

Lab 9 Exercises 1 and 2

Macromolecules and Human Nutrition

Overview

This lab will introduce students to the purpose of meiosis. Students will also learn how chromosomes segregate according to Mendelian laws.

Learning objectives

By the end of this lab, students will be able to:

- State the four macromolecules and give examples of each
- State the monomer for each macromolecule
- Describe the type of chemical bond found in each macromolecule
- Determine basal metabolic rate and the relationship with caloric intake

Materials and equipment

In-person labs

- Macromolecules student handout
- Scale to measure body weight
- Basic calculator

Online labs

- Use same materials as in-person labs

Pre-lab Assignment

- Students should complete the EdPuzzle assignment prior to attending lab.
- Students should also complete **Part 1** of the student handout prior to attending lab.

Exercise 1: Macromolecules

In this exercise students will identify key components of macromolecule structure. Students will also determine the specific type of chemical reaction involved in building macromolecules.

[Download Lab 9 Exercise 1 Macromolecules Student Handout](#)

Exercise 2: Biology Online Nutrition Lab: Energy and Macronutrient Intake Online Lab

In this exercise, students will determine their basal metabolic rate and the number of Calories they will need to maintain their weight. Students will also calculate their daily needs of each macronutrient as well as the actual daily intake of each macronutrient.

[Download Lab 9 Calculating Basal Metabolic Rate and Macronutrient Intake](#)

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Exercise 2: Jones, T. (2019, June 04). [Biology Online Nutrition Lab: Energy and Macronutrient Intake Online Lab](#), at OER Commons. Licensed as [CC-BY-NC-SA 4.0](#). (<https://www.oercommons.org/authoring/54848-biology-online-nutrition-lab-energy-and-macronutri>.)

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