ISMHS EARLY CHILDHOOD PROGRAMS

Building a Lunar Lander

How can astronauts land safely on the Moon?

MATERIALS NEEDED

Astronauts:

- Marshmallows, ping pong balls, toy figures

Parachute

- Coffee filter, paper, aluminum foil, shrink wrap

Body of the Lander:

- Small fruit plastic container, cup, paper plate

Miscellaneous materials:

- Pipe cleaners, pencils, tape, string, wire, glue, paper, etc.

INSTRUCTIONS

Step 1: Inspiration

Find a space themed book to read like *Here We Are* by Oliver Jeffers. After reading, ask your children what they know about space. How big is it? What's in space? What do they know about the Moon? How did we land on the Moon?

Step 2: Find a Problem to Solve

How can we get our astronauts (marshmallows, ping pong balls, tiny action figures, etc.) to land safely on the Moon without falling out? Remember, our Lunar Lander is coming from SPACE.

Step 3: Plan & Sketch

Have the children plan and draw out their Lunar Lander design of on a sheet of paper. Gather materials and have the kids explore. The supply list for this activity is limitless. You will need to think of three different categories:

1. Astronauts (marshmallows, ping pong balls—even toy action figures could work)
2. The body of the lander (any sort of container)
3. A parachute (coffee filters, paper, etc.) *The trick is thinking of how to ATTACH the parachute to the lander without weighing it

Step 4: Create & Test

Now, it's time to build your lander module! Think about what you want to achieve: you want your lander to be able to land on the ground safely.

Step 5: Improve

Did their astronauts land safely? Ask them what worked and what didn't—what would they change? What else would they try? What was their favorite material and why? Continue the testing after improving.

CONTINUE EXPLORING

Was your first run successful? How many test runs do you think NASA Engineers did before they sent someone to the Moon? Check out real images of the NASA Lunar Lander—is it similar or different to your designs?