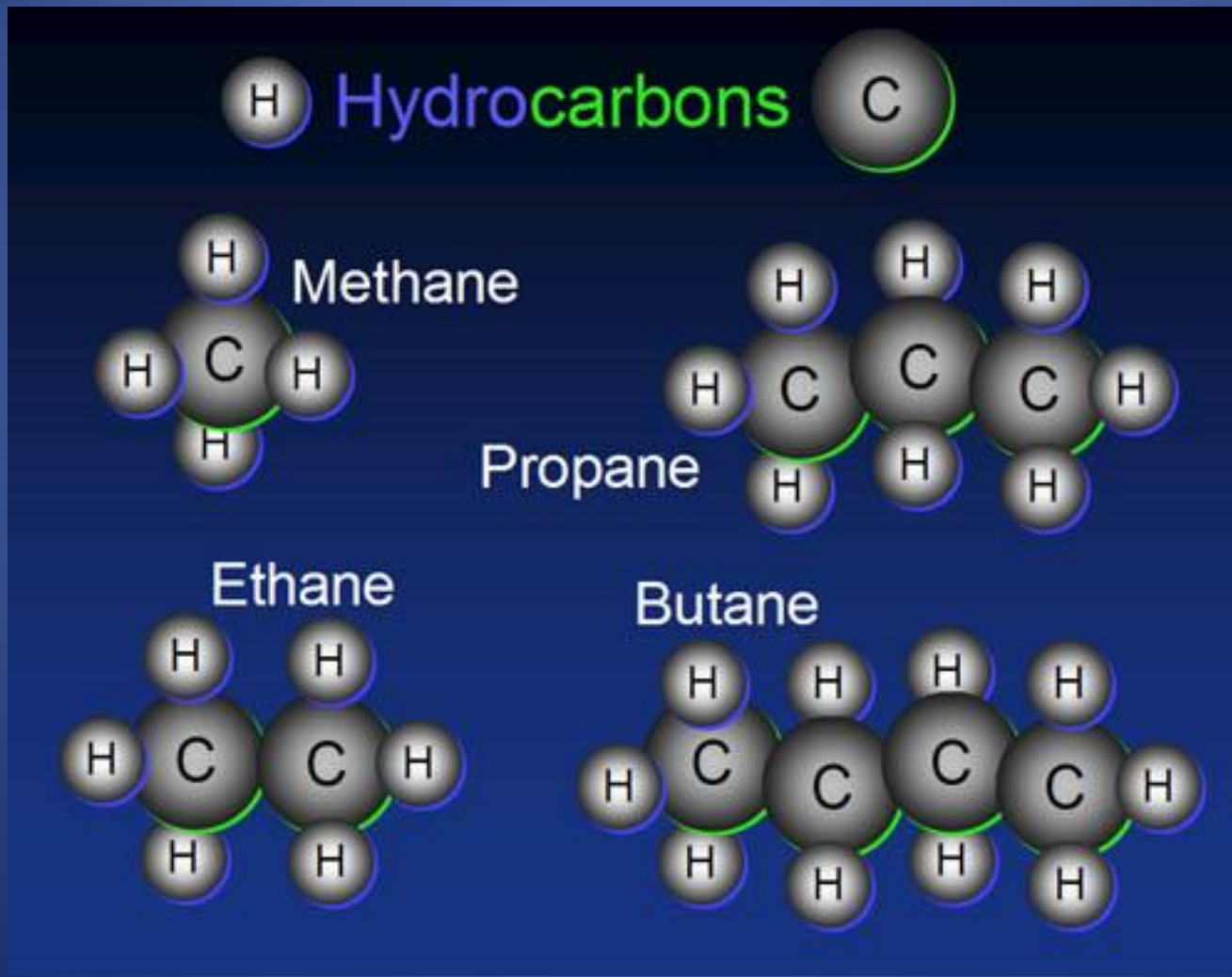


# Organic chemistry

- Hydrocarbons

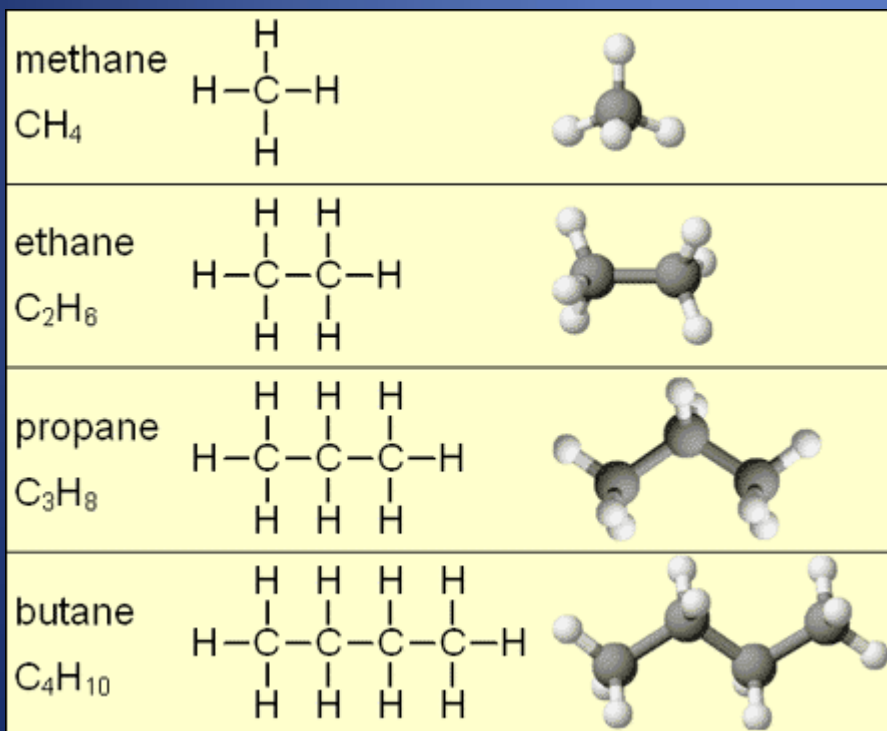
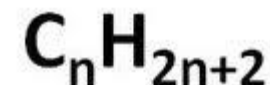
# Hydrocarbons

- Chemical compounds that consist of only hydrogen and carbon atoms are called hydrocarbons (kolväten).



# Learn the structure...it's very logical

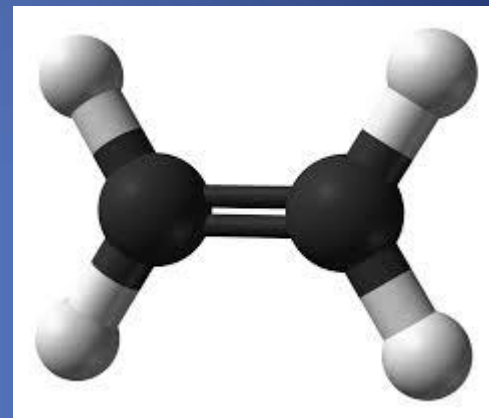
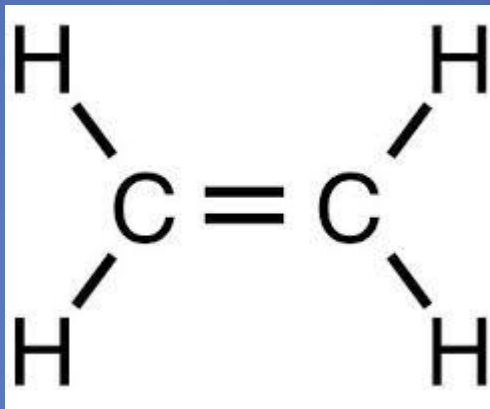
- Alkanes are the names of hydrocarbons that starts with methane, the atoms are linked with single bonds (enkelbindningar)



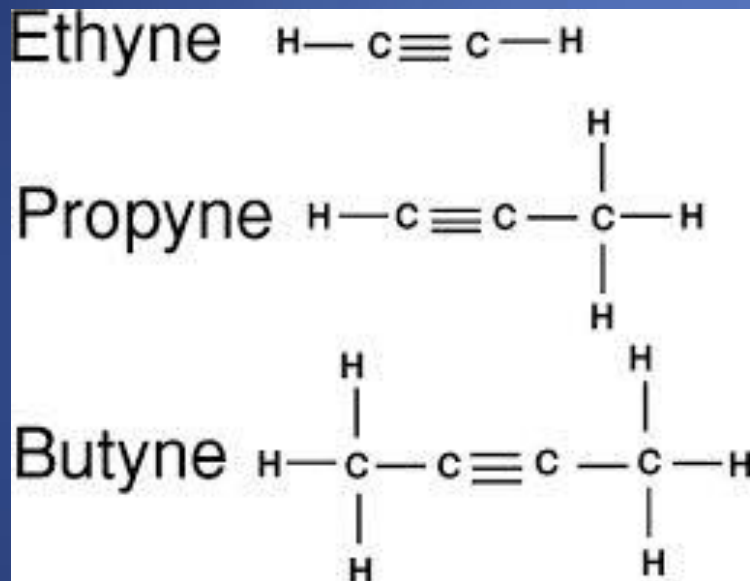
Name	Molecular Formula
methane	$CH_4$
ethane	$C_2H_6$
propane	$C_3H_8$
butane	$C_4H_{10}$
pentane	$C_5H_{12}$
hexane	$C_6H_{14}$
heptane	$C_7H_{16}$
octane	$C_8H_{18}$
nonane	$C_9H_{20}$
decane	$C_{10}H_{22}$

# Alkenes - hydrocarbons with a double bonding of atoms

No. of C atoms	Name of alkene	Molecular formula
2	Ethene	$C_2H_4$
3	Propene	$C_3H_6$
4	Butene	$C_4H_8$
5	Pentene	$C_5H_{10}$
6	Hexene	$C_6H_{12}$
7	Heptene	$C_7H_{14}$
8	Octene	$C_8H_{16}$
9	Nonene	$C_9H_{18}$
10	Decene	$C_{10}H_{20}$



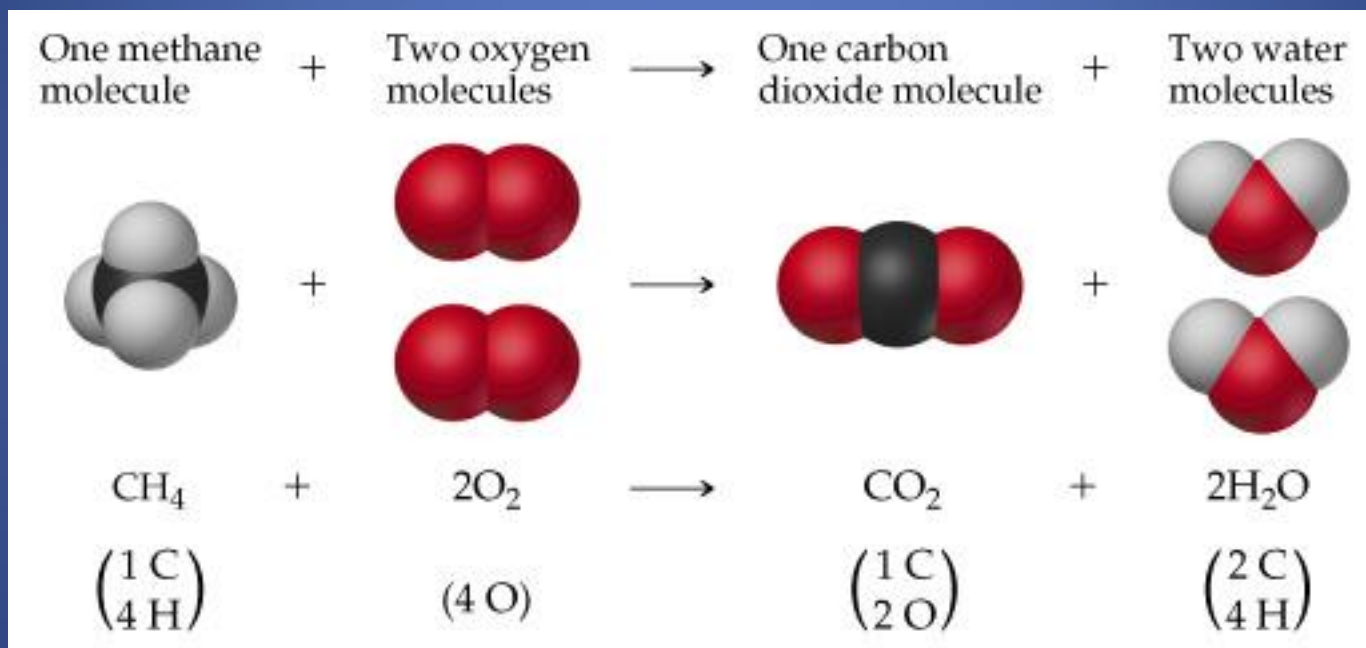
# Alkynes – hydrocarbons with a triple bonding of atoms



# Saturated and unsaturated hydrocarbons

- Alkanes are called ***saturated*** hydrocarbons – the carbon atoms bind to as many hydrogen atoms as possible with single bonds
- Alkenes and alkynes are called ***unsaturated*** hydrocarbons – the carbon atoms could bind to more hydrogen atoms and become saturated

# Combustion of hydrocarbons – what happens?



# Try yourself now to balance these reactions

- Propane burns in oxygen and carbondioxide and water is created...
- Butane burns in oxygen and carbondioxide and water is created...