

1. Water is composed of two elements, hydrogen and oxygen, in a ratio of **2:1** by volume, respectively
2. oxygen represents **88.89%** of the **mass** of a water molecule and hydrogen represents **11.11%**
3. Two hydrogen atoms are linked to the oxygen atom by two **covalent bonds**, between which an angle measuring about **104.50°**.
4. boiling point of **pure water** which is **100°C** at **normal atmospheric pressure**
5. **hydrogen sulphide**, which boils at **- 61°C**.
6. **pH value** of the solution It is a scale that ranges **from 0 to 14**
7. less than 7 is acidic, greater than 7 is basic, equal to 7 is neutral.
8. **Seawater**: The pH value of seawater generally ranges from **7.5 to 8.4**.
9. **Fresh water** (rivers and lakes): the pH value varies and normally ranges **from 6.5 to 8.5**.
10. **Distilled water**: It has a pH value of **about 7**, because it is free of most of the impurities and ions.
11. **Groundwater**: is either **neutral or basic**.
12. **Clouds**: are generally slightly acidic, with values ranging from **4.5 to 5**, **due to carbon dioxide**
13. In case of **pure water**, the mass of **1 cm³** of it at a temperature of **4°C** equals **1 g**.
14. The **density** of water at **4°C** equals **1 g/cm³**, which is equivalent to **1000 kg / m³** in the **international unit (SI)**.
15. Normal **salinity** of ocean water is **35 grams per liter of water**.
16. The **concentration** of **oxygen gas** in the **air** is **about 500 times higher than** that of **carbon dioxide**.
17. **oxygen** gas is about **50 times** less soluble in water **than** that of **carbon dioxide**.

18. The **solubility** of the two gases "O₂, CO₂" in **salty ocean** water is about **20-30% lower** than their **solubility in fresh water**.
19. At a depth of **10 meters**, more than **50%** of **visible light** energy is **absorbed**.
20. In clear **tropical waters**, only about **1% of visible** light mostly in the **blue** spectrum reaches a **depth of 100 meters**.
21. **Nitrogen (N₂)**: represents about **78%** of the volume of the atmosphere.
22. **Oxygen (O₂)**: represents about **21%** of the volume of the atmosphere.
23. **Argon (Ar)**: an inert gas that makes up about **0.93%** of the volume of the atmosphere.
24. **Carbon dioxide (CO₂)**: Makes up about **0.04%** of the volume of the atmosphere and is essential for plant photosynthesis.
25. **Ozone gas (O₃)**: The ozone layer is found at an altitude of approximately **10 km - 55 km** from The Earth's surface.
26. **Troposphere**: The layer **closest to The Earth's** surface, with a **thickness** of about **18 km at the equator** and **8 km at the two poles**.
27. **The air temperature** decreases **by one degree** Celsius for every **176 m**.
28. **Stratosphere**: its height up to **50 km** above sea level,
29. **The temperature** does not change through the stratosphere layer until an **altitude of 20 km**.
30. **Mesosphere**: A layer about **30 km** thick, with the lowest temperature (**-90 °C**).
31. **Ionosphere**: Extending approximately to **640 km** above sea level.
32. The escape velocity from Earth's gravity is about **11.2 km/s**.