

6/2/24

How Much Do You Know About...

Estimated play time: Approximately 15 minutes

Number of players: Unlimited

Supplies needed: Tokens (for scorekeeping); Prizes (small) for winner(s)

Suitable for visually impaired players.

Overview:

In this game, we look at one subject in depth – it could be a person, place, event, or thing. This week, let's see how much you know about ... **WATER**.

Instructions:

1. This game can be played by individuals or teams.
2. Read the first question. Discussion is permitted among teammates. Prior to the start of the game, a method to signal when a team is ready to answer must be determined. Ringing bells and New Year's blowers are just two inexpensive noisemakers. Raised hands work, but the host must be vigilant to watch for whose hand went up first. The host always has the final say in any disputes.
3. After a team is recognized as the first to signal, they may give one answer. If the first answer is incorrect, the other teams may 'buzz' in and answer.
4. Keep score (10 points for each answer) after each question is answered correctly. Play until all questions have been asked and answered.

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INSTRUCTIONS: Just answer the questions to find out how much you know about this week's subject ... WATER.

1. Even if you don't know many molecular formulas, you probably know this one – the formula for water.
2. What does H₂O stand for?
3. The surface of Earth is nearly 71% water. What is the largest body of water on Earth?
4. Only 2.5% of all the water on earth is fresh water. Of that amount, 30% is ground water, and only 1% is surface water (lakes, rivers, etc.). Can you guess where nearly 70% of the earth's fresh water is found?
5. Water is constantly going through a cyclical process of precipitation (e.g., rain) which lands on the earth's surface. What is the second part of this process called, in which the surface water becomes heated, turns into vapor, and escapes back into the atmosphere?
6. Water plays an important role in the world economy as an ingredient in a wide variety of products, and also as a critical component of many industrial processes. But 70% of all the fresh water in the world is consumed by one particular field of economic endeavor. Can you guess what that global business is?
7. In the United States, the average person uses between 80 to 100 gallons of water per day. What common activity involves the largest amount of individual water use?
8. Although the freezing point of water is 32 degrees Fahrenheit (0 degrees Centigrade), the freezing point of ocean water is about 30 degrees, and sometimes even lower. Why?
9. Measuring more than one mile down, this lake in the Siberia region of Russia is the deepest lake in the world.
10. The eighth- and ninth-deepest lakes in the world are both located in North America. For our Canadian subscribers, can you name the deepest lake in your country, which is located in the Northwest Territories?

And for our US subscribers, can you name America's deepest lake, which is located in Oregon and gives its name to a National Park?

11. The US Geological Service has made a table of how much of each state is covered in water, including inland lakes, rivers, ponds, etc., and coastal waters. Can you guess which state has the largest percentage of surface water within its borders? And which US state has the smallest percentage of surface water coverage?

Again, for our Canadian subscribers, can you name the province/territory with the greatest percentage, and the smallest percentage, of water coverage?

12. The Ancient Greek philosopher Empedocles held that water is one of the four classical elements of the universe. What were the other three?
13. Snow is water in the form of crystalline water ice. If a storm that drops a foot of snow on the ground were a rainstorm instead, how much rain (in inches) would have fallen?
14. The popularity of bottled water has created a number of problems throughout the world. For example, bottled water produces up to 1.5 million tons of plastic waste per year. In the US and other developed countries, bottled water has also played a significant role in the rise of tooth decay over the last decade or so. Why?

This is not a question, just an interesting fact. Most scientists believe that virtually all of the water on Earth has been here since the beginning of time. Exactly how it got here – whether it was part of the so-called "Big Bang" from which our universe was formed, whether it arrived when asteroids slammed into the earth, etc. — is still up for debate. But what is certain is that our water has been here for a VERY long time. As described in the quiz above, water goes through a continuous cycle of descending to the earth's surface as rain (precipitation); being heated by the sun and turning into vapor (evaporation); rising back into the atmosphere and cooling (condensation); and finally turning back into water, which eventually falls back to the earth to start the process all over again. So the next time you have a glass of water, take a close look at it. You are probably drinking the same water that dinosaurs drank a few hundred million years ago!

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How Much Do You Know About...

ANSWERS

1. H₂O
2. It stands for two atoms of hydrogen and one atom of oxygen.
3. The Pacific Ocean is the largest body of water – about twice as large as the Atlantic Ocean, which is the second-largest body of water.
4. It's found frozen in glaciers and mountain ice caps.
5. Evaporation
6. Agriculture – primarily for irrigation. (Note: In the United States, the second-most intensive use of water is for hydroelectric power.)
7. Flushing the toilet
8. The salt in seawater makes it denser than fresh water, decreasing the freezing point.
9. Lake Baikal, which is also the largest freshwater lake by volume, containing roughly 20% of the world's unfrozen surface fresh water.
10. Great Slave Lake (Canada)
Crater Lake (USA)
11. **US state, greatest percentage:** 41.5% of the state of Michigan is covered in water. After Michigan come Hawaii at 41.2%, Rhode Island at 33.1%, Massachusetts at 26.1% and Maryland at 21.8%.
US state, smallest percentage: New Mexico is the "driest" state, with only .2% of its surface covered in water. After New Mexico come Colorado at .4%, Kansas at .6% and four states (Iowa, Nebraska, Nevada, and Wyoming) all coming in with .7% of surface water.
Canadian province/territory, greatest percentage: Nunavut 21%; Quebec 15.4%; Northwest Territories 13.5%; Ontario 10.8%
Canadian province/territory, smallest percentage: Prince Edward Island .1%; Nova Scotia .6%; New Brunswick .7%; Newfoundland and Labrador 4.1%
12. Fire, earth, and air. (Note: Ancient Chinese philosophy believed in five basic elements: earth, fire, wood, metal ... and, of course, water.)
13. Just under an inch. In general, 1" of rain is equivalent to 13" of snow.
14. Most tap water contains fluoride that prevents tooth decay, while bottled water does not.