

Attention Teachers!

Welcome to my recycling WebQuest! I hope you and your students enjoy the tasks as much as we do! Before you get started, let me help you out with a few tips and background information that may be helpful.

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|----------------------------|--|
| Grade Level | Third |
| Length of Unit | Approximately Two Weeks |
| Subject Commentary | This particular unit is designed to focus on the third grade science curriculum. It also includes activities address standards with reading, language and writing, and math skills. |
| Time of Year | This unit is best taught during the week of Earth Day . |
| Organization | There are many different learning opportunities incorporated into this unit. On some activities, students work independently, others are designed for partner work, and still there is a component created for cooperative grouping as well. |
| Daily Activities | The activities in this unit were designed for a class of third graders not completely familiar with technology usage in the classroom. The unit begins gradually incorporating technology into the lessons and ends with the students working a great deal online and with other computer programs. A suggestion would be to introduce the components of technology you plan to use prior to beginning this unit to familiarize the students with the technological aspect. For instance, create a Power Point slide show, a chart on a spreadsheet, or demonstrate how to use a publishing program to create a poster in other lessons before this one is introduced. This prior knowledge will allow the students more chance for independent work as well as provide them feelings of success as they work through their tasks. |
| Assessment | This unit is assessed in two major ways: <u>Checklist</u> : A checklist is provided as a tool for assessing the many projects the students will complete throughout the unit. A small value is placed on each project so that a point grade can be given at the end. It is organized by activities per day. <u>Rubric</u> : A rubric is also provided as an assessment tool for the students' final projects dealing with the WebQuest task posed on the student page. |
| Extra Opportunities | For an extended learning experience for your students, I suggest contacting your local recycling company for either a field trip tour or to invite a guest speaker into your classroom. This always adds to the interest in the students and shows them that what they are doing in the classroom really can make a difference in our world. You can also take the students on a Be Kind to Earth Scavenger Hunt . This web site shows a list of things the kids can look for outside. |
| Web Links | There are many web sites that provide excellent information dealing with recycling and the environment. I have provided links to sites that either your students will be using or ones that include great resources for teachers. |
| Indiana Academic Standards | Please refer to the last page to view which standards are connected to this unit. You many also wish to visit the INDOE Academic Standards web site to view the entire list of standards. |
| Related Research | You may refer to this page to view an annotated bibliography of research used specifically for the background of this project. |
| Student Information | <i>Quick Links</i> throughout this webquest |

Daily Activities

Day One

Motivational Activity: As a way to introduce the unit, read the story, *The Paper Bag Prince*. Discuss what the Paper Bag Prince does to help clean up our Earth, and what we can do.

Activity #2: Pass out used paper grocery bags to each student and some tape. Have each student decorate the front of the bag with the title, "Recycle Paper!" Have each student tape the bag on the side of their desk. Explain that for one week, students are to throw away any paper they have as waste into their bags--not into the class trash can. Ask students to bring in 1-2 recycled items that they may be able to create something with (cereal boxes, oatmeal or Pringles container)

Materials: The *Paper Bag Prince*, used grocery bags (one for each student), tape

Assessment: The main form of assessment today is simply observation to make sure every student followed directions clearly. Complete checklist.

Day two

Motivational Activity: Gather the recycled items the students have already brought in to school. Explain that the task for today is to create a usable item out of the already used items. For instance, using a cereal box, and make a new school tools box for markers, crayons, etc. Another example is to take a raisins can, decorate the cover with scraps of construction paper, put a hole in the top, and create a piggy bank. The students usually come up with great ideas! This activity works best in partners so they can work together and have two usable items to work with. At the end of the day, students should share their newly created items with the class.

Materials: used items that were brought into school from kids, school supplies

Assessment: Each student should have successfully completed the task today with their partner. Complete checklist.

Day three

Motivational Activity: As a class, brainstorm a list of nouns that relate to our environment. Then brainstorm verbs that can go with the nouns. (Examples: clouds floating, rivers flowing, lions roaring, sun shining, etc.) To write an eight line poem, the students will simply list one noun-verb combination for eight lines. The last line should read, "SAVE THE EARTH!" Students may then illustrate and share their poems with the class. These would be wonderful examples of student work to display in the hallway.

Materials: Chart paper or Overhead projector in which to use as a brainstorming tool, writing paper

Assessment: Completed poem. Complete checklist.

Day five

Motivational Activity: Before you begin, ask students to predict how much paper the class together has thrown away in their bags. Weigh a cardboard box using a scale and then fill up the box with all the paper from the students. Weigh it again, and then subtract the weight of the box to find out how much paper the class will be able to recycle in one week. Have the students work in pairs to figure out how much the class could save in a month and in a year. Be sure to bring the box of paper to a local recycling company.

Materials: scale, paper from students' desks, box for paper

Assessment: Check students' answers. Complete checklist.

Days six and seven

Motivational Activity: Begin today by reading the poem provided on the WebQuest, *Sarah Cynthia Sylvia Stout Would Not Take the Garbage Out*. Discuss poem together, and using the students page, explain task together. Students should be split into groups of four and given a job: paper, plastic, metal, or glass. Beginning today, students should begin their research finding their tips for Sarah and facts about recycling their material.

Materials: computers for students

Assessment: At the end of each class session, have students share one thing they learned today. Complete checklist.

Days eight and nine

Motivational Activity: To begin, show an example Power Point presentation you have created. Students should begin their group tasks today. As a group, today should be dedicated to their Power Point presentations. There should be at least six slides: one as an introduction, one for each material, and one for the conclusion.

Materials: computers for students, Power Point software

Assessment: Each group should show their slides to their teacher at the end of class. The class will see them on the last day of the unit. Complete checklist.

Days ten and eleven

Motivational Activity: Sarah really needed those tips to keep her recycling program going. Today, students will create their posters for Sarah to see every day. They will create them using Publisher software.

Materials: computers for students, publishing software

Assessment: Each group should show their final poster to their teacher at the end of class. The class will see them on the last day of the unit. Complete checklist.

Days twelve and possibly thirteen

Activities: These days can be used for presentation days. Students can have a chance to shine and show their Power Point presentation and their posters,

Materials: Computers for students, anything else they need for presentations

Assessment: Use rubric for final grade.

Name: _____

Date: _____

Recycling Checklist

| | Points Available | Points Earned |
|--|------------------|---------------|
| Recycling Bags on each desk | 2 | _____ |
| * Daily participation in recycling | | |
| Creative project made from used items | 2 | _____ |
| Earth Day Poem | 5 | _____ |
| * 8 lines | | |
| * Correct noun/verb usage | | |
| * End with Earth Day message | | |
| Weight of Paper | 2 | _____ |
| * Completed two math problems | | |
| Beginning of WebQuest task | 1 | _____ |
| * Share information learned | | |
| * One point per day | 1 | _____ |
| * Completed Worksheet | 5 | _____ |
| Power Point | 12 | _____ |
| * Introduction slide | | |
| * Four informational slides | | |
| * Conclusion slide | | |
| Posters | 5 | _____ |
| * All 20 tips included (5 from each student) | | |
| | TOTAL | 35 |
| | GRADE | _____ |

Grading Scale

A (90 - 100%) = 27 - 30

B (80 - 90%) = 24 - 26

C (70 - 80%) = 21 - 23

D (60 - 70%) = 18 - 20

F (69% and under) = less than 18

Web Links for Teachers



| | |
|--|---|
| <u>Environmental Office of Solid Waste Kids Page</u> | This web site is a great resource for information as well as provides links to many user friendly web sites for students. It also includes a teacher information page. |
| <u>Department of Conservation: Recycle Rex</u> | Recycle Rex provides newsletters and activities for use by students and as a helpful aid for teachers. |
| <u>Oregon Recycling Handbook</u> | This site provides facts for recycling different kinds of materials. The link will take you to the Table of Contents where you will be able to see the kinds of materials for which they provide information. |
| <u>100% San Jose: "Recycle Where You Live"</u> | Here you will find an example of a successful community recycling program actually put into use. |
| <u>Glassworks Recycling</u> | Provided here are "fascinating facts about glass recycling." |
| <u>1-800 Recycle Information</u> | This web site provides links to facts about different kinds of materials that can be recycled. |
| <u>Department of Ecology - Links for Kids</u> | Here you can find many links to sites about recycling for kids. |
| <u>EPA Recycling</u> | Recycling information is provided here with links to specific materials. |
| <u>Earth Day Groceries Project</u> | Find out how to start this program in your school! |
| <u>American Forest and Paper Association: Kids and Educators</u> | This web site focuses on the recycling of paper. There is a teacher page as well as student friendly links. |
| <u>Ollie Recycles</u> | Great web site for kids that shows links to all kinds of materials that can be recycled as well as a teacher page. |
| <u>PlanetPals</u> | This is an excellent child-friendly web site that provides many opportunities for learning, fun, and helpful hints and downloads for the teacher. |
| <u>Landmark Project Rubric Builder</u> | Here, you can create any kind of rubric to use in your classroom. |

Related Research

This WebQuest is designed for students to be successful. Using technology and working in cooperative groups allows them more opportunity for a positive learning experience. Being able to search the Internet for information, create a Power Point presentation, a publish-ready document, and an oral group presentation opens the door for them to feel powerful in what they are able to do. Their self-confidence will increase as they are learning in ways they never thought possible before, and their academic and social skills begin moving in a positive direction as they are using the information they learn and actually applying it to real-world situations. The overall goal of this WebQuest is for students to not only learn about recycling, but also to make it a true learning experience that they will be able to keep with them forever.

The following references provide a research background on the positives of technology and cooperative learning. Also, there are some sighted documents referring to recycling that are meant to be used by the teacher to provide a real world background for the students.

References

Barr, C. (2000). The greening of Japan. *Christian Science Monitor*: [On-line]. available: http://resources.blackboard.com/scholar/course/research/research_frame.jsp

Being eco-friendly saves energy and contributes to a cleaner environment. As shown in Japan, living the "green life" by purchasing environmentally safe products is unfortunately not cost effective. What is shown here is that it is up to the people to want to live in harmony with their environment. Prices are definitely an obstacle that people must get through in order to do their best to clean up the environment. Examples are shown of ways in which people are doing just that. Students could benefit from hearing a summary of this article to actually see that an effort needs to be made by the people. Recycling programs are definitely the way to go, but only are most successful when people pull together.

Cooperative Learning. (2000). *Volcano World: A Living Laboratory*: [On-line]. available: <http://volcano.und.nodak.edu/vwdocs/msh/lc/is/cl.html>

This article clearly favors cooperative learning over competitive and individual learning arrangements. The reasons being that cooperative learning has been said to increase the development of higher-level thinking skills, communication skills, motivation, increased self-esteem, and has a positive effect on social interactions between students. It outlines elements that are necessary for teachers to pay attention to when implementing this kind of learning environment in their classrooms. Great suggestions are given for how to create successful cooperative learning situations.

Cooperative Learning & Technology. (2001). *Compaq Educational Resources*: [On-line]. available: <http://www5.compaq.com/education/k12/resources/cooperative2.html>

This article outlines very well the definition of cooperative learning, provides practical examples of including technology into this kind of learning environment, gives a research background explaining the positives of combining technology and cooperative learning, and gives suggestions for helpful tips and types of technology that can be most valuable for this situation. The definition and examples provided give a clear understanding of how cooperative learning successfully creates a positive learning environment for many students.

Dodge, B. (2001). Five Rules for Writing a WebQuest. *Learning and Leading with Technology*: [On-line]. available: <http://206.58.233.20/L&L/archive/vol28/no8/featuredarticle/dodge/index.html>

Bernie Dodge presents a background and defines WebQuest in a very effective and comprehensible way. She outlines her version of the five rules for writing a great WebQuest, and gives the reader clear suggestions in successfully encountering all five of her rules. Her resources page is very thorough and extremely helpful for WebQuest beginners.

Herbst, S. & Fitzgerald, J. (Apr. 2000). Reaping the benefits of waste recycling. *Pollution Engineering*: [On-line]. available: http://resources.blackboard.com/scholar/course/research/research_frame.jsp

Many businesses have adopted recycling programs and reuse practices since the awareness of environmental problems. This article discusses the reasons that businesses start these programs in their companies. A section also discusses a recycling program entitled "Clean Sweep" that was implemented in 1999 in the Chicago area. It was a successful program that could be an excellent example for other cities.

This article can be used to show students that not only companies, but also entire metropolitan cities are working to increase the awareness of environmental problems in our world today.

Pay-as-you-throw programs encourage communities to reduce waste. (Nov. 2000). *Public Management (US)*: [On-line]. available: http://resources.blackboard.com/scholar/course/research/research_frame.jsp

Pay-as-You-Throw, a new solid waste management program is one in which customers see a direct economic incentive to reduce the amount of waste they use. In this program, it costs customers a fee that is based on how much waste they throw away. A pilot program is underway in Fort Worth, TX. They have identified goals and given workshops to start other US cities. A contact name is provided for more information.

This article can be used to show students that cities in the United States are starting their own programs to reduce the amount of garbage used for the betterment of our environment.

Using cooperative learning in the technology infused classroom. (1998). *Learning Solutions*: [On-line]. available: <http://www.learnsol.com/coop.html>

Besides defining and providing a background for cooperative learning, this article shows how using technology in this type of learning environment can only be a positive move. First, the range of student experience with technology will vary so cooperative learning setting allows students to learn and work together to provide the support each one needs. Also, with so many classrooms limited in the amount of computers available, this type of setting allow more students to work together on one station. The article provides research background that shows cooperative learning improves academic performance and increases motivation and self-confidence.

Silverstein, S. (1974). *Where the sidewalk ends*. New York: Evil Eye Music, Inc.

Here you will find a collection of poems and drawings by Shel Silverstein. Included is the poem, *Sarah Cynthia Sylvia Stout Would Not Take The Garbage Out*.

Stahl, R. (2000). The essential elements of cooperative learning in the classroom. *ERIC Digests*: [On-line]. available: http://www.ed.gov/databases/ERIC_Digests/ed370881.html

Stahl uses his research background to support the fact that students in cooperative group settings not only have higher academic skills, but also increase positively on social skills. He clearly states the elements he believes are necessary for a successful cooperative learning setting from grouping and tasks to how students interact and learn together. Students are going to not only be academically successful, but are also going to learn how to work with others in a positive way to make the best of their education

Help Needed Immediately!

My name is Sarah Cynthia Sylvia Stout, and I have a HUGE problem. You see, I got a little lazy with my chores this year, especially with taking the garbage out. It's piled so high now that I can't figure out what to do. My problem has now become a community crisis and I need help!!



Dear Third Graders,

Sarah has really gotten herself into big trouble. Not only has she ruined her own home, but also her neighbors and other communities as well. If we don't help her soon, the world we live in is going to become a pretty stinky one!

It is up to us to help Sarah out. Every day for the next two weeks, we'll be working on some activities to help you decide on the best advice to give her. You will also be working in small groups of four students. Each student will be assigned a task in which he/she will find information about a certain type of material that can be recycled. As a group, you will use the information each of you learned and come up with a way to convince Sarah that she needs to start recycling in her home. You also need to come up with a plan to help her get out of the mess she is in right now! Good luck! She really needs it!

Mrs. Hernandez



Paper

Plastic

Aluminum

Glass



PAPER

1. You need to find five facts that will help convince Sarah to start a recycling bin for paper in her home.
2. During your search, you need to come up with five tips that will help her get started.

Here are some questions to help you in your search.

3. Can you recycle milk cartons even though they have that plastic lining? If you can, how valuable is it for our environment?
4. How much of an impact can recycling paper have on saving trees?
5. Recycling newspaper helps our environment in a few ways. What are those ways and what is your attitude now about recycling newspaper?

Use the following web sites to help you on your search.

[Isn't Paper Just Paper?](#)

[Paper Facts](#)

[Ollie Recycles Paper](#)

[Oregon Recycling Handbook: Newspaper](#)

[Oregon Recycling Handbook: Mixed Paper](#)

Now that you have found out all you could about paper, it's time for your next step: **The Group Task!**

PLASTIC

1. You need to find five facts that will help convince Sarah to start a recycling bin for plastic in her home.
2. During your search, you need to come up with five tips that will help her get started.

Here are some questions to help you in your search.

3. What are some things that can be made from recycled plastic?
4. They say that plastic is one of our most "earth friendly materials". What makes it that way?
5. If someone said that you are wearing a PET t-shirt, what do they mean? What does that have to do with recycling plastic?

Use the following web sites to help you on your search.

[Plastic Facts](#)

[Ollie Recycles Plastic](#)

[Oregon Recycling Handbook: Plastics](#)

[The RecyCool Planet: Plastic Edition](#)

[Plastics and Our World](#)

Now that you have found out all you could about plastic, it's time for your next step: **The Group Task!**

GLASS

1. You need to find five facts that will help convince Sarah to start a recycling bin for glass in her home.

2. During your search, you need to come up with five tips that will help her get started.

Here are some questions to help you in your search.

3. How is glass sorted before they begin recycling it? Why do you think it's important to sort it this way?

4. Does recycling glass save energy? If so, can you find out how much energy can be saved? How would this information affect the people that recycle and those that don't recycle?

5. There are two ways we can start the recycling process. What are they? Which one do you think it would be best for Sarah to use? Why?

Use the following web sites to help you on your search.

[What Happens to Recycled Glass](#)

[Fascinating Facts About Glass Recycling](#)

[Glass Facts](#)

[Ollie Recycles Glass](#)

[Oregon Recycling Handbook: Glass](#)

[The RecyCool Planet: Glass Edition](#)

Now that you have found out all you could about glass, it's time for your next step: **The Group Task!**

ALUMINUM

1. You need to find five facts that will help convince Sarah to start a recycling bin for metal in her home.
2. During your search, you need to come up with five tips that will help her get started.

Here are some questions to help you in your search.

3. Are the amount of cans recycled each year increasing or decreasing? What does that say about the people of today? Can you predict what will be happening with aluminum recycling in ten years?
4. Compare the amount of energy used between manufacturing recycled aluminum and new aluminum.
5. How many times can we recycle aluminum? What does that tell us about our recycling habits?

Use the following web sites to help you on your search.

[Aluminum Facts](#)

[Ollie Recycles Aluminum](#)

[Oregon Recycling Handbook: Aluminum](#)

[The RecyCool Planet: Aluminum Edition](#)

Now that you have found out all you could about aluminum, it's time for your next step: **The Group Task!**

**SARAH CYNTHIA SYLVIA STOUT
WOULD NOT TAKE THE GARBAGE OUT**



Sarah Cynthia Sylvia Stout
Would not take the garbage out!
She'd scour the pots and scrape the pans,
Candy the yams and spice the hams,
And though her daddy would scream and shout,
She simply would not take the garbage out.
And so it piled up to the ceilings:
Coffee grounds, potato peelings,
Brown bananas, rotten peas,
Chunks of sour cottage cheese.
It filled the can, it covered the floor,
It cracked the window and blocked the door
With bacon rinds and chicken bones,
Drippy ends of ice cream cones,
Prune pits, peach pits, orange peel,
Gloppy glumps of cold oatmeal,
Pizza crusts and withered greens,
Soggy beans and tangerines,
Crusts of black burned buttered toast,
Gristly bits of beefy roasts. . .
The garbage rolled on down the hall,
It raised the roof, it broke the wall. . .
Greasy napkins, cookie crumbs,
Globs of gooey bubble gum,

Cellophane from green baloney,
Rubbery blubbery macaroni,
Peanut butter, caked and dry,
Curdled milk and crusts of pie,
Moldy melons, dried-up mustard,
Eggshells mixed with lemon custard,
Cold french fried and rancid meat,
Yellow lumps of Cream of Wheat.
At last the garbage reached so high
That it finally touched the sky.
And all the neighbors moved away,
And none of her friends would come to play.
And finally Sarah Cynthia Stout said,
"OK, I'll take the garbage out!"
But then, of course, it was too late. . .
The garbage reached across the state,
From New York to the Golden Gate.
And there, in the garbage she did hate,
Poor Sarah met an awful fate,
That I cannot now relate
Because the hour is much too late.
But children, remember Sarah Stout
And always take the garbage out!
Shel Silverstein, 1974

Indiana State Standards Covered by this Webquest

Science Standards

- 3.1.1 Recognize and explain that when a scientific investigation is repeated, a similar result is expected. (Core Standard)
 - 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis. (Core Standard)
 - 3.1.5 Demonstrate the ability to work cooperatively while respecting the ideas of others and communicating one's own conclusions about findings.
 - 3.1.8 Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.
 - 3.2.5 Construct something used for performing a task out of paper, cardboard, wood, plastic, metal, or existing objects.
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Math Standards

- 3.5.7 Estimate and measure weight using pounds and kilograms. (Core Standard)
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Language Arts:

- 3.2.2 Analysis of Grade-Level-Appropriate Nonfiction and Informational Text:
Ask questions and support answers by connecting prior knowledge with literal information from the text.
 - 3.2.3 Show understanding by identifying answers in the text. (Core Standard)
 - 3.2.7 Follow simple multiple-step written instructions.
 - 3.4.4 Research Process and Technology: Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).
 - 3.4.5 Use a computer to draft, revise, and publish writing.
 - 3.5.6 Write persuasive pieces that ask for an action or response. (Core Standard)
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