

Dear Families,

Get ready for an Out-of-the-World Adventure!

Your learner will be roleplaying as a space scientist! Space scientists- like astronauts, rocket engineers, physicists, and more -must use their science and engineering skills to observe distant objects in space, design tools to travel beyond our atmosphere, and contemplate the cosmos.



To engage with your learners and learn about their day, you can ask them the following questions after each *Blasting Off* activity:

- *What did you learn about space today?*
 - *Did you talk about objects in space like stars and planets?*
 - *Did you talk about how space scientists study the universe?*
- *Did you talk about any of the tools scientists use to study space?*
 - *Does that tool help them learn about space from the ground?*
 - *Does the tool need to go into space to be helpful?*
- *Did you work with anyone else today?*
 - *What did you and your fellow scientists discover?*
- *How were you like a scientist today?*
- *What did you and your fellow scientists discover?*
 - *Did you make observations?*
 - *Did you ask questions and make predictions?*
 - *Did you test an idea?*
 - *Did you learn something new?*

Blasting Off @ Home Activities

Attached are activities related to *Blasting Off* that are easy to do at home! Try out any of these activities with your learners to engage them in further scientific thinking!

Moon Walk!

Materials: 2 large car wash sponges, masking tape

1. Think about what it might be like to walk around in the low gravity of our moon.

- *What is it like to walk on the moon?*
- *How might it be different from walking on Earth? How do you think it is the same?*
- *Have you seen videos of astronauts moving on the moon?*
- *What do you notice about how the astronauts are moving?*
- *How does it look different from people walking on earth?*
- *Have you ever been in an inflatable moon bounce house at a party or fair? What was it like?*
- *How was jumping in the moon bounce like how the astronauts in the video moved?*

2. Assist your learner in securing a sponge to the bottom of each foot (keep your shoes on!), using masking tape to hold it in place.

3. Try walking in your “moon boots” and move like astronauts on the moon.

- *How does it feel different from walking in normal shoes?*

4. Try the following challenges in your moon boots, such as:

- How high can you jump?
- How far can you leap in a single step?
- Get across the room in the smallest number of leaps possible
- Moon rock obstacle course--Place books or other small objects on the floor as “moon rocks” to navigate around
- Moonwalk relay--collect a “rock sample” by running to the other end of the room, picking up a “sample” (ball or other small object), returning to the “lunar lander”

Build a Rover

Materials: paper and pencil, any craft supplies, recycled materials

- **We've made it to the moon and are ready to explore!**
 - *How much can we see by walking?*
 - *What if we want to see more of the moon than that? What kind of vehicle might we need to explore another planet?*
- **Think about vehicles like rovers in space.**
 - *What tasks does the rover need to do?*
 - *What parts or features help it accomplish those tasks?*
 - *What might be different about doing those tasks on the moon instead of on Earth? What might be some challenges of that environment?*
- **Talk about what features your rover will need to have. Sketch out your ideas on paper first!**
 - *What kind of environment will your rover be moving around in?*
 - *Will it carry people or not?*
 - *What tools, instruments, or detectors might it need to have?*
 - *How will it get power to move?*
- **Use craft supplies and recycled materials to make a model of your rover. Think and talk about the parts your rover needs and how the materials represent them.**
 - *What part of your rover will that be? What does that part do?*
 - *What other parts are you going to add to your rover?*
 - *What task does each part do, and why is it important for your rover?*
 - *What challenges did you have making your model? How did you solve the problems?*