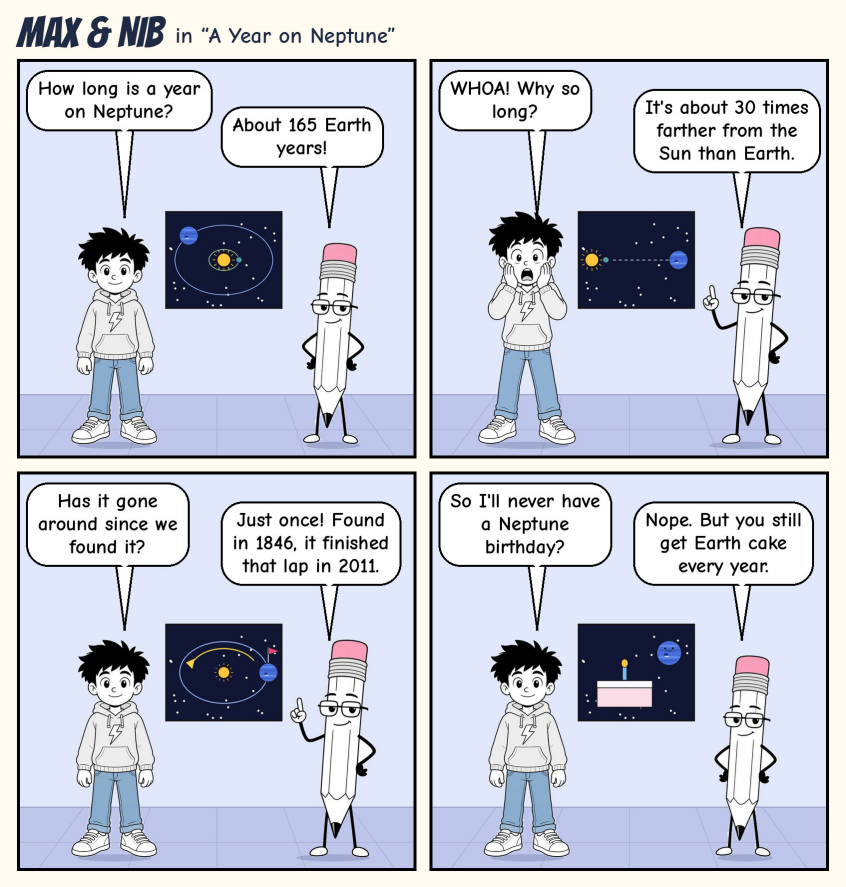


Name: _____ Date: _____

How Long Is a Year on Neptune?

Space Science · Grades 3–6 · About 15 minutes · Max & Nib

Cool facts

How long is a year on Neptune? First, what is a year? A year is the time a planet takes to travel once around the Sun. Earth takes about 365 days. Neptune, the eighth planet, takes about 60,190 Earth days. That is about 165 Earth years! NASA says Neptune is about 30 times farther from the Sun than Earth, so its path around the Sun is much longer, and it moves more slowly. Astronomers discovered Neptune in 1846. In 2011, it finally finished its first full trip around the Sun since then. Because a Neptune year is so long, each season there lasts more than 40 years. (Numbers are from NASA and are rounded.)

Cool Fact One **day** on Neptune is short: about **16 hours**. (NASA)

Questions

1. What is a year?

2. About how many Earth days does one year on Neptune last? About how many Earth years is that?

3. Give one reason a year on Neptune is so long.

4. Neptune was discovered in 1846. It finished its first full trip around the Sun since then in 2011. How many years did that trip take?

Show your work

Write about it

On Neptune, one season lasts more than 40 years. If one season on Earth lasted that long, which season would you pick? Explain why.

Word Record **Orbit**: the path a planet takes around the Sun.

How Long Is a Year on Neptune? — Answer Key

Grades 3–6 · For teacher or parent use

Answers

1. What is a year?

   A year is the time a planet takes to travel once around the Sun.

2. About how many Earth days does one year on Neptune last? About how many Earth years is that?

   About 60,190 Earth days. That is about 165 Earth years.

3. Give one reason a year on Neptune is so long.

   Neptune is about 30 times farther from the Sun than Earth, so its path around the Sun is much longer (and it moves more slowly).

4. Neptune was discovered in 1846. It finished its first full trip around the Sun since then in 2011. How many years did that trip take?

   165 years (2011 − 1846 = 165).

Writing prompt: On Neptune, one season lasts more than 40 years. If one season on Earth lasted that long, which season would you pick? Explain why.
Accept any reasoned answer for the writing prompt. For adults: NASA lists Neptune's orbital period as about 60,190 Earth days (about 165 Earth years); Earth's year is about 365.25 days, and 60,190 ÷ 365.25 ≈ 164.8. Neptune's average distance from the Sun is about 30 AU (2.8 billion miles). Johann Galle found Neptune on September 23, 1846; NASA and ESA/Hubble marked its first full orbit since discovery on July 11–12, 2011.

Sources

- NASA Science: Neptune Facts — https://science.nasa.gov/neptune/neptune-facts/
- NASA Science (Hubble): Neptune Completes Its First Circuit Around the Sun Since Its Discovery — https://science.nasa.gov/missions/hubble/neptune-completes-its-first-circuit-around-the-sun-since-its-discovery/
- ESA/Hubble: Happy Anniversary, Neptune — https://esahubble.org/announcements/ann1115/

Word Record **Astronomer**: a scientist who studies planets, stars and space.

Cool Fact Neptune is so far away that sunlight takes about **4 hours** to get there. (NASA)