



## Big Idea 12

# Solar System

Our vast solar system is a collection of interacting bodies that behave according to the principles of gravity. Forces at work in the solar system account for the patterns that we take for granted in everyday life, such as day and night, tides, and seasons of the year. The solar system remains a frontier to be explored. Uncovering even more of its secrets will require advances in technology and the imaginations of dreamers.



## Enduring Understandings

- Systems have cycles and patterns that allow us to make predictions.
- There are observable, predictable patterns of movement in the solar system.
- The sun is a star that drives Earth's systems and is essential for life.
- Stars form and change over time.
- Physical characteristics of planets depend on their size and distance from the sun.
- Humans study and explore the sun, moon, and planets to learn about their past, present, and future history.

## Vocabulary List

- |                 |             |             |
|-----------------|-------------|-------------|
| ■ Alignment     | ■ Eclipse   | ■ Orbit     |
| ■ Asteroid      | ■ Galaxy    | ■ Phases    |
| ■ Axis          | ■ Gravity   | ■ Planet    |
| ■ Comet         | ■ Lunar     | ■ Rotation  |
| ■ Constellation | ■ Meteorite | ■ Satellite |

## Essential Questions

Use these questions to help guide student exploration into our solar system.

- How can patterns be used to describe the universe?
- Why is our solar system a system?
- How is our solar system organized?
- How does the sun affect the other planets?
- What is the role of gravity in the solar system?
- What adaptations would you have to make to live on another planet?
- What accounts for day and night, seasons, months, and tides?
- How is our knowledge of the solar system affected by technology?
- How could people in the past think that Earth was the center of the solar system?
- Why do humans explore the solar system?
- Why was landing on the moon a great achievement?
- How can studying the solar system lead to a better Earth?

*Add your own questions!*



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