

Mind Map Thermodynamics Assignment

A mind map, also called a concept map, is a way to visually connect important terms and ideas. A concept map is a visual organization and representation of knowledge. It shows concepts and ideas and the relationships among them. You create a concept map by writing key words (sometimes enclosed in shapes such as circles, boxes, triangles, etc.) and then drawing arrows between the ideas that are related. Then you add a short explanation by the arrow to explain how the concepts are related. To see example of a concept or mind map, do a quick google search and click on images to see how they can be created.

Below are a series of terms and short phrases that you should become familiar with and make a mind map. You can talk with others about this, using zoom or whatever means you find appropriate and then each student must create his or her own mind map using the terms below. IF in the process you find more terms or ideas or short phrases, that you feel critical to understand the techniques of protein purification feel free to add.

THIS IS AN INDIVIDUAL ASSIGNMENT - Grading will be done by the completeness and the short (emphasize short) explanation for the arrows. **Create your mind map by hand**, take a pic and convert to a PDF (a scan function on your phone works best).

Gibbs Free Energy

Van der Waals Radii

Lennard-Jones Potential

Weak Interactions

Entropy

Enthalpy

Hydrophobic Interaction

Hydrogen Bond

Non-Standard State Free Energy of a Reaction

Keq

Equilibria

Metals in Ionic Bonds

Rate Constants

Reducing Equivalents

High Energy Phosphate Bond

Phosphoanhydride bond

Substrate Level Phosphorylation

Energy Coupling