

The Most Precious Thing in the World¹

By Mitchell Rocha

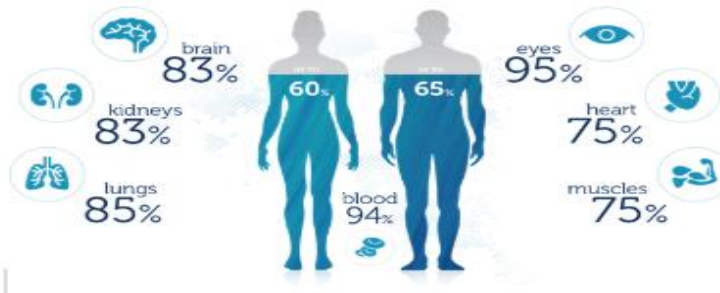
What must you have to survive, really just to survive?



A person can live about a month without food, but only about a week without water and not that long if you are in arid Santa Fe. Up to 70% percent of the human adult body is water. Your brain is made up of 83% water, your heart is about 75% water, your kidneys are 83%, your lungs are about 85%, and your muscles are 75%. Your skin contains 80% water, your eyes are 95% water, your blood is 94% water, and even your bones are 24% water.

Order these percentages from greatest to smallest in the following chart?

| | | | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|--|
| Human Body Parts | | | | | | | | | |
| % of water | | | | | | | | | |



Each day humans must consume a certain amount of water to survive. Generally, an adult male needs about 3 liters of water per day while an adult female needs about 2.2 liters per day.

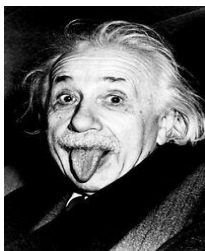
How much water is that weekly? Monthly? Annually? Register your data in the following chart.

¹ Suggested Grades: 4 – 5 Skills: Ordering, percents, multiplication with integers, & expanded notation. MA.4.2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. MA.5.5. Fluently multiply multi-digit whole numbers using the standard algorithm. MA.5.1. Use parentheses, bracket, or braces in numerical expressions, and evaluate expressions with these symbols.

| | Liters of Water | |
|-----------|-----------------|-------|
| | Men | Women |
| Per Day | | |
| Per Week | | |
| Per Month | | |
| Per Year | | |

7 days = 1 week
 30 days = 1 month
 365 days = 1 year

If Albert Einstein was born in 1879, and died in 1955, about how many liters of water did he drink during his life?



What data from the previous chart is needed to find the answer?

What else do you need to know first about Einstein?

Here is a numerical expression with parentheses explaining how to calculate the amount of water he used in his life.

$$(\text{Liters of water a year in men}) \times (\text{Einstein's year of death} - \text{Einstein's year of birth})$$

Write your answer in Expanded Notational form.

| Hundred Thousands (x 100,000) | Ten Thousands (x 10,000) | Thousands (x 1000) | Hundreds (x 100) | Tens (x 10) | Ones (x 1) |
|-------------------------------|--------------------------|--------------------|------------------|-------------|------------|
| | | | | | |

Is your answer 100% accurate or is it an approximation? Explain.

List many factors that influence the amount of water a person needs to drink in a lifetime.