

## CLOVERBUD READING ADVENTURES

# The Sun is Kind of a Big Deal

By Nick Seluk

The sun never stops working to keep things on Earth running smoothly. Learn all about the Sun's job: keeping the solar system together, providing Earth with day and night, the changing seasons and more. We wouldn't be alive without it!



## Vocabulary

### Asteroid

Rocky, airless objects left over from the early formation of the solar system

### Meteoroid

A piece of space rock floating in space. When it enters the Earth's atmosphere and burns up, it is called a meteor.

### Orbit

The curved path followed by a planet, moon, or space station as it travels around the sun.

### Sun

A star that is the center of a system of planets



## Before You Read

Show Cloverbuds the cover of the book. Read the title of the book.





## Ask

1. What do you think this book is about? What does the cover tell you about the book?
2. The title of the book says that the **sun** is kind of a big deal. Does anyone know why the sun is important?  
*Explain that the sun is a large star that keeps our solar system together. (Our solar system contains planets, moons, dwarf planets, **asteroids**, and **meteoroids**).*
3. Ask Cloverbuds to tell you something they know about the sun.  
*It is round. It is hot. It is yellow. You can get sunburned if you are not careful. Explain to them that the sun gives us light, keeps us warm, brings us rain so the plants will grow.*
4. Explain that it takes a year for the Earth to make a complete **orbit** around the sun. Ask the Cloverbuds if they know how many times they have been around the sun.  
*Give them a hint: their number of trips around the sun equals their age.*



## Read

As you begin to read the book, tell the Cloverbuds that the sun is the only star in our solar system. It is in the center of all the planets and holds everything together. Show them the picture of the **solar system** and explain that Earth is the third planet from the sun.

Point out the phrase **solar system**. Explain that it is made up of planets, moons, dwarf planets, **asteroids**, and **meteoroids**. Name the planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. If anyone asks about Pluto, explain that Pluto was once thought to be a planet but is now called a dwarf planet because scientists decided it did not fit the definition of a planet.

Explain that it takes a year for the Earth to make a complete **orbit** around the sun. Ask the Cloverbuds if they know how many times they have been around the sun. Give them a hint: their number of trips around the sun equals their age.



## After You Read

Choose from the following activities that will complement the book you read. You do not need to do all the activities.



# ACTIVITIES

## Harness the Sun's Energy

Supplies

Balloon

Magnifying glass

Sun



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What to Do

- Inflate the balloon.
- With the sun behind you, hold a magnifying glass over the balloon so that the sun rays are focused on the balloon.
- Ask the Cloverbuds how long they think it will take for the balloon to pop.
- Wait for the balloon to pop.

The Science Behind It

- The sun's rays generate hot energy which heats the air in the balloon.
- As the air heats, it expands and creates pressure inside the balloon.
- The balloon will burst when the pressure inside the balloon becomes too great.

Did You Know?

- During a total eclipse, the sun's rays are completely blocked by the moon.
- The temperature will drop because the moon blocks the sun's rays.

## Planet Matching Game

Print the planet cards (back-to-back with solar system card) on heavy paper or cardstock. Cut cards apart. You should have two each of ten cards. *Source: photos from stock.adobe.com*

Supplies

One set of Planet Cards

What to Do

- Place the cards face down on the table.
- Have Cloverbuds turn over two cards. If the cards match, name the planet and remove those cards from the game.
- Continue turning over cards until all matches have been found.



## Solar System Line-Up

Using the cards from the planet matching game, separate them so you have one card of each type in each pile. You should have two sets of cards.

### Supply

Set of planet matching cards

### What to Do

- Starting with the sun, ask Cloverbuds to put the planet cards in the order they are from the sun.
- Explain that the cards are not made to scale. This means that even though the planets are the same size in the picture, they are not all the same size in real life.
- Remind them that the moon orbits around Earth and is not actually a planet.

## CRAFTS

Crafts are a fun way for Cloverbuds to extend their experience with the book you read. Remember that it is helpful to make a sample of the craft as an example for your Cloverbuds to follow.



Crafts on Sea

### Paper Plate Sun

#### Supplies

One paper plate for each Cloverbud

Crayons

Construction paper

Glue or glue stick

Child-safe scissors

### What To Do

- Give each Cloverbud a paper plate.
- Ask them to decorate it like the sun. Ideas include coloring the plate, cutting out rays from construction paper and gluing them around the outside of the plate.
- If you have time, help the Cloverbuds to trace around their handprint and make several out of construction paper. Glue handprints around the outside of the plate.



# Sunlight Art

Source: University of Alaska Museum of the North, [uaf.edu/museum/education](http://uaf.edu/museum/education)

Explain to Cloverbuds how to do this activity. Ask their parents to help them assemble their picture at home and put in a sunny window for a few hours. Remind Cloverbuds to bring their sunlight art picture to the next meeting to share.

## Supplies

- Construction paper
- Small, flat objects to make prints (leaves, shells, feathers, small toys, etc.)
- Sun

## What to Do

- Give each Cloverbud a sheet of construction paper.
- When they get home, they should arrange their small items on the construction paper and place it in a sunny window for a few hours.
- If the window is sunny enough, the construction paper around the items will begin to fade.
- After the paper shows signs of fading, they can remove their small items and look at their artwork!

## The Science Behind It

Sunlight gives off light across the electromagnetic spectrum, including Ultraviolet (UV) light. UV light waves are very strong and cause the bonds of chemicals in paper to break, which changes the paper's color. The objects on the paper protect that area of the paper from the sunlight and those areas remain the original color.

UV light is harmful to humans. It can cause sunburn and damage our skin. But some of our animal and insect friends see ultraviolet colors that we cannot. This allows animals and insects to find food, avoid predators, and attract mates.

## Did You Know?

Sun prints are used to make a kind of art known as cyanotype.



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# SNACKS

## Space Rocket Snack

Source: [mamacheaps.com/fruit-space-rocket-snack](http://mamacheaps.com/fruit-space-rocket-snack)



### Supplies

- Wooden skewers, one for each Cloverbud
- Strawberries, rinsed (one for each Cloverbud)
- One cantaloupe (or substitute cheese)
- Regular size marshmallows (two for each Cloverbud)
- Plastic knives so Cloverbuds can cut strawberries
- Wax paper or something to protect the table where you are working.

### What to Do

#### Before the meeting

- Cut the cantaloupe into one ½ inch slices. Cut into trapezoid-shaped pieces. These will be the bottom of the rocket ship.

#### At the meeting

- Have Cloverbuds wash their hands.
- Give each Cloverbud a strawberry and ask them to cut off the top and cut the remaining strawberry into three pieces. Show them what to do.
- Give each Cloverbud a skewer, two marshmallows, and a piece of cantaloupe. Show them how to assemble rocket on the skewer.
- Eat and enjoy!



## Solar Eclipse Trail Mix

You may need to increase the recipe, depending on how many Cloverbuds are in your group.

### Supplies

- 1½ cup “o” shaped cereal
- ½ cup sunflower seeds
- ¼ cup raisins
- ¼ cup banana chips
- ¼ cup candy coated chocolate
- Large bowl or plastic bag
- Small snack bag – one per child

### What to Do

- Mix all ingredients together.
- Divide into snack bags, one for each Cloverbud.
- Eat and enjoy!







## KNOWLEDGE CHECK

At the end of the meeting, ask participants these questions to help them process what they learned.

### SHARE

What is something new you learned about the sun?

### REFLECT

Which activity did you like the most? Why?

### GENERALIZE

What is a planet that you might like to learn more about? Why?

### APPLY

Why is it important for the sun to help our plants grow?

## OTHER BOOKS TO READ ALOUD

*Eclipse*, Andy Rash

*Sun! One in a Billion*, Stacy McAnulty

*Total Solar Eclipse*, Jayme Sandberg

## EVALUATION

We value your input! After completing a Reading Adventure with your Cloverbuds, please tell us what you think. Your feedback will be used to improve the Reading Adventure program. Type the link in your browser and navigate to the evaluation site: [go.osu.edu/evaladventures](https://go.osu.edu/evaladventures)

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### 4-H CLOVERBUD READING ADVENTURES

Reading Adventures are part of the Ohio 4-H Cloverbud program. This adventure was developed by Rhonda Williams, Editorial Specialist, Extension Publishing, Ohio State University Extension. It contains well-known activities, games, and snacks. Sources are indicated where appropriate. Find more reading adventures online at [ohio4h.org/cloverbudresources](https://ohio4h.org/cloverbudresources).

### TIP:

This 4-H Cloverbud Reading Adventure works well with the Science and Technology section in *The Big Book of 4-H Cloverbud Activities* available through OSU Extension offices or online at [extensionpubs.osu.edu](https://extensionpubs.osu.edu). Ohio residents get the best price when they order and pick up their purchases through local Extension offices.





Earth



Earth



Sun



Sun



Moon



Moon



Mercury



Mercury



Venus



Venus





Mars



Mars



Jupiter



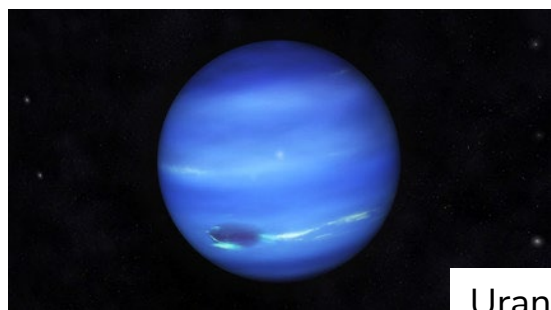
Jupiter



Saturn



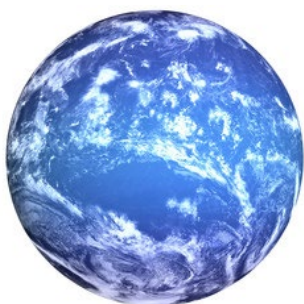
Saturn



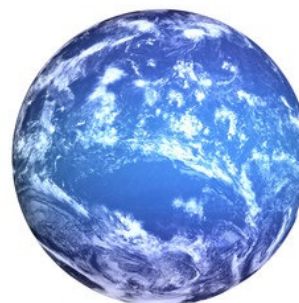
Uranus



Uranus



Neptune



Neptune

