

Lesson Plan on Sustainability

I. Subject: ENC 0025, College Prep Writing 2

Teacher: Wendy Ward

Topic: Environmental Sustainability

II. Goal: In this assignment, students will become familiar with the concept of environmental sustainability and write an essay that (1) persuades others to adopt behaviors that encourage sustainability or (2) demonstrate how they themselves promote environmental sustainability.

III. Instructional Objectives:

Students will be able to understand the concept of sustainability as it relates to the environment.

Students will be able to use the educational outcome that relates to communicating effectively using listening, speaking, reading, and writing skills as they engage with others and evaluate various activities that promote sustainability.

Students will synthesize the information and compose an essay that persuades or informs others on the subject of sustainability.

IV. Instructional Strategies:

Activity 1: K-W-L Worksheet on sustainability

Activity 2: Youtube video on sustainability

Activity 3: Small group discussion on ways to promote sustainability

Activity 4: Large group discussion of small group work

Activity 5: Persuasive or informative essay on sustainability

Handout for Activity 1:

K-W-L

K: What do you Know about environmental sustainability?

W: What questions do you have? What do you
Want to learn?

L: What have you Learned?

Activity 2: Here is the link to the Youtube clip to introduce the concept of sustainability.

<http://www.youtube.com/watch?v=B5NiTN0chj0>

Activity 3 and 4: Students will brainstorm with others, but I can provide ideas for them. Here is a link that I will share with students after they discuss the topic among themselves. The class will compare the suggestions they developed on their own with the suggestions from this website.

<http://sustainability.ucsd.edu/involve/promote-sustainability.html>

Sustainability 2.0

A Living Laboratory

How You Can Help Promote Sustainability

Learn how you can help conserve energy and resources at home and at work:

- [Dining](#)
- [Paper](#)
- [Fuel](#)
- [Electricity](#)
- [Water](#)
- [Reuse and recycle](#)

Dining:

- Ask for reusable dinnerware, including silverware, cups, and plates instead of disposable dinnerware.
- Use your own beverage containers and utensils whenever possible. You receive a discount on beverages when you bring your own cup or mug.
- Take only what you need, including food, condiment packets, paper napkins, straws, plastic drink tops, and other disposable items.
- Take only silverware that you will use. Whether you have used a utensil or not, it must be washed — using energy, water, and cleaning agents.
- Save your leftovers.

Paper:

- Only copy materials that you really need.
- Make double-sided copies whenever possible and request double-sided printing at copy centers.
- Print single-spaced drafts of documents and double-spaced copies for final versions only.
- Use the "Print Preview" function to view documents before printing.
- If you print it, pick it up from the printer.
- Reuse paper that has been printed on 1 side for scratch or note paper.

- Edit documents on screen rather than printing copies.
- Save files and e-mail messages electronically. Don't print hard copies of everything.
- Post information on the Web or use e-mail instead of printing fliers and memos.
- View your W-2 [online](#).
- [Opt out of unsolicited phone book deliveries](#).
- Stop delivery of paper ledgers and instead use [FinancialLink](#).

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Fuel:

- Use alternative transportation, including UCSD shuttles, public transportation, carpools or vanpools, bicycling, and walking.
- Avoid driving in circles to find the closest parking spot.
- Keep your tires properly inflated for better gas mileage.
- Avoid sudden starts and stops.
- Turn off your vehicle instead of idling.
- Drive a more fuel-efficient vehicle, including hybrid and electric vehicles.

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Electricity:

- [Office equipment](#)
- [Lighting](#)
- [Indoor climate](#)
- [Labs](#)
- [Home](#)
- **Office equipment:**
 - Purchase [energy-efficient equipment](#).
 - Turn off office equipment that is not being used, such as printers and copiers (unless such machines are [Energy Star](#) certified units that reduce energy consumption during periods of inactivity).
 - Turn off computers in the evening. During the day, use your computer's stand-by and hibernate modes instead of screen savers.
 - Use laptop computers if possible. They consume 90% less energy than standard desktop computers.
 - If possible, use ink-jet printers. They consume 90% less energy than laser printers.
 - Select the right-sized copier. A mid-volume copier in a low-volume office can use up to 70% more energy per page than a low-volume machine.
 - Take the stairs instead of the elevator whenever possible.
 - Avoid leaving an "away" message up all day on your instant messaging program.
 - Be patient in the event of lighting, ventilation, and possibly elevator curtailments (where multiple elevators exist) as facilities staff attempt to manage UCSD's electric load.
 - [Be prepared for a possible blackout](#) during a stage 3 alert by shutting down machines that could incur damage, including loss of data, if power should suddenly be lost.

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- **Lighting:**
 - Turn off the lights when no one is using the room.
 - Use natural light instead of electrical lighting whenever possible.
 - Use CFLs (compact fluorescent lamps) instead of incandescent light bulbs.
 - Install lighting motion sensors in common areas.
 - Request a lighting evaluation from the Facilities Management [Customer Relations Service Referral Desk](#), (858) 534-2930.
- **Indoor climate:**
 - Set [thermostats](#) to 78 degrees on hot days and 68 degrees on cold days.
 - Dress comfortably for the weather, and adjust your layers before adjusting the thermostat.
 - Keep rooms cool by closing shades, especially in empty conference rooms, offices, and common areas.
 - Turn off electric space heaters. (If you are uncomfortably cool, put on a sweater.)
- **Labs:**
 - Keep fume hood sashes closed whenever possible. This reduces the load considerably for building exhaust fans and supply fans and reduces thermal energy use from the Central Utilities Plant.
 - Turn off air valves.
 - Fill autoclaves before use.
 - Remove antiquated equipment.
 - Turn off all lights and equipment when leaving for the day.
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- **Home:**
 - Avoid opening refrigerators and freezers more often than necessary.
 - Postpone using washers, dryers, and dishwashers until after 7 p.m. (or later) during an alert.
 - Avoid using high-wattage appliances, machines, and illumination.
 - Dress in layers to avoid using fans or portable heaters.
 - Purchase [Energy Star](#) appliances such as refrigerators, washers, and dryers.
- **Unplug phantom loads:**

Unplug appliances with phantom loads, plug them into a surge protector, and switch it off when appliances are not in use. A phantom load is wasted energy that plugged-in appliances use when they're turned off. For example:

 - TVs
 - DVD and VHS players
 - Computers and printers
 - Stereos and CD players
 - Video game systems
 - iPod and cell phone chargers
- **Spread the word:**

Communicate your ideas for reducing electric load anywhere on campus. Contact [Assistant Vice Chancellor Gary Matthews](#) or [John Dilliott](#), campus energy manager, (858) 822-2807.

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Water:

- Turn off the faucet when brushing your teeth, shaving, and soaping your hands.
- Run full loads of laundry and dishes.
- Take shorter, cooler showers.
- Install ultra-low flow shower heads and faucets.
- Install low flush toilets, or put a brick in your toilet tank. (The brick takes up space in the tank, so you use less water.)
- Run sprinklers during early morning or late afternoon.
- Plant native species that are adapted to our semi-arid climate, and avoid planting turf grass.

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Reuse and recycle:

Find out ways to preserve precious resources by reusing everyday items, buying earth-friendly products, and learning about recycling.

Use wisely and reuse whenever possible:

- Use canvas shopping bags instead of paper or plastic.
- Use old newspaper to wrap gifts.
- Use rechargeable batteries.
- Use only what you need of cleaning products; half the recommended amount is usually sufficient.
- Refill soap and detergent bottles from bulk containers.
- Borrow books from the library instead of buying them.
- Donate old items to charity instead of throwing them out.
- Flatten and save boxes for future use.
- Re-address envelopes for interdepartmental mail.

Buy with the planet in mind:

- Buy recycled and organic products.
- Buy products from ecologically responsible companies.
- Buy environmentally friendly cleaning products.

Recycle — it's good for everyone:

- Find out [what's recyclable](#) and [how to recycle at UCSD](#).

Activity 5: The essay will be a four-paragraph essay. Below is a rubric for grading the essay.

Rubric

SCORE of 6 Your paper is specific, original and creative. Your writing is descriptive and has examples and details to support your main idea on sustainability. The paper is unified and coherent. Transitional expressions guide the reader and signal to the reader that you want to emphasize or clarify points. After reading the essay, the reader has a full understanding of methods of sustainability. Vocabulary usage is excellent. Sentence variety is displayed. You have very few errors in grammar usage and mechanics.

SCORE of 5 Your paper is specific and developed well. The main idea on sustainability is established, and specific examples support it. Your organization is logical. Your sentences are varied. You may have occasional errors in sentence structure, including errors involving commas and/or apostrophes. Errors that involve grammar usage and mechanics do not interfere with your ability to communicate your ideas.

SCORE of 4 The paper has an adequate main idea. The reader can identify ways to promote a sustainability. There are some specific details and examples. The paragraph is mostly logical. There are some transitional expressions. Vocabulary usage is effective, and sentence structure is somewhat varied. There are some occasional errors in sentence structure, usage and mechanics. These errors occasionally affect your ability to communicate. However, second-language based errors and use of nonstandard English are minimal.

SCORE of 3 This paper has a main idea in a thesis sentence. However, the details you use are general and vaguely support the topic sentence. The paper sometimes lacks unity and coherence. The vocabulary and/or sentence structure is very basic and repetitious. There are errors involving grammar usage, syntax and mechanics. Errors involving plurals, verbs usage, and pronouns are present. These errors sometimes interfere with your communication.

SCORE of 2 This paper has an ambiguous main idea. The details are not specific. The paper's organization is mechanical and lacks unity and coherence. As a result, the reader cannot fully grasp the concept of sustainability or list examples of sustainability. The writing is simplistic, and sentences lack variety. There are serious errors involving grammar usage and punctuation. The paper may include errors involving nonstandard English and/or second-language based mistakes involving syntax. These errors involve plurals, verb usage, and pronouns. Errors in sentence structure and other mistakes frequently interfere with your ability to express your main points clearly.

SCORE of 1 This paper has no main idea. The development is inadequate and might simply be a list of ideas. The paper lacks organization. The reader cannot understand what sustainability is, nor can the reader discuss methods of promoting sustainability. The sentence structure and vocabulary choices confuse the reader. There are many errors in sentence structure, usage, syntax and mechanics. They could also include second-language based errors. These errors significantly interfere with your ability to express your main points clearly and logically.