

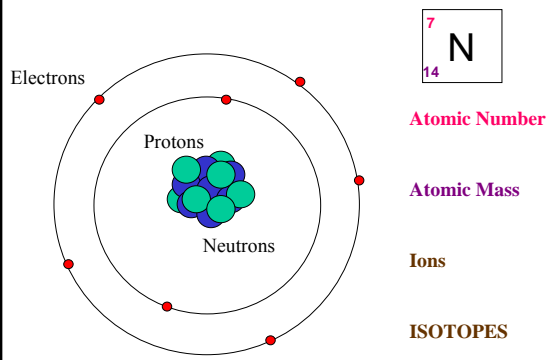
BIOCHEMISTRY

ATOMS
 TYPES OF BONDS
 WATER
 pH

PERIODIC TABLE OF THE ELEMENTS

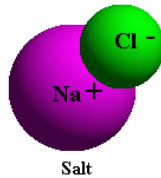
1 H																	2 He														
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne														
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar														
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr														
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe														
55 Cs	56 Ba	57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr	104 Unq	105 Unp	106 Unh	107 Uns	108 Uno	109 Une	110 Uun								

Basic Chemistry



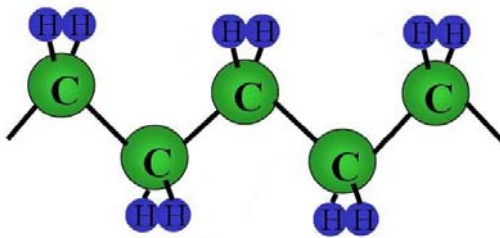
TYPES OF CHEMICAL BONDS

IONIC- atoms become charged and opposite charges attract



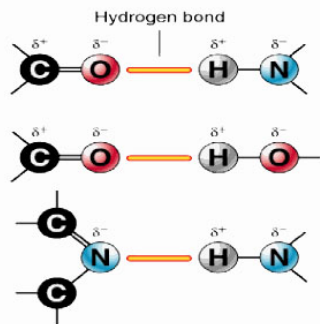
Can be strong or ~Weak, Dissolve in water

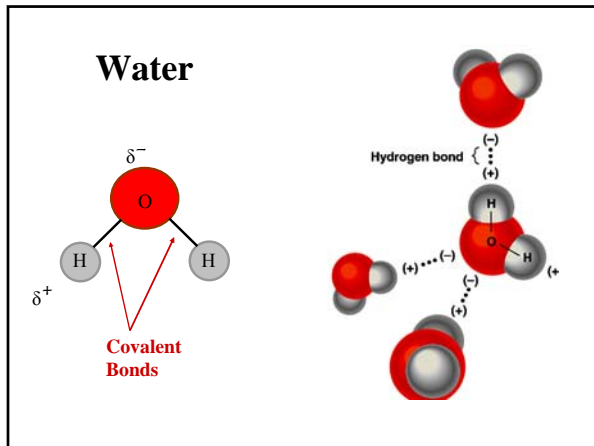
COVALENT- atoms share electrons (strongest bonds)

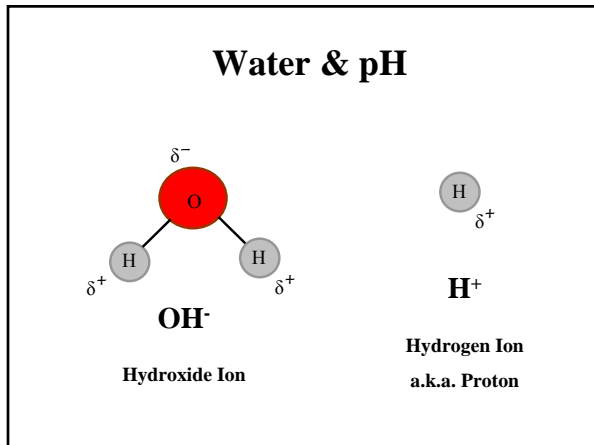


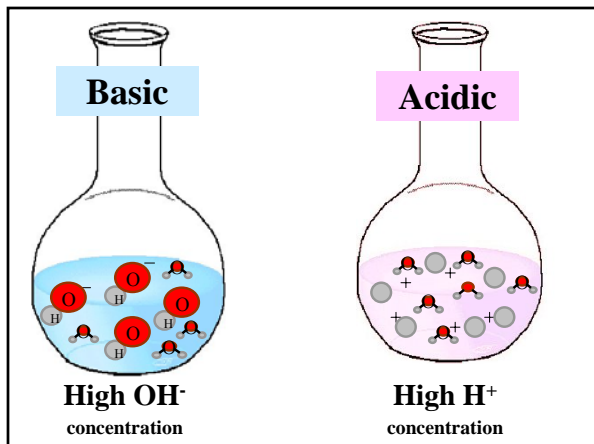
Strong- Do not dissolve in water...in fact, water molecules are held together by this type of bonding...more in a bit...

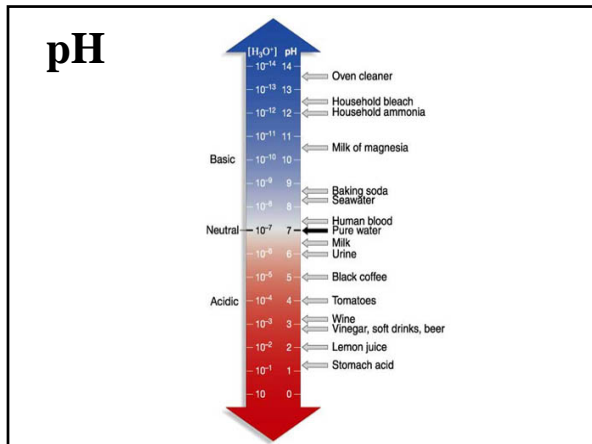
HYDROGEN BONDS- bonds between a hydrogen atom in one molecule and a negatively charged atom from another molecule.



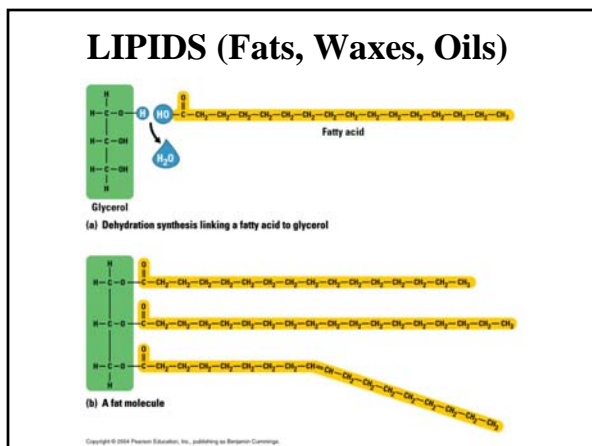


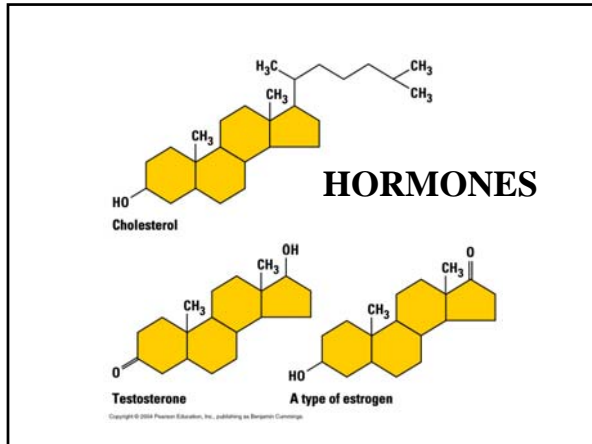


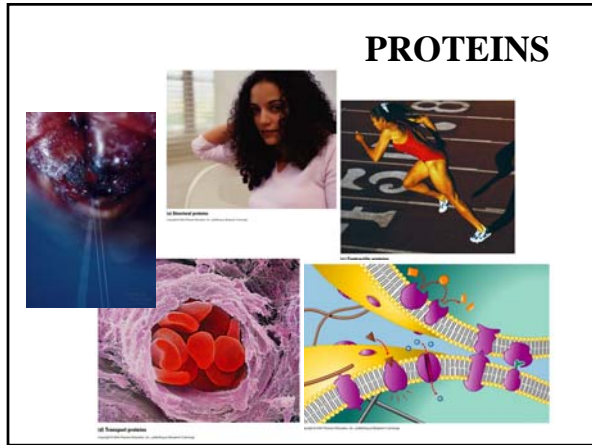


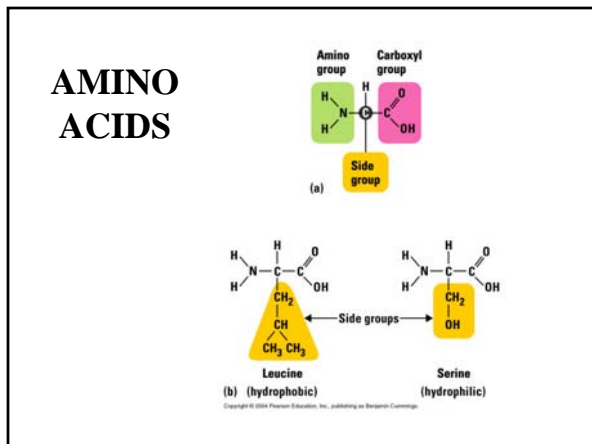


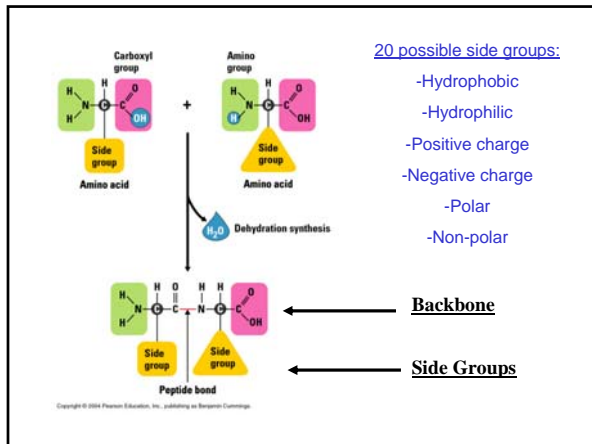
BIOLOGICAL MOLECULES

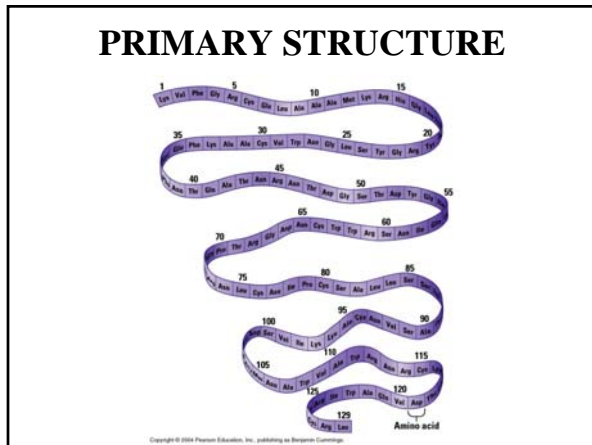


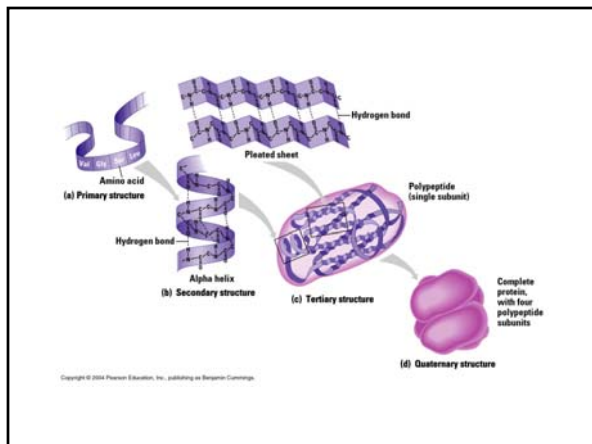


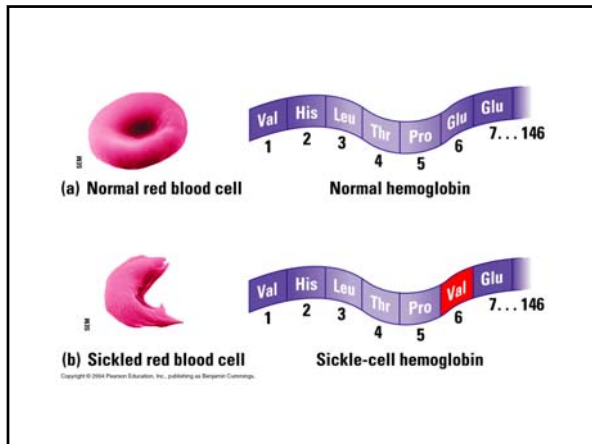


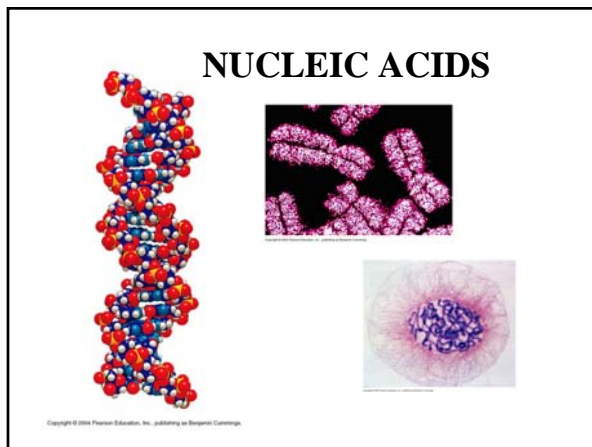


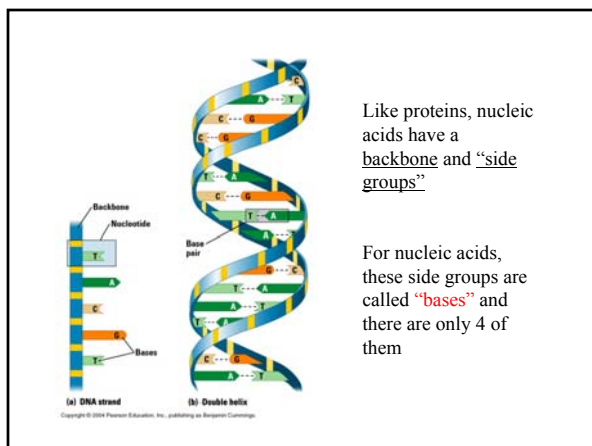












Like proteins, nucleic acids have a backbone and “side groups”.

For nucleic acids, these side groups are called **“bases”** and there are only 4 of them



