Brandywine Heights High School

ENVIRONMENTAL SCIENCE (H0214) – Syllabus 2026 – 2027

Teacher Information: Christa Heagerty Room 237

chrhea@bhasd.org 610-682-5102

Resources:

classroom.google.com class codes: 1st period zrmclzrm

4th period 7ne7oxau

COURSE DESCRIPTION: Environmental science is a cross-curricular course taking concepts from science, math, and social studies that interact with each other when dealing with environmental resources. Topics investigated include the different types of systems of the natural world (soil, water, atmosphere), matter and energy flow through varying ecosystems, pollution issues, human energy use and its impacts, and conservation choices on a changing planet.

RECOMMENDED COURSE MATERIALS:

Large 3-ring binder (2″) Charged laptop

Lined paper or a notebook

COURSE WORKLOAD:

- Approximately 1 hour of homework each week
  - Case studies
  - Lab activities
  - Text and graph analyses
- Summative Assignments
  - Projects and Presentations
  - Quizzes

GRADING POLICY:

- Summative assignments (a measure of student learning at the end of an instructional unit) are worth 60% of each marking period's grade.
- Formative assignments (an ongoing measure of student learning used by the teacher to guide instruction) are worth 40% of each marking period's grade.
- Assignments are due by 7:00 a.m. the Monday following when they are assigned.
- Students MUST communicate with their teacher in a timely manner if an assignment will be late, giving an alternative submission date no later than the Monday after the initial due date.
- Quiz corrections are available upon request. Half a point is returned for correct answers. Half a point is returned for evidence as to why that answer is correct or why the initial answer was incorrect.

COURSE CONTENT:

- The Biosphere (12 weeks)
  - Introduction to Environmental Science
  - Biomes and Basic Ecology
  - Species and Populations
  - Biodiversity

    - LAB WORK AND PROJECTS: Tragedy of the Commons simulation, Ecological Footprint, Eco-Columns, Biome speed-dating. Bubble Lab, endangered species profile, macroinvertebrate analysis, invasive species research
- Earth's Dynamic Systems (9.5 weeks)
    - Atmosphere and Weather Patterns
    - Plate Tectonics and Environmental Disturbances
    - Minerals and Soil
    - LAB WORK AND PROJECTS: ozone strips, climatogram analysis, particulate matter collection, carbon cycle model, soil testing, cookie mining, soil profile model
- Environmental Issues and Sustainability (12 weeks)
    - Energy Resources and Use
    - Watersheds and Water Cycling
    - Aquatic Biomes and Water Pollution
    - Land Use and Sustainability
    - LAB WORK AND PROJECTS: Kill-a-Watt lab, water testing, water treatment simulation, watershed modeling, LD 50 determination
- Final Project (dependent upon schedule and conflicts) – sustainable community project

COURSE EXPECTATIONS AND POLICIES:

- Come to class prepared:
    - Be sure to have completed readings, notes, and assignments.
    - Bring your binder, a writing utensil, and your charged laptop.
    - Dress appropriately for any activities: labs, field trips, outdoor observations.
- Stay on top of communications (see first page for contact and class information).
- Make every effort to be present, both physically and mentally.
    - Check the student handbook for BHHS make-up work policies.
    - Signing out of the classroom should be minimized and done at appropriate times for bathroom use only.
- Always strive for maximum integrity.
    - Do what is asked of you.
    - Do what you know you should do even if it was not asked of you.
    - Complete your work only and encourage others to do the same.
        - If incidents of cheating (in any of its forms) are found:
            - Depending on the nature of the assignment, credit earned is divided amongst all parties upon first offense and parents/guardians are informed.
            - Any future offense is documented with a discipline referral through BHHS administration and handbook punitive actions are followed.
- Food, drink, and electronics policy:
    - Because of the nature of the course and specific student allergies, no food is allowed in the classroom (barring special circumstances).
    - Beverages must be in closed containers, and there are circumstances where they will not be allowed.
    - During instructional time, defined as the time from when a student enters a classroom until the time the student leaves that classroom, cell phones and personal electronic devices must be silenced and kept out of sight.
        - If a phone is seen, the student will be sent to the office to turn their phone in for the day.
        - Earbuds should not be used or seen.