

Modified Science Lesson Plan

Lesson: One Towel, One Tree¹

Length: 30-45 minutes

Age or Grade Level Intended: 4th graders functioning at a 3rd grade level

Academic Standard(s):

3.1.8—Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Performance Objective(s):

Given a series of six items, students will identify which items can be recycled five out of six times.

Given a worksheet with five questions, students will identify how recycling can prevent waste disposal problems, answering three out of the five questions correctly.

Assessment(s):

Students will be given a plastic bottle, newspaper, pop can, sheet of notebook paper, glass, and a Styro-foam cup to determine which items are recyclable and what kind of recyclable they classified as.

Students will be assessed by receiving a worksheet with the following questions: Where does trash go?; (**Bloom: Knowledge**) What are three things you can do to reduce the trash problem?; (**Bloom: Comprehension**) How can recycling help the trash problem?; (**Bloom: Comprehension**) How can you tell what is recyclable?; (**Bloom: Knowledge**) and How can the class promote recycling around the school? (**Bloom: Application**)

Advance Preparation by Teacher:

- Re-read the lesson plan and make sure it applies to all the students in the classroom
- Have pencils and erasers available to students who may have forgotten theirs.
- Have a clean whiteboard and/or chalk board
- Have chalk and/or markers available to use
- Have an eraser for the whiteboard and/or chalkboard
- 4 rolls of paper towel
- 1 empty trashcan
- 4: plastic bottles, newspapers, pop cans, sheets of notebook paper, glass bottles, and Styrofoam cups
- Enough copies of the worksheet for everyone in the classroom (worksheet attached)
- Copy of the check list to assess whether the students can sort recyclables
- Markers
- Poster board
- Colored paper labeled:
 - **Red:** Plastic
 - **Blue:** Paper
 - **Yellow:** Aluminum (Cans)
 - **Black:** Trash
 - **Orange:** Glass

Procedure:

Introduction/Motivation:

Ask the students “How many paper towels do you use when you dry your hands after washing them?” (**Gardner: Intrapersonal**) Ask the students how long it should take them to use a whole roll of paper towels. Then ask the students “When you wash your hands do you use one piece of paper towel or more?” (**Gardner: Intrapersonal**) Talk to the students about how using one piece of paper towel is like using a whole roll of paper towels over a period of time. Then explain that using two piece of paper towel each time is like using two rolls of paper towels over the same amount of time. Then take a roll of paper towel and throw one roll of paper towel in the trashcan and explain that is the amount of trash that is produced when using one piece of paper towel over a period of time. Then continue to throw the other three paper towel rolls in the trash to demonstrate the amount of trash made by paper towel. (**Gardner: Visual-Spatial**) Ask the students, “Where do you think all this trash goes?” (**Bloom: Knowledge**) (Answer: landfill) Do you know you know what paper towel is made out of? (**Bloom: Knowledge**) (Answer: trees) Then explain to the students how using the paper towel is like using one tree, two trees, etc. Finally ask the students “Can you think of ways to reduce the amount of trash you create?” (**Bloom: Application**) Then tell the students that we are going to talk about recycling today to reduce the amount of trash we send to landfills everyday!

Step-by-Step Plan:

1. Show students the symbol that indicates Reduce, Reuse, Recycle (**Gardner: Visual-Spatial**)



2. Talk to the students about where they may see this symbol.
 - a. Examples: plastic bottles, cardboard boxes, aluminum cans, and glass bottles
3. Ask the students, “Why is it important to recycle?” (**Bloom: Knowledge**) (Answer: to reduce waste in the landfill, to reuse different items, etc.)
4. Then tell the students how important it is to keep trash out of our landfills. Tell the students that our trash is filling up landfills and pretty soon we will not know what to do with our trash.
5. Tell students that we can reduce waste that we send to the landfill by reusing plastic bottles, or reducing the number of paper towels we use, and finally by recycling different items that we do not want to use anymore.
6. Explain to students that when we recycle different items they can be turned back it the same item again or possibly a different item.
 - a. Explain: that plastic bottles can be melted down to make more plastic bottles or paper can be recycled to make new paper.
7. Tell the students that they will be working together in groups of 2-3 to come up with slogans to help start a recycling program in the classroom. Have the students be creative when coming up with slogans to encourage other students to recycle. (**Gardner: Interpersonal**) (**Bloom: Application**) (**The teacher should assign students to groups**)
8. Give the students an example of a slogan to use to encourage students to recycle.
 - a. Example: Recycle...It's NOT that HARD
 - b. The students should be provided with some words they can use in their slogans:

i. Recycle	vii. Celebrate	xiii. Easy
ii. Proud	viii. Everyday	xiv. Global
iii. Reduce	ix. Paper	xv. Care
iv. Reuse	x. Plastic	
v. Please	xi. Aluminum (Cans)	
vi. Thank you	xii. Glass	

9. The teacher should supply the students with markers and poster board for the groups to write and draw out their slogan.
10. The students should be given fifteen to twenty minutes to create their slogan.
11. The teacher should be circling between groups during this time assisting any groups that may need help. Students may reference their science books for any additional words they may want to use in their slogan.
12. After all groups have finished their slogans, have the groups come to the front of the classroom and tell the class their slogan.
13. Then have the students return to their seats and tell them that everyone will be receiving a worksheet to complete while some students will be called back to sort recyclables.
14. Hand out the worksheet titled **Pros of Recycling** and then call students back one by one to sort recyclable items that have been set out on the table.
15. The teacher should lay the color sheets of paper labeled with the categories that the students may place the different items in.
16. The teacher should present the five items to the students and ask them to place them on the correct colored sheet of paper. (The teacher should use the check list to indicate the items the students sorted correctly. [checklist attached])
17. After all students have completed this activity and the worksheet the teacher should collect the worksheets and grade them.
18. After all the worksheets are graded the teacher should return them and review the answers with the students. (This step maybe done on another day.)

Closure:

What are some things you guys will do in the future to reduce the amount of waste going into the landfill? (**Bloom: Application**) I hope that you have a better understanding on how recycling helps reduce the waste in the landfill. As a class lets start recycling all the materials that we can so we can to reduce the amount of waste going into the landfills.

Adaptations/Enrichment:

This lesson has been modified by providing students with a list words they can use for their recycling slogans. A fourth grade students functioning at a fourth grade level would not need a list of words to come up with a recycling slogan. I also provide the students with labeled sheets of paper where they would place the items that they were asked to sort. Fourth grade students functioning at a fourth grade level would be able to sort these objects without the labeled sheets of paper. The students functioning at the fourth grade level would also be asked more complex questions than the students functioning at a third grade level. The students functioning at the fourth grade level would be doing a similar activity but the modifications make it possible for students functioning at a third grade level to learn the importance of recycling.

Self-Reflection:

1. What went well during the lesson?
2. What did not go so well during the lesson?
3. Did the assessment really test what the students know?
4. Was the assessment fair for all students?
5. Were the students engaged during the whole lesson?

¹ Information for this lesson came from: One Towel, One Tree. (n.d.). *Indiana Department of Education*. Retrieved November 30, 2009, from www.indianastandardsresources.org/files/sci/sci_3_1_8.pdf