

Virtual Science Adventure Lab (VSAL) Strawberry DNA Extraction Lesson Summary

Grade Levels: This virtual lesson is appropriate for students in grades K-6

Time Required: 20 minutes

Outcomes and Objectives

Learning Targets

- To understand basic properties and functions of DNA and cells.
- To expose students to the process of isolating DNA as it is the first step in many experiments (such as cloning, DNA sequencing, and DNA Fingerprinting).

Assumptions of Prior Student Knowledge

- Students will have heard of cells and DNA.

Description

In this virtual lesson, students learn about DNA and cells, and how they are the instructions to build and operate living organisms. A demonstration of a DNA isolation experiment will then be performed on a strawberry. To encourage students in the following days to try the experiment out at home with supervision, a handout with the procedure and materials list will be provided.

Vocabulary

- **DNA:** The material that carries all the information about how a living thing will look and function.
- **Cells:** The basic unit of life. Humans are made of trillions of cells.
- **Nucleus:** The part of the cell where the DNA is found.
- **Protein:** Large molecule(s) that have a multitude of functions in the body.
- **Isolate:** To get something by itself.
- **Extraction:** The action of taking something out.
- **Lysis:** To break open.
- **Precipitate:** Clump together.
- **Microscope:** A piece of equipment that is used to see very small objects that can't normally be seen with the naked eye.