



MIDDLE SCHOOL LIFE SCIENCE LABS

Tuesdays, September 15-December 15

No class October 13, November 3 or November 24

1:00pm-2:00pm

Ages 11-14

This semester, we focus on foundational concepts in life science, including cell structure, cellular processes and laboratory skills and safety. Lab supplies are included in registration fee (pick up or shipping options available).

Location: Online

Full Series - \$200 OR \$20/lab

50% off sibling discount

LAB SCHEDULE:

SCIENTIFIC METHOD & METRIC SYSTEM – Tuesday, September 15

We review the scientific method how to properly use scientific tools to measure mass, volume, distance, and temperature using the metric system.

CLASSIFICATION – Tuesday, September 22

Students review our taxonomic classification system as we learn how (and why) scientists create these groups based on their characteristics.

CELLS & CELL STRUCTURE – Tuesday, September 29

We review different cell types, and examine animal and plant cells to describe their structural differences and organelle function.

MACROMOLECULES – Tuesday, October 6

In today's lab, we investigate the four groups of biological macromolecules, including their characteristics, structure and functions in living organisms.

DIFFUSION & OSMOSIS – Tuesday, October 20

We conduct experiments with chicken eggs and plant cells to evaluate the processes of diffusion and osmosis, and the importance of passive transport to cell structure and function.

CELLULAR PROCESSES – Tuesday, October 27

Today, we conduct photosynthesis, cellular respiration and fermentation experiments as we learn about metabolism and energy conversion in cells.



MITOSIS – Tuesday, November 10

Students discover how cells create new cells as they model mitosis, and view cells in the process of dividing.

MEIOSIS – Tuesday, November 17

We model the process of meiosis to learn how genetic information is divided into gametes to be passed onto the next generation.

DNA STRUCTURE & FUNCTION – Tuesday, December 1

We review the basics of DNA, including its structure and function, create a model of a DNA strand and extract DNA from an octoploid organism following a scientific protocol.

HEREDITY – Tuesday, December 8

Students use a Punnett square card game to investigate how alleles are inherited and to study the behavior of dominant and recessive genes.

NATURAL SELECTION – Tuesday, December 15

This week, students investigate genotypes and phenotypes to learn how genetics influences physical traits, and how natural selection acts on phenotypes of individuals.

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