

Introduce students to molecular biology with their own DNA!

CONCEPTS

- DNA
- Central Dogma
- Cell Structure

With this simple lab activity, students extract genomic DNA from their own cheek cells and watch it precipitate from solution as floating white strands. The DNA strands are then easily collected and transferred to a keepsake vial, and the vial is fashioned into a necklace! From cell structure to genetics to the chemistry of life, this kit integrates multiple life science standards in a single lesson.

SKILLS

- DNA Extraction

Seeing Is Believing

For students learning about the molecular framework of biology for the first time, DNA can be abstract and intangible. This activity makes the invisible visible — seeing their own DNA makes it real and helps students comprehend this primary substance of life.

Build Confidence

With this activity, students employ the same real-world laboratory procedure used to extract DNA from many different organisms for a variety of biotechnology research applications. Seeing the tangible results of their work to “extract and precipitate deoxyribonucleic acid” builds confidence in their ability to “do science.”

Learning for All Levels

Designed for any classroom environment, this activity requires no specialized equipment or stains. For middle school students, it’s a great introduction to the world of DNA science. For secondary and college-level instruction, lessons on DNA structure and function, cell structure, and enzyme function can be introduced or reinforced with this lab.

Activities include

- Extract DNA from cheek cells
- Prepare a keepsake necklace

Kit content supports 32 students

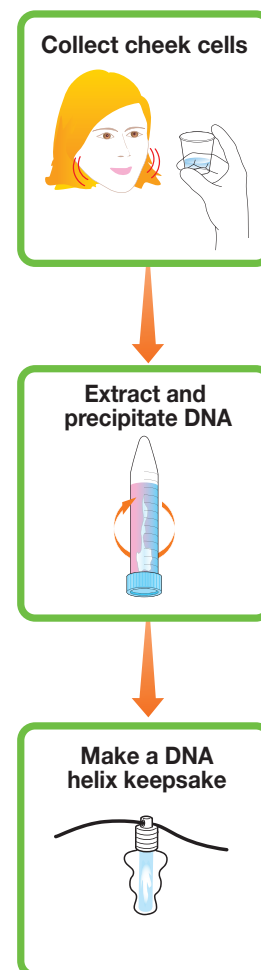
- Lysis buffer
- Powdered protease + salt
- Conical tubes, 15 ml
- Multicolor microcentrifuge tubes
- Disposable plastic transfer pipets
- Helix vials
- Screw caps
- Cord
- Curriculum, including teacher's guide, student manual, and quick guide

Required accessories not included in kit

- 91% isopropyl alcohol or 95% ethanol

Timeline

- Finish all activities in one 45-minute class period



Ordering Information

<i>Catalog #</i>	<i>Description</i>
1662300EDU	Genes in a Bottle Kit
1662000EDU	DNA Extraction Module
1662250EDU	DNA Helix Necklace Module
1662001EDU	DNA Extraction Refill

Call **1-800-4BIORAD** (1-800-424-6723) or visit explorer.bio-rad.com for more information and classroom supports.

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