Mol* Cheat Sheet

1. **Navigate the 3D Canvas:**
   a. *Rotate*
      - Press left mouse button and move OR use Shift + left mouse button and drag.
   b. *Translate*
      - Press right mouse button and move OR use Control + the left mouse button and move. On a touchscreen device, use a two-finger drag.
   c. *Zoom*
      - Use the mouse wheel. On a touchpad, use a two-finger drag. On a touchscreen device, pinch two fingers.
   d. *Center and zoom*
      - Use right mouse button to click on the part of structure you wish to see.
   e. *Change clipping planes*
      - Use Shift button + the mouse wheel. On a touchpad, use the Shift button + a two-finger drag.

2. **Select:** first open Selection Mode and change the Picking Level (if needed)
   a. *Select Picking Level*
      - Click on objects in the 3D canvas – such as atoms, residues, chains, etc.
   b. *Select object in 3D canvas*
      - Click on residues, chains etc. in the 3D canvas based on picking level
   c. *Select object from Sequence Panel*
      - Click on residues, ligands, or entire chain in the Sequence Panel
   d. *Custom Select combinations*
      - Use the Set Operations Menu in the Selection Mode toolbar

3. *See or Hide:*
   a. *To add representations*
      - Create a component of the region you wish to see/hide → Go to the Components Panel and press the "eye" icon next to the component you create
   b. *To hide/remove from view*
      - Select region you wish to hide → Click on the subtract/hide icon in the Selections toolbar

4. **Color:**
   a. *N-terminus to C-terminus (rainbow)*
      - Components → Polymer → Set Coloring → Residue Property → Sequence Id
   b. *Heteroatom*
      - Components → Polymer → Set Coloring → Atom Property → Element Symbol
   c. *Secondary structure*
      - Components → Polymer → Set Coloring → Residue Property → Secondary Structure
   d. *Hydrophobicity*
      - Components → Polymer → Set Coloring → Residue Property → Hydrophobicity
   e. *Domain*
      - Select domain → Selections Menu → Apply Theme to Selection → Color → Apply Theme

5. **Compare Structures:** first upload two or more structures at *rcsb.org/3D-view*
   a. *By chains*
      - Select 2 or more polymer chains/residues → Superposition → By Chains → Superpose
   b. *By atoms*
      - Select 1 or more atoms → Superposition → By Atoms→ Superpose

6. **Make Measurements:**
   a. *Distance*
      - Make 2 or more selections → Measurements → Add → Distance (for first 2 selections)
   b. *Angle*
      - Make 3 or more selections → Measurements → Add → Angle (for first 3 selections)
   c. *Dihedral*
      - Make 4 or more selections → Measurements → Add → Dihedral (for first 4 selections)