**Activity: Drawing, visualizing and interpreting 3-D molecular structure**

**Learning objectives:**

Students will be able to:

1. Write the formula for a molecule based on a 3-D structure.
2. Draw a molecule based on a 3-D structure.
3. Convey 3-D structure of a molecule in a drawing.
4. Translate molecular connectivity to a drawing that conveys 3 dimensions.
5. Create digital drawings of molecules using Chemdraw or similar chemical drawing software.

**Activity:**

**Part A:** Five, 3-D molecules will be displayed in the classroom. For each, write the chemical formula, draw the connectivity, and draw the structure in a way that conveys the 3-D shape.

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| **Formula** | **Connectivity Drawing** | **Drawing with 3-D** |
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| **Formula** | **Connectivity Drawing** | **Drawing with 3-D** |
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**Part B:** Once you have completed all of the above, open up Chemdraw, and create a digital version of the tables in this worksheet. Pay close attention to quality of the presentation.

**Part C:** Draw the following molecule in Chemdraw. Write the answers to the questions in Chemdraw using a text box.

* Use “View > Analysis window” to determine the molecular weight, formula, and elemental analysis.
* Use “Structure > convert structure to name” to determine the IUPAC name.
* Do a google search to determine the common name of this molecule
* What is this molecule used for?