



# Reynolds High School

*Building Relationships for Academic Success*

## Environmental Science Investigations 2023/24

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### Textbook/Materials:

The textbook used in this course is *Living in the Environment, 17<sup>th</sup> Edition* (2012), by G. Tyler Miller and Scott Spoolman. A class set will be available. Personal copies can also be checked out from the library.

### Required Materials:

- Chromebook
- 3-ring binder for notes, handouts, lab sheets, readings
- Spiral notebook for note-taking and lab work
- Planner

### Course Description:

The environment is the world we live in, and increasingly the human population has the ability to affect our environment through our activities and choices. How you choose to live in your environment will be critical to what kind of future you live in. The goal of this course is to give you the information and tools to make informed decisions and to be knowledgeable and active members of your community and larger society. Environmental Science Investigations will give you opportunities to explore your environment and learn about your world through labs, field investigations and interactive activities! We will investigate the causes and effects of global environmental problems. Lectures, films, reading materials, class discussions, activities and projects will be used for this purpose. Planned lecture and lab topics are listed on the attached Course Outline.



### Class Expectations (i.e. POWER):

1. **PREPARED and PUNCTUAL:** Come to class every day, on time and be engaged!
2. **ORGANIZED:** Turn in assignments and homework on time. Get help from me before an assignment is due. Use your planner and don't hesitate to email questions or ask for help.
3. **WRITE:** Listen and speak to others, but do your own best work. Copied work will not receive credit.
4. **ENGAGED:** Participate in discussion, whether in whole group or breakout rooms. Share your opinion, ask questions. Be present!
5. **RESPECT:** Show respect to everyone. Be respectful of others' opinions and perspectives. Allow others to share, but also be generous about sharing your own ideas and insights.



**Cell Phones:** Cell phones and other electronic devices, including headphones or airpods, must be off and away during class. Cell phones can only be used with permission. **Cell phone use during direct instruction is not allowed.**

### Grading System

Grades will be reported using a traditional A – F grading system, as follows:

**A** 90 – 100%      **B** 80 – 89%      **C** 70 – 79%      **D** 60 – 69%      **F** < 60%

**Formative Assessments: Classwork/ Homework (40%):** Includes daily assignments, labs, projects

**Summative Assessments: Tests/Quizzes/Lab Reports (60%):** includes quizzes, unit tests, and Final Exam.

NOTE: Lab Reports will also be included in this category.

**Late Work Policy:**

Turning work in on time is highly recommended and is in your best interest. Late work will be accepted up to the end of the unit. If you want to retake a failed test, any late work for the unit must be completed first. Any late work is subject to a point reduction of up to 50% of the grade. If you are quarantined at home during any part of the year, you will be given opportunities to complete any missing work without loss of points.

**Course Calendar:**

<b>Unit</b>	<b>Topics</b>	<b>Labs/ Activities/ Projects</b>
What is environmental science?	Introduction to environmental science Ecosystem sampling Scientific method	Peanut observation Pill Bug Lab
Ecosystems and ecological principles	Ecological concepts Food chains, trophic pyramids, food webs Nutrient cycling Succession, Biomes Local flora & fauna Freshwater Ecosystems Aquatic communities & water quality	Bio-Indicators Lab Soil Ecology Lab Owl pellets lab Plant community lab Ecosystems Inquiry lab *Salmon Watch field trip
Biodiversity and Population	Biodiversity Ecosystem services Human Population Growth Population ecology	World population Internet lab Hunger banquet  Fish banks Activity
Water resources, pollution and treatment	Water resources & wastewater treatment Hydrologic Cycle & Water Pollution	Water quality lab Bottled water lab *Sewage treatment plant field trip
Land use and agricultural practices	Land Resources Agricultural Methods/ pesticides Risk assessment & toxicology Environmental Laws	LD-50 Lab Mining Lab Land Use debate *Zenger Farm field trip
Global warming and Climate Change	Composition of the atmosphere Air pollution Global warming & Climate Change	Airborne particulates lab Acid rain lab
Pollution and Solid Waste	Solid & Hazardous waste Plastics & recycling Pollution	Plastics lab Oil spill lab
Energy resources and consumption	Energy concepts Energy sources Fossil fuels vs. Renewables	Energy content of fuels lab Biodiesel Lab Wind Turbine Inquiry Lab

Students! Please detach and turn in this page for credit. You may keep the front page for your reference.

### Parent Contact Information

Please provide the information below so that we can contact you if needed.

- 1. Student Name (print) \_\_\_\_\_
- 2. Student email (print) \_\_\_\_\_
- 3. Parent Name (print) \_\_\_\_\_
- 4. Parent email (print) \_\_\_\_\_

5. Please choose one of the following two options:

I can be reached during normal business hours at this telephone number:  
( ) \_\_\_\_\_ - \_\_\_\_\_

I can be reached from \_\_\_\_\_ (a.m./p.m.) until \_\_\_\_\_ (a.m./p.m)  
at this number: ( ) \_\_\_\_ - \_\_\_\_.

6. Are you available/interested in helping with a field trip as a chaperone?

Yes/no \_\_\_\_\_

7. Where can the student access the Internet?

Home \_\_\_? School \_\_\_? Other \_\_\_\_\_?

I have read and I understand the attached course syllabus and student expectations.

\_\_\_\_\_

(Student Signature)

\_\_\_\_\_

(Parent Signature)

\_\_\_\_\_

date

\_\_\_\_\_

date

Please turn this page over, read the safety rules and sign the agreement.

Thanks

**Please turn this page over to sign the Lab Safety Contract**

## RHS Science Department - Laboratory Safety Agreement

I, \_\_\_\_\_ agree to abide by the  
Student Name  
following safety rules whenever working in the science laboratories.

I will:

1. Use the science laboratory for authorized work only.
2. Remove contact lenses and wear safety goggles when instructed.
3. Study the laboratory investigation before coming to class, if possible. (If in doubt about any procedure, I will ask the teacher.)
4. Know how to use safety equipment and the location of the eyewash station, safety shower and fire blanket.
5. In case of fire, alert the teacher and leave the laboratory.
6. Carefully check for the presence of ignition sources (open flames, etc.) before using flammable materials such as alcohol.
7. Report any accident, injury, spill, unsafe procedure or broken glass to the teacher at once.
8. Never taste, touch or smell any substance unless specifically directed by the teacher to do so.
9. Handle chemicals carefully, check the label of every bottle or jar before removing the contents, and never return chemicals to reagent containers.
10. When heating a substance in a test tube, point the mouth of the tube away from all persons.
11. Use proper equipment to handle hot glassware.
12. Tie back long hair, remove dangling jewelry, roll up loose sleeves, and tuck in loose clothing.
13. At the end of the lab, clean the work area, wash and store all materials and equipment, and turn off all water, gas, and electrical appliances.

We have read the laboratory safety agreement, the course syllabus, and acknowledge the content.

\_\_\_\_\_  
(Student Signature)

\_\_\_\_\_  
(Parent Signature)

\_\_\_\_\_  
date

\_\_\_\_\_  
date