. In the Moon's lower gravity, that is not too far to walk, but you are limited in what you can carry. What should you take with you?

Look at the list of supplies you have. You will spend a few minutes working alone, and then a few minutes working as a group. Finally each group will share their choices with the class. Then we'll read what NASA suggests as the most important.

- Sort them into 2 groups: items you would take with you and items you would leave.
- Put the ones you would take with you in order of usefulness, from essential-for-survival to not-so-important. Number the most important item 1 and work down from there.

YOU HAVE THE FOLLOWING 12 ITEMS TO CHOOSE FROM:

1. **Box of Matches** - These might be useful to make a signal fire or camp fire in case of a crash on Earth, but would they be useful on the Moon?

2. **Two 100 Pound Tanks of Oxygen**- These tanks would weigh 100 pounds on Earth, but in the Moon's lighter gravity, they would weigh less than 17 pounds each.

3. **Magnetic Compass**- True North on Earth varies from magnetic North by as much as 23 degrees. How well could you navigate on the Moon with this?

4. **Food Concentrate**- Astronaut food is notoriously bad, but light weight and compact. Just add water and that bowl of mush could taste like a pot roast.

5. **Self-Igniting Signal Flare**- This flare could work underwater or in the vacuum of space.

6. **Solar-Powered FM Transceiver**- This radio transmitter and receiver requires only sunlight to function properly.

7. **50 Feet of Nylon Rope**- Nylon rope is tough and light weight.

8. **Moon Constellation Map**- Navigating by the stars on the Moon would be very much the same as navigating by the stars on Earth.

9. **5 Gallons of Water**- Water is essential to life and to reconstituting dehydrated food

10. **Portable Heating Unit** - This unit is designed to work on its own batteries with no external power source.

11. **First Aid Kit with Hypodermic Needles**- Hypodermic needles fit special openings in the standard issue space suit.

12. **Self-inflating Life Raft that uses a Carbon Dioxide Canister**- This raft is standard issue on shuttles that land on Earth,in case of an emergency water landing.

PART 1:

Items to keep	Items to leave

Now look at all the items you chose to keep and list them in order from the most important to the least important. (If you kept more than 8, them add more numbers.)

1.

2.

3.

4.

5.

6.

7.

8.

PART 2:

Now share your individual answers with your family (or anyone you want to) and take a few minutes to agree on a list as a group. Record your list below and email it back to me with the names of the people you worked with. Once I get everyone's responses, I'll email what NASA astronauts said was their best list.

1.

2.

3.

4.

5.

6.

7.

8.