

Emblem of the Month



SPACE EXPLORATION

**MOONBEAMS: OUT OF THIS WORLD/ SUNBEAMS: SPACE TRAVEL/
EXPLORERS: SPACE EXPLORATION/ RANGERS: SPACE EXPLORATION
GIRL GUARDS: SPACE**

This packet belongs to:

Getting Started



Complete this packet to earn your emblem.

Moonbeams (PreK & Kindergarten) - Complete Activities 1-3

Sunbeams & Explorers (grades 1-5) - Complete Activities 1-5

Girl Guards & Rangers (grades 6-12) - Complete Activities 1-7

People have been looking into the sky ever since to study its wonders! Space exploration is the act of leaving earth's atmosphere and traveling into the unknown area of space to other planets, moons, and places in the solar system. This activity will help you to become familiar with people and facts associated with space exploration.

Bible Study

Take a moment to think about all the different places that exist. Can you name 5 different places on earth? Can you name the planets and places beyond earth? Who created these places? Does God know how to find all of these places?

Read Psalm 139 (Moonbeams focus on the verses 1-16)

This Psalm tells us that there is no where we can go outside of God's sight. He knows who we are and where we are. Does knowing that God knows everything about you make you happy or uncomfortable?

Psalm 139:23-24 (MSG) "Investigate my life, O God, find out everything about me; cross-examine and test me, get a clear picture of what I'm about; See for yourself whether I've done anything wrong - then guide me on the road to eternal life."

These verses are a prayer. Take a moment to rewrite the prayer in your own words.

Activity 1



Activity 1

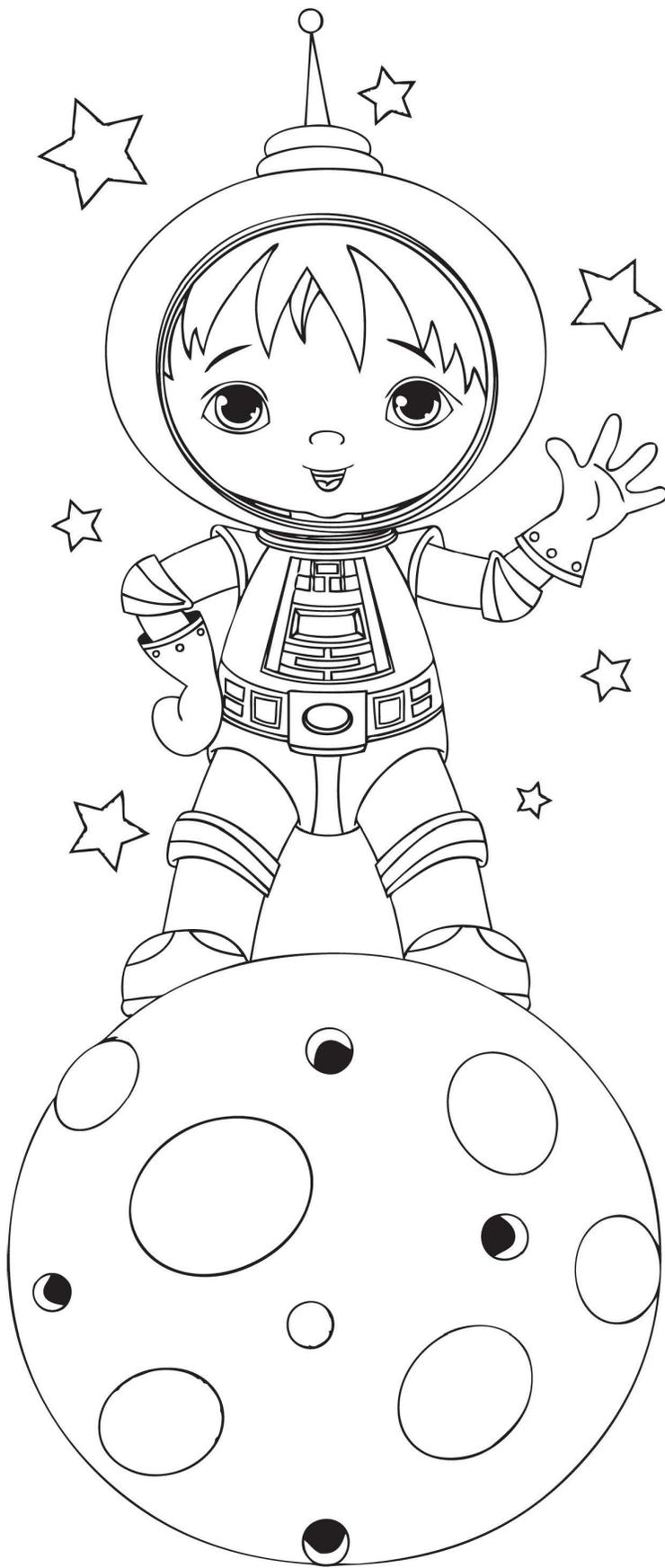
Match the following words, individuals and events with the definition/statement about them.

Moonbeams (PreK & Kindergarten) - Complete the worksheet on the next page

Sunbeams & Explorers (grades 1-5) - Find the words for definitions 1-9

Girl Guards & Rangers (grades 6-12) - Match all words and definitions

- | | |
|------------------------|--|
| A. Astronomer | 1. _____ National Aeronautics and Space Administration |
| B. Atmosphere | 2. _____ A person who studies the sun, stars, planets, moons and other space items. |
| C. Gravity | 3. _____ Layers of gases that surround the Earth and other planets/stars in the solar system |
| D. NASA | 4. _____ A path that is traveled by a planet, moon, or satellite |
| E. Orbit | 5. _____ A craft used to launch a rocket out of the earth's atmosphere |
| F. Satellite | 6. _____ A object that revolves around another object in space can be natural or man made |
| G. Telescope | 7. _____ A tool used by a person to observe distant objects, which uses lenses and mirrors to magnify items far away |
| H. Space Station | 8. _____ A man-made place built so that astronauts can live and work in space for long periods of time |
| I. Space Shuttle | 9. _____ The force between two objects which pulls one object down depending on its mass |
| J. Russia | 10. _____ Location of the Johnson Space Center |
| K. Huntsville, Alabama | 11. _____ First Female commander of a Space Shuttle |
| L. Eileen Collins | 12. _____ The first country to send a satellite into space |
| M. Houston, Texas | 13. _____ The first man to walk on the moon |
| N. Edwin E. Aldrin Jr. | 14. _____ Location of the Kennedy Space Center |
| O. Neil Armstrong | 15. _____ The first American woman in space |
| P. Central Florida | 16. _____ Location of Space Camp |
| Q. Sally Ride | 17. _____ Buzz Lightyear was named after this astronaut |



GREETINGS EARTHLINGS!

1. Color the oval shapes. ○
2. Count the stars. ★
There are _____ stars.
3. Draw enough stars to
total 10 stars.



Activity 1

Activity 2



Activity 2

THE INTERNATIONAL SPACE STATION CAN BE TRACKED FROM ANYWHERE IN THE WORLD. At times you can see it just by looking up. Visit www.nasa.gov/station to learn more about the space station.

According to the website, how many days has the space station been in orbit? _____

On the same website, click on the box "Live Earth Views from the Station". Was the station flying over water or land? (circle one)

Research astronaut food that is eaten at the Space Station. Or watch this video with Astronaut Chris Hadfield (https://www.youtube.com/watch?v=f8-UKqGZ_hs&t=622s) and see if you can answer some questions.

Why do astronauts use tortillas instead of bread in space? _____

Why don't they have fresh fruit and vegetables in the Space Station? _____

How do they keep the food packages from flying away? _____

What food would you miss the most if you were in space for a long time? _____

****Leaders - Maybe your troops would like to try eating like an astronaut. There are freeze dried fruits and even ice cream that you could try and compare and contrast to the fresh counterpart.****

Activity 3



Activity 3

Design your own rocket ship. Then, line up in your room and set your rockets to fly. See who can fly across the room the quickest!

Instructions

1. Color and decorate the rocket ship. Cut it out.
2. Cut the string to fit from one wall to the other across the room.
3. Attach the string to one side of the room with tape. (Attach it at waist level.)
4. Blow up a balloon and tie it closed.
5. Tape the balloon to the straw.
6. Tape the rocket ship to the side of the balloon.
7. Place the yarn through the straw. Tape it on the other side of the wall.
8. Now the rocket will travel on the yarn across the room. Cut the end of the balloon and watch it go!

Experiment

What happens if you attach a balloon with more air? _____

What happens if you attach a balloon with less air? _____

**Here is an alternative option for rocket ship experiments:*

<https://www.jpl.nasa.gov/edu/learn/project/make-a-straw-rocket/>

Activity 4 & 5



Activity 4

There are many kinds of spacecrafts. These are vehicles designed to fly in outer space. They are used to collect data, provide communication, report on findings, and travel. Research and find the descriptions of a few spacecrafts below.

ROVERS



SATELLITES



SPACE SHUTTLES



Activity 5

If you have the unique experience to have ever been near a space shuttle launch, you will know that it is loud, hot, and extreme. It takes so much power to propel an object out of the earth's atmosphere that a lot of fuel is used to get the shuttle moving. You can even feel the ground move under your feet for miles around. To complete this task, watch a recording of a shuttle launch. You can find one online - https://www.youtube.com/watch?v=7_SNFrTr_oo

Activity 6



Activity 6

Space exploration is big business. NASA often develops advanced technology to meet special demands for the space program. Visit your local library or go online to learn how the space program has advanced the following areas. Give at least two examples of ways each of the following areas has benefited.

SCIENCE

TECHNOLOGY

Take a moment to learn about the Artemis Program. Information can be found at <https://www.nasa.gov/specials/artemis/>

What is the goal of the Artemis Program? _____

Discuss with your troop - Why or why not do you think this is a valuable program to invest in?
