CHEMISTRY REVIEW

OBJECTIVES: 1. IDENTIFY THE PARTICLES THAT MAKE UP ATOMS. 2. COMPARE COVALENT AND IONIC BONDS. 3. DESCRIBE VAN DER WAALS FORCES. 4. IDENTIFY THE PARTS OF A CHEMICAL REACTION. 5. RELATE ENERGY CHANGES TO CHEMICAL REACTIONS. 6. SUMMARIZE THE IMPORTANCE OF ENZYMES IN LIVING ORGANISMS. 7. EVALUATE HOW THE STRUCTURE OF WATER MAKES IT A GOOD SOLVENT. 8. CONTRAST SOLUTIONS AND SUSPENSIONS. 9. DESCRIBE THE DIFFERENCE BETWEEN ACIDS AND BASES.

ON THE LAST DAY, THE CLIMAX OF THE FESTIVAL, JESUS STOOD AND SHOUTED TO THE CROWDS, "ANYONE WHO IS THIRSTY MAY COME TO ME! ANYONE WHO BELIEVES IN ME MAY COME AND DRINK! FOR THE SCRIPTURES DECLARE, 'RIVERS OF LIVING WATER WILL FLOW FROM HIS HEART.' JOHN 7:37-38

PARTNER TALK

- See how many of these words you can remember from your awesome stupendous wonderful amazing fantastic Chemistry class last year:

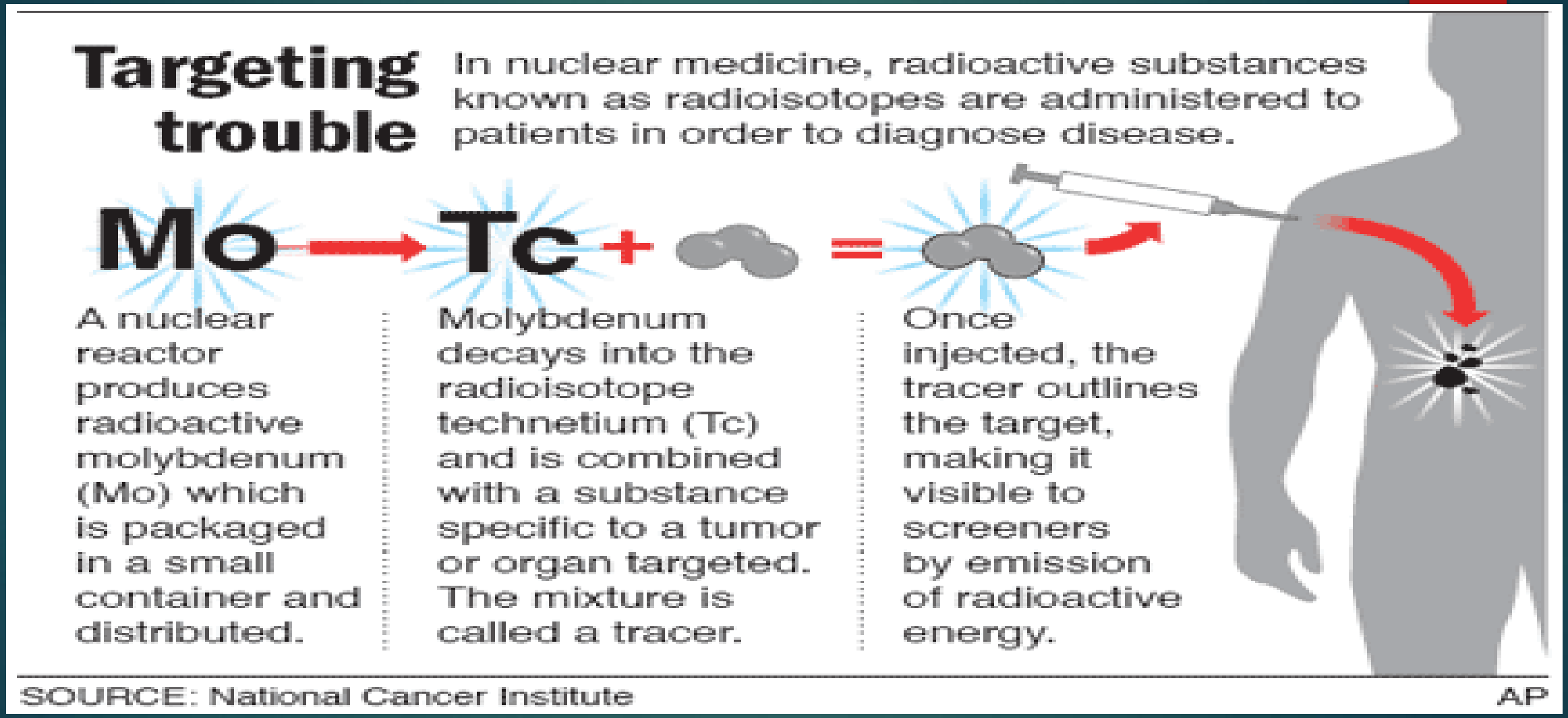
atom

element

compound

isotope

Application of Isotopes in the medical field



PARTNER TALK

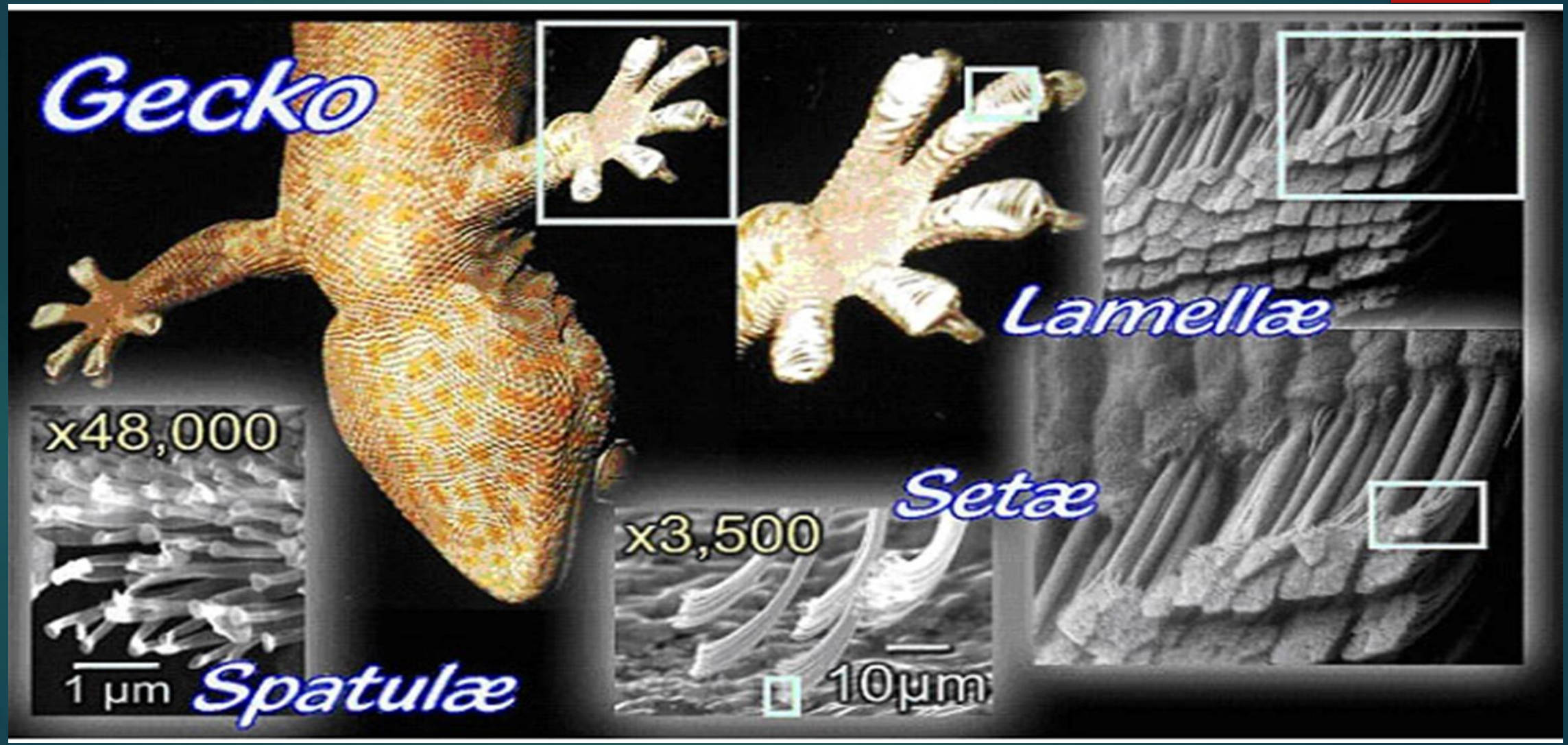
- Then, see how many of these words you can remember:

  Ionic Bonds

  Covalent Bonds

  London Dispersion forces (Van der Waals forces)

Application of Van der Waals forces in nature



PARTNER TALK

- Now, try this list!

Polar molecule

Hydrogen bond

Mixture

Solution

Solvent

Solute

Acid

Base

pH

Buffer

Application of Water's Characteristics on Life

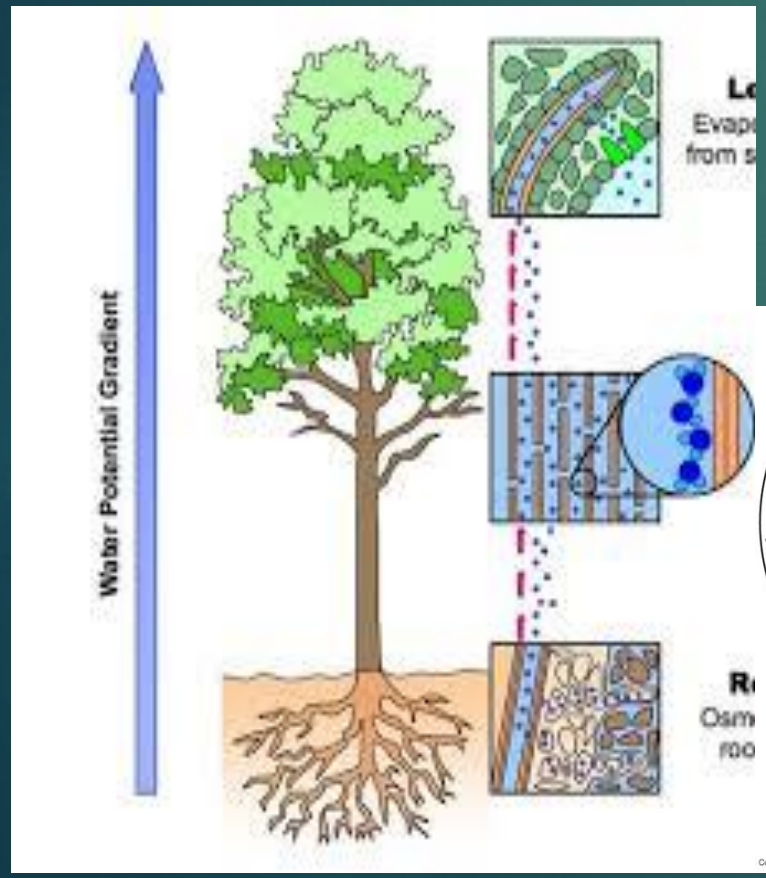
- https://www.youtube.com/watch?v=3jwAGWky98c

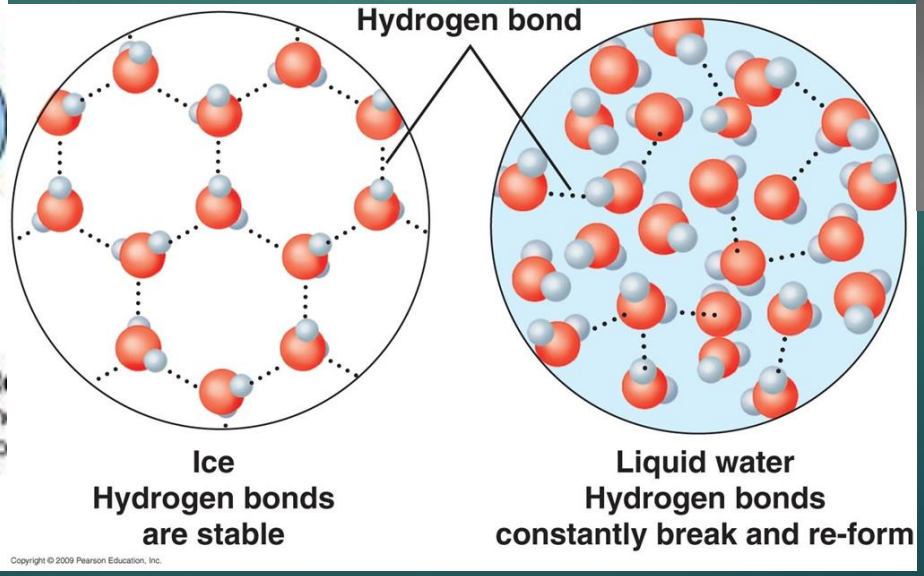
Water

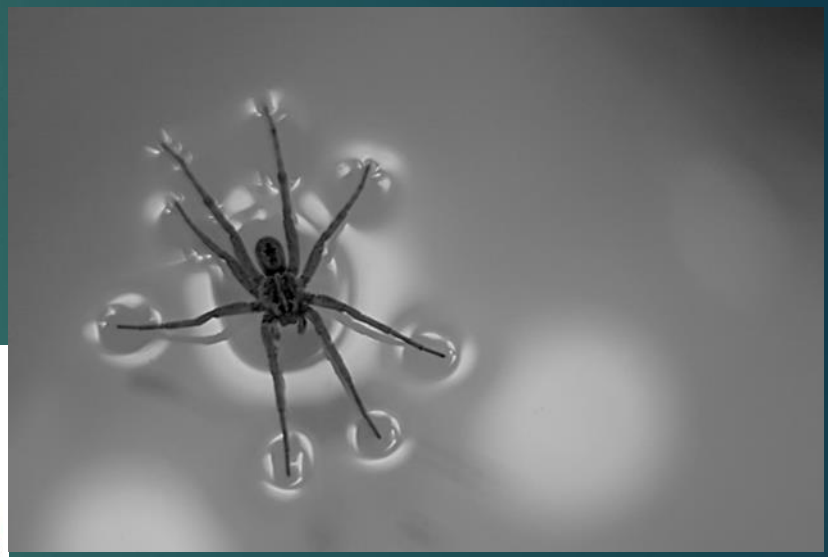
Properties	Chemical Reason	Effect
Resists change of state (from liquid to ice and from liquid to steam)	Hydrogen bonding	Moderates earth's temperature
Resists changes in temperature	Hydrogen bonding	Helps keep body temperature constant
Universal solvent	Polarity	Facilitates chemical reactions
Is cohesive and adhesive	Hydrogen bonding; polarity	Serves as transport medium
Has a high surface tension	Hydrogen bonding	Difficult to break surface tension
Less dense as ice than as liquid water	Hydrogen bonding	Ice floats on water

PARTNER TALK

- Review the key characteristics of water with your partner- see what you can remember without looking!





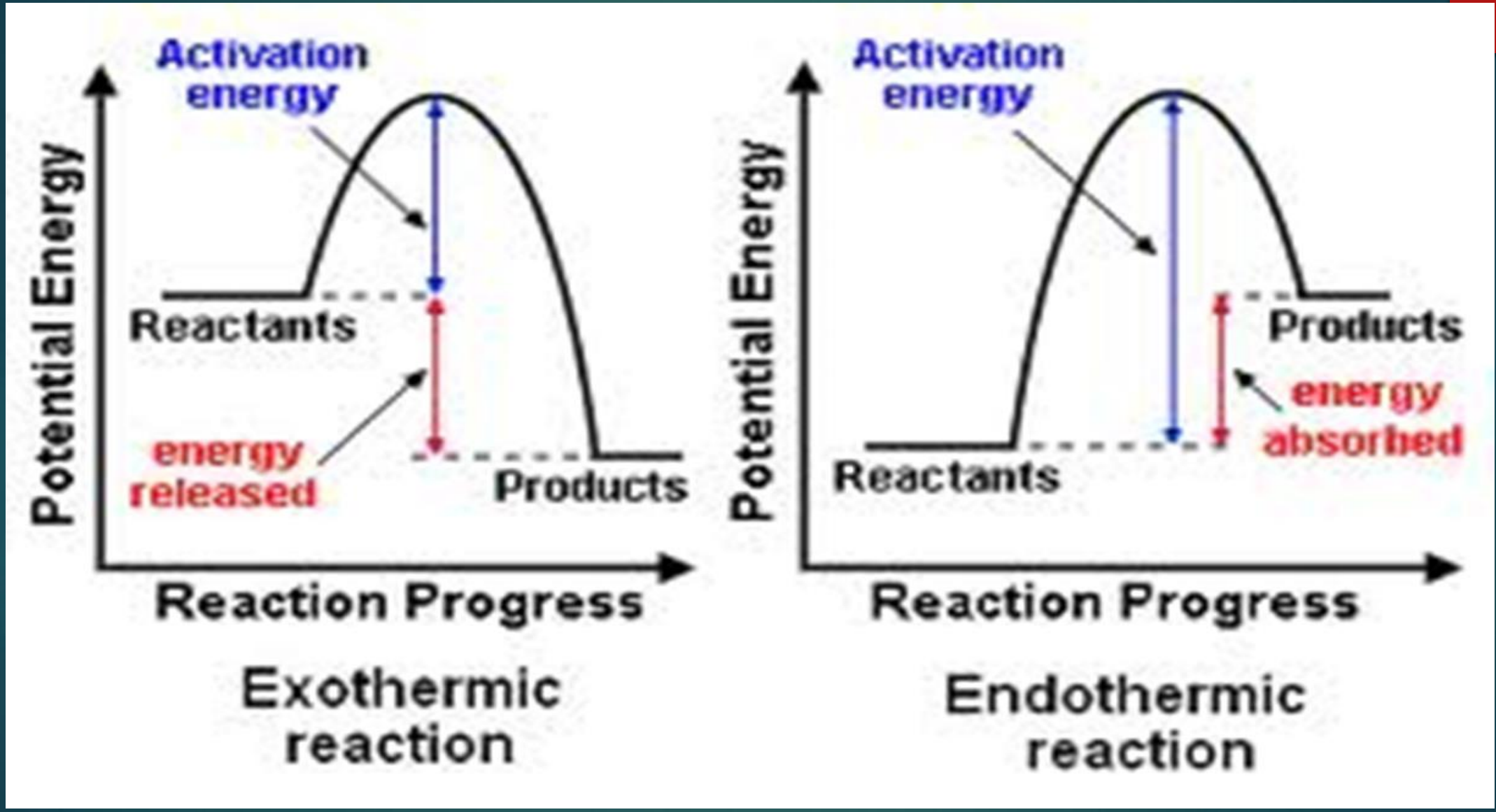


Impact of Acid Rain

PARTNER TALK

- See how many of these words you can remember:

Chemical reaction
Reactant
Product
Activation energy
Catalyst


Activation energy
Potential Energy
Reactants
energy released
Products
Reaction Progress
Exothermic reaction
Activation energy
Potential Energy
Products
energy absorbed
Reactants
Reaction Progress
Endothermic reaction

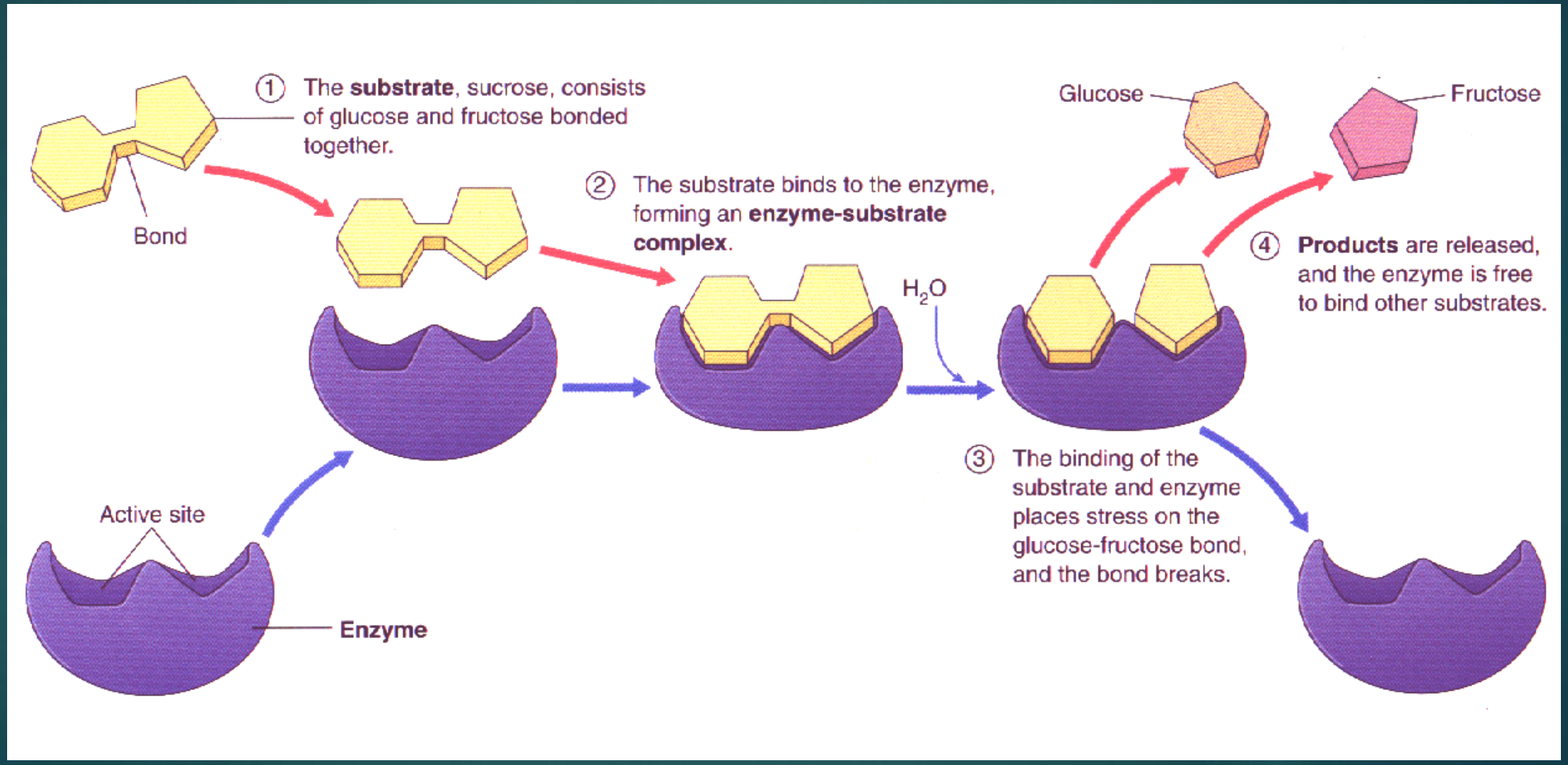
Enyzmes

1. What are they?

2. What do they do?

3. How do they do it?

- Name of an enzyme ends in "_____"
- Usually related to what it breaks down- Example:



- Factors that impact an enzyme's effectiveness:
  1.
  2.

Why?