

For those of us living in the northern hemisphere, summer is here. How could we get through summer without water – drinking it to stay hydrated, swimming in it to stay cool, freezing it into ice cubes to keep our summer beverages refreshing! So, in honor of life-sustaining water, here is a summer-y (pun intended!) of 21 facts about water that we found surprising – with one more bonus fact at the very end.

### The Chemistry of Water

1. Water is the second most common molecule in the universe. The most common is hydrogen gas, H<sup>2</sup>.
2. There are more molecules in a teaspoon of water than there are teaspoons of water in the Atlantic Ocean.
3. Water is sticky -- water molecules love to stick to things, especially to each other (hence its large surface tension).
4. Water can dissolve more substances than any other liquid, including sulfuric acid.
5. It's heavy: an inch of water covering one acre weights 113 tons.
6. Hot water freezes faster than cold water. This is known as the Mpemba Effect, and no-one knows why it happens.

### Its Origins and Quantity

7. All the water on Earth arrived in ice-laden comets and asteroids during the Late Heavy Bombardment period 4.5 billion to 3.8 billion years ago.
8. The Antarctic has been covered in ice for more than 30 million years.
9. There is more water in the atmosphere than in all of our rivers combined.
10. If all the water on Earth was spread evenly over the Earth's surface, it would have a depth of 3,700 meters.
11. There are around one million miles of water pipeline and aqueducts in the US and Canada, enough to circle the globe 40 times.

### And one bonus fact...

Leonardo Da Vinci and Niccolo Macchiavelli once came up with a plan to use water to win a war, by diverting the river Arno.

### References

- Matt Scott, 40 shocking facts about water, June 30, 2009
- Tom Chivers, 27 Fascinating and Strange Facts About Water, May 27, 2015
- Melissa Breyer, 36 eye-opening facts about water, March 22, 2017
- 20 Interesting and Useful Water Facts, 2004
- 50 Amazing Facts About Water
- William Hartston, Top ten facts about water, March 22, 2017

# 21 Surprising Facts About Water

### Using Water to Make Things

12. It takes over 11,000 liters (~2,900 gallons) of water to produce 450 grams (~1 pound) of coffee, or 200 liters (~52 gallons) of water to produce the coffee beans for one cup of coffee.
13. It takes 15,000 liters (~3,950 gallons) of water to produce 1kg (~2.2 pounds) of beef.
14. It takes about 300 liters (~79 gallons) of water to make the paper for one Sunday newspaper.
15. It takes up to 5,000 liters (~1,320 gallons) of water to produce 1kg (~2.2 pounds) of rice.
16. It takes 10,000 liters (~2,640 gallons) of water to produce 1 kilo (~2.2 pounds) of cotton – enough for a shirt and pair of jeans.

### Water and Us

17. Our bodies are 60-70% water. In a 70 kg (~154 pounds) person, there are 42 liters (~11 gallons) of water.
18. Drinking too much water too quickly can lead to water intoxication, i.e., water dilutes the sodium level in the bloodstream and causes an imbalance of water in the brain.
19. By the time a person feels thirsty, his or her body has lost over 1% of its total water amount.
20. 25% of the bottled water on the market is drawn from municipal taps.
21. On average, an American uses about 100 gallons (~378 liters) of water per day, a European 50 gallons and a sub-Saharan African 2-5 gallons.