



## Happy Birthday, Space Traveler!

Compare your age on Earth to your age on the other planets in our solar system (and the dwarf planet Pluto).

### Age is just a number

Birthdays are great, right? You might even wish yours could roll around more often. Well, with a bit of planetary travel, maybe it could.

Your birthday is actually a celebration of one complete orbit of the Earth around the Sun. The time it takes Earth to orbit the Sun is what defines a year. But each of the eight planets orbits the Sun at a different rate. While Earth takes 365 days to go once around, Mercury takes only 88 days. Mars takes a whopping 687 days!

The planets are held in their orbits by the Sun's gravity. The time it takes for a planet to complete an orbit depends on its distance from the Sun. The closer to the Sun a planet is, the faster it moves and the shorter the distance it has to go. The farther from the Sun a planet is, the slower its speed and the farther it must go.

If you lived on another planet, your age would be different because a year would be a different length. But don't worry. You would still be the same age in Earth years. It's the orbit that changes—not you!

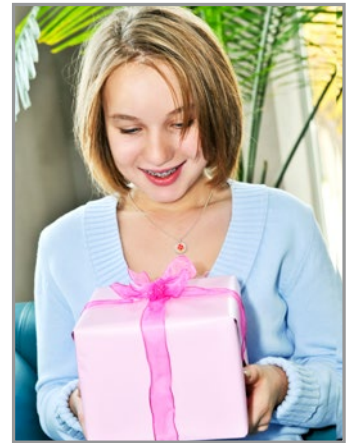
### Do the activity

1. Multiply your age by 365. This product is your age on Earth in days. You will use this age to calculate your age on the other planets.

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2. The table shows the length of a year, in Earth days, on the other planets in our solar system. To find your age on each planet, divide your Earth age in days by the number of days in the planet's year. The quotient is your age in years on that planet. Calculate your age on each planet and enter it in the table.



Planet	Length of year	Your age in years on planet
Mercury	88 Earth days	
Venus	225 Earth days	
Earth	365 Earth days	
Mars	687 Earth days	
Jupiter	4,380 Earth days	
Saturn	10,585 Earth days	
Uranus	30,660 Earth days	
Neptune	60,225 Earth days	
Pluto	90,520 Earth days	

### Interpret the results

1. On which planet (or dwarf planet) in our solar system would you be youngest? What would your age be on that planet?

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2. On which planet (or dwarf planet) in our solar system would you be oldest? What would your age be on that planet?

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3. How does your age on a planet relate to the orbit of the planet?

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