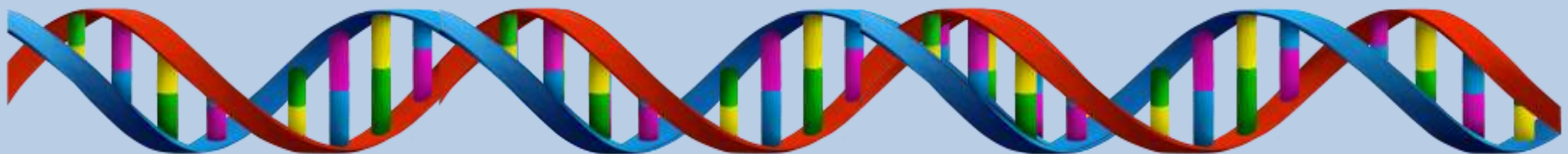
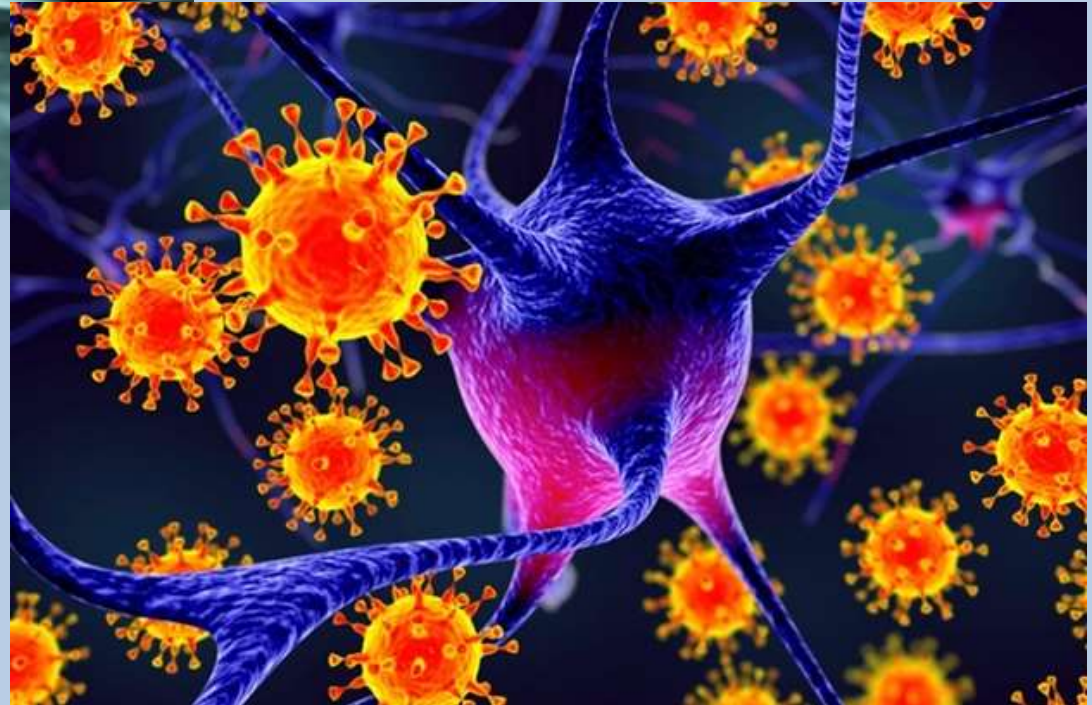
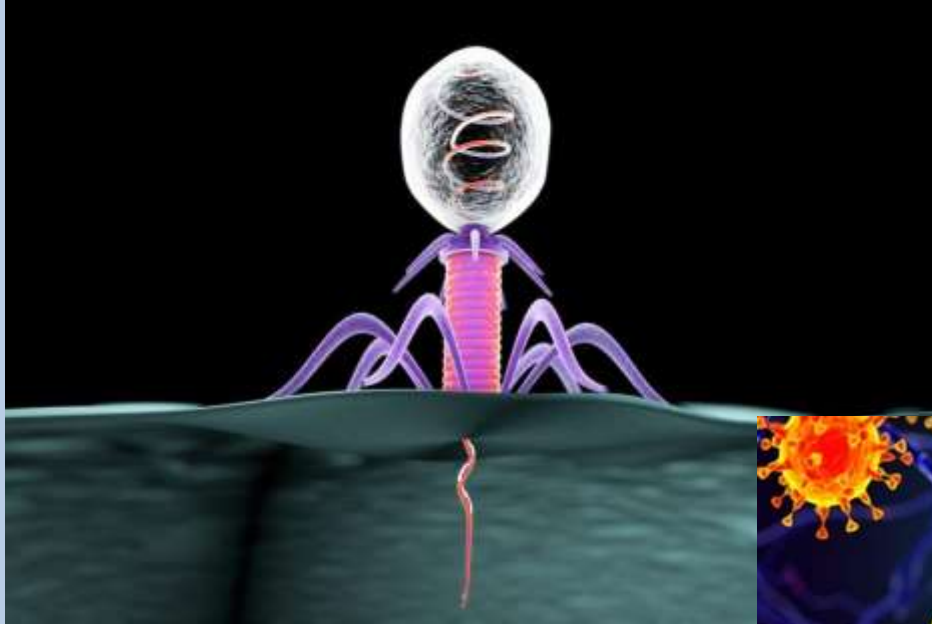


- 1. What is the difference between horns and antlers?**
- 2. What is the chemical formula of water?**
- 3. What is one quality of water that makes it important for life?**



# Virus – Is it alive?



# **Virus – Is it alive?**

- **Take a stand, and BE PREPARED TO DEFEND YOUR POSITION *USING EVIDENCE***

# Life

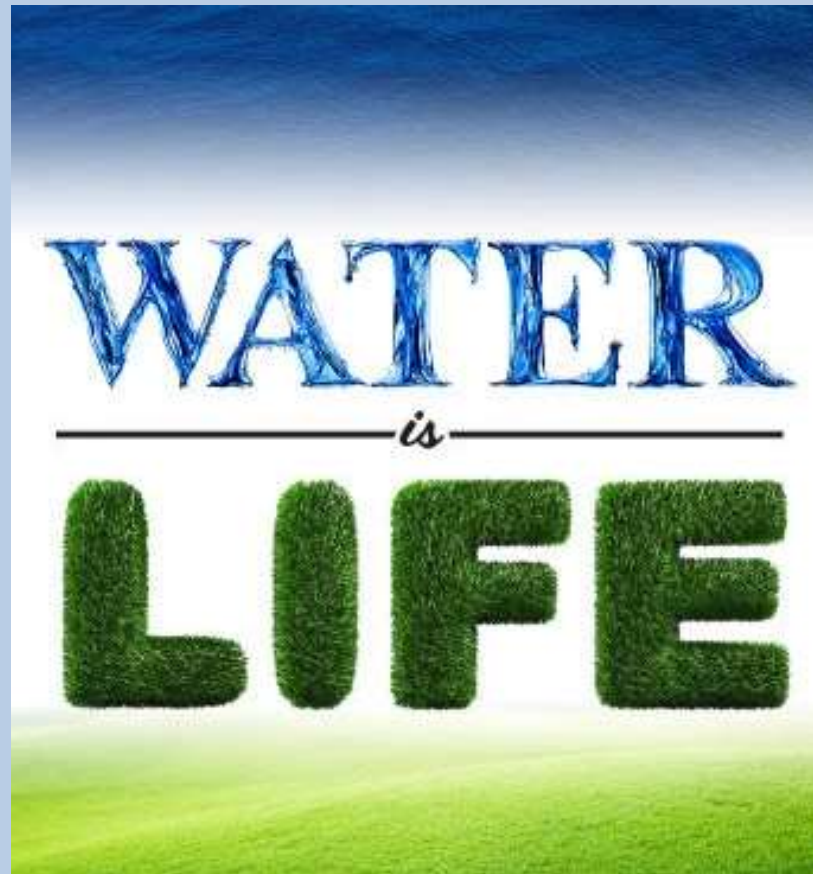
- **Water is a requirement for life  
(at least on Earth)**

# Section 2.1 The Nature of Matter

- This section is a review of last year
- If you don't remember the words: atom, molecule, covalent bond, ionic bond
- Then you need to do the interactivity in chapter 2 section 1 called "Types of Bonding"

# The Wonderful World of Water

- Water is a requirement for life (at least on Earth)



# **The Wonderful World of Water**

- To begin learning about the reasons water is so important we will test prior knowledge with a formative assessment**

# The Wonderful World of Water

- Title page 10 “Water”
- Make a table with 10 rows, and 3 columns

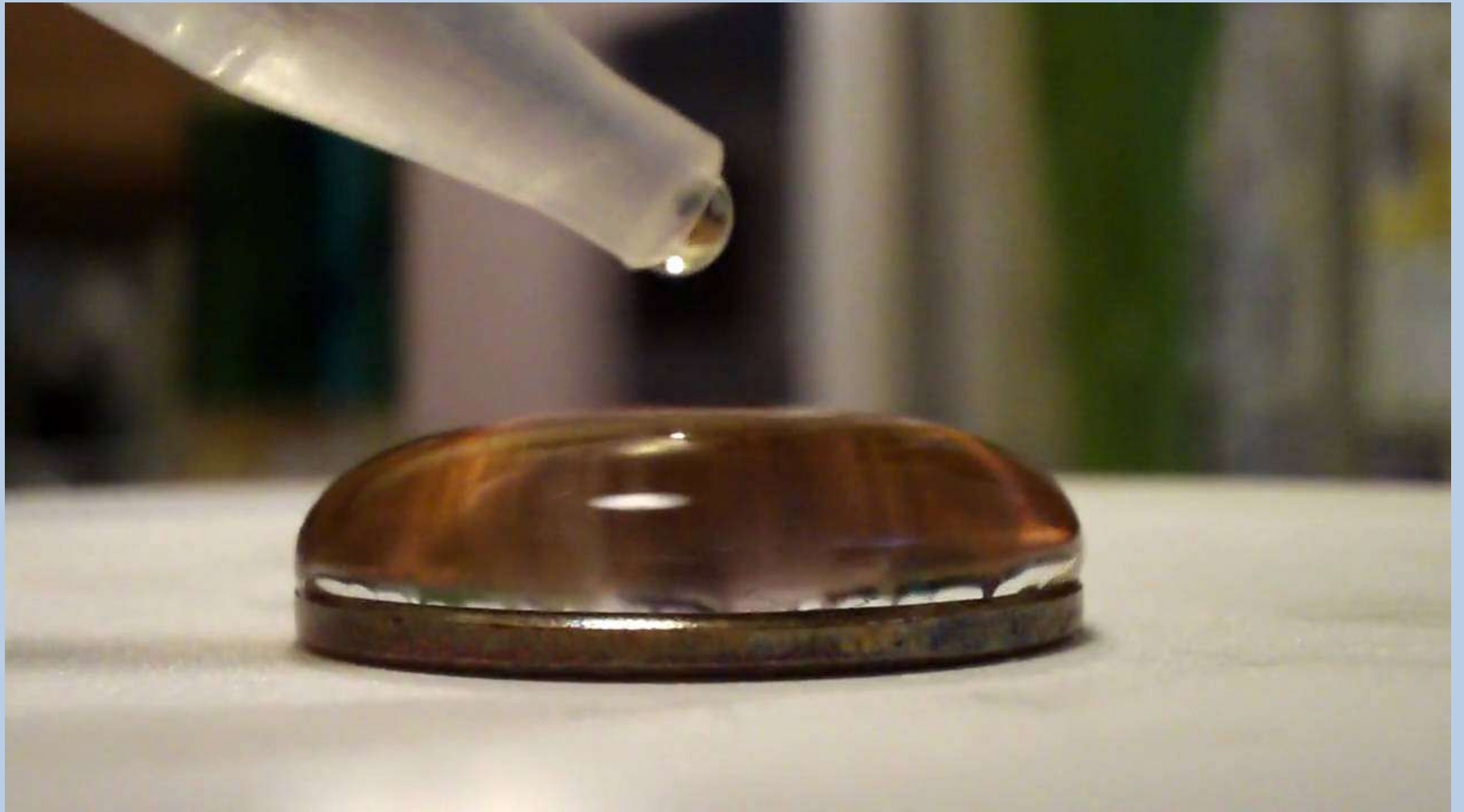
PICTURE	BEFORE	AFTER
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		





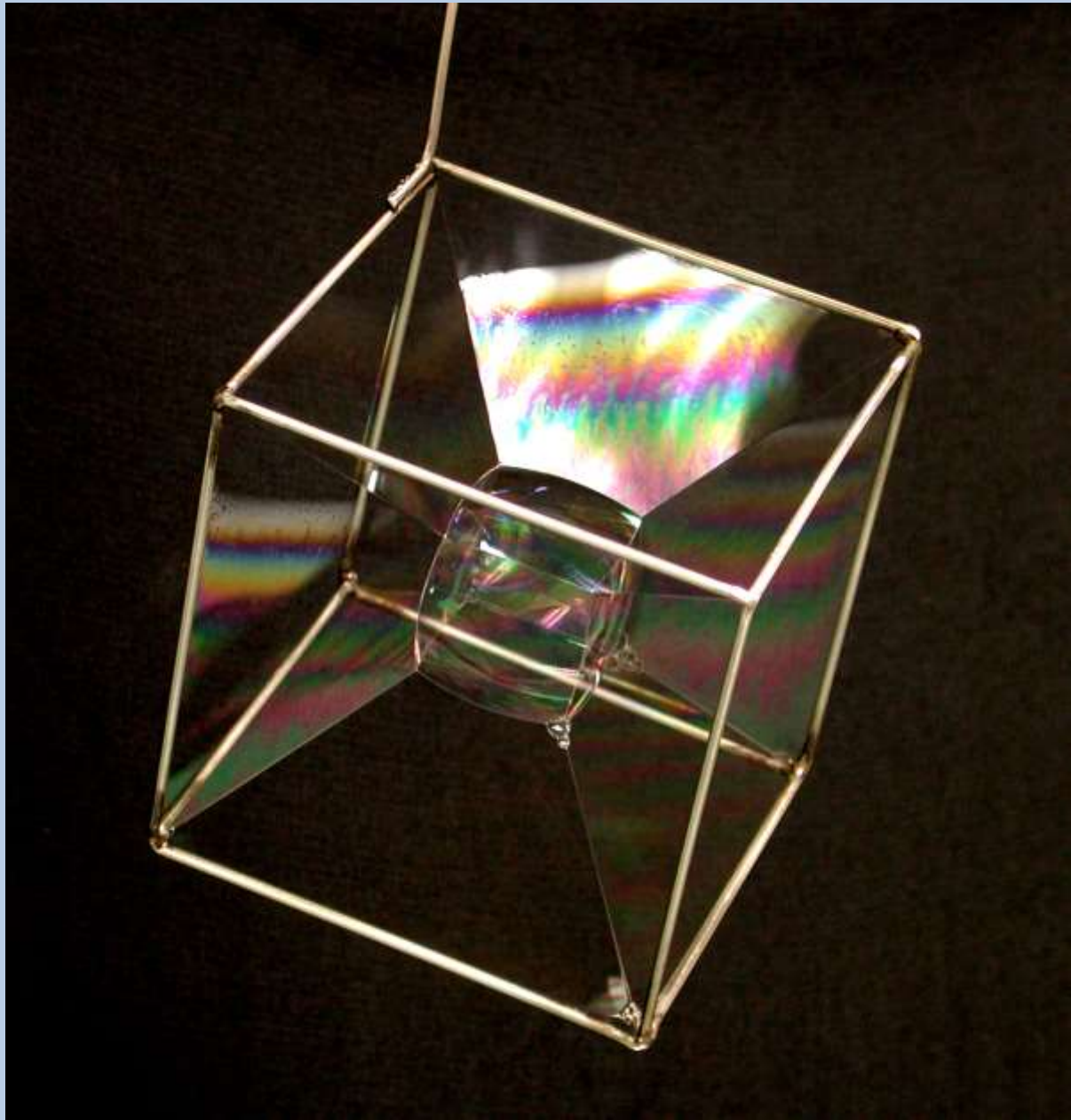


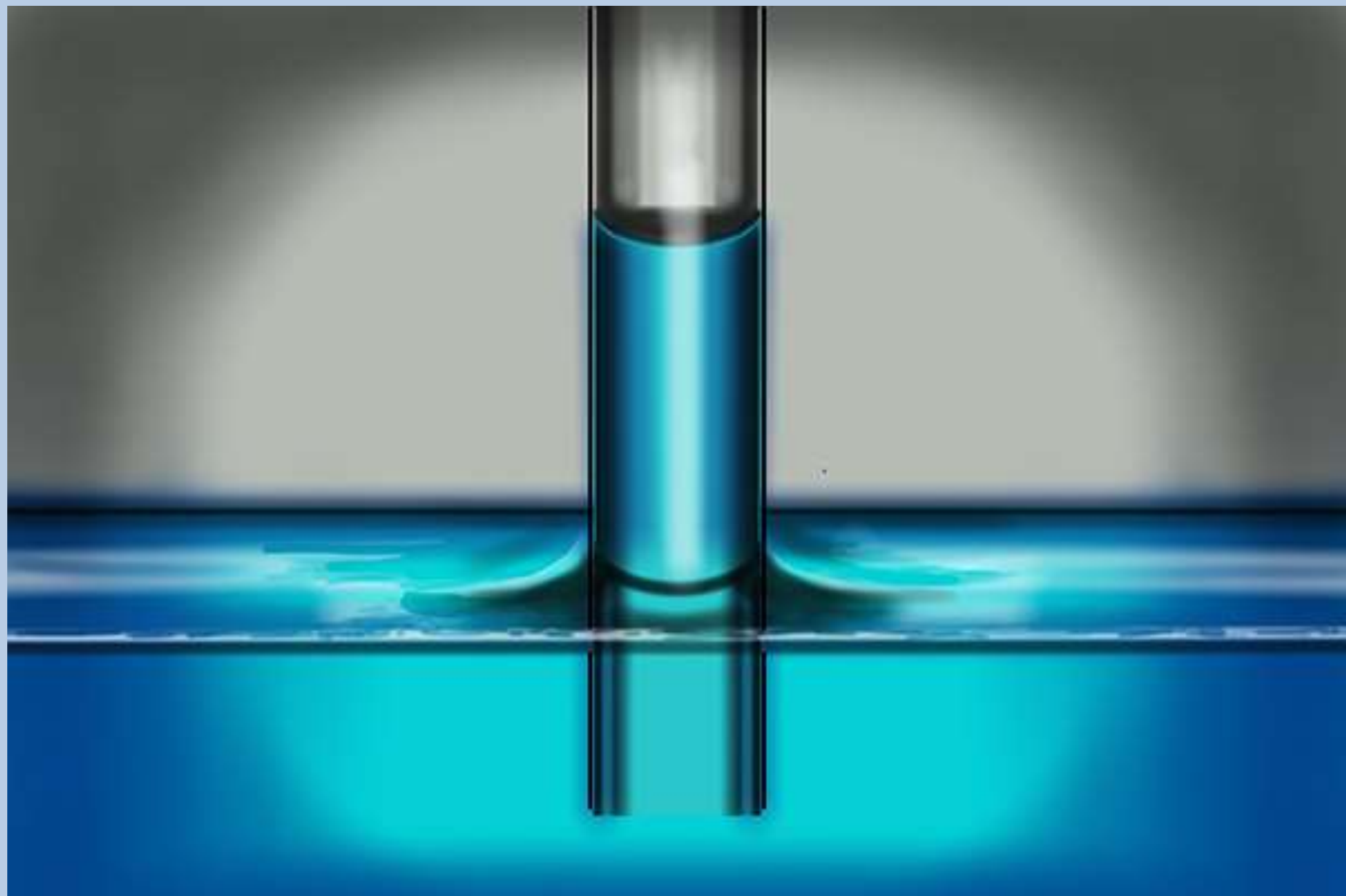




















# **The Wonderful World of Water**

- **Gather around and watch a demonstration**
- **Demonstrate your observation skills and PAY ATTENTION, you will learn vocabulary**

# **The Wonderful World of Water**

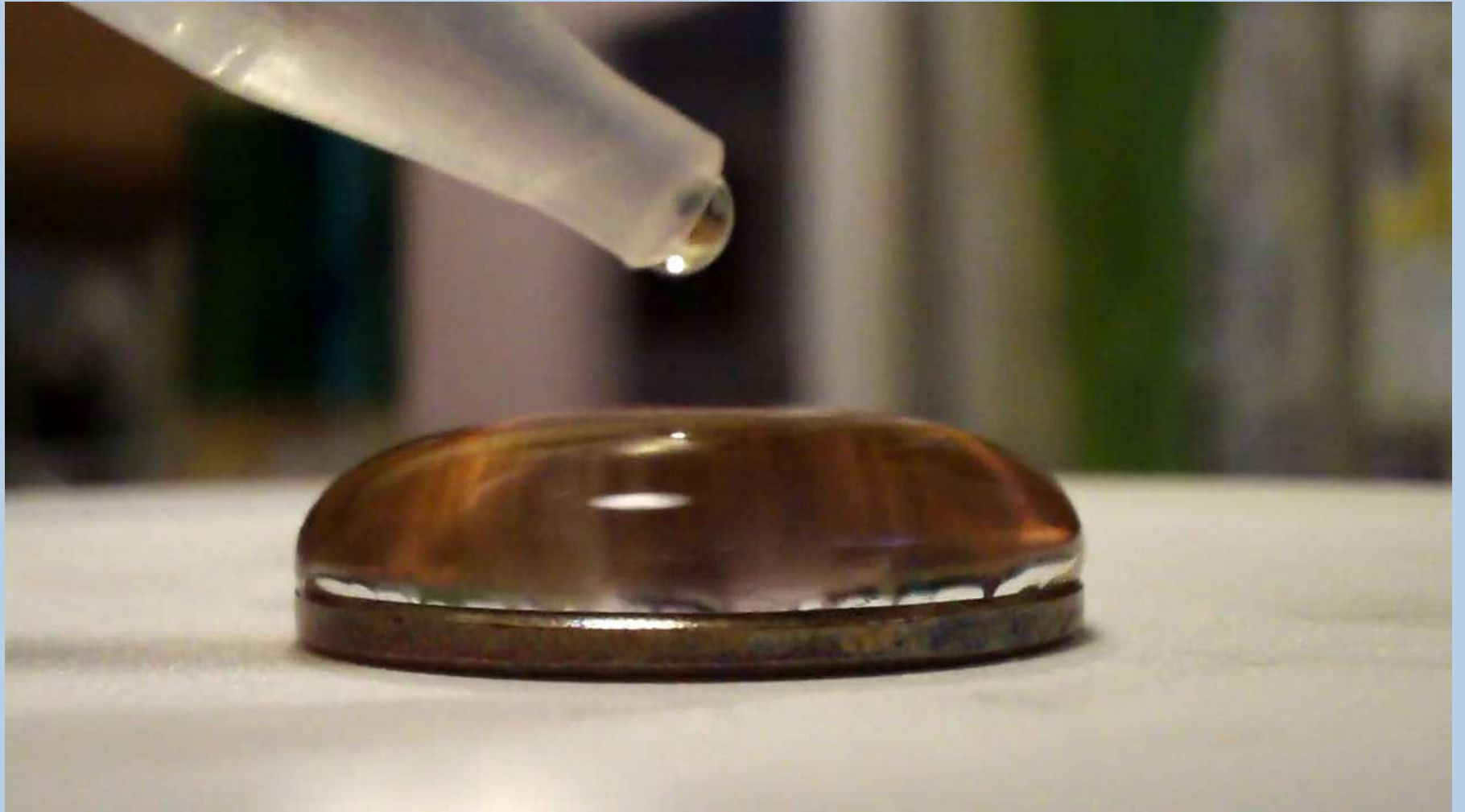
- **Now let's look at those pictures again and revise our answers**





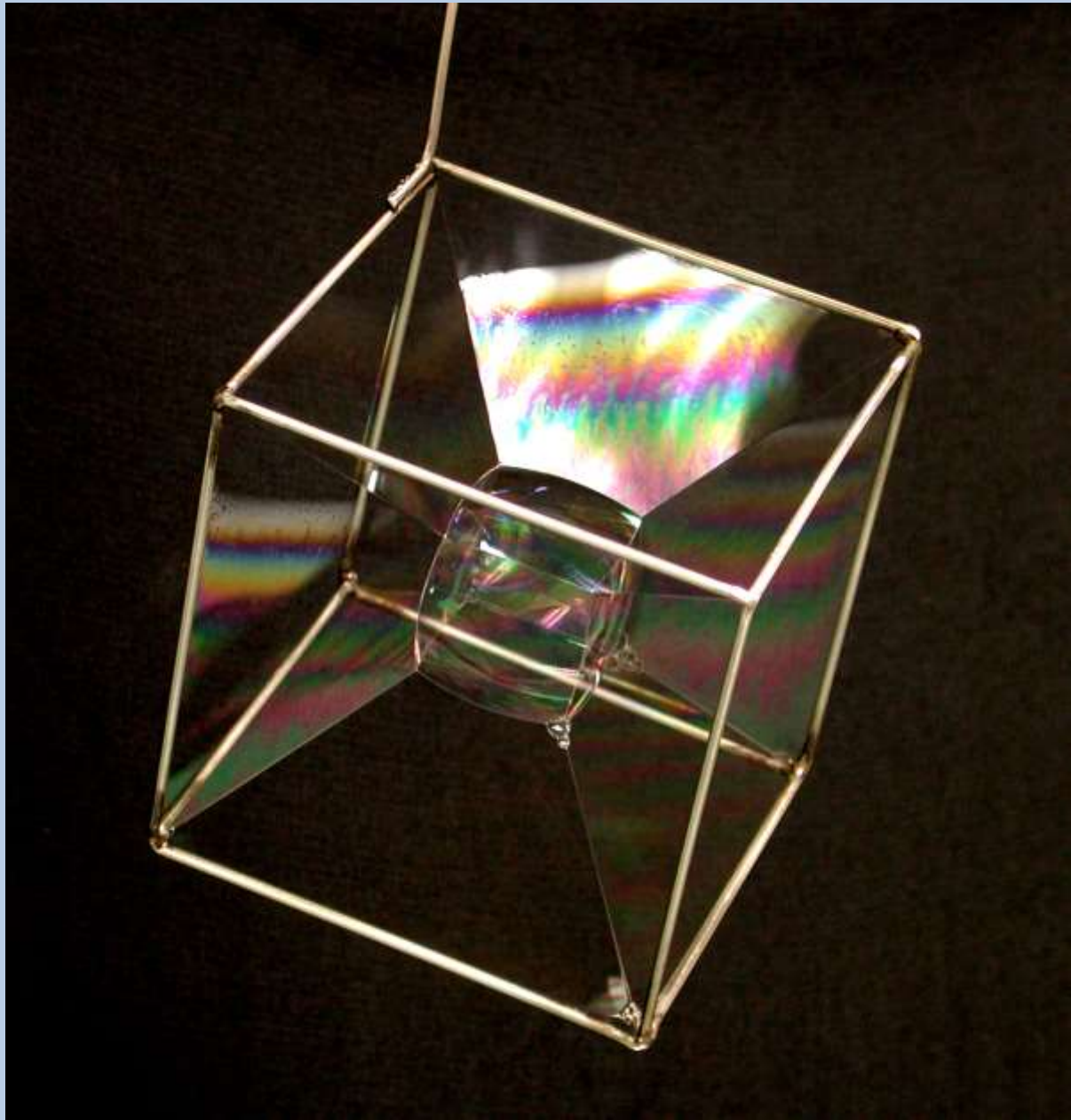


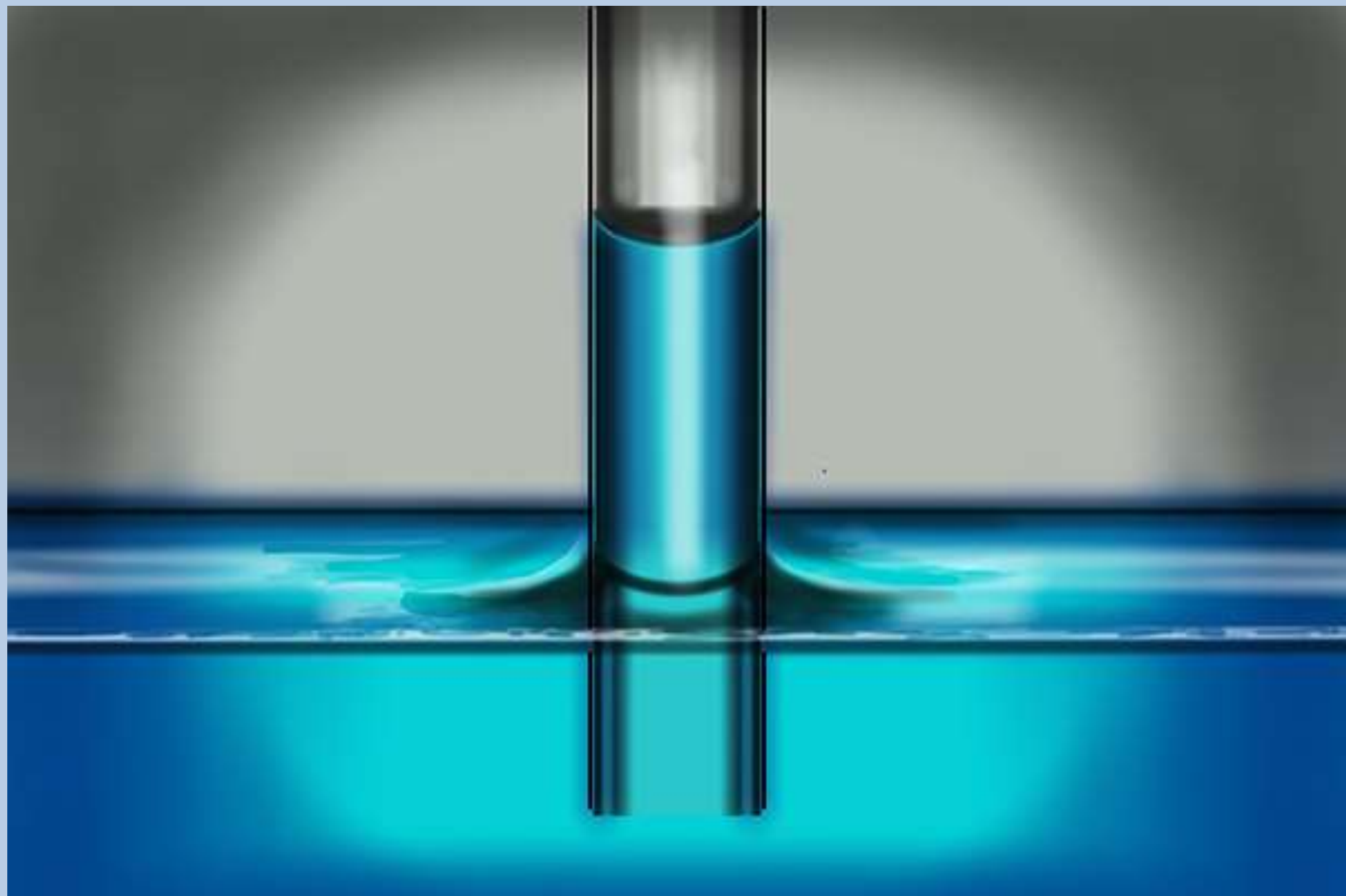


















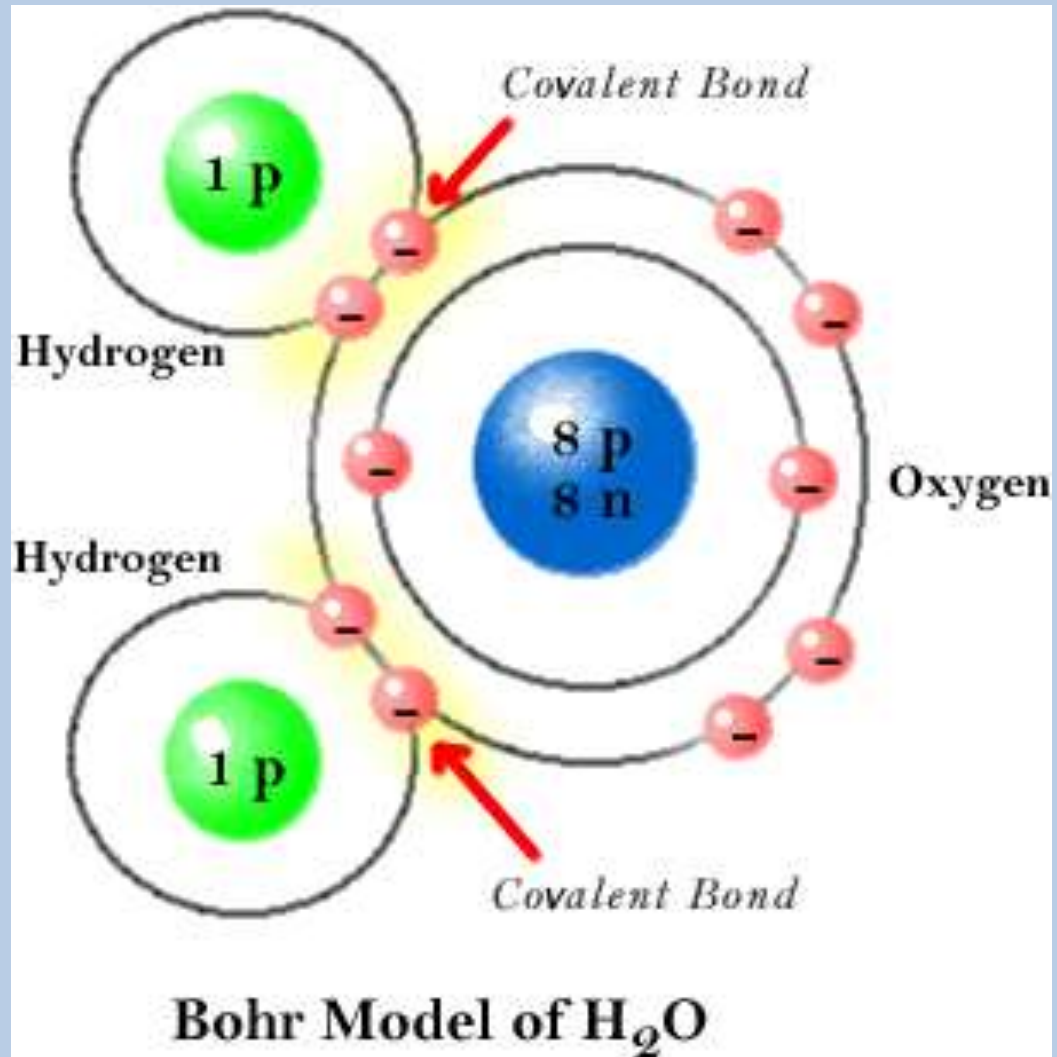


# Magic of Water

- **1 minute:**
  - **Look over your Unit 1 Cover Sheet**
    - **Make any notes you would like to**
    - **Go over the vocabulary we have learned so far**

# Magic of Water

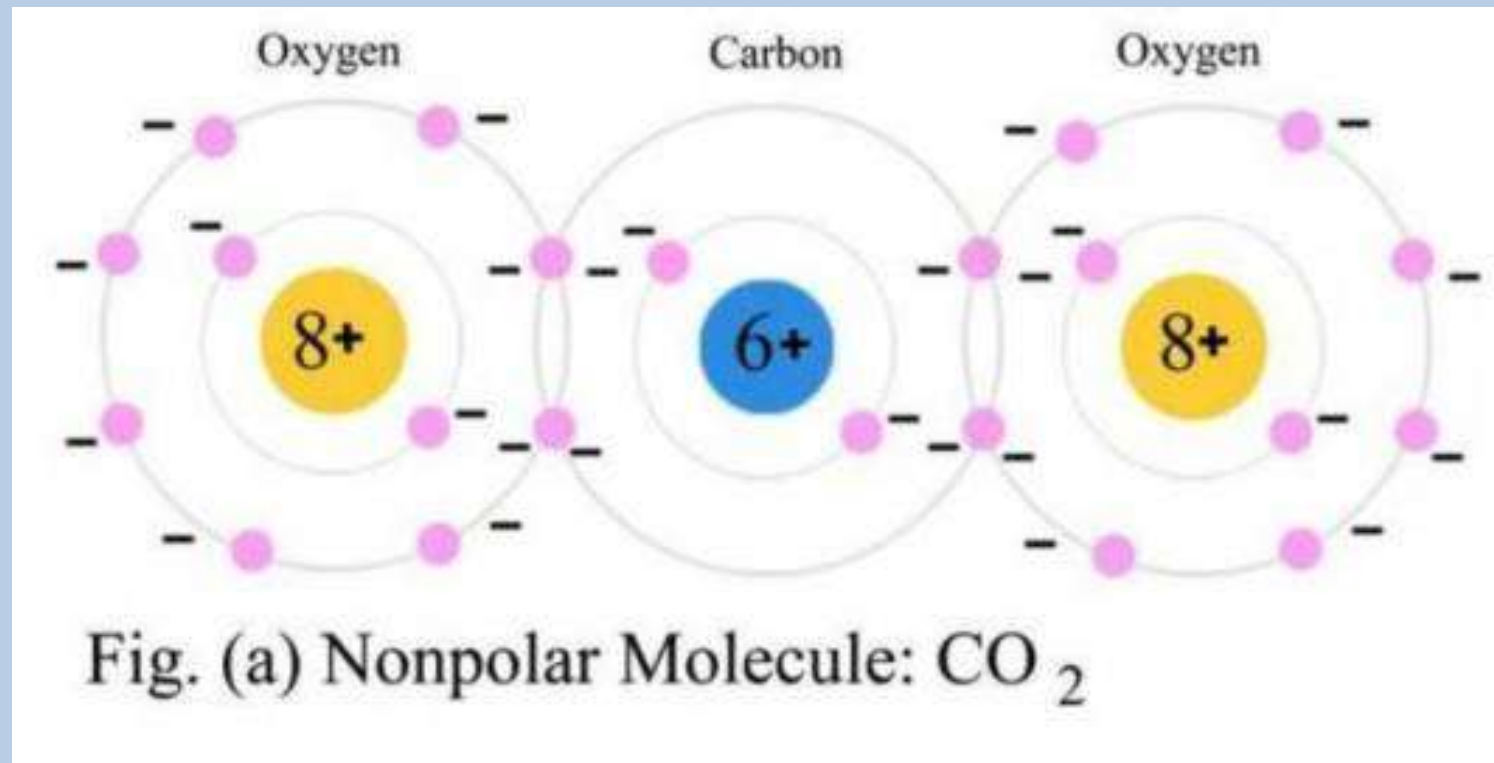
**Polar:** Atoms of a molecule have unequal pulls on electrons, creating a positive end and a negative end





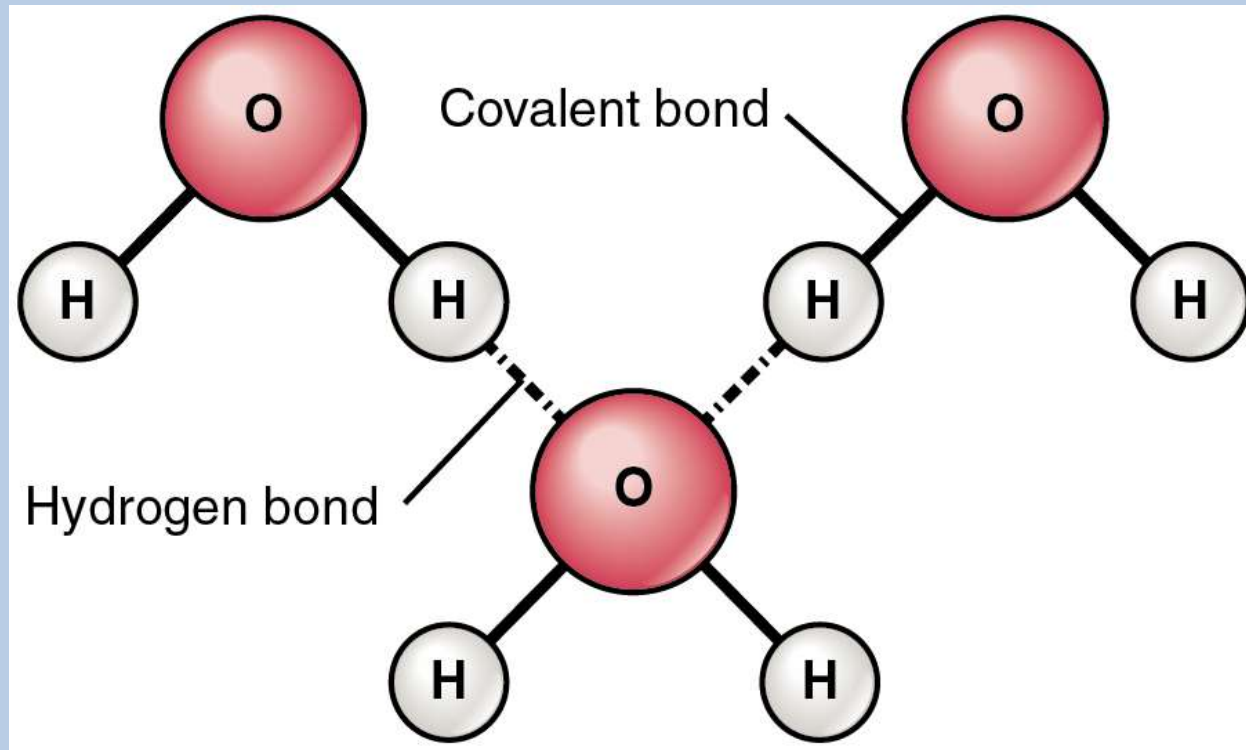
# Magic of Water

**Non-polar: Electrons are shared equally creating no pulls or poles**



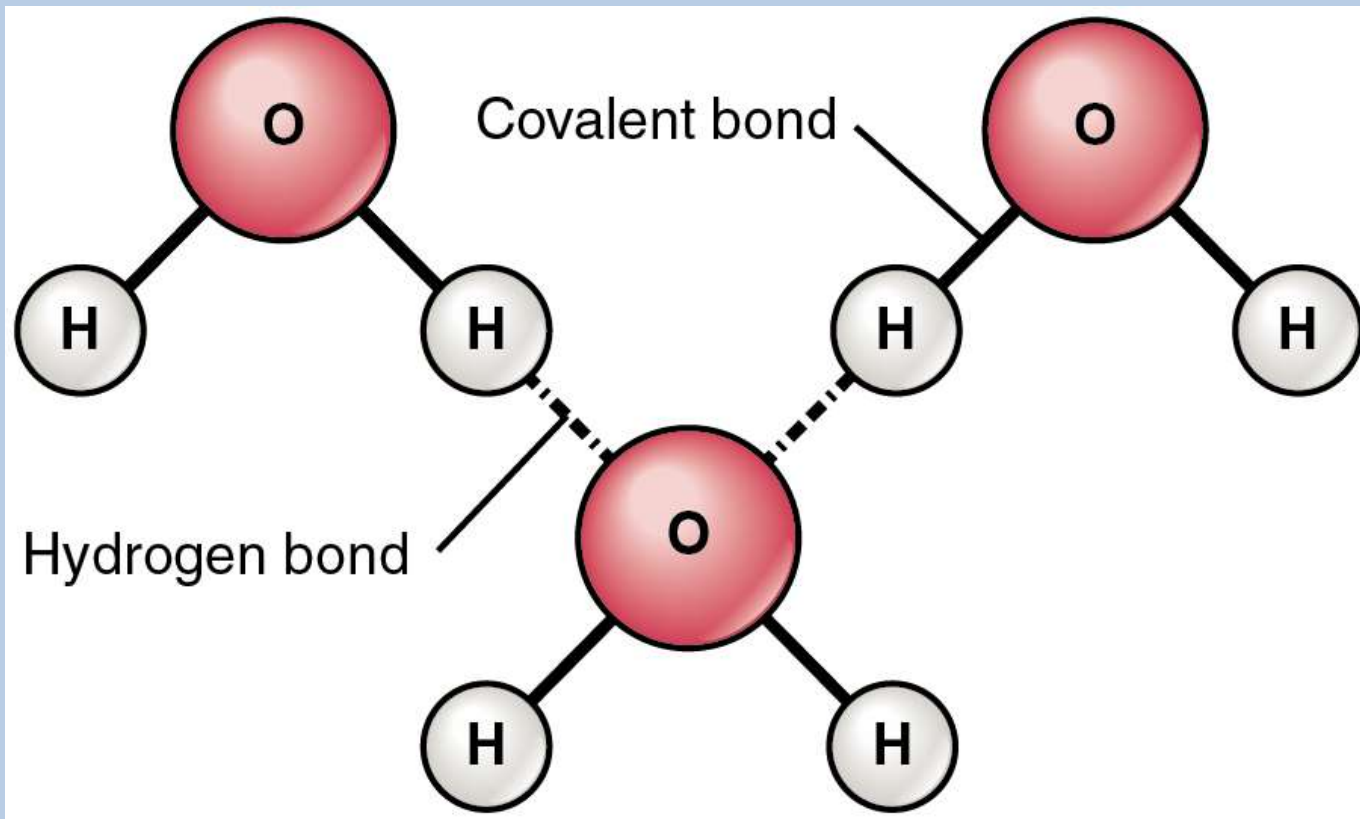
# Magic of Water

**Hydrogen bond: attraction between a partial positive H and a partial negative atom (form between water molecules)**



# Magic of Water

**Covalent bond: forms when atoms share electron pairs**

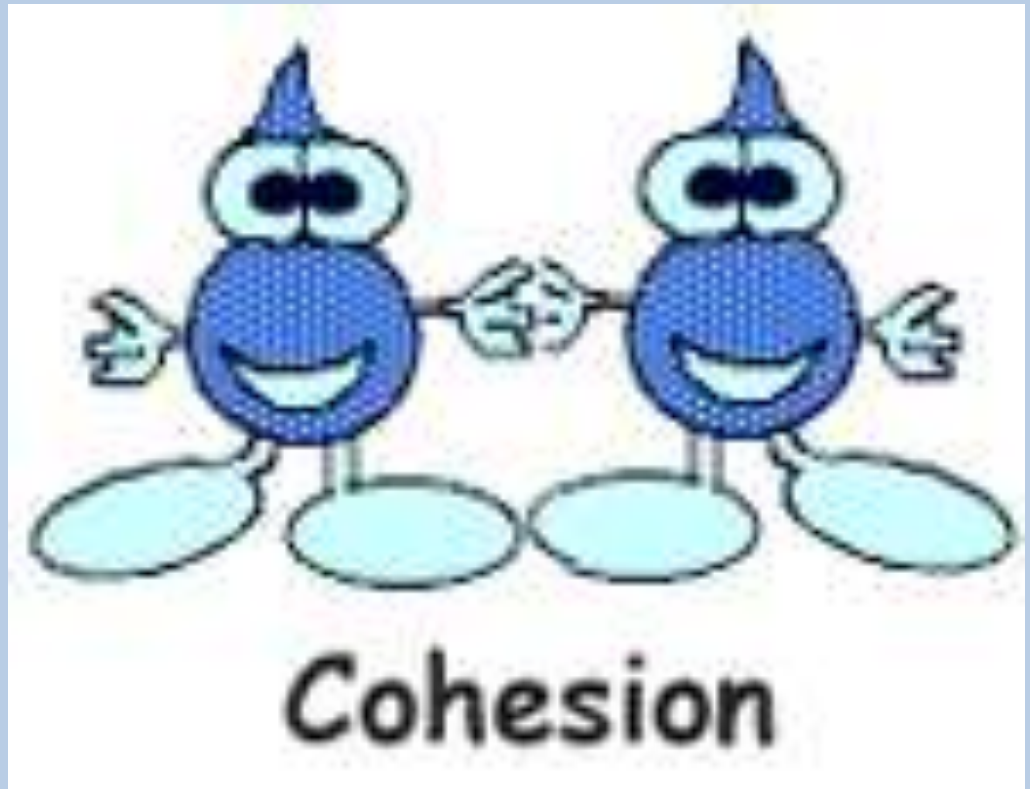


# Magic of Water

- **Bonds inside of water molecules  
= covalent**
- **Bonds between water molecules  
= hydrogen**

# Magic of Water

**Cohesion: Water molecules are attracted to water molecules**



# Magic of Water

**Surface tension: Water molecules at the surface are more attracted to each other than to other molecules (air)**

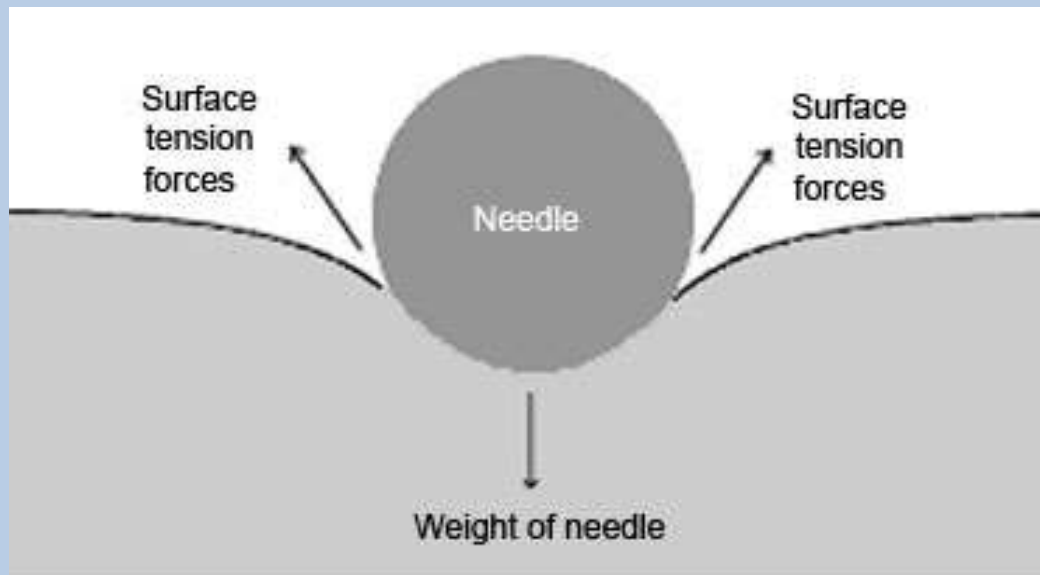


Fig 2. Forces enabling a needle to float on water

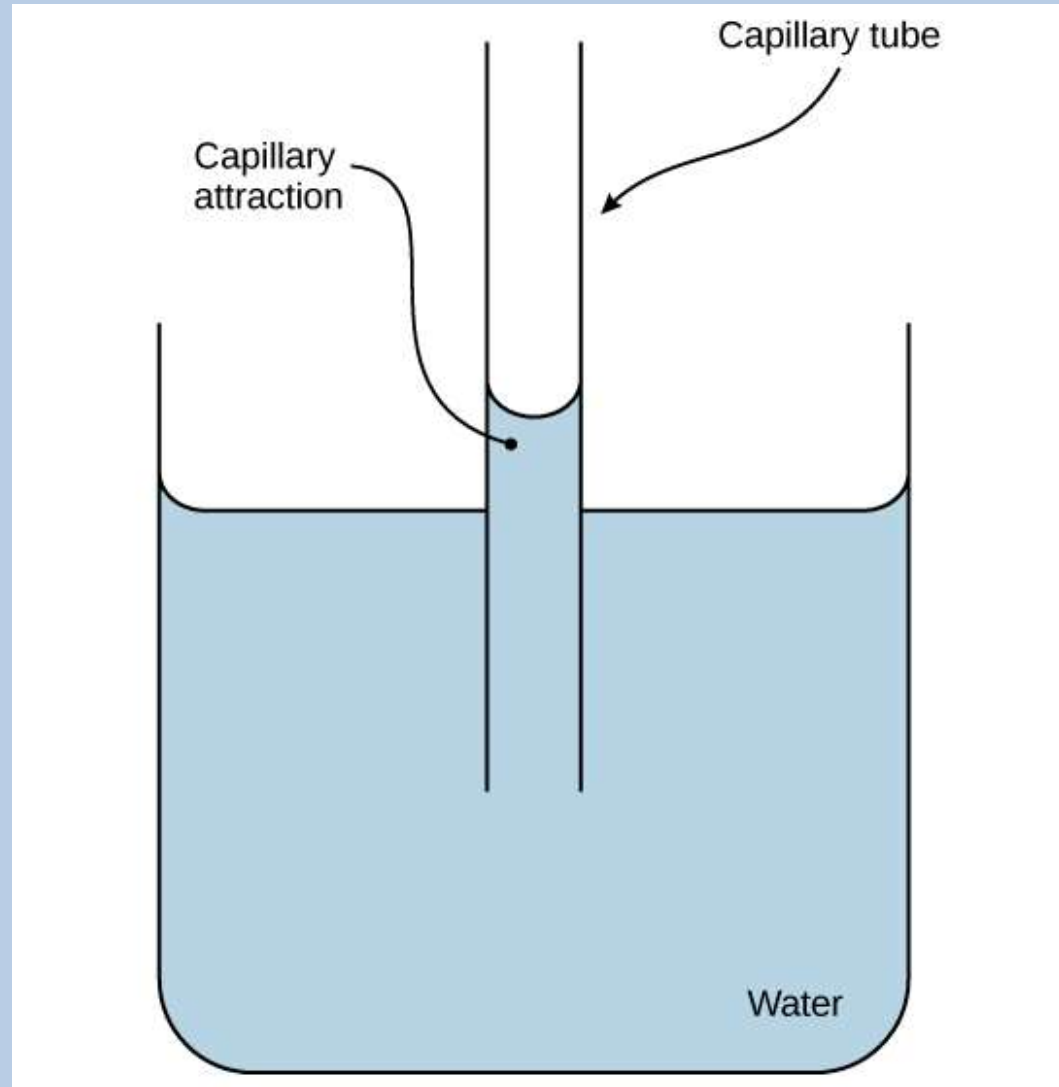
# Magic of Water

**Adhesion: Water molecules are attracted to other molecules**



# Magic of Water

**Capillary Action:  
Movement of  
water through  
tubes and  
porous  
materials**





# Magic of Water



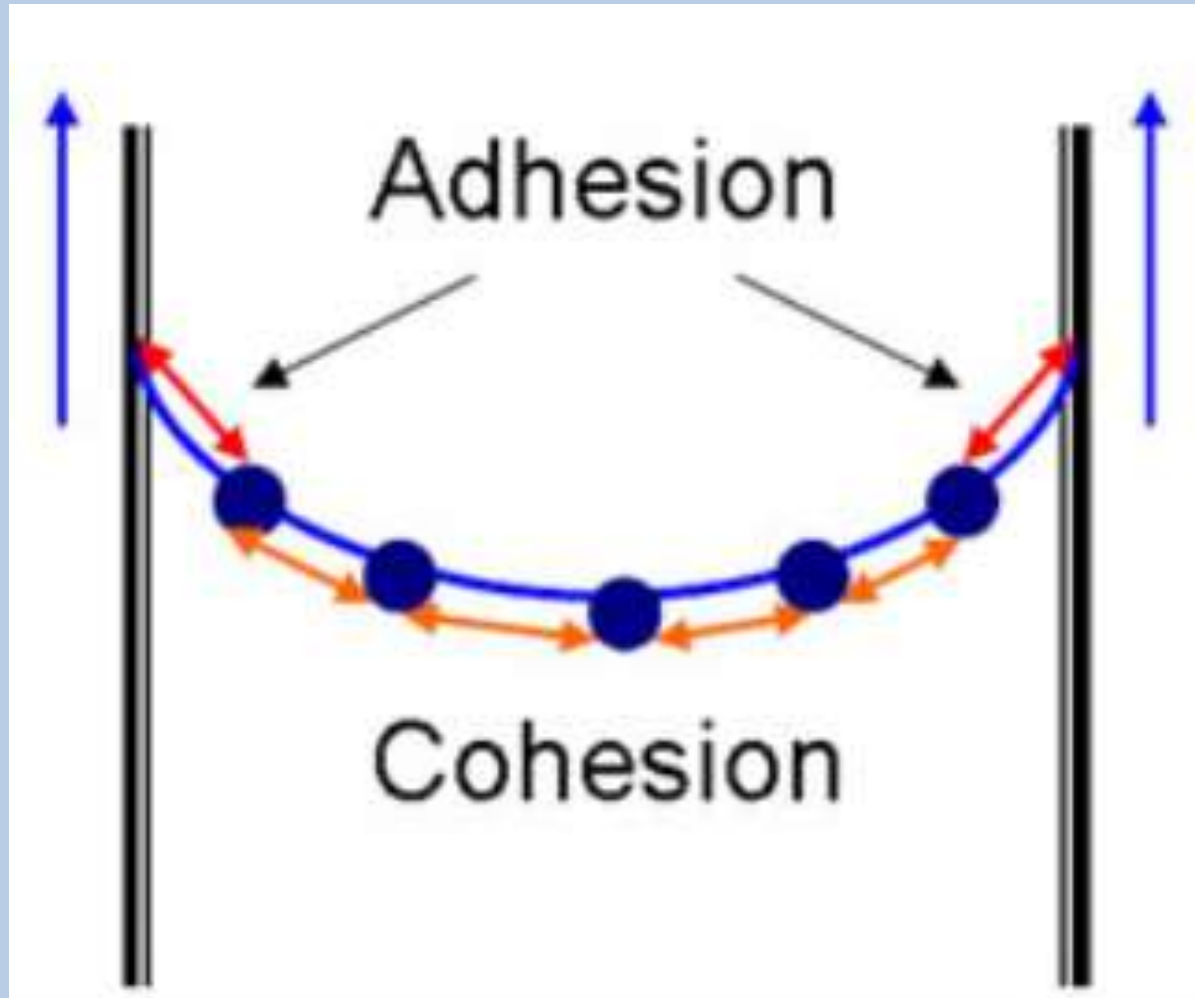
Cohesion

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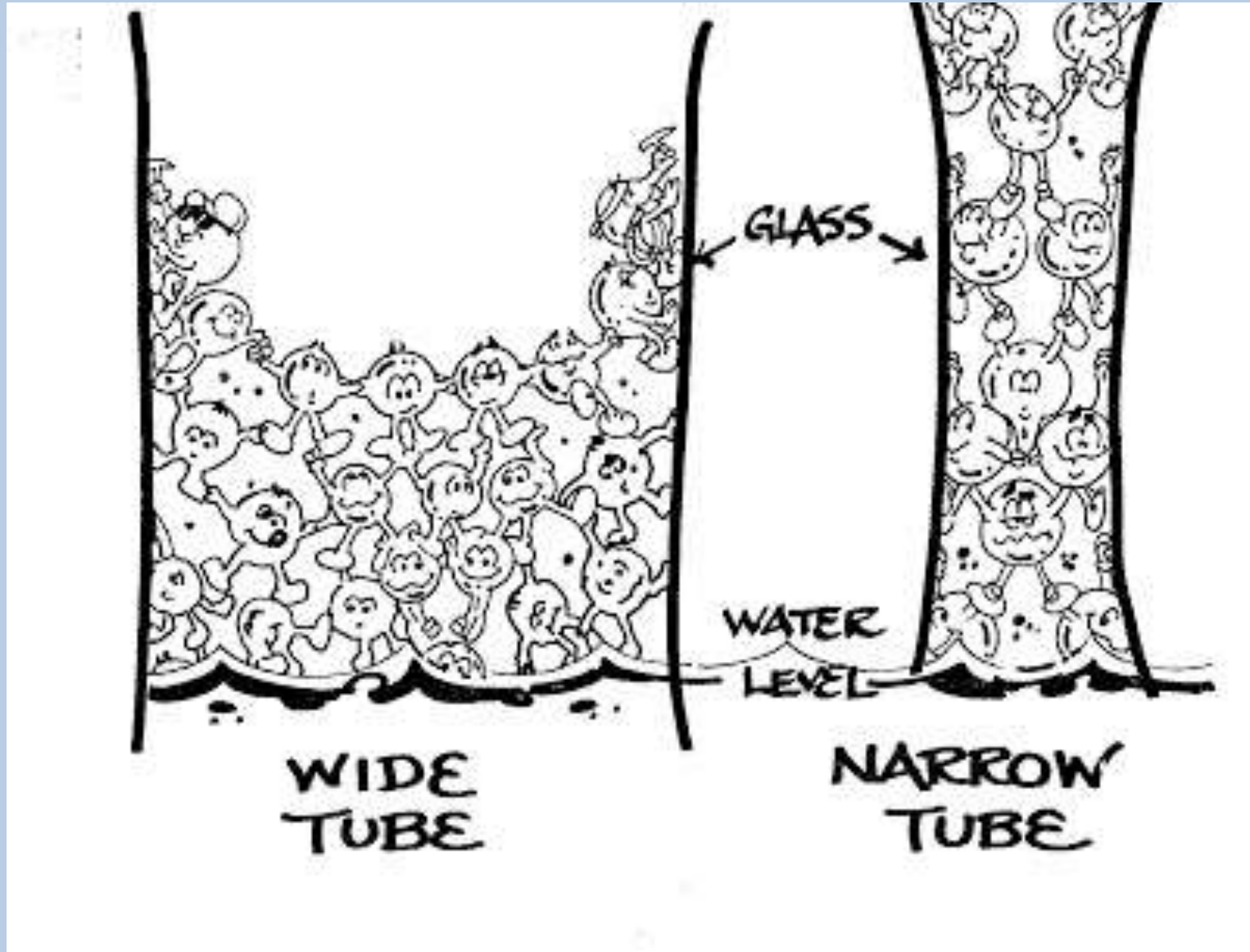


Adhesion

# Magic of Water



# Magic of Water



# Magic of Water

## How To Make A Solution

Solute



Solvent



Solution



Salt

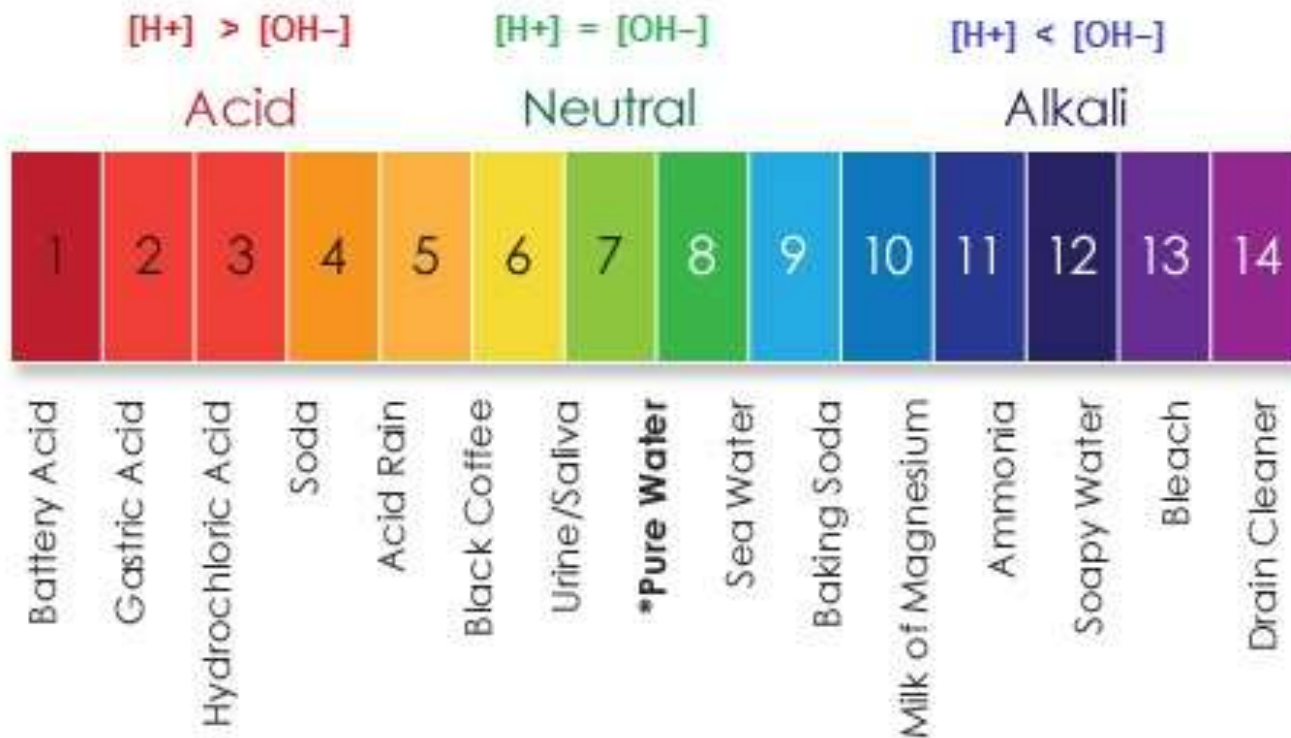
Water

Salt Solution

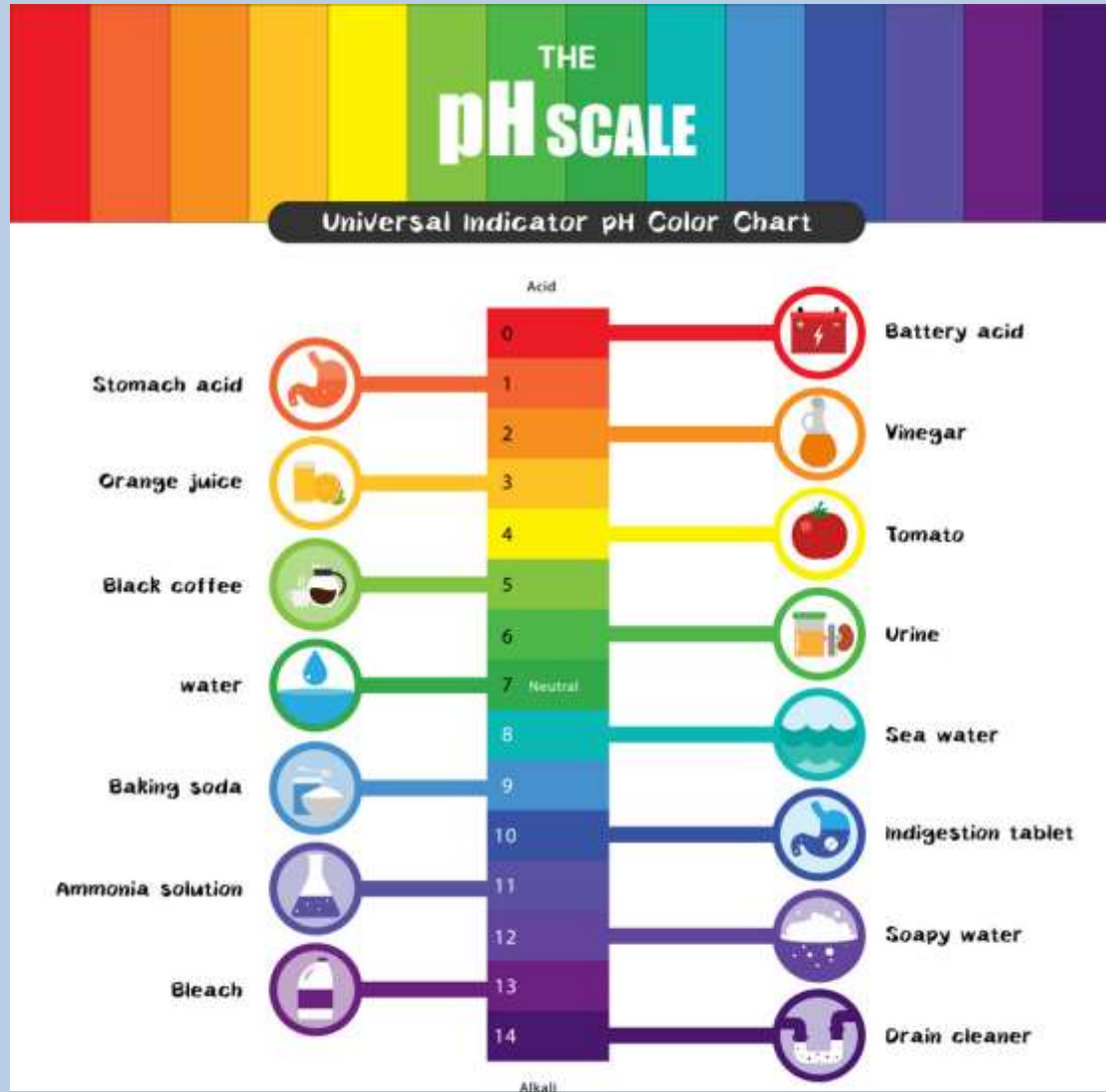
# Magic of Water

pH scale: acid =  $<7$ , high  $[H^+]$

base =  $>7$ , high  $[OH^-]$



# Magic of Water





# Magic of Water

- **If you bought goggles or are planning to buy them:**
  - **Bring up your receipt to get your goggles**
  - **Find a partner you trust**
  - **Sign up for a lab drawer**