



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Dietary Supplements and the Chemistry of Life

Guide for Curriculum Unit 06.05.02
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This unit is designed for an eleventh grade chemistry curriculum. The goal of the unit is to provide students with background information on the molecules and compounds that make up both the human body and the foods and nutrients they provide to it. Students will use this background knowledge to gain a deeper understanding of bodily processes and functions, and ultimately study the effect of dietary supplements on these functions. The students will be able to apply this unit to their daily lives by gaining fundamental knowledge of carbohydrates, lipids, and proteins; the processes of anabolism and catabolism; the function and effect of ATP; caloric intake and total energy expenditure; and the definition and role of dietary supplements on their bodies. They will perform activities that will help them further grasp these concepts and that will allow them to relate this information directly to their own function as a human being.

It is important to educate students on these topics at an early age to prevent serious health issues from plaguing them in the future. The dietary supplements that are focused on in this unit are those that have been advertised for weight loss purposes. While there are many that exist in this capacity, the intention of this unit is to focus on a small group of these supplements that have been made popular and caused much controversy in recent years. The overall goal is to make students aware of the effects of these types of dietary supplements and to research and suggest healthier alternatives to weight loss and body toning.

(Developed for Chemistry, grade 11; recommended for Chemistry, Biology, and Health, High School grades)

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