

Environmental Science 6th-8th

Syllabus for Semester 2, 2011/12 Academic Year

Instructors: Christopher Van Ness (Mr. V) and Shelly Frost (Ms. Frost)

*Please come prepared each week with a notebook and journal, writing utensils and an attitude of positivity, ready to participate and interact! We look forward to the fun and learning we will have during the next few months!

Materials: All students have been given a journal that should be brought to every class. Notebooks and pencils are required.

Materials Requested: Baby food jars, or other type of small jar, for Week 3 lab. Clean pizza boxes or other small cardboard boxes with lids for Week 4 lab.

**This syllabus is subject to change based weather, scheduling or teacher discretion.

Week 1, February 3:

Class Introductions and Expectations and Assessment; Definition of Env. Science; Life of a Plastic Bag; The 3 R's; Students in Action (group activity)

*Homework: Research and report on a current Scientific Event. Information must be written in your journal and include source, specifics on event or discovery and personal thoughts. Students must come prepared to talk about findings.

Week 2, February 10:

Review week 1 and talk about student research.

Class: Reduce, Reuse, and Recycle groups meet and plan for school-wide conservation.

*Homework: Research current recycling practices in the United States. Information should be written in your journal and please include your source. You must also write about your feelings on your findings (e.g. I think it is spectacular that... or, I think it is terrible that... because).

Week 3, February 17:

Review week 2 and talk about student findings.

Class: Natural Resources from Energy Wise. Students will receive student workbooks to be kept in classroom. In- Class assignment: Living Wise section one with three mini labs (water cycle, global apple activity, and pollution clean-up).

*Homework: Parent Energy Wise flyer to be sent home. Intro. to Environmental Study Guide handout. Use journal to keep track of how many aluminum cans you use in one week. Be ready to present your findings to the class.

Week 4, February 24:

Review of week 3 and talk about student findings.

Class: Energy Wise Section 2 - 4 (Energy, Electrical Energy, Water & Energy Conservation).

*Homework: Energy kit will be handed out and brought home for students to complete activities.

Week 5, March 2:

Review of week 4 and talk about student findings.

Class: Finish Energy Wise unit.

Introduction of "Ecology" concepts... class discussion.

*Homework: Finish energy kit homework and complete all activities.

Week 6, March 9:

Review of week 5 and talk about student findings.

Class: Energy Wise post test

Ecological Activity (outdoors).

*Homework: Scientific Method Reading Handouts and 'Front Yard Investigation' –Identify a location within your local area that can be marked as a one meter by one meter study area. This area should be able to remain marked and not be disturbed for up to 10 days.

Week 7, March 16:

Review of week 6 and discussion of investigations.

Class: Outdoor Plot Study (large Group)

Indoor Research and field identification

*Homework: Begin 'Home Plot Study' and Scientific Method Write-up. You are to prepare your 'plot study' and spend a minimum of 15 minutes in observation daily. Take notes on variety of species, record numbers and locations on a hand-drawn map. Instructions will be provided.

Week 8, March 23:

Review of Class Expectations and week 7 activities.

Class: Field Trip - Bear Creek Riparian Area Visitation and journal activity.

Lecture and demonstration of Ecological Cycles: Water, Nitrogen, Carbon

*Homework: Continue 'Home Plot Study' -Continue to monitor 'plot' for at least 15 minutes daily. Monitor changes and record your findings. Finish drawing your map and be prepared to present your study to the class.

Week 9, April 6:

Review week 8 activities

Class: Journal about Bear Creek Experience

Present 'Home Plot Studies' within class

View: 'Journey of a Drop of Water', and group Water Activity

*Homework: Monitor water usage at home and solutions to minimize consumption –record in journal (review a copy of your families water bill and see the total amount of gallons used monthly. Divide this number by the number of people in your household to find the average usage per person).

Research methods of water conservation –record in journal and make sure to cite sources.

Week 10, April 13:

Review of week 9 activities and student research

Class: Outdoor Water Investigation and journal activity.

View: ‘Water Treatment in America’

*Homework: From Source to Sink –journal about where the water in your house comes from. Follow the path from your sink to its source. Be specific...

Week 11, April 20:

Field Trip: Visitation to Upper and Lower Waste Water Treatment Plants

Location: 8:30am -Upper Treatment Facility - 1400 Granite St. Ashland. OR.

9:30am -Waste Water Treatment Plant – 1295 Oak St. Ashland, OR.

Week 12, April 27:

Discussion of Water Treatment Field Trip

Class: Build a Weather Station (three groups)

*Homework: Create your own weather station for your home

Week 13, May 4:

Class: Creation of ‘Weather Journal’

Various ‘Weather Journal’ activities

*Homework: Daily monitoring and data collection from weather station. Record data in logs within your weather journal. Be prepared to share your findings with the class. (detailed instructions will be provided)

Week 14, May 11:

Share data and findings collected from weather journal.

Class: Populations and Energy –presentation and discussion regarding the Earth’s ‘carrying capacity’. Energy sources and food sources available will be discussed. Sustainable vs. non-sustainable methods of energy and food production will be examined.

Written review of Environmental Concepts –open journal test.

*Homework: Video assignment (TBA)

Week 15, May 18:

Class: “Problems and Solutions” -discussions and activities

*Homework: Research an Environmental issue effecting our home, region, nation or world that you connect with, and create one possible solution. “Here is what I plan on doing about....” -Record in your journal.

Week 16, May 25:

Class: ‘Techno Party’ (technology party that is!) -come prepared to share your viable solution to ONE Environmental issue... and bring an ‘Environmentally Themed’ treat to share with all!