— TEACHER TOOLKIT —

SOLAR SYSTEM UNIT · SCOPE & SEQUENCE

A two-week classroom plan using every resource from planetsforkids.org/teachers

2 WEEKS **10 LESSONS**

Ages 5–12 · Adaptable to your schedule

WEEK 1 — INNER PLANETS

DAY 1 — Launch the unit

Hook students with the scale of the solar system and set expectations for the unit.

- Open with the master Solar System poster on the wall
- 15 min: Toilet-paper-universe activity (from Scale Models)
- Read aloud Saturn Level 2 passage as a teaser

MASTER POSTER · SCALE MODELS · READING PASSAGES

DAY 2 — Mercury & Venus

Compare the two innermost planets — closest to the Sun, no moons, very different surfaces.

- Mercury PowerPoint + worksheet
- Venus PowerPoint + reading passage
- Discussion: "Why is Venus hotter than Mercury?"

MERCURY SLIDE DECK + WORKSHEET · VENUS SLIDE DECK + READING

DAY 3 — Earth — our home

Position Earth as a planet (not separate from "space") and explore what makes it habitable.

- Earth lesson plan (full 45 min)
- Magnetic field demo (in lesson plan)
- "Goldilocks zone" discussion

EARTH LESSON PLAN · EARTH SLIDE DECK + WORKSHEET

DAY 4 — Mars — the explorers

Connect Mars to current science (rovers, missions) so it feels living, not just a textbook fact.

- Mars PowerPoint
- Activity: Design Your Own Mars Rover (in lesson plan)
- Show NASA rover footage if you have screen access

MARS LESSON PLAN · MARS SLIDE DECK + WORKSHEET

DAY 5 — Inner planets review

Consolidate Mercury, Venus, Earth, Mars before moving outward.

- Comparison fact sheet (kid version) on every desk
- Pairs: each pair quizzes the other from inner-planet facts
- Award Mercury / Venus / Earth / Mars Expert certificates

COMPARE FACT SHEET · EXPERT CERTIFICATES (4)

WEEK 2 — OUTER PLANETS & REVIEW

DAY 1 — Jupiter & the gas giants

Introduce gas giants — show how dramatically they differ from rocky planets.

- Jupiter PowerPoint + worksheet
- Activity: A storm bigger than Earth (in lesson plan)
- Stretch: discuss Galilean moons

JUPITER SLIDE DECK + LESSON PLAN

DAY 2 — Saturn — the jewel

Saturn's rings as a hook into 'why does it look like that?' science.

- Saturn PowerPoint
- Activity: Build a paper-plate Saturn (in lesson plan)
- Discuss the 292 moons (most of any planet)

SATURN LESSON PLAN · SATURN SLIDE DECK + WORKSHEET

DAY 3 — Uranus & Neptune

Cover the ice giants. Highlight what makes each unique (Uranus tilted, Neptune predicted by maths).

- Uranus PowerPoint
- Neptune PowerPoint
- Compare-and-contrast worksheet (use both)

URANUS + NEPTUNE SLIDE DECKS + WORKSHEETS

DAY 4 — Whole solar system review

Pull all 8 planets together. Use scale and comparison to lock in big-picture understanding.

- Walk-the-Solar-System activity (Scale Models, distances)
- Compare fact sheets — kids fill in their own
- Choice Board (kids pick from 3 review activities)

SCALE MODELS · COMPARE FACT SHEET · CHOICE BOARD

DAY 5 — Celebrate & assess

Assess what students have learned and celebrate completion.

- End-of-Unit Assessment (30 min)
- Planet Bingo (15-25 min) for the rest of class
- Award Junior Astronomer certificates

ASSESSMENT · BINGO · JUNIOR ASTRONOMER CERT