

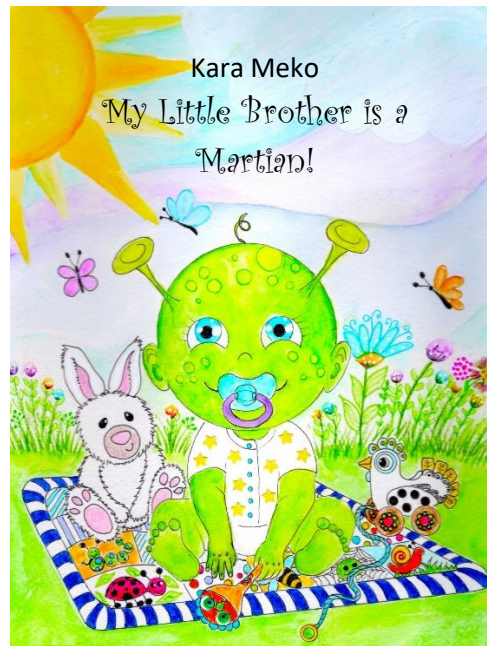
# Penelope Polka Dot

## ABOUT THE BOOK

*A new brother, a strange looking little creature.  
How could Penelope not conclude he was a  
Martian?*

When Nana came home from the hospital, announcing to Penelope that her mother had the baby they were all expecting. "You are going to love him! she said. "He is simply out of this world!" Penelope also heard her say that her new baby brother was a bit "jaunty" and he had to be kept in a "cubator" under a warm light until he changed colour.

Penelope remembered the eggs that Mr Matisse, her teacher, had put in a "cubator" for their chicken hatching project. Now she understood why her parents had decorated the baby's room with spaceships and star wallpaper. Is that why the crib had bars on the side to keep that tiny alien from escaping?



Available as an e-book  
ISBN 978-1-926911-43-4



Penelope is here to put teachers and students alike in a J-O-Y-F-U-L learning space!

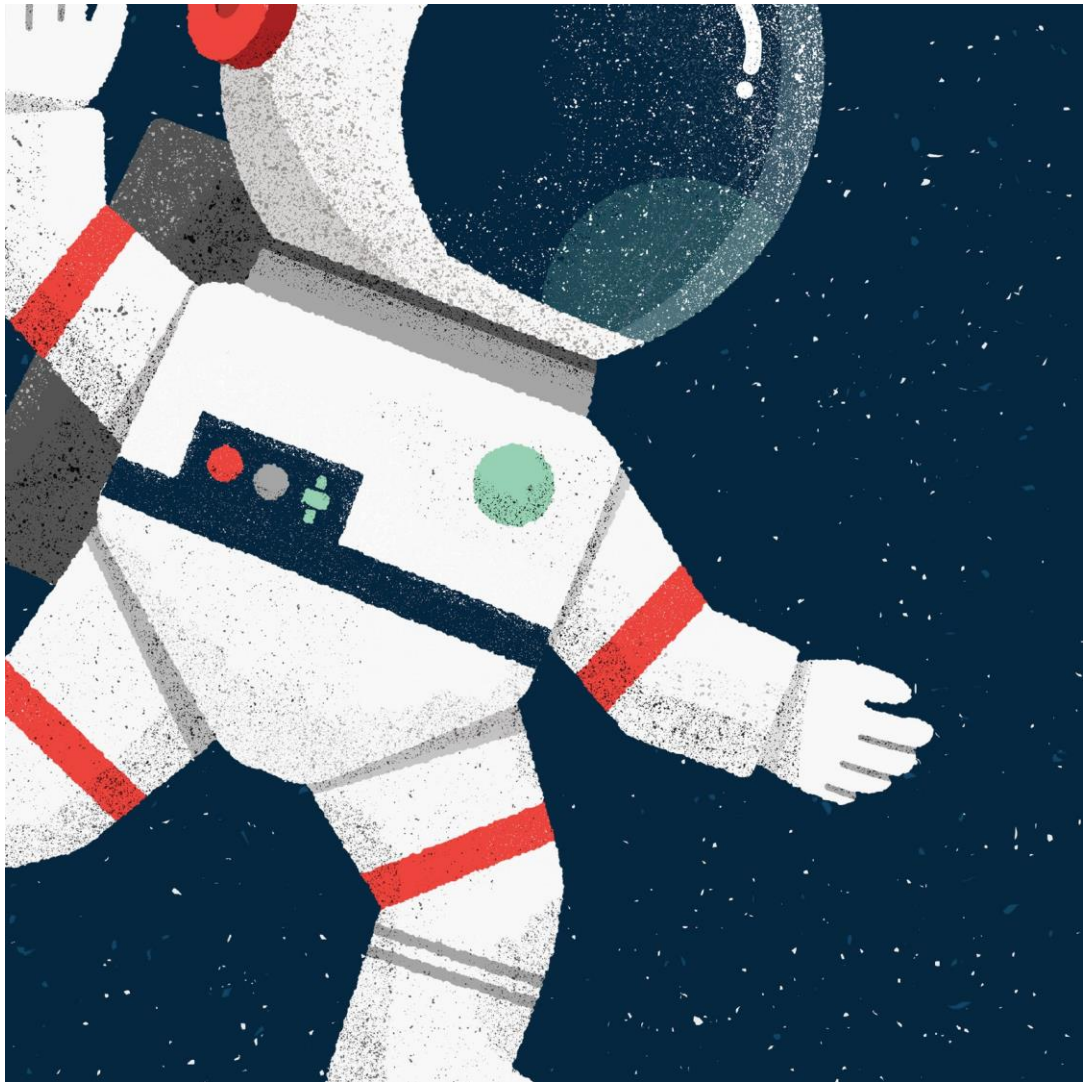
This guide is filled with book-specific activities, aligned with Core Curriculum Competencies, such as the use of language, to identify, create and share ideas, feelings and opinions and preferences. You will find integrated learning sure to make your classroom a stupendous and fantastical learning environment!



**KARA MEKO DESIGN**  
[www.penelopepolkadot.com](http://www.penelopepolkadot.com)

## DESIGN YOUR SPACE SUITE AND ILLUSTRATE THE PLANETS YOU SAW DURING YOUR SPACEWALK

Have students illustrate their unique spacesuit with a photo of their face inside the helmet. Next, have them glue the spacesuit on a black background and do a collage of the planets they have seen. Use sparkles, white paint for cut out stars to fill out the rest of the environment.



## CORE CONNECTIONS

### Communication

The ability to interact and share, acquire, transform ideas and information, and make connections by expressing their individuality, furthering their learning, and getting things done. It is fundamental to finding satisfaction, purpose, and joy.

## Hello from Mars!

Imagine that you will be travelling to Mars. Write a postcard to your family to tell them about your visit to the Red Planet. Who did you meet? What did you see? What did you eat? What was the weather like?



### Thinking

Knowledge, skills, and processes associated with intellectual development permit students to take subject-specific concepts and content and transform them into a new understanding. This includes specific thinking skills, habits of mind, and metacognitive awareness to process information from various sources, including thoughts and feelings at a subconscious or unconscious level to create new understandings.

## Living in Space

Astronauts must learn how to eat, sleep, work, brush their teeth and go to the bathroom in space. What do you think is the most challenging thing, and why? To find out more, let's look at what a real astronaut has to say about all this:

- [Chris Hadfield's Space Kitchen - YouTube](#)
- [Chris Hadfield Brushes his Teeth in Space - YouTube](#)
- [Sleeping in Space - YouTube](#)
- [Can You Cry In Space? - YouTube](#)
- [Waste in space: how do astronauts go to the toilet? - YouTube](#)



Knowing all of this now, would you still like to travel into outer space?

# Understanding our solar system

Penelope's teacher Mr Matisse said that the world and space are places of wonder, and he taught his students all about the solar system.

## Procedure:

Explain that the sun is in the centre, and the planets orbit around the sun. Using a variety of objects, show students the relative sizes of the planets. Explain that due to Pluto's tiny size, smaller than Earth's moon, and its distant location at the very edge of the solar system, scientists have now classified it as a dwarf planet. For this theme, have a selection of books or sites to consult on this topic. Ask the school librarian to suggest and set aside the books for students to consult in the classroom.)

## Objectives:

- Students will be able to *identify* all eight planets (nine including the dwarf planet Pluto) and will be able to *name* the planets.
- Students will become familiar with and observe the relative sizes of the planets.
- Students will be able to *explain* that the planets orbit around the sun, which is in the centre of the solar system.
- Students will be able to *list* the order of the planets from the sun.

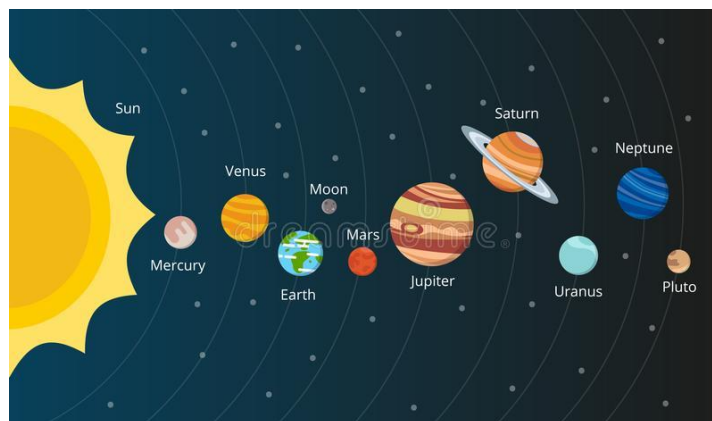
## Materials:

- Chart paper and markers
- Gather a collection of objects corresponding to the relative sizes of the planets. The dimensions are listed below in millimetres. The sun would be about 1.39 meters (about 4.5 feet) in diameter on the same scale.

1. Mercury = 4.9 mm small pea
2. Venus = 12.1 mm olive or cherry
3. Earth = 12.7 mm small radish
4. Mars = 6.8 mm a marble
5. Jupiter = 142.8 mm small cantaloupe
6. Saturn = 120 mm grapefruit

7. Uranus = 51.2 mm small tangerine
8. Neptune = 48.6 mm apricot
9. Pluto = 2.3 mm sesame seed

- Invite students to share facts they already know about the planets and the solar system. Draw a diagram of their solar system on chart paper. Lead the students with questions, such as which planet is closest to the sun, which world comes next, etc. Discuss the relative sizes of the planets and show students the various vegetables or fruit models.
- Explain to students how the planets orbit around the sun, and the closer the planet, the shorter the orbits—the orbits become more significant as the distance from the sun increases. Ask students how long it takes Earth to travel around the sun. (One year, 365 days.)
  - Mercury, the closest planet to the sun, takes 88 days
  - Neptune takes 165 years
  - Pluto takes 248 years to complete one revolution.
- Ask students what life would be like on these planets:
  - Mercury is very hot because it is close to the sun, while the outer planets are always very cold.
  - The inner four planets, Mercury, Venus, Earth, and Mars, are known as the terrestrial planets because they are rocky.
  - Jupiter, Saturn, Uranus, and Neptune are known as the gas giants because they are mainly composed of hydrogen and helium gas, and they are huge.
- Choose nine students to come to the front of the room. Each student is given one of the fruits or vegetables. One student holds an illustration of the sun (1.39 meters). Ask the class which planet is closest to the sun—the student holding "Mercury" stands next to the sun. Continue with the rest of the planets to have students place them all in the correct order. Have students pick a planet to find out all there is to know about it. Next, students prepare a report on **All There is to Know About \_\_name of planet \_\_\_\_** and present their findings in class. Create a bulletin board to display their work.





## Personal and Social

Encompass the abilities to speak and listen as it relates to students' identity in the world, both as individuals and members of their community and society. Personal and social competencies are what students need to thrive as individuals, understand and care about themselves and others, to find and achieve their purposes in the world.

## Vocabulary and Use

Explain the meaning of words and their relationships and nuances. Use words in narratives to recount events in sequence, including details describing actions, thoughts, and feelings—use of temporal words to signal the order of events, leading to a conclusion.

# Martian Day

1. Invite students to write or tell a story about why they would like to meet a Martian or travel to another planet.
2. Prepare a Martian snack for students and have a selection of books to share that day.  
The selection can include:  
*A Place for Pluto* by Stef Wade  
*Sun! One in a Billion* by Stacy McAnulty  
*The Girl Who Drank The Moon* by Kelly Barnhill
3. Watch: *The Magic School Bus Gets Lost in Space*  
[The Magic School Bus - Gets Lost in Space - Ep. 1 - YouTube](#)
4. People from Earth are Earthlings, and Martians are from Mars; what are the names of the people of creatures from the other planets? Create a family portrait as your family from one of these planets. Give them exciting names.

# Martian Speak

When Penelope's little brother started to talk, he used his own words. Ask students if they remember words that were difficult to pronounce when they were growing up.

- Alligators are elevators
- Cubator is an incubator
- Peeker is a computer
- Rockamole is for the Guacamole he puts on his head
- Rockanooni is macaroni
- Rocky is for broccoli, a vegetable he does not like.
- Keeka is a kitty kat
- Heem is ice cream
- Strawbabies are strawberries, his favourite fruit
- Ooshies are shoes that he always seems to lose.