

### **CONCEPT: DRAWING NEWMAN PROJECTIONS**

Through a series of steps, we can consistently draw accurate Newman Projections to determine conformational stability.

**EXAMPLE:** Draw the most energetically favorable Newman Projection for  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$  down the C2 – C3 bond.

1. Convert problem into bond line structure
2. Highlight the bond of interest
3. Draw an eyeball glaring down the length of the bond
4. Surround *only* the bond of interest with **ALL** implied hydrogens
5. Draw front carbon with 3 groups in the front and a back carbon with 3 groups in the back
6. Determine which dihedral angle would correspond

**PRACTICE: DRAWING NEWMAN PROJECTIONS**

1. Draw the most energetic Newman Projection of  $\text{CH}_3\text{CH}(\text{C}_6\text{H}_5)\text{CH}_3$

2. Draw the most stable Newman Projection of  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$  through the C2 – C1 bond.