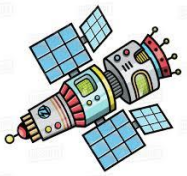
Outer Space Pretend Play



Let your imagination blast off into outer space!

Astronauts and scientists study the Earth from outer space. They take pictures of Earth's surface and measure cloud cover, sea levels, glacier movements, and more.

Instructions:

Step 1: Work together with your child(ren) to create an area for your space station. Use cardboard boxes or pieces, aluminum foil, recycled plastic bottles, yarn, ribbons, bottlecaps, fabric scraps, or any other materials you have available. It can be as small or as large as you want it to be.

Step 2: Pretend to be an astronaut on your space station. Let your child lead with ideas for imaginative play!

Left: www.youclevermonkey.com/2016/01/space-pretend-play.html Center and right: pocketofpreschool.com/space-station-dramatic-play/

Suggestions and Prompts:

- What is daily life like on your space station? Where and how do the astronauts eat, sleep, and exercise?
- What sort of research are you doing on your space station? See the *Studying Earth From Above* sheet for ideas.
- How will you control your space station's orbit around Earth? Create a control panel so you can "pilot" the station!
- How will you get more supplies? Build a rocket to launch a space shuttle to the station!
- Use a phone or digital camera to take pictures from your space station. Astronauts on the International Space Station take pictures of the Earth's surface every day!

Studying Earth From Above

NASA is best known for exploring outer space, but it also conducts many missions to investigate Earth from above. Scientists use the information they collect to better understand our changing planet.

Astronauts on the **International Space Station** use cameras and scientific instruments to take photos and collect data about Earth. They track and measure cloud cover, ocean currents, air pollution, hurricanes, glacier movements, floods, forest fires, wind speed, urban lighting, and more.

Right: Astronaut Christina Koch performs an experiment. Image: NASA.

International Space Station. Image: NASA.

The International Space Station orbits about 250 miles (400 km) above the Earth. Its orbit takes it over parts of the planet at different times, allowing it to collect images from many areas at different times of day.

Explore the International Space Station in this video: www.youtube.com/watch?v=SOCixRhRGDw

Scientists also use **satellites** to study Earth. A satellite is a machine launched into space to orbit Earth (or another object in space). There are many satellites looking down on Earth. They fly high in the sky, so they can see large areas of Earth at one time. They take pictures to send back to Earth.

Global Precipitation Measurement mission, NASA/Goddard.

Scientists learn about changing coastlines, ocean currents, air pollution, and more from the images the satellites send back. For example, *the Global Precipitation Measurement* mission uses satellites to observe where and how much rain and snow fall onto Earth. This helps scientists to understand the relationship between rain and snow, weather, and climate.

Discover more about satellites: www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-a-satellite-k4.html