



How Old Are You on Mars?

Introduction

In the book, *Going Around the Sun: Some Planetary Fun* by Marianne Berkes, the reader is introduced to the eight planets that orbit (revolve) around the sun. In this activity, students learn the relationship between the Earth orbiting the Sun and how we measure time.

Materials Needed

- ◆ *Going Around the Sun: Some Planetary Fun* by Marianne Berkes
- ◆ Chart naming the four inner planets and the approximate length of one year.

Key Concepts

- ◆ Rate compares one measured quantity with another.
- ◆ Use knowledge and evidence to formulate explanation.
- ◆ Evidence should be used in explanations.

For standards correlation please see our website.

Procedure

1. Download or make a chart showing showing the approximate length of a year for the four inner planets. (Mercury = 88 Earth days, Venus = 225 Earth days, Earth = 365.25 Earth days, and Mars = 687 Earth days.)
2. Read *Going Around the Sun: Some Planetary Fun*.
3. Explain that every time the Earth goes around the Sun once, we have "aged" one year (or 365.25 days.)
4. Ask students to figure their age in Earth days (age x 365.) Example for a person who is 10 years old on Earth: $10 \times 365 = 3650$ Earth days old.
5. From the chart, ask students to determine how old they would be on Mars compared to their age on Earth. (It takes Mars 687 days to go around the Sun once.)
6. Example for a person who is 10 years old: Divide the 3,650 Earth days by 687 = 5.3 years. Students who are ten years old would only be a little over 5 years old on Mars.

Nature Connections

- ◆ When Earth goes around the Sun one time, you have become one year older. Ask students if they would be younger or older on Venus? Then ask students how old a 10 year old Martian is in Earth years.
- ◆ Our year (365 days, or 366 days every four years) is measured by the time it takes Earth to revolve around the Sun once. What would happen if we didn't add an extra calendar day every four years?

Additional Resources

Fun Facts ABOUT Space Shuttles

- ◆ There have been five Space Shuttles in the United States: Columbia, Challenger, Discovery, Atlantis and Endeavor.
- ◆ The Space Shuttle is 184 feet long and requires the worlds largest tractor to pull it to the launch pad.
- ◆ The weight of a Space Shuttle is 4.5 million pounds.

