

Module 3: Strawberry DNA Extraction 10 minutes

Target Audience: 7-12th Grade Science, Biology, Life Science

Overview:

The student will learn strawberry DNA extraction using simple materials and observe a physical process.

Objectives:

Students will participate in the activity and learn that:

- Strawberries contain DNA from strawberries.
- Observe when DNA looks like in the real life.
- Understand DNA is found in all the food we eat.

National Science Education Standards:

Life Science: 1-3.A.1-1.3.A.2 and **1-3.A.3-1.3.A.4** (National Science Education Standards, National Research Council, copyright 1996, National Academy Press)

Content Standard 1.1 (Life Science 1.A)

- **Organisms and Heredity:** Knows organism organization and interactions for specifying its traits. Heredity in the passage of these characteristics from one generation to another.

Content Standard 1.2 (Life Science 1.A)

- **Cells and Cell Processes and the Relationship to Life Functions:** The genetic information stored in DNA is used to direct the synthesis of the thousands of proteins that each cell requires.
- **The Molecular Basis of Heredity:** In all organisms, the instructions for specifying the characteristics of the organism are carried in DNA, a long molecule formed from subunits called nucleotides (A, T, C, and G). The chemical and physical properties of DNA molecules are the genetic information that enables heredity. Heredity is the process of passing on characteristics from one generation to a succeeding generation. Each offspring inherits its traits from a single organism.

Science Content:

1.1.A.1-1.1.A.2, 1.2.A.1-1.2.A.2 and DNA from strawberries.

Science Process Skills:

- 1. Observing
- 2. Classifying
- 3. Inferring

Life Skills:

- 1. Communication
- 2. Learning
- 3. Collaboration

Time:

10 minutes