

Environmental Science

Course Description

Environmental Science is designed to provide students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world and to identify and analyze environmental problems both natural and human made. A list of topics is attached.

Grading

Quarterly grades will be based on:

- Tests 50 %
- Quizzes 20
- Projects and labs 20
- Homework and class work 10

Assignment information

- Homework should be completed before the start of class on the assigned due date.
- Late homework for the current unit will receive half credit. Late credit will not be given for assignments from units that have been completed.
- If a student is absent from class, she/he is responsible for making up any assignments and tests within one week.
- Test and quiz dates, homework assignments, lab report requirements, and project information will be posted in the classroom and also on the internet.

Contact information

Email: nnaslas@melroseschools.com

School site: www.melroseschools.com

Extra Help

My formal after school help times are from 2:30 to 3:15 pm on Monday and Thursday. I am available before school by appointment.

Materials

Each student will receive a textbook. This book may stay at home, in a safe place, until the end of the school year.

Please bring these items to class every day:

- 2-pocket folders or 3-ring binder with tabs
- Pencils
- Colored pencils
- Notebook or lined paper for notes
- Calculator

Classroom Behavior

RESPECT: Good classroom behavior is essential for learning. Each student must show respect for one another, the teacher, and the classroom and supplies/equipment. Please review the MHS Behavior Rules in your student handbook. If you break school equipment you will be expected to pay for it.

BE PREPARED: Bring your daily supplies to class; you will not be allowed to go to your locker if you forgot something.

PARTICIPATE: Come to class ready to learn, to share your opinions, and to ask questions.

NO cell phone use in class. Other electronic devices may only be used at certain times with permission.

NO FOOD (including gum) in our new science lab classrooms. Only water in reusable water bottles will be allowed.

Those who fail to behave appropriately may receive a teacher conference/detention.

Attendance

It is imperative for you to be here every day for class activities, demonstrations, discussions, etc. On the seventh unauthorized absence a letter grade of "F" will be issued for the quarter. Please be on time and in your seat when the bell rings.

CP Environmental Science Topics List

Unit 1—Introduction

Chapter 1. Introduction to Environmental Science

- 1.1 Our Island, Earth
- 1.2 The Nature of Science
- 1.3 The Community of Science

Chapter 3. Earth's Environmental Systems

- 3.1 Matter and the Environment
- 3.2 Systems in Environmental Science
- 3.3 Earth's Spheres
- 3.4 Biogeochemical Cycles

Unit 2—Ecology

Chapter 4. Population Ecology

- 4.1 Studying Ecology
- 4.2 Describing Populations
- 4.3 Population Growth

Chapter 5. Evolution and Community Ecology

- 5.1 Evolution
- 5.2 Species Interactions
- 5.3 Ecological Communities
- 5.4 Community Stability

Chapter 6. Biomes and Aquatic Ecosystems

- 6.1 Defining Biomes
- 6.2 Biomes
- 6.3 Aquatic Ecosystems

Chapter 7. Biodiversity and Conservation

- 7.1 Our Planet of Life
- 7.2 Extinction and Biodiversity Loss
- 7.3 Protecting Biodiversity

Unit 3—Humans and the Environment

Chapter 8. Human Population

- 8.1 Trends in Human Population Growth
- 8.2 Predicting Population Growth
- 8.3 Humans and Their Environments

Chapter 9. Environmental Health

- 9.1 An Overview of Environmental Health
- 9.2 Biological and Social Hazards
- 9.3 Toxins in the Environment
- 9.4 Natural Disasters

Chapter 10. Urbanization

- 10.1 Land Use and Urbanization
- 10.2 Sprawl
- 10.3 Sustainable Cities

Unit 4—Earth's Resources

Chapter 11. Forestry and Resource Management

- 11.1 Resource Management
- 11.2 Forest Resources
- 11.3 Forest Management

Chapter 12. Soil and Agriculture

- 12.1 Soil
- 12.2 Soil Degradation and Conservation
- 12.3 Agriculture
- 12.4 Food Production

Chapter 13. Mineral Resources and Mining

- 13.1 Minerals and Rocks
- 13.2 Mining
- 13.3 Mining Impact and Regulation

Chapter 14. Water Resources

- 14.1 Earth: The Water Planet
- 14.2 Uses of Fresh Water
- 14.3 Water Pollution

Chapter 15. The Atmosphere

- 15.1 Earth's Atmosphere
- 15.2 Pollution of the Atmosphere
- 15.3 Controlling Air Pollution

Unit 5—Towards a Sustainable Future

Chapter 16. Global Climate Change

- 16.1 Our Dynamic Climate
- 16.2 Global Warming
- 16.3 Effects of Climate Change
- 16.4 Responding to Climate Change

Chapter 17. Nonrenewable Energy

- 17.1 Energy: An Overview
- 17.2 Fossil Fuels
- 17.3 Harmful Effects of Fossil Fuels
- 17.4 Nuclear Power

Chapter 18. Renewable Energy Alternatives

- 18.1 The Need for Alternative Energy
- 18.2 Biomass and Geothermal Energy
- 18.3 Hydroelectric and Ocean Energy
- 18.4 Solar and Wind Energy
- 18.5 Energy from Hydrogen

Chapter 19. Waste Management

- 19.1 Municipal and Industrial Solid Waste
- 19.2 Minimizing Solid Waste
- 19.3 Hazardous Waste