



Lesson Title: Pollution Solution

Tagline: Talk about solutions to common pollution problems and make a class book using recycled magazines

Grade Range: Grades: 2-4

Please make changes to lessons and appendices as desired to fit the needs of your classroom.

Supports Subject Area(s) of:

Science/environmental

Lesson duration 1 to 2 days

Standards: See complete list at end of lesson

Options for Assessment: Check student understanding through varied methods depending on subject.

Objectives:

- Students will investigate various forms of common pollution
- Students will research pollutions and discuss solutions for them such as: reducing, reusing, recycling and composting.

Materials shown in this project:

- Discarded magazines
- Elmer's Glue All or Glue stick
- Paper, cardstock
- Markers, pencils, colored pencils
- Any items collected to depict pollutions and solutions
- Roll of paper towels, kitchen towel, food container, sandwich baggie, plastic disposable cup, glass cup
- Appendix A

Directions for pictured project:

- Ask students to bring in old magazines (Appendix A). Begin collecting a few weeks before you plan to do this lesson
- Before doing this lesson have parent volunteers carefully tear out all but about 10 pages from the middle of the magazine being careful to leave the glued binding in tact
- Parents can also pre cut white paper for the students to use for covering the pages of their magazines (do not cover magazine pages with paper until students have finished their illustrations.)
- After students have completed the activity, glue their finished pages in order over top of the magazine pages.
- To make a binding students take a strip of cardstock and fold it over the magazine binding. Trim to size
- Glue cardstock over magazine binding to make a new bound edge
- Let glue dry overnight

Lesson Steps:

Introduction:

- Lay the roll of paper towels, kitchen towel, food container, sandwich baggie, plastic disposable cup, and glass cup for all students to see
- Ask the students to make general observations about each of the items
- Then ask students to get more specific and make observations about each object and its individual impact on the environment
- Ask students to classify the objects by which ones would be harmful to the environment and which would be more environmentally friendly.
- Possible questions:
 - Look around our classroom, what are some ways we could help our environment by changing our habits? (list students responses on board)
 - Are there any "pollutions" we could find solutions for?
 - What could be the impact on the environment if we made some of these changes? If we did not make some of these changes?
- Ask the students to think about their homes, stores, playgrounds, ballparks etc.. and ask them to help list more pollutions and possible solutions to them. Ideas include: bottled juice- juice from powder packet, tissue-handkerchief, bottled water- water bottle, plastic bag- reusable bag, disposable battery- rechargeable battery, buying books- borrowing books, buying new clothes- buying used clothes, turning up the heat- putting on a sweater, throwing a magazine away- giving the magazine to a friend

Activity:

Students work together or individually to create two pages. One depicting the pollution and the other depicting the solution. Students can use real objects in their book when appropriate and able.

Check Understanding: Use formative assessments such as checking student and group progress, answering and asking questions as students work through the process. Check student understanding as needed through the two days of working on this project.

Play Make a Choice: Write all of the pollutions and solutions separately on large pieces of paper and post them around the room. Ask students to choose one of the pollution/solutions that they feel is best for the environment and go stand beside it. Ask students to share out loud why they believe this pollution/solution is the best or ask them to respond by writing few sentences that describes why they feel this way.

Wrap it Up

Students may enjoy reading their book to other classes

Extension

Students can conduct a class, school or home audit looking for pollutions and solutions to them

Standards

K-4 National Science Standards

NS.K-4.1 Science as Inquiry: Abilities necessary to do scientific inquiry , Understanding about scientific inquiry

NS.K-4.2 Properties of objects and materials

NS.K-4.5 Abilities to distinguish between natural objects and objects made by humans

5-8 National Science Standards

NS.5-8.2 Properties of objects and material

NS.5-8.6 Populations, resources, and environments

Appendix A



Dear Parents,
Date

We need magazines (kid friendly, please) that you have finished reading! We will be using them to make into class books. We will be collecting them through (date)_____.

Thank you, Name



Dear Parents,
Date

We need magazines (kid friendly, please) that you have finished reading! We will be using them to make into class books. We will be collecting them through (date)_____.

Thank you, Name