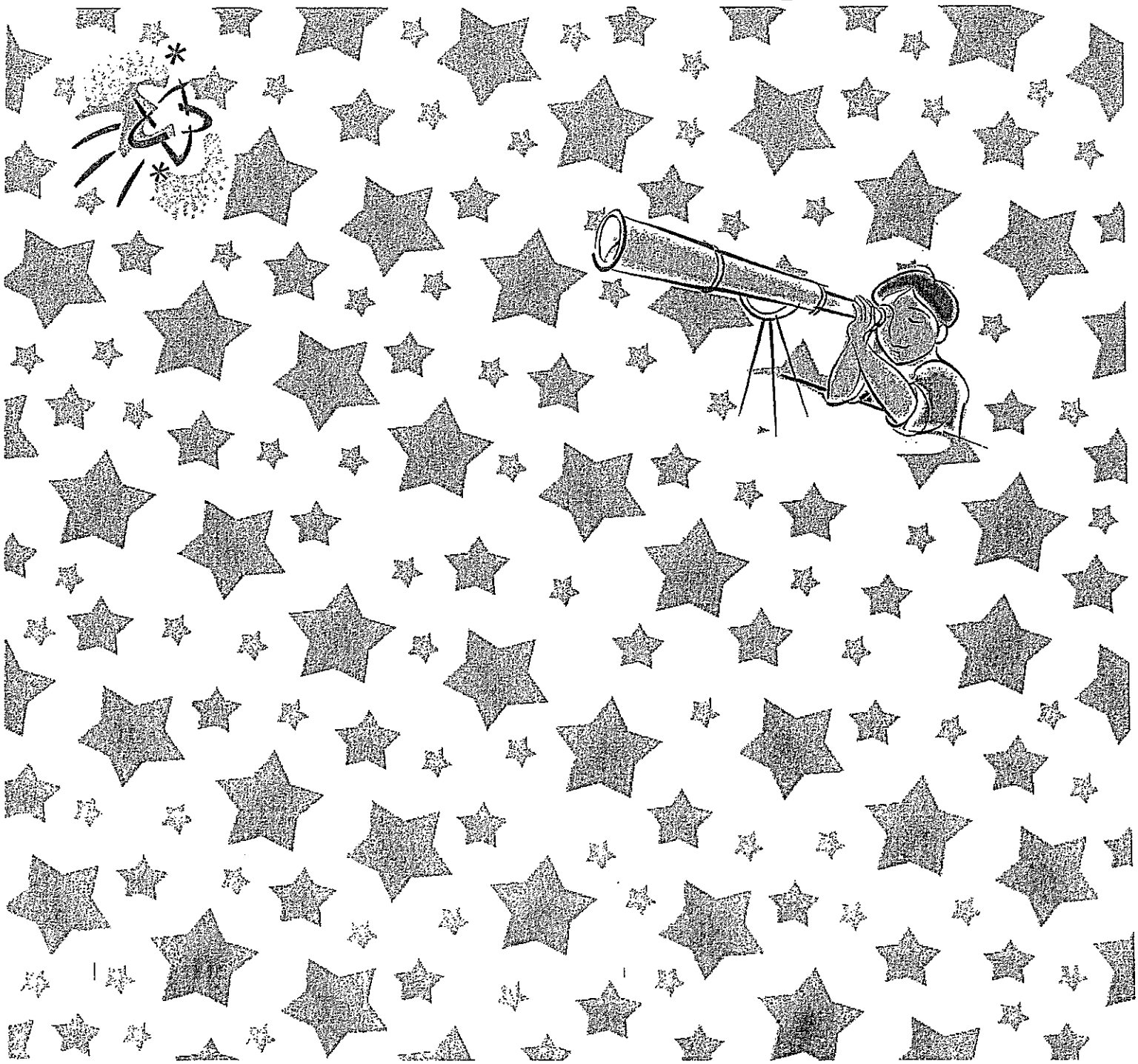
Mini-4H Astronomy

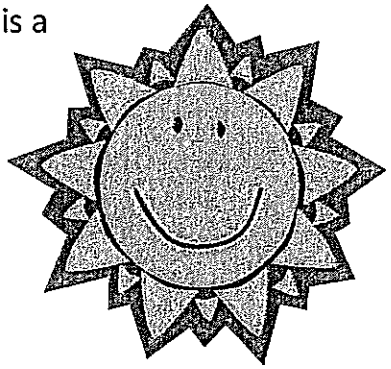


MINI 4-H ASTRONOMY IS OUT OF THIS WORLD!!!

Do you like to read or have stories read to you? It is amazing the number of stories, fables, and nursery rhymes that have either the Earth, Moon, or Sun as a main part of the story. In Mini 4-H Astronomy, these are what you will learn about.

To understand Astronomy, one must first understand the basics: Sun, Moon, and Earth. Let's get started!!!

SUN



"Our sun is a star located at the center of our Solar System. It is a huge, spinning ball of hot gas and nuclear reactions that lights up the Earth and provides us with heat.

Our sun is a medium-sized yellow star that is 93,026,724 miles from the Earth.

The Greeks called the Sun 'Helios'; the Romans called it 'Sol'."

EARTH

"The Earth is the third planet from the Sun in our Solar System. It is the only planet in our Solar System that is known to support life. The Earth has one moon.

The Earth is an oasis of life. Its temperature, weather, and atmosphere are just right to keep us alive. Thank goodness!!!

The Earth is the biggest of all planets in the Solar System. The diameter of Earth is 7,925 miles. The circumference measured around the equator is 24,901 miles. There are currently almost 7 billion people living on the Earth.

About 30% of the Earth's surface is land while 70% is water."

MOON

The Earth has one moon. Its name is Luna.

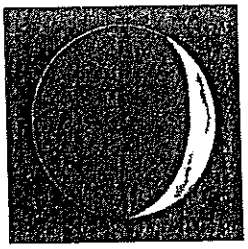
The same side of the moon always faces the Earth. The far side of the moon was first observed by humans in 1959 when the unmanned Soviet Luna 3 mission orbited the moon and photographed it. Neil Armstrong and Buzz Aldrin (on NASA's Apollo 11 mission, which also included Michael Collins) were the first people to walk on the moon, on July 20, 1969.

The moon is about 238,900 miles from Earth on average.
The moon revolves around the Earth in about one month (27 days 8 hours). It rotates around its own axis in the same amount of time.

Each month our Moon passes through 8 phases. These phases are named after how much of the moon we can see, and whether the amount visible is increasing or decreasing each day.

It takes our Moon about 29.5 days (about a month) to completely cycle through all 8 phases. Occasionally, about every 2.5 years, there are two full moons in the same month. This is referred to as a Blue Moon. Have you ever heard the saying, "Once in a Blue Moon?"

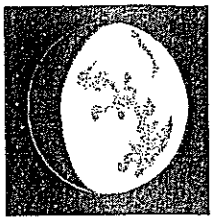
NEW MOON: The side of the moon facing the Earth is not illuminated, or shining. Also, the moon is up throughout the day and down at night. Therefore, we cannot see the moon during this phase.



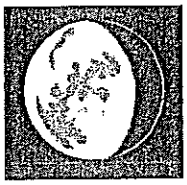
WAXING CRESCENT: Part of the Moon is beginning to show. This sliver can be seen each evening for a few minutes just after sunset. The Moon is 'waxing' because each night a little bit more is visible for a little while longer. From Indiana, the crescent will be on the right side of the Moon.

FIRST QUARTER: Half of the Moon is visible for the first half of the evening and then goes down, leaving the sky very dark. From Indiana, it will be the right side of the Moon.

WAXING GIBBOUS: Most of the Moon is visible. A person can see all but a little sliver of the Moon. During this phase, the Moon is in the sky most of the night. During this phase, we can see a little more of the moon each night. From Indiana, the right side of the Moon will be visible.



FULL MOON: We can see the entire face of the moon. A full moon will rise just as the evening starts and will set in the morning.



WANING GIBBOUS: We can see all but a sliver of the moon each night. From Indiana, the left side of the Moon will be visible. We begin to see less and less of the moon each night. The moon is 'waning'.

LAST QUARTER: Half of the Moon is visible for the first half of the evening. From Indiana, the left side of the Moon will be visible.

WANING CRESCENT: The sliver of the moon is seen just before morning. From Indiana the crescent will be the left side of the moon.

To understand the phases, follow the diagram below counterclockwise (around to the left) which means the opposite way the hands on the clock turn (around to the right).

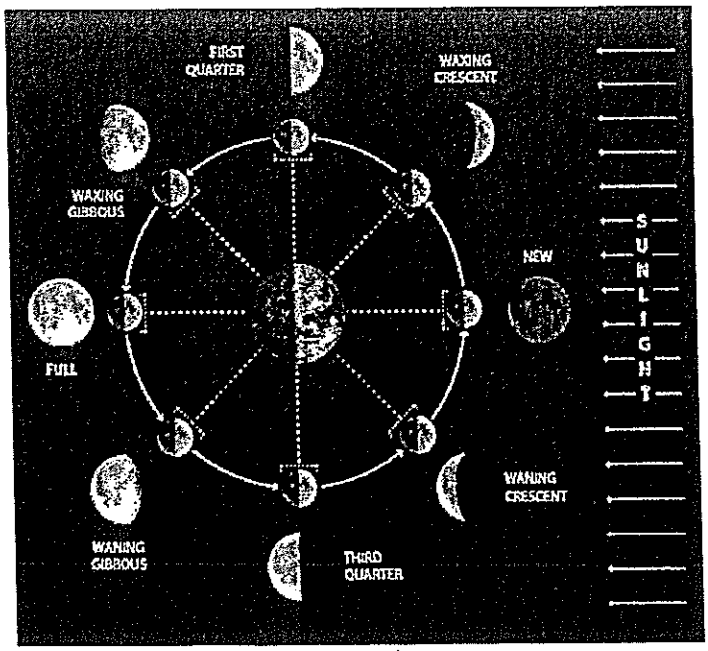


Exhibit one of the following:

A. Color the diagram of the SUN included in this manual and put on a posterboard no larger than 11" x 22" displayed horizontally.
B. Draw a picture of the SUN and list different names of the sun in different languages. Display on a posterboard no larger than 11" x 22" displayed horizontally.
C. Draw a picture of the EARTH. Label the equator on your drawing. Display on a posterboard no larger than 11" x 22" displayed horizontally.
D. Be creative and make a model of the EARTH. Label the equator on your model.
E. Exhibit an acrostic poem where the first word of each line starts with the letter of the word M-O-O-N.
F. A drawing of a story or nursery rhyme that has the Moon (Examples: Hey Diddle, Diddle, or Wynken, Blynken, and Nod)
G. A drawing or clay sculpture of one phase of the moon and label the phase it represents. If drawing, display on posterboard that is 11" x 22" and displayed horizontally.

SOURCES:

http://www.kidsastronomy.com

http://www.enchantedlearning.com

http://www.planetsforkids.org

Structure of the Sun