

Using Sequencing/Pattern Puzzles

You can use pattern puzzles to help you remember sequential information. Pattern puzzles are not just a tool for memorization. They also promote a greater understanding of a variety of chemical processes, from the steps in solving a mass-mass stoichiometry problem to the procedure for making a solution of specified molarity.

1. Write down the steps of a process in your own words. For an example, we will use the process for converting the amount of a substance in moles to mass in grams. (See Sample Problem B on page 84.) On a sheet of notebook paper, write down one step per line, and do not number the steps. Also, do not copy the process straight from your textbook.

Writing the steps in your own words promotes a more thorough understanding of the process. You may want to divide longer steps into two or three shorter steps.

- List the given and unknown information.
- Look at the periodic table to determine the molar mass of the substance.
- Write the correct conversion factor to convert moles to grams.
- Multiply the amount of substance by the conversion factor.
- Solve the equation and check your answer.

2. Cut the sheet of paper into strips with only one step per strip of paper. Shuffle the strips of paper so that they are out of sequence.

- Look at the periodic table to determine the molar mass of the substance.
- Solve the equation and check your answer.
- List the given and unknown information.
- Multiply the amount of substance by the conversion factor.
- Write the correct conversion factor to convert moles to grams.

3. Place the strips in their proper sequence. Confirm the order of the process by checking your text or your class notes.

- List the given and unknown information.
- Look at the periodic table to determine the molar mass of the substance.
- Write the correct conversion factor to convert moles to grams.
- Multiply the amount of substance by the conversion factor.
- Solve the equation and check your answer.

Pattern puzzles are especially helpful when you are studying for your chemistry tests. Before tests, use your puzzles to practice sequencing and to review the steps of chemistry processes. You and a classmate can also take turns creating your own pattern puzzles of different chemical processes and putting each other's puzzles in the correct sequence. Studying with a classmate in this manner will help make studying fun and will enable you to help each other.

