PLANETS FOR KIDS • TEACHER LESSON PLAN

Let's Meet Mercury!

A fun 45-minute trip to the closest planet to the Sun — the tiny, super-fast, super-hot world called Mercury.

Lesson at a Glance

LESSON	Let's Meet Mercury!
AGE GROUP	Ages 5–12 (with tips for adapting younger and older)
TIME	45 minutes
SUBJECT	Science / Astronomy
MATERIALS	Mercury PowerPoint, projector or whiteboard, paper, crayons or coloured pencils, optional: small ball + flashlight for demo

What Will Students Learn?

By the end of this lesson, your class will be able to:

- Name Mercury as the closest planet to the Sun and the smallest planet in our solar system.
- Describe what makes Mercury special — its scorching days, freezing nights, and lack of an atmosphere.
- Explain why Mercury has no moons of its own.
- Compare Mercury to Earth in size, distance from the Sun, and what it would feel like to stand on each.

Warm-Up: Spark Curiosity (5 min)

Get the class excited by asking: “If you could visit any planet, which one would you pick — and why?” Let a few hands shoot up. Then drop the hook:

> **Try this!**
> Hold up a small ball (or a marble) next to a basketball or football. Tell the class: “If the basketball were Earth, this little marble would be Mercury — that’s how small it is!” Watch their eyes go wide.

Then say: “Today we’re going to meet that little marble — it’s called Mercury, and it’s a wild place!”

Main Lesson: The Mercury PowerPoint (15 min)

Open the Mercury_For_Kids.pptx slide deck and walk through it together. Don't just read the slides — pause, ask questions, let kids react.

Slides to slow down on:

- Slide 3 (Mercury at a Glance) — Ask: "Which number surprises you the most?" Let kids pick.
- Slide 4 (Hot AND cold!) — This is the wow moment. Mercury can be 800°F in the day and -290°F at night. Have kids act out shivering and sweating!
- Slide 5 (One year is just 88 days) — Ask: "If you lived on Mercury, how old would you be?" (Their age in Earth years × 4-ish.) They will love this.
- Slide 7 (No moons) — Ask: "Why do you think Mercury has no moons?" See what theories they come up with before revealing the answer.
- Slide 12 (Quiz Time!) — Save this for the wrap-up at the end of the lesson.

> **Teacher tip**
> Don't feel you need to read every word on every slide. Pick the bits that get the loudest reactions and let the class drive the energy.

Activity: Postcards from Mercury (20 min)

Hand each student a piece of paper and crayons. Their mission: design a postcard from Mercury back home to Earth.

On one side of the postcard, draw:

- What Mercury looks like (lots of craters, a grey-tan colour, the Sun looking HUGE in the sky).
- Themselves in a spacesuit waving!

On the other side, write a short message back to Earth like:

- "Dear Earth, Mercury is amazing! It's ___ during the day and ___ at night..."
- They can include 2-3 facts they learned and a feeling: "I feel ___ standing here."

> **Adapt for younger kids (ages 5-7)**
> Skip the writing — just have them draw Mercury with the Sun looking giant. Provide a simple template with prompts: "Colour Mercury in," "Draw the Sun BIG," "Draw yourself!"

> **Challenge older kids (ages 10-12)**
> Have them include actual numbers in their postcard message — temperatures, the length of a Mercury year, distance from the Sun. Bonus: ask them to

> calculate their age in Mercury years!

Wrap-Up: Quiz Time! (5 min)

Bring everyone back together and run through the quiz slide from the PowerPoint as a group. Encourage shouting out answers — make it celebratory! End by asking:

- “What’s the coolest thing you learned about Mercury today?”
- “If you could send one message to Mercury, what would you say?”

Quick Lesson Flow

TIME	SEGMENT	WHAT HAPPENS
5 min	**Warm-up**	Spark curiosity with a fun question and a quick demo.
15 min	**Main lesson**	Walk through the Mercury PowerPoint, slide by slide.
20 min	**Activity**	Hands-on: postcards from Mercury.
5 min	**Wrap-up & quiz**	Run through the quiz slide together and celebrate what they learned!

Discussion Questions (use any time)

- Why do you think Mercury is so hot during the day but so cold at night?
- Mercury has no atmosphere. What would that be like if Earth had no air?
- Why do you think Mercury moves so fast around the Sun?
- Would you want to visit Mercury? Why or why not?

Extension Ideas

- Coloring page (great for early finishers or homework — see the Mercury resource page).
- Math link: How many Mercury years old are you? (Divide your age in days by 88.)
- Writing prompt: Write a diary entry as an astronaut who just landed on Mercury.
- Class display: Stick all the postcards on a wall to make a Mercury gallery.

What You’ll Need

- Mercury_For_Kids.pptx (download from the Mercury resource page)
- Projector or whiteboard to display the slides
- Paper for the activity (one per student)

- Crayons, coloured pencils, or markers
- Optional demo props (see Warm-Up section)

© Planets for Kids • planetsforkids.org • Free for classroom use