Name: _____ **Date:** _____

Chemistry *~ Ms. Hart* **Class:** Anions or Cations

12.1 Guided Notes – Hydrocarbons

SPARK:
Draw the Lewis Dot diagram for CH_4

Objective: SWBAT name and draw hydrocarbons

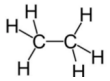
Organic Compounds

- _____
- (~8 million, compared to 100,000 inorganic)
- Each carbon has 4 bonds
- Carbon can make single, double, or triple bonds with itself.

Hydrocarbons

- _____

Types of Bonds



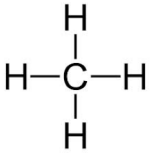
- _____ contain only single carbon-carbon bonds
- _____ contain at least one multiple carbon-carbon bond.

Types of Organic Compounds

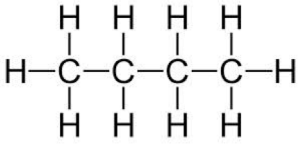
Alkanes:

- All single bonds
- Name ends with –ane
- General formula is C_nH_{2n+2}
- Differs by CH_2 unit
- Saturated, all single bonds

Methane:



Butane:

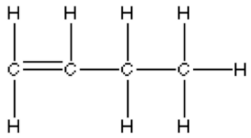


Your turn… draw the structure for pentane:

Alkenes:

- Contains a double bond
- Name ends with –ene
- General formula is C_nH_{2n}
- Differs by CH_2 unit
- Unsaturated, contains multiple bond

1-butene:



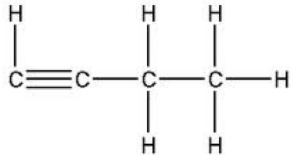
Your turn… draw the structure for 1-pentene:

Your turn… draw the structure for 2-hexene:

Alkynes:

- Contains a triple bond
- Name ends with –yne
- General formula C_nH_{2n-2}
- Differs by a CH_2 unit
- Unsaturated, contains a multiple bond

1-butyne:



Your turn… draw the structure for 2-hexyne:

Practice: Draw the straight chain structure for each formula and then name each compound. (Hint: can you draw more than on straight chain?)

1. CH_4

2. C_2H_6

3. C_3H_6

4. C_4H_{10}

5. C_4H_8

6. C_5H_{10}

7. C_6H_{10}

8. C_4H_6