

Brownie Space Science Adventurer





WE WILL DISCUSS:

1. THE MOON
2. THE PLANETS
3. THE STARS
4. THE CONSTELLATIONS



THE MOON

FACTS ABOUT THE MOON:

1. GLOBE-LIKE STRUCTURE
2. IS A QUARTER OF THE EARTH'S SIZE
3. MADE OF EARTH-LIKE MATERIALS
(NOT THE SAME BUT SIMILIAR)



ORBITS:

1. IT ORBITS THE EARTH
2. AS THE MOON ORBITS,
THE SUN GIVES LIGHT TO
CERTAIN PARTS
3. DEPENDING ON ITS ORBIT
THE MOON SETS AT
DIFFERENT TIMES.



MORE FACTS:

1. REFLECTS THE SUN
2. VISIBLE 12 HOURS A DAY
3. RISES & SETS IN
DIFFERENT PLACES ALONG
THE HORIZON

PHASES OF THE MOON

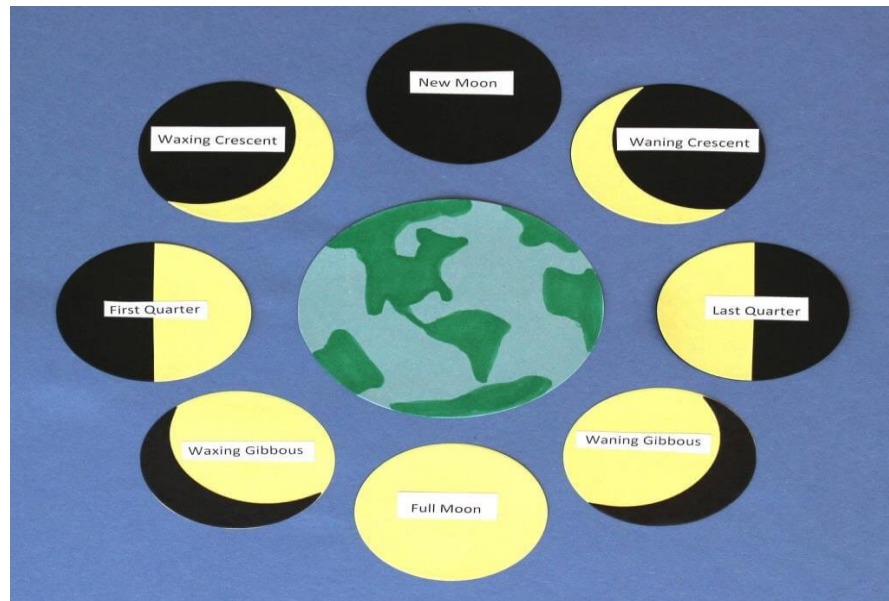


The moon's shape changes according to how much sunlight is facing the earth.

THE MOON COMPLETES
A SET OF PHASES EVERY
29 1/2 DAYS (ALMOST A MONTH)

ECLIPSE:

1. SOLAR ECLIPSE- THE MOON COVERS THE SUN
2. LUNAR ECLIPSE- THE MOON CROSSES THE SHADOW OF THE EARTH



MOON PHASE CRAFT



YOU WILL NEED:

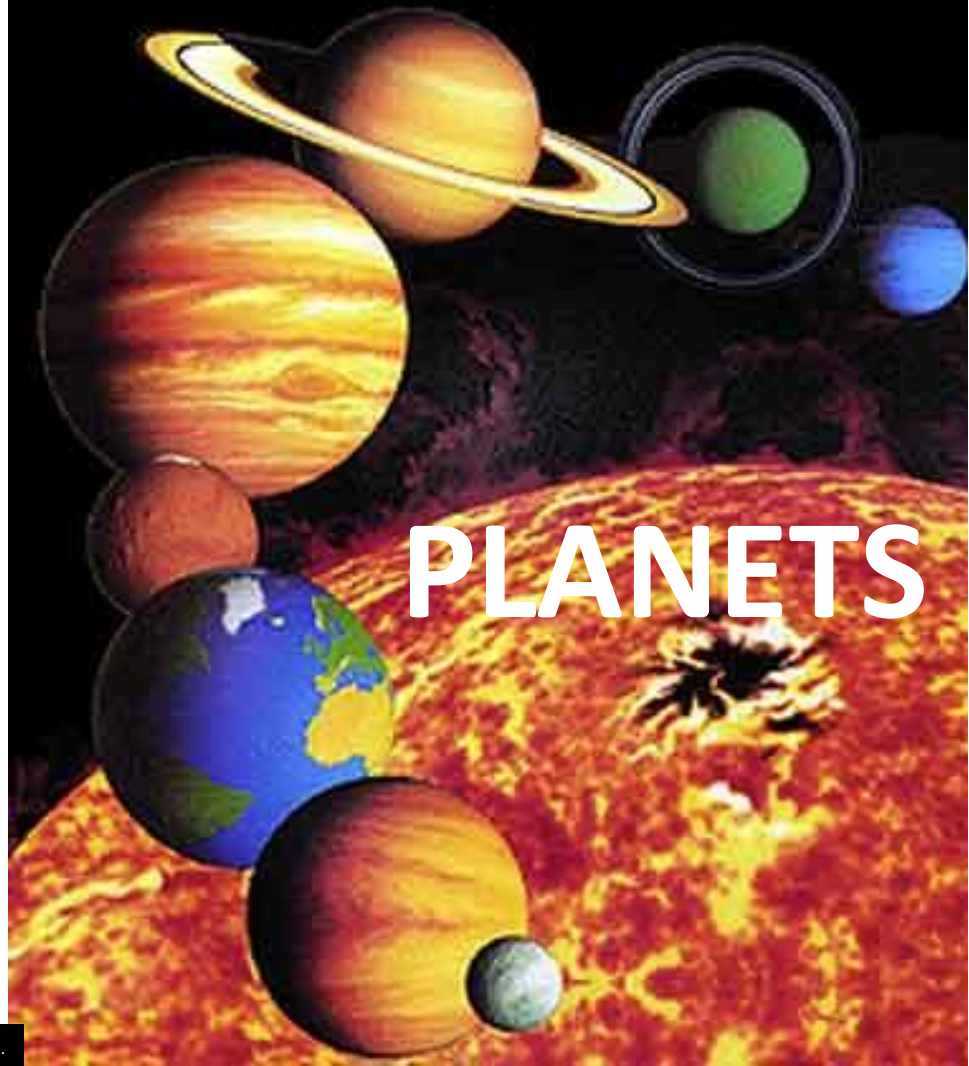
8 OREO COOKIES (OR BLACK CRAYON),
1 PAPER PLATE, A BUTTER KNIFE,
A PENCIL, and BLUE AND GREEN CRAYONS

USE A JAR TOP TO TRACE A PERFECT CIRCLE IN THE
CENTER OF YOUR PAPER PLATE.

USE THE PICTURE AS YOUR GUIDE TO DRAW IN YOUR
EARTH LINES. THEN COLOR WITHIN YOUR LINES WITH
BLUE AND THE OUTSIDE GREEN. Y

OUR OREO COOKIES WILL REPRESENT YOUR "MOON
PHASES." FOLLOW THE PICTURE BY REMOVING THE
TOP OF YOUR OREO AND CURVE THE ICING WITH A
BUTTER KNIFE TO MATCH YOUR MOON PHASES.

Moon Phases Craft
Space Activity for kids



OUR SOLAR SYSTEM

OUR PLANETS ARE WITHIN OUR SOLAR SYSTEM

OUR PLANETS FROM THE SUN

1. MERCURY (SMALLEST)
2. VENUS
3. EARTH
4. MARS
5. JUPITER (BIGGEST)
6. SATURN
7. URANUS
8. NEPTUNE
9. PLUTO (This is a dwarf planet. Sometimes it is included on lists like this with other planets in the solar system. It was a planet when the grown-ups were kids, so many adults still consider it a regular planet.)



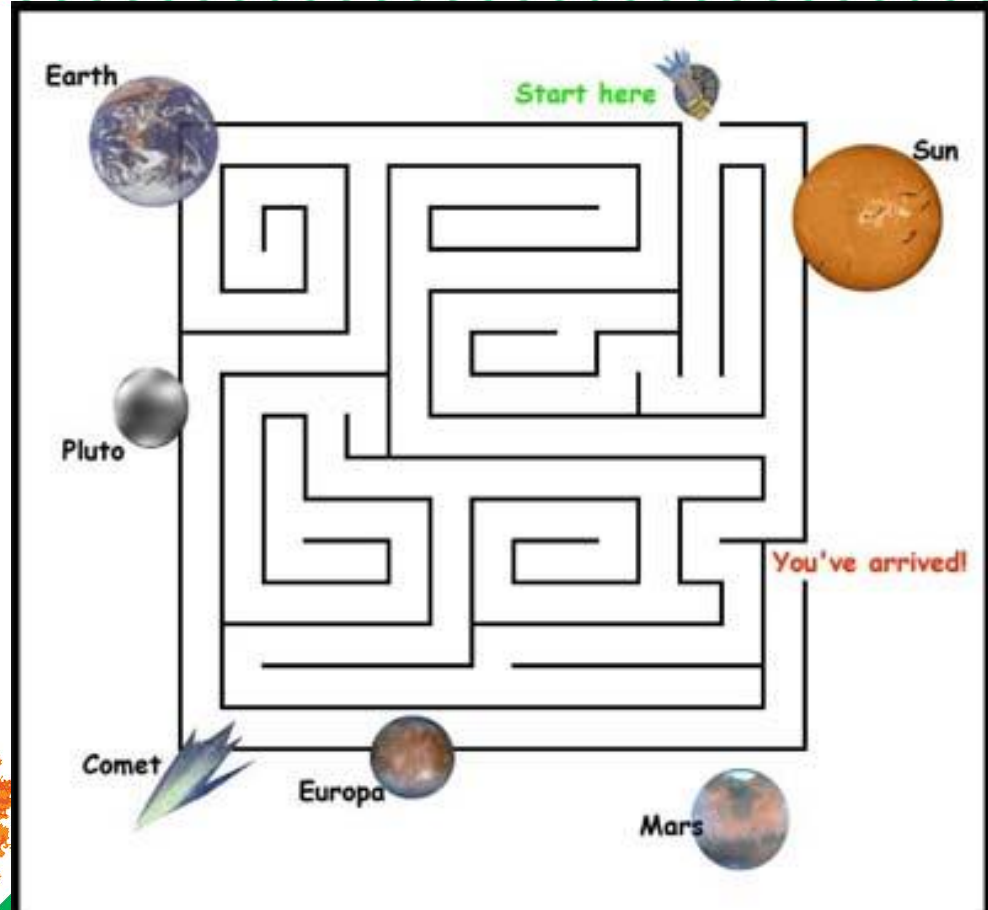
PLANET MAZE ACTIVITY

USE YOUR FINGER

OR STYLUS TO GO

THROUGH

THE PLANET MAZE



MAKING PLANETS

- MATERIALS:

- 1. CONSTRUCTION PAPER OR PLAIN PAPER WITH CRAYONS
- COLORS: PINK, 2 LIGHT BLUE, 1 DARK BLUE

RED, YELLOW, ORANGE, WHITE, GREEN

- 2. A PENCIL OR BLACK MARKER TO LABEL YOUR PLANETS, GLUE

- INSTRUCTIONS

- MAKE A SUN FOR THE CENTER WITH YOUR YELLOW PAPER
- OR COLOR ONE.

- CUT 1 CIRCLE FROM EACH PIECE OF CONSTRUCTION PAPERS

- REMEMBER YOU HAVE BIG PLANETS AND TINY ONES, AND SATURN HAS RINGS.

- THEN LABEL THEM AND GLUE THEM ON A ANOTHER SHEET OF PAPER FOR SAFE KEEPING!



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Make a Constellation Viewer:

What you'll need:

A potato chip can or tube

A knife

An adult to help

Step 1: Have the adult with you help you carefully use the knife to cut the bottom out of the potato chip can

Step 2: Use paper and markers to decorate your constellation view however you wish (optional)

Step 3: Wait until nighttime when the sky is clear and look through your constellation viewer. The potato chip can is perfect for blocking out excess light pollution so you can see the constellations better!



Tell a Star Story!

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Tell a Star Story!

Step 1: Pick a constellation in the sky. Click on this link to use a sky map if you're having trouble seeing through the clouds:
<https://www.stelvision.com/en/sky-map/>

Step 2: Think about the constellation and write a story about the constellation and why people see it the way they do!
(bonus for any research you do on the constellation)



More Space Science Activities!

Still interested in space?

If you don't have a telescope, you can use binoculars to explore the sky- they don't have to be anything fancy!

OR

See the Stars With a Computer:

- To explore star patterns and shapes in the sky from a computer, check out the current night sky here:

<https://www.stelvision.com/en/sky-map/>

or an interactive map of the stars here:

<https://stellarium-web.org/>



Congratulations!!!

**YOU HAVE COMPLETED THE SPACE SCIENCE
ADVENTURER BADGE.**



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