PLANETS FOR KIDS • TEACHER LESSON PLAN

Let's Meet Venus!

A fun 45-minute trip to Earth's scorching twin — the cloud-covered, super-hot world called Venus.

Lesson at a Glance

LESSON	Let's Meet Venus!
AGE GROUP	Ages 5–12 (with tips for adapting younger and older)
TIME	45 minutes
SUBJECT	Science / Astronomy
MATERIALS	Venus PowerPoint, projector or whiteboard, paper, crayons or coloured pencils, optional: clear jar with cotton wool clouds for demo

What Will Students Learn?

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

- Name Venus as the second planet from the Sun and Earth's nearest neighbour.
- Describe what makes Venus the hottest planet — its thick clouds and runaway greenhouse effect.
- Explain why Venus is sometimes called "Earth's twin" and how it's different.
- Recognise that Venus spins backwards compared to most other planets.

Warm-Up: Spark Curiosity (5 min)

Get the class excited by asking: "Which planet do you think is the hottest in our solar system?" Let a few hands shoot up. Then drop the hook:

> **Try this!**
> Most kids will say Mercury (because it's closest to the Sun). Surprise them: "Actually it's Venus — even though Mercury is closer! Today we're going to find out why." Pause for the gasps.

Then say: "Venus has a HUGE secret — and we're about to crack it!"

Main Lesson: The Venus PowerPoint (15 min)

Open the Venus_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 (Venus at a Glance) — Ask: “See that 243 number? That’s how long ONE Venus day takes — longer than its year!” Watch the brain explosions.
- Slide 4 (The Hottest Planet) — This is the big reveal. 870°F! Hot enough to melt lead. Ask: “Why is this hotter than Mercury, even though Mercury is closer?”
- Slide 5 (The Backwards Spin) — Tell kids the Sun rises in the WEST and sets in the EAST on Venus. Mind = blown.
- Slide 6 (Thick Clouds) — Connect it to the warm-up: those clouds trap heat like a blanket. That’s why Venus is so hot.
- 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: Build a Venus Cloud Jar (20 min)

Help kids understand WHY Venus is so hot with a simple visual. Each kid (or pair) makes a Venus cloud jar — a paper drawing inside a 'cloud-covered' jar.

On a piece of paper, kids draw:

- The Sun on one side, with arrows showing sunlight reaching Venus.
- Venus itself in the middle with a yellow-orange surface (lots of volcanoes!).
- Arrows showing heat trying to escape — but bouncing back from thick clouds.

Then they label their drawing with:

- “Sunlight comes IN ☀”
- “Heat tries to leave 🔥”
- “Clouds bounce it BACK!”
- And one fun fact at the bottom: “Venus is ___ degrees! Hot enough to ___.”

> **Adapt for younger kids (ages 5-7)**
>
> Skip the labels and arrows — just have them colour Venus orange and add lots of swirly cloud shapes around it. Done!

> **Challenge older kids (ages 10-12)**
>
> Introduce the term 'greenhouse effect' and have them explain in their own words why Venus is hotter than Mercury. Bonus: research Earth’s greenhouse effect — same idea, just less extreme.

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 Venus today?”
- “If you could send one message to Venus, 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 Venus PowerPoint, slide by slide.
20 min	**Activity**	Hands-on: build a Venus Cloud Jar.
5 min	**Wrap-up & quiz**	Run through the quiz slide together and celebrate what they learned!

Discussion Questions (use any time)

- Venus is the hottest planet even though it’s NOT closest to the Sun. Why?
- What would happen if Earth’s clouds got really thick like Venus’s?
- On Venus, the Sun rises in the west. What would that be like?
- Why do scientists call Venus “Earth’s twin”? Are they actually similar?

Extension Ideas

- Coloring page (great for early finishers or homework — see the Venus resource page).
- Science link: Try a real greenhouse effect demo — two jars in the sun, one covered with plastic wrap, see which gets hotter.
- Writing prompt: Write a weather forecast for Venus tomorrow.
- Class display: Hang all the Venus cloud jars on a wall — a sea of swirly orange and yellow!

What You’ll Need

- Venus_For_Kids.pptx (download from the Venus 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)

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