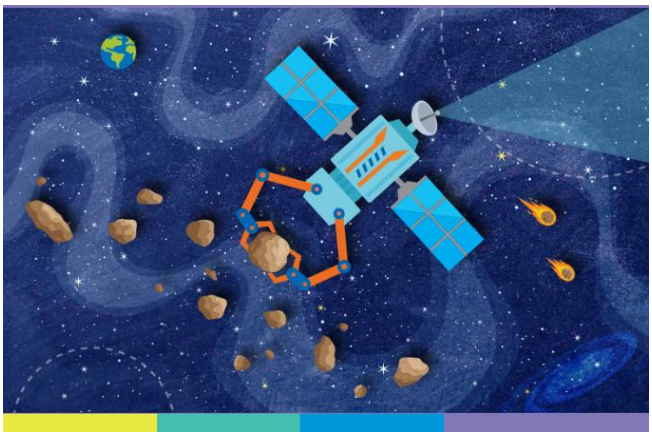
Dear Families,

Get ready for a super space 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 *Science of Space* 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?*

Science of Space @ Home Activities

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

Rocket Launch

Materials: straw with a bendable neck, 4"x6" piece of paper, pencil, masking tape

- **Think about what it might be like to be a rocket engineer.**
  - *What does the name rocket engineer make you think of?*
  - *What have you seen or heard about rockets? What do they do? What parts do they have?*
  - *What things do you think a rocket engineer might do as part of their job?*
  - *Besides the engine and fuel, what do you think might be important for helping a rocket to fly a long distance?*
- **Real rockets are big and expensive to build, so your young rocket engineer will build a model rocket to test. Assist your learner in building a model rocket.**
  - Roll the short side of the paper around a pencil to make a tube
  - Tape the end of the paper down to hold it shut
  - Slide the tube off the pencil
  - Pinch one end of the tube into a point and tape it closed
- **Set a safe launch zone and practice launching your model rockets.**
  - Put the paper rocket on the end of the straw
  - Hold the straw parallel to the floor (and pointing away from any other scientists!)
  - Blow into the straw to launch the rocket.
- **Help your learner to test their rocket by asking the following questions:**
  - *What did you notice about how the rocket flew? How far did it go?*
  - *What do you think we could change to help it fly further?*
  - *How does changing the angle of the launch change how your model flies?* (Use the bend in the straw to change the angle!)

Space Glove Challenges

Materials: *oven mitts, large rubber or gardening gloves, tongs or large tweezers, a puzzle or building toy (blocks, LEGO, etc.), 10-12 plastic cups*

1. **Talk to your learner about what it might feel like to wear a spacesuit.**
    - *What do you think it's like to wear a spacesuit?*
    - *What types of things would you need to do in space while wearing the suit?*
    - *How do you think it would feel to walk? Jump?*
    - *How do you think it would feel to hold things with a spacesuit on?*
2. **Explain that thick, bulky gloves are an important part of an astronaut's suit.**
    - *Have you worn gloves before? Why did you wear them?*
    - *What sorts of things have you been able to do (or not do!) with gloves on?*
    - *How do you think the gloves you have worn compare to the gloves an astronaut needs to wear?*
3. **Allow your learner to try to complete a puzzle, build with building toys, or stack cups using the different gloves and implements provided.**
    - *What was it like to work with the gloves? With the mitts and tongs?*
    - *Which tasks were easier or harder to do?*
    - *How do you think this activity was like actually working in space, and how was it different?*
    - *What challenges do you think astronauts have working in space?*
    - *What might astronauts have to fix while they are in space?*
    - *How do you think tools can help astronauts do their work?*