

Quiet Contamination of Our Waters

Lesson Plan

Adapt this one-period **lesson plan** for any grade level and follow it with a simple and powerful **service project** for Earth Day. The **reflection** brings learning and service impact together.

Summary: *Students learn about the toxic ingredients in personal care products and take action to protect local waterways from the effects of the chemicals.*

Anticipatory Set: (10 minutes)

Ask the students to quietly brainstorm a written list: “What products do you use in your morning or evening routine?” (think of cleansers, hair products, dental products, cosmetics, moisturizers)

Students meet with their lists in small groups and discuss:

- What percentage of the people in your group has read the ingredient labels on their products? Looked them up?
- What chemicals and active ingredients are in these products?
- Where do the chemicals go after you use them?
- How do you think these chemicals affect us and our environment?

Part One: (10 min.) The environmental impact of Pharmaceuticals and Personal Care Products (PPCPs)

1. Review the small group discussion observations.
2. Talk about the variety of products we use to improve our appearance or health: Daily medications are called pharmaceuticals (P). Personal care products (PCP) include shampoo, soap, make-up and make-up removers, toothpaste, and moisturizers. It is important to us to look and feel good, but we also have to be aware of the impact of our personal choices on others and the environment. Where do the chemicals in PPCPs go when we rinse them down the drain?
3. Show the video: The Story of Cosmetics: <http://storyofstuff.org/movies/story-of-cosmetics/>
4. Ask students what they can do to be an agent of change related to how pharmaceuticals and personal care products (PPCPs) enter our environment. What does it mean to be environmental stewards? What is private citizen action for the common good? See the Glossary handout.

Part Two: (15 minutes) Read PPCP labels and analyze contents.

*Before the lesson gather a variety of PPCPs: either you or the students bring in common examples.

1. Students work in small groups with 2-4 samples of PPCPs. Have them complete the PPCP handout with information learned about the chemicals that are in the given products.
2. Discussion Questions:
 - What are some common ingredients in your products?
 - What is the purpose of those ingredients?
 - How do they affect our environment and waterways?



Part Three (10 min): How to reduce our use

Brainstorm ways to reduce our use of these PPCPs

1. Eliminate products you do not really need (or find healthy ways to dispose)
2. Purchase or make your own natural products
3. Complete and sign a personal “Action Plan- Reducing my PPCP Waste”



Challenge for older students: Calculate the number of toxic PPCPs that the students are diverting and keep an ongoing total that can turn into a “green promotion” for your school’s efforts to restore the environment.

For younger students: Read ideas to introduce how kids can help keep their water clean:

<https://www.tvakids.com/environment/cleanwater.htm>

Make Homemade PCPs

Search the Internet for “homemade personal care products.” Students maintain a journal about their experience in making and using homemade natural products compared to store-bought counterparts. Compare cost, availability of ingredients, storage issues (lifespan), and time required to make and use.

Service Project for Earth Day

This service project, adaptable for student age and voice, may be planned in class and completed on subsequent days, either with the class or with friends and family. Be sure to have students write observations, take pictures, and collect data.

Project Overview: The project focuses on raising awareness of reducing use and proper disposal of PPCPs. Students create an awareness campaign about the issue of PPCPs in our water.

Procedure:

1. Students may create PSAs, posters, or another format to teach people about using safe products for the sake of the environment. Promote the ideas from Part Three, above.
2. As a whole group, brainstorm important facts about PPCP in the water. Identify the most important and effective points. Reflect on the idea of personal action for the common good.
3. In small groups, students create their campaigns. Pictures and diagrams help the public better understand the importance of this topic and how they can act for the good of all.
4. Students share their campaigns. Put them up around your school, on social media, and in the community. Share them with the local media to get a bigger community outreach.

Service Project Variations:

1. Work with the local community or nonprofit to create a pharmaceutical “Drop-Off Event.”
2. Test local waterways for health levels. Purchase water-testing kits via a science supply company.
3. **For younger students:** Write a letter to local leaders the importance of clean water. Each student includes a drawing of what they enjoy most about clean water.

Reflection:

Follow the service project with a brief reflection in writing, in partner discussions, and whole-group discussion.

1. Discuss observations of the impact of the campaign. Who saw the posters and PSAs? What was the response and action? Did anyone change habits? What did you learn?
2. Why is it important to protect our community’s water? Why do we all need to be good stewards of our environment?
3. Make a picture/word collage to summarize learnings and impact. Post these pictures in school.
4. Share the reflections with Learning to Give and a national audience. The TeachOne initiative connects teachers across the country with others who completed this project.

Follow-up: Discuss what they’d like to do next to continue being stewards of the environment.

