

“In Outer Space”

Module 7, Astronaut Glove Box

The logo for "EXPLORE IT" is enclosed in a black rectangular border. The word "EXPLORE" is in a bold, sans-serif font, with the letter "O" replaced by a green circle. The word "IT" is in a smaller, regular sans-serif font, with the letter "i" having a purple dot.

Prompt:

When astronauts and scientists are studying rocks and soil from the moon they use a special sealed box with gloves attached to keep them safe. They keep these rocks and soil in the box while they measure them, perform tests, and make observations.

In this activity, you will pretend that you are training to become an astronaut. Part of your training is learning how to use tools and move objects around inside a box while wearing gloves. First, you and your grown up will make your own glove box. Then, you will begin training by trying simple challenges.

Materials:

- Cardboard Box
- Box cutter, utility knife, or scissors (for adults only)
- [Kid sized gloves](#) (can use rubber gloves, gardening gloves, or winter gloves)
- Plastic wrap (optional)
- Plain paper
- Crayons, markers, or colored pencils

Some suggested tools:

- [Magnifying glass](#)
- [Eye dropper](#) or [pipette](#) with a small cup of water
- Tongs
- Ruler
- Spoon

Some suggested items for inside the box:

- Natural materials (rocks, leaves, sticks, flowers)
- Small toys (figurines, toy cars, small balls)
- Building blocks
- Small plastic containers for sorting

Instructions:

1. Read the prompt with your child.
2. Using your box cutter or other tool, cut the top off the cardboard box. Cut out two holes on the side of the box, big enough for your child to fit their hands through. *Note: this should be done by adults only!*



3. Put the tools and materials your child will be using inside the box.
4. Optional step: Cover the top of the box with plastic wrap.



5. Invite your child to pretend they are an astronaut, put on their gloves, and reach into the box through the holes. Encourage them to try out using the tools inside. Give them some simple challenges. Here are some suggestions:
 - Pick up all the objects and move them from one side of the box to other
 - Pass something from hand to another
 - Sort objects by size, shape, or color
 - Stack objects on top of one another
 - Measure an object
 - Use tongs or a spoon to pick something up
 - Use eye droppers or pipette to move water from one container to another
6. Encourage your child to pretend that all the items in the box came from a different planet. What is that other planet like? Encourage them to draw a picture of the planet their objects came from.

Resources:

1. Check out these pictures from NASA of glove boxes in action.



[Handling Apollo Samples Inside a Glove Box](#)



[Testing Apollo Samples in a Glove Box](#)

2. Need inspiration? Take a look at the glove box made by your *Explore It* guides.



Extensions:

If your child needs more challenges to go along with this activity:

- Take out items from the box and put in new ones.
- Invite your child to make up challenges for you to do.
- Cover the top of the box with a towel so your child can't see inside. Have them reach into the box (without gloves on). Challenge them to guess what the objects inside are just by touching them.

Together with your child, go to the "In Outer Space" topic on Flipgrid and share their experience with their glove box.

