

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.
- Strawberry DNA is found in every living strawberry living thing.
- Strawberry 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 1-3 (Life Science 1-3)

- **Understanding and Knowledge:** Knows significant relationships of interactions for specifying the basic structure of the organisms that can generate or modify.

Content Standard 1-3 (Life Science 1-3)

- **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) 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 explain how the genetic information that controls heredity is transmitted to generation after generation. Heredity is not explained by a simple mechanism. Each DNA molecule is made from a single molecule.

Science Content:

1-3.A.1-1.3.A.2 and 1-3.A.3-1.3.A.4 (National Science Education Standards)

Science Process Skills:

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

Life Skills:

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

Time:

10 minutes