PLANETS FOR KIDS • TEACHER LESSON PLAN

Let's Meet Uranus!

A fun 45-minute journey to a strange, sideways-spinning ice giant — Uranus, the blue-green planet at the edge of the solar system.

Lesson at a Glance

LESSON	Let's Meet Uranus!
AGE GROUP	Ages 5–12 (with tips for adapting younger and older)
TIME	45 minutes
SUBJECT	Science / Astronomy
MATERIALS	Uranus PowerPoint, projector or whiteboard, paper, crayons or coloured pencils (especially blue and green!), optional: a ball or apple for the tilt demo

What Will Students Learn?

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

- Name Uranus as the seventh planet from the Sun and an ice giant.
- Explain why Uranus is blue-green — the methane in its atmosphere absorbs red light.
- Describe Uranus's most unusual feature — it spins on its SIDE!
- Recognise that Uranus's moons are named after Shakespeare and Pope characters.

Warm-Up: Spark Curiosity (5 min)

Get the class excited by asking: "Most planets spin like a spinning top. Can you imagine a planet that ROLLS instead?" Let a few hands shoot up. Then drop the hook:

> **Try this!**
> Hold up a ball or an apple. First, spin it like a top. Then tip it on its side and roll it. Tell the class: "This is the difference between most planets and Uranus. Uranus rolls around the Sun on its side — like nothing else in the solar system!"

Then say: "Today we're visiting the weirdest spinner in the solar system — Uranus!"

Main Lesson: The Uranus PowerPoint (15 min)

Open the Uranus_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 (Uranus at a Glance) — 84 EARTH years for a Uranus year! Most kids will never live to see Uranus complete one orbit.
- Slide 4 (Uranus Spins on its Side) — The big reveal. Compare Earth (vertical axis) to Uranus (horizontal axis). Have kids try to act it out.
- Slide 5 (The Coldest Planet) — -371°F. Even colder than Neptune! Ask: “Why is the SEVENTH planet colder than the EIGHTH? That’s a real mystery.”
- Slide 6 (What’s Uranus Made Of?) — Don’t skip the stinky clouds fact. Kids will hoot. Methane in the air = blue-green colour. Hydrogen sulfide in the clouds = rotten egg smell.
- 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: Sideways Uranus Adventure (20 min)

Each student creates a 'travel guide' page about Uranus, capturing what makes it so weird and wonderful.

On a piece of paper, draw:

- Uranus tipped on its side — colour it blue-green!
- Vertical rings going around it (because the WHOLE planet is tipped over).
- An arrow showing the direction it rolls around the Sun.
- Mark the North Pole on the SIDE — not the top!

Around the drawing, write a 'Welcome to Uranus' guide:

- “Your year here will last ___ Earth years.” (84)
- “Here it’s always ___.” (cold, freezing — let them be creative)
- “Watch out for: ___.” (Stinky clouds!)
- “Why you should visit: ___.”

> **Adapt for younger kids (ages 5-7)**
>
> Skip the writing — just draw a sideways Uranus with vertical rings, and circle one fun fact at the bottom (like “It smells like rotten eggs!” — a guaranteed hit).

> **Challenge older kids (ages 10-12)**
>
> Have them write a full 5-day itinerary for a Uranus tour, including which Shakespeare-named moons they’d visit (Titania, Oberon, Miranda, etc.) and what they’d see on each.

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 Uranus today?”
- “If you could send one message to Uranus, 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 Uranus PowerPoint, slide by slide.
20 min	**Activity**	Hands-on: sideways Uranus Adventure.
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 Uranus spins on its side? What could have caused that?
- If you lived at Uranus’s pole, you’d have 21 years of darkness, then 21 years of sunlight. What would that be like?
- Uranus’s clouds smell like rotten eggs. Would you still want to visit?
- Why are Uranus’s moons named after Shakespeare characters and not Greek gods?

Extension Ideas

- Coloring page (great for early finishers or homework — see the Uranus resource page).
- Literature link: Read a short Shakespeare passage with the class — maybe from “A Midsummer Night’s Dream” since Titania (the queen of the fairies) is one of Uranus’s biggest moons.
- Writing prompt: Write a postcard from Uranus describing the smell, the sideways days, and the weird seasons.
- Class display: Make a 'Sideways Solar System' wall — Uranus on its side, surrounded by all its moons.

What You’ll Need

- Uranus_For_Kids.pptx (download from the Uranus 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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