

DOBBS FERRY MIDDLE SCHOOL
Dobbs Ferry, New York 10522

COURSE OUTLINE

SUBJECT: Science Research Elective

GRADE: 8

Offered: Full Year

COURSE DESCRIPTION:

The Science Research course will introduce students to the principles and practices of scientific research with a strong connection to the NYS Science Learning Standards. Students will explore how scientists ask questions, design investigations, analyze data, and communicate findings. Through hands-on projects and guided inquiry, students will complete independent and group research projects, culminating in formal presentations and developing their public speaking skills. Emphasis will be placed on critical thinking, problem-solving, and real-world scientific applications.

COURSE OBJECTIVES

By the end of the course, students will be able to:

- ❖ Develop testable scientific questions
- ❖ Conduct background research using credible sources
- ❖ Design and carry out experiments or investigations
- ❖ Collect, organize, and analyze data
- ❖ Draw evidence-based conclusions
- ❖ Communicate scientific findings through written and oral formats
- ❖ Demonstrate understanding of ethical research practices

UNITS OF STUDY

1. INTRODUCTION/BASIC SKILLS/EXPERIMENTAL
2. "HOW TO" PRESENTATION - Show What You Know (about a topic you are passionate about)
3. EXPERIMENTAL RESEARCH - Aerodynamics
4. BIOLOGICAL SCIENCES
5. SOCIAL SCIENCES
6. ENGINEERING
7. CODING