

**Organic Chemical Pollutants**

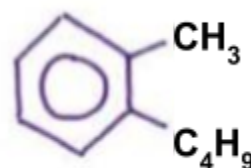
- 80% of all chemical pollutants are organic
- The other 20% are metallic and other ions or radioactive.
- Hg, Pb, Cr, etc.

**Benzene (phenyl groups)**

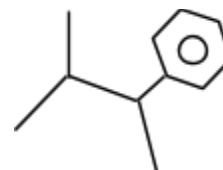
- All chemicals with the 6 ringed carbon group
- VERY stable... hard to break down.
- What used in gasoline until from to be a carcinogen

**Naming**

- If a branch of another structure, call it phenyl
- If benzene is the MAIN structure name branches from lowest number, name -yl
- Name Branches in alphabetical order

**1 butyl 2 methyl benzene**

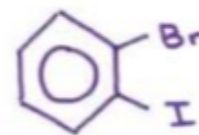
2 Methyl 3 phenylbutane (aka... kitty meow)

**Halogenated Hydrocarbons**

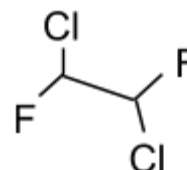
- Contains at least ONE halogen (group 17)

**Naming:**

- Find the longest chain
- Name branches from lowest number, name -yl
- Number halogens. Name "-o"
- Name Branches in alphabetical order

**1 bromo, 2 iodo benzene**

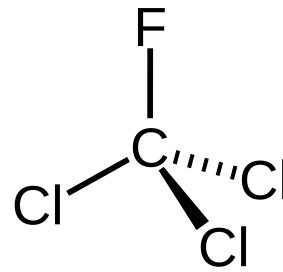
1, 2 dichloro 1,2 difluoro ethane



## Chlorofluorocarbons (CFCs)

- Halogenated hydrocarbon with both chlorine and fluorine.
- Also known as freon.
- Non-flammable... and non "toxic"
- Used as a refrigerant,
- 

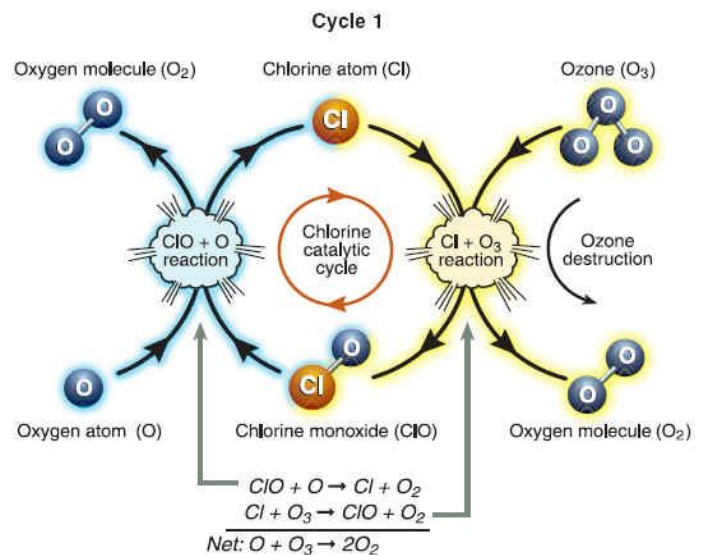
### Trichloro fluoro methane



With the uneven distribution of electron, a chlorine can be released with the addition of UV radiation. Causing a free extremely volatile chlorine to destroy any oxygens in the area... destroys Ozone

## Ozone depletion

- CFCs can destroy the ozone by the free chlorines reacting with  $O_3$  to make  $O_2$
- Polar winds (vortex) can pull these chemicals to the poles of the earth intensifying the problem.
- One chlorine molecule can break up millions of  $O_3$  molecules.



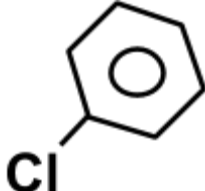
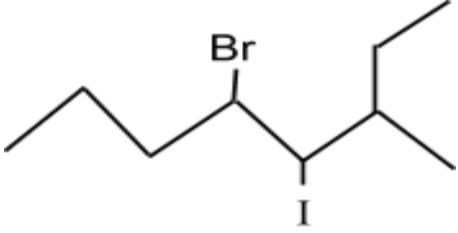
# Science 30 - Lesson 22 - Organic Chemical Pollutants

Name: \_\_\_\_\_

Draw the Following compounds

2, 3 dichloro pentane	1 bromo, 2, iodo benzene
4 ethyl, 2 fluoro, 3 phenyl heptane	2, 2, 3, 3 tetrachloro butane
Methyl benzene	2 methyl 1,3,5 trinitro (NO <sub>2</sub> ) benzene

Name the following compounds

	
---	--

