

Unit 2 - Project

Matter and Organic Compounds & Biochemical Reactions

CC38 Biology

Section C: Real-World Application:

Many of the ideas explored within science can be can be complex concepts to understand without a real-world application to compare it to. Through this activity, you will research the biological concepts explored within the unit leading you to this point, and compare those concepts to real-life applications!

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

- 1 The serving size now appears in larger, bold font and some serving sizes have been updated.
- 2 Calories are now displayed in larger, bolder font.
- 3 Daily Values have been updated.
- 4 Added sugars, vitamin D, and potassium are now listed. Manufacturers must declare the amount in addition to percent Daily Value for vitamins and minerals.

Understanding Food Labels and Nutritional Values

In this unit, you've explored the four biomolecules (also known as macromolecules) that are present in all living things: carbohydrates, lipids, proteins, and nucleic acids. These biomolecules are necessary for cells to function properly, but, on a grander scale, they are needed for your day-to-day processes, hence why a balanced diet inclusive of the right types and amounts of these biomolecules is required. This activity will have you

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explore what types of biomolecules are necessary to lead a healthy lifestyle, the amounts needed of those biomolecules, and the adverse effects not having a proper diet may entail!

You are tasked with creating/providing a nutrition label for any food item of your choice (that is not water, or any aqueous beverage). In addition to your nutrition label, you must identify the following information regarding your food choice:

- 1) The name of the food item selected.
- 2) Does your selected food choice provide a balanced amount of carbohydrates, lipids, and proteins for a student of your age, biological sex, and ethnicity (as all three variables can influence dietary needs). Justify/explain your response using scientific data and reasoning inclusive of proper resource citation.
- 3) Information regarding what a **calorie** is, how are calories used within the body, and what happens when one's diet is inclusive of too much or too little caloric intake.
- 4) Information regarding what dietary **fiber** is, including what type of macromolecule it is, and the dietary benefits of a high fiber diet
- 5) The difference between **saturated fats** and **unsaturated fats**, including which type is more beneficial for dietary intake.

Your assignment should be structured using proper grammar, syntax, sentence structure (punctuation, spelling, etc.), and relevant scientific vocabulary and reasoning to illustrate your understanding of the content.

All submissions should be provided as a PDF, Word document, or PowerPoint/Google Slide presentation format via upload into LMS or accessible hyperlink.