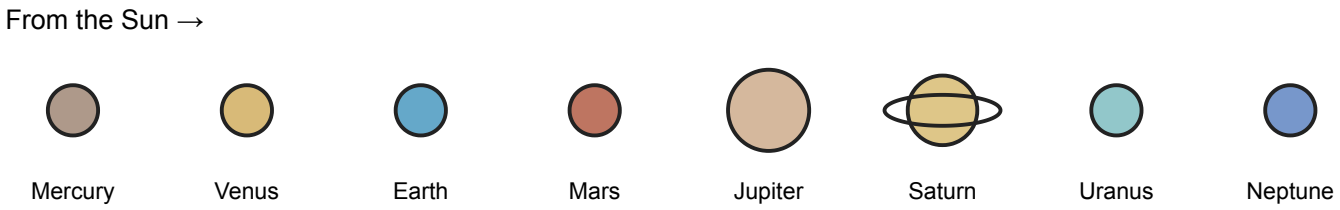
GRADES 2–3

Solar System Planet Order

Name / chosen name: _____

Our solar system has eight planets. Use this order diagram to complete the questions. The Sun is a star; Pluto is a dwarf planet.



Schematic only: planet sizes, colors, gaps and positions are not to scale. All eight planets orbit the Sun; they are not usually lined up.

1. Write the eight planets in order from the Sun

_____

_____

2. Which planet lies between Earth and Jupiter?

_____

_____

3. How is the Sun different from a planet?

_____

_____

Source: NASA — planets

GRADES 2–3

Planet Fact Matching

Name / chosen name: _____

Match each planet to a fact letter. Each letter is used once. Use the NASA source with an adult if needed.

1. Mercury → _____

2. Venus → _____

3. Earth → _____

4. Mars → _____

5. Jupiter → _____

6. Saturn → _____

7. Uranus → _____

8. Neptune → _____

A. Largest planet in our solar system

B. Our home planet

C. Most distant of the eight planets from the Sun

D. Closest planet to the Sun

E. Well known for its bright ring system

F. Often called the Red Planet

G. Hottest planet in our solar system

H. Rotates with a strongly tilted axis

Source: NASA — planets

K–5

Design an Imaginary Planet

Name / chosen name: _____

Invent a fictional planet. Your drawing is imaginative, so do not label invented details as real scientific facts.

1. Planet name and invented features

2. An imagined habitat

3. One real planet fact that inspired a different detail

GRADES 2–3

Moon Phases Learning

Name / chosen name: _____

The Moon reflects sunlight. As it orbits Earth, we see different amounts of its sunlit half. These four markers repeat in a cycle of about 29.5 days.

New Moon | First quarter | Full Moon | Third quarter

White shows the sunlit part; dark shows the part not lit by the Sun. Schematic northern-hemisphere orientation: apparent orientation varies by location and viewpoint. Ordinary phases are not caused by Earth's shadow.

1. At which marker do we see a fully lit disk?

2. Why is the Moon not making its own light?

3. Why can the Moon look different during a month?

Source: NASA — Moon phases

Source: NASA — Moon questions

GRADES 2–3

Moon Observation Log

Name / chosen name: _____

Use a reliable Moon-phase calendar or safe observations with an adult. Do not look at the Sun. Record what you actually find; cloudy weather or no observation is a valid entry.

Date and source	Draw the lit shape	What I notice

1. One change I noticed

2. One question to investigate

Source: NASA — Moon phases