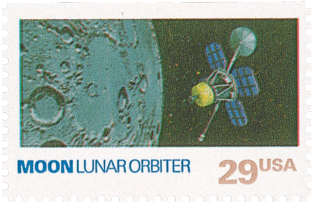
This Day in History… February 29, 1752

Happy Leap Day!

Leap Day is the accumulation of an additional six hours every year over four years.

It's an event that only happens once every four years. The first modern Leap Day was instituted on February 29, 1752, but it's a tradition that dates back to Ancient Rome.

Leap Day is a type of intercalation, or insertion, of a day or days into the calendar to keep our seasons on track with the lunar and solar schedules. Different cultures have found their own ways to adjust their calendars. The ancient Egyptians had twelve 30-day months with five days added at the end of the year. The Chinese lunisolar calendar adds an extra month every two to three years, depending on the relationship between the winter solstice and the new moon.



The original Roman calendar was based on the lunar cycle, in which the Moon orbits the earth every 29.5 days.

America's Leap Day comes as the result of the practices of ancient Rome. Around 738 BCE, Rome's first king, Romulus, established the Roman Republic calendar. Beginning in Martius (our March), it only lasted 10 months and didn't include winter because people didn't work at that time. However, by the time Romulus's successor, Numa Pompilius took over, many were frustrated with the calendar's inconsistencies. In order to align with the rest of the world, he added the months of Ianuarius (January) and Februarius (February) at the end of the year.

Even with this change, the calendar still fell out of sync with the seasons every few years. So about every two years, they added a 13th month, Mercedonius, also called Intercalaris which had 27 or 28 days. This month was usually added after February 23 (cutting that month short), but allowing for the annual festival of the Terminalia, honoring the god of boundaries, Terminus.

It takes the Earth 365 days, 5 hours, 48 minutes, and 56 seconds to orbit the sun. That extra time is why we have Leap Day.

It was many years before another major change occurred under Julius Caesar. Working with Greek astronomer Sosigenes, he established a solar calendar that would take effect in 45 BC. Sosigenes calculated that a year was exactly 365 days and six hours. So this new Julian calendar consisted of 365 days, and those extra six hours would be added up to one day every four years. Caesar extended February 24 to 48 hours. The calendar also moved January to the start of the year. The year before this change went into effect was a 445-day year known as the "last year of confusion."

Leap Day helps keep the calendar properly aligned with the seasons.

As the Roman Empire expanded over the years, the Julian calendar spread through Europe. But a flaw was discovered, finding that it surpassed the solar year by 11 minutes each year, which added up to 10 days by the 16th century. Pope Gregory XIII made another adjustment, establishing the Gregorian calendar we use today. Leap years would still occur every four years, but they would skip centurials (1700, 1800, 1900, etc.), except for those that are divisible by 400 (1600, 2000, 2400, etc.). Some nations were slow to adopt the change. Britain delayed for several years, but eventually passed the Calendar (New Style) Act in 1752, which moved the start of the year to January 1 and adopted the institution of Leap Day on February 29 every four years.

In 1972, leap seconds were introduced to account for the slight remaining difference. However, it was decided in 2022 to stop tracking that in 2035.

Sweden switched back and forth between the Julian and Gregorian calendar, and ultimately had a rare February 30 to resolve their issues in 1712.

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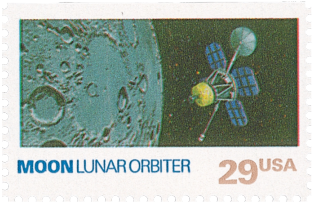

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