

## **INFORMAL WRITING EXERCISES USING CONCEPT MAPS TO ANSWER DISCUSSION QUESTIONS**

### **Framework and Timeline**

#### **Week 1: General Information (10 Minutes in Class)**

Give students a handout describing concept maps for them to read on their own. Describe the writing assignments to be given in class. Define the goal of these writing assignments. Ask them to bring a writing notebook to class.

#### **Week 3: Introduction to Discussion Questions (5 Minutes in Class)**

Have students review two specific topics covered during weeks 1 and 2 before coming to class. In class, ask them a question relating these two topics and have them answer this question in a paragraph during class. Collect writing samples.

#### **Week 4: Rewriting their Answer after Completing a Concept Map (20 Minutes in Class)**

Give students a skeleton of a concept map to complete before class related to the question asked during week 3. Have them re-write their responses to the question after having completed the concept map. Give them their responses from week 3 to compare their answers.

#### **Week 5: Constructing a Concept Map (20 minutes in Class)**

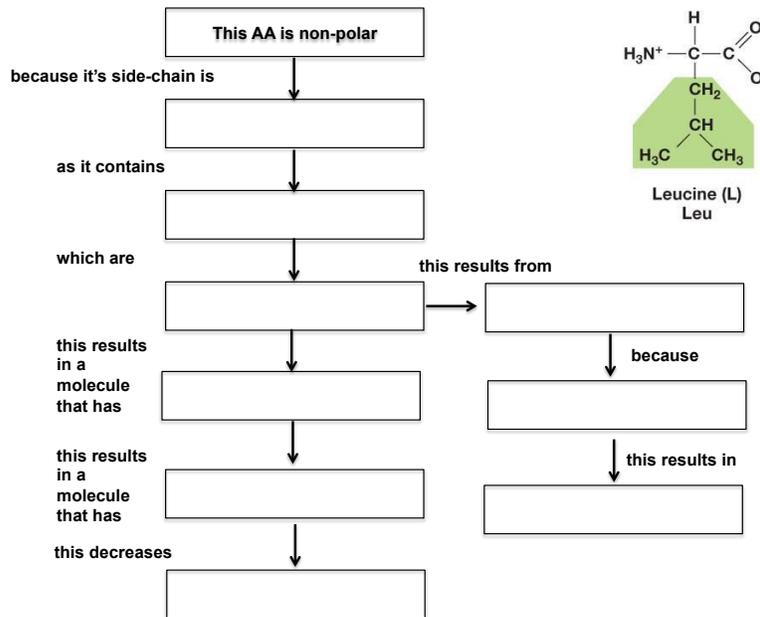
Ask students a question and have them build their own concept map for homework. Ask one student to present his or her concept map in class. Correct the concept map in class as a group.

#### **Following weeks: Using Concept Maps To Answer Discussion Questions**

As homework, have students answer discussion questions that link two or more topics in the course. Have them build a concept map as an outline and respond to the question in a paragraph.

**Example Discussion Question:**

*Why is leucine a non-polar amino acid?*



**1. Complete the concept map above using the phrases below.**

- A. The atoms involved have equal electronegativities.
- B. The electrons in the bond being shared equally.
- C. Many C-H bonds.
- D. Limited ability to form hydrogen bonds with water.
- E. Non-polar covalent bonds.
- F. A molecule's solubility in water.
- G. No partial + or - charges on the atoms in the bond.
- H. Non-polar.
- I. Limited partial or full charges on the whole molecule.

**2. Use the concept map to formulate your response to the question in a paragraph.**