

Exploring the Solar System

Part 1: Introduction to the Planets

Provide an overview of the 8 planets in our solar system by answering the following questions.

1. Have students fill out a worksheet or chart comparing key details of each planet.
2. Planetary Comparison Chart
3. Name of Planet:
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9. Notable Moons:
10. Atmosphere Composition:
11. Surface Temperature Range:
12. Length of Day:
13. Length of Year:
14. Other Interesting Facts:

Have students fill-in-the-blanks via a chart for each planet.

Part 2: Planetary Fact Files

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Part 3: Planet Comparisons

- Put students into pairs or small groups. Ensure that each student was assigned a different planet in Part 2.
- Have groups analyze similarities and differences using a Venn Diagram or table. They should be comparing characteristics like:
 - Composition (rocky vs gas giants).
 - Atmosphere and climate,
 - Size and gravitational force.
 - Unique surface features or storms.
- Groups present their comparisons to the class.

Part 4: Planet Cities

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Part 5: Pretend You're There

- Have students imagine they are living on their assigned planet. What would a day be like? What might they see, hear, smell, experience?
- Students are to write a journal entry each day for a fictional week from the perspective of someone living on their planet.
- Students are to submit their journal.

Part 6: Presentations

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Research References:

- NASA Solar System Exploration: <https://solarsystem.nasa.gov/planets/overview/>
Offers basic facts about each planet from the space agency.
- Windows to the Universe: https://windows2universe.org/solar_system/
Provides reliable data plus images and interactives for each world.
- Space Place from NASA: <https://spaceplace.nasa.gov/planet-profiles/en/>
Concise profiles of all planets with vocabulary defined.
- Kids Astronomy: <https://www.kidsastronomy.com/planet-facts.html>
Simple charts and descriptions for each, good starting point.
- Space Facts: <https://www.spacefacts.de/en/planets/index.htm>
Details on key attributes clearly presented.
- StarChild Question of the Day:
<http://starchild.gsfc.nasa.gov/docs/StarChild/questions/question1.html>
Answers common questions about each world.
- Cool Cosmos:
https://coolcosmos.ipac.caltech.edu/cosmic_classroom/classroom_activities/eight_planet_s/index.shtml
Activities and lessons linked to individual planets.
- Universe Today: <https://www.universetoday.com/tags/planets/>
Up-to-date news snippets plus visualizations supplement facts.