

I love candy! And they keep telling me not to eat it!

Developer: Teachers at Vikingaskolan (Contact through Johan Krantz and Per-Magnus Persson)

Institute: Vikingaskolan

Country: Sweden

Subject: Biology, Chemistry, Domestic Science

Grade level: 7-8

Objectives/competencies: Students are expected to be able to:

- Seek and select appropriate information related to the study of caries, nutrition (GI, obesity) from books, computers networks and web pages.
- Explain the advantages and disadvantages of different diets, relating the explanation to the chemical compositions of different foodstuffs.
- Explain the role of carbohydrates in human metabolism and relate it to the role of fats and proteins. Explain the difference with respect to human metabolism between polysaccharides on the one hand and mono- and oligosaccharides on the other hand.
- Plan a healthy diet, a healthy meal and prepare such a meal.
- To cooperate with partners in the group in planning a diet, a meal and preparing this meal.
- To design and carry out experimental determinations of the chemical compositions of different foodstuffs.
- Decide, with reasons, what is a healthy diet and what place refined sugar can have in this diet.

Curriculum content: pH, surface tension and the various conditions of bacterial growth.

Kind of activity: Library search, work in the domestic science room [in a bathroom], laboratory investigation, group discussion to make a justified socio-scientific decision

Anticipated time: 5 lessons

Student Guide

Scenario

Sugar Sweetmouth loves candy. She eats candy instead of school lunch every day. Teacher says she will get bad teeth, gain weight, maybe some day get a heart attack. Fiddlesticks! says Sugar. Bad teeth? What are dentists for? Gain weight? Well, I choose a bigger size, when buying clothes. Heart attack at 50? Who cares?

Student Tasks

1. Seek from different sources (as books, computers networks, web pages, etc.) information about the consequences of different diets and on human nutritional needs. Pay special attention to all information on refined sugar.
2. Analyse the information obtained so as to become familiar with the data on the need of different foodstuffs, and their impact on human health. Pay special attention to all information on refined sugar.
3. Seek from different sources (as books, computers networks, web pages, etc.) information about caries, obesity, and the connection of overweight and cardiovascular diseases. Pay special attention to all information on refined sugar.
4. Analyse the information obtained so as to become familiar with the different causes of caries, obesity, and cardiovascular diseases. Pay special attention to all information on refined sugar.
5. Plan a meal that takes into account the information obtained above: pay attention both to the composition and amount of foodstuffs you are going to use.
6. In the domestic science room
 - Prepare the meal you have planned.
 - Eat this meal. Describe its effect on your well-being; pay especially attention to whether you feel “peckish” after this meal.
7. Discuss with your group and in classroom
 - the effect of eating refined sugar;
 - the need for eating sugar. What is “feeling peckish” and what to do once you feel this way?.
8. Determine how best to communicate the results to Sugar Sweetmouth.