**High Oleic Oil**

# Molecular Shapes and Polarity

Name_____ Date_____

Watch these videos: https://vimeo.com/album/3440693

**Materials:**

Ball and stick model pieces

**Procedure:**

1.Use VSEPR Theory to predict the shape of each of the following molecules. (Count the valence electrons (look up group number); determine electron pairs available for bonding by dividing by two, determine the central atom, attach the terminal atoms, adjust electron pairs to satisfy the octet rule.)
2. Count the shared and lone pairs (which determine the shape).
3. Predict the shape and draw it.
4. Build a model of each molecule to check your predictions.
5. Note that if there is a double or triple bond, multiple springs will need to be used.
6. Watch the video, Polar & Nonpolar – Crash Course in Chemistry http://youtu.be/PVL24HAesnc

| | Valence Shell Electrons / Pairs | Draw Lewis Structure **See: https://www.youtube.com/watch?v=1ZlnzyHahvo for help** | Shared pairs/Lone Pairs | Predicted Geometry | | Polar (yes/no) |
|---|---|---|---|---|---|---|
| | | | | Electron pair | Molecular | |
| $H_2$ | | | | | | |
| $H_2O$ | | | | | | |
| $CO_2$ | | | | | | |
| $NH_3$ | | | | | | |
| $CH_4$ | | | | | | |
| $CH_3Cl$ | | | | | | |
| $H_2O_2$ | | | | | | |
| $F_2$ | | | | | | |

## High Oleic Oil

| | Valence Shell Electrons / Pairs | Draw Lewis Structure | Shared pairs/Lone Pairs | **Predicted Geometry**<br><br>Electron pair | Molecular | **Polar (yes/no)** |
|---|---|---|---|---|---|---|
| N2 | | | | | | |
| $H_2S$ | | | | | | |
| $PH_3$ | | | | | | |
| HCl | | | | | | |
| $C_3H_6$ | | | | | | |
| $H_2S$ | | | | | | |

7. Check your answers by watching: VSPER Theory: Common Mistakes
https://www.youtube.com/watch?v=8Tl_bDWCAmo