



What is the Urban Barcode Project (UBP)?

- A science program spanning the New York Metropolitan area.
- A chance for high school students to explore the living environment.

What is a DNA Barcode?

Just as a unique pattern of bars in a universal product code (UPC) identifies each item for sale in a store, a DNA barcode is a DNA sequence that uniquely identifies each species of living thing.

Trip Planner

PROPOSAL STATION

Explore Biodiversity

- Decide what aspect of biodiversity in the NYC metropolitan area you want to explore.
- Organize a team (teacher or mentor plus 2–4 high school students).
- Check our website for guidelines, and submit a proposal by the next deadline!

FIELD WORK STATION

Collect and Document Your Samples

- Visit your sampling locations.
- Collect and record samples.
- Label and store your samples carefully.

LAB STATION

Conduct Your Experiments Using Provided Reagents and Equipment

- Extract DNA.
- Amplify DNA using polymerase chain reaction (PCR).
- Verify your amplified PCR product using gel electrophoresis.

www.dnabarcoding101.org/lab/

BIOINFORMATICS STATION

Use Our Bioinformatic Tools to Identify Your Species

- Check DNA sequence quality.
- Trim and edit sequences.
- Create consensus sequences.
- Align sequences.
- BLAST sequences.
- Analyze phylogenetic trees.

www.dnasubway.org

GENBANK LINE

Contribute to Biodiversity Science

- If you discover a new species or one that has not been barcoded, submit your sequences to GenBank!

www.ncbi.nlm.nih.gov/genbank

UBP SYMPOSIUM STATION

Prepare and Disseminate Your Results

- Prepare a final report and a scientific poster.
- Present your results at the UBP Symposium!



Cold Spring Harbor Laboratory
DNA LEARNING CENTER

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