Name

A.P. Biology CH4-Carbon and Functional Groups





The electron architecture of Carbon makes it ideally suited as the element around which is organized.         What is the universal medium for life?         Carbon makes up the be of all organic molecules. No exceptions.         Compounds that contain carbon are called compounds.         The scientist pictured to the right is Dr. S, although chemical companies such as Dow and Upjohn are also successful in synthesizing organic molecules.         How many valence electrons does Carbon have the potential to form?         The image to the right teaches us that carbon's bonds tend to branch off in four directions and form a(n)         What is 0=C=0?         Is it chemically reactive or stable?         The initial source of carbon for all organic molecules is the gas         What molecule is pictured to the right?         Does carbon usually form a single, double, or triple bond when bonded to hydrogen?         An organic molecules on snon-polar or polar? B. Hydrophilic or hydrophobic?         B.       The two molecules pictured to the right are isomers.         Is the womolecules pictured below are isomers.       C_gH1_1NO2         HO       H       C = C / H         Ho       H       C = C / H					
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Functional Groups

Do functional groups behave in the same way when they are attached to different organic molecules?

Are functional groups usually polar or non-polar?

Addition of a functional group (increases / decreases) solubility.

## Matching

			,H
1	Hydroxyl group		R-N.
2	Amino group	A.	Н
3	Carbonyl group		
4	Carboxyl group		
5	Sulfhydryl group		~
6.	Phosphate group		10
7.	Added and removed during ATP	B.	R-C
	synthesis and decomposition.		Н
8.	When added, the organic molecule		
	becomes an alcohol.		
9.	Sugars are soluble due to the		R-C-R
	presence of this group.		n ji n
10	Involved in energy transfer		0
	between organic molecules.		
11.	Create organic acids		
12.	Added to carbon (along with		1. A.
	a carboxyl group) to make		10
	protein building blocks.	C.	R-C
13	Separates nucleotides in DNA.		ОН
14.	Acts as a base.		
15.	Stabilizes the shape of		
	proteins.		
16	Forms aldehydes and ketones.		
17.	added to DNA affects gene expression		R-OH
		D.	

E.

F.



$$R - C OH$$

$$R - OH$$

H