In the Green!

~How To Help Make Our Students More Environmentally aware~

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MIAMI-DADE COUNTY

Delivering Excellence Every Day

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For information on applying for an IMPACT II Adapter Grant for this project, go to The Education Fund web site at www.educationfund.org, call 305-892-5099, ext. 18 or email Lvalle@educationfund.org.

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I Environmental Programs within MDCPS

With the Green movement so popular these days, it is no surprise that environmental programs are becoming more and more popular. MDCPS supports and endorses the following organizations:

Dream in Green / Green Schools Challenge

http://dreamingreen.org/project_school.php

This program is a way for students to design and implement ways to offset the school's carbon footprint. Using the Greenometer[SM], DIG hosts a competition each year to determine which school has reduced the most energy. Apply today!

Fairchild Tropical Botanical Garden's Fairchild Challenge

http://www.fairchildgarden.org/index.cfm?page=education

FTG has aligned our standards (SSS) to all of their programs and competitions. Through a myriad of disciplines, students can participate and create projects with an environmental theme. Elementary, Middle and High School competitions are held each year. Register your school today!

Biscayne Nature Center for Environmental Education

http://science.dadeschools.net/bncee/default.htm

Established by MDCPS, this center provides hands on application in a real life South Florida Environment. Caution: you may get wet! Reserve online or call ASAP.

II Educational Agencies and Organizations in Miami

Looking for interesting ways to enhance your lesson and your students' learning? There are many environmental agencies and programs right here in Miami that tie in the Arts and Language Arts, are reasonably priced and/or sometimes FREE!

Project P.E.T.E (Protecting the Environment through Education)

jdandersen@mdpd.com

John Andersen is a marine biologist turned environmental detective. His PowerPoint presentation, experience with the MDPD and photography of South Florida will leave you speechless. Oh, and did I mention that he presents to your students for free?

Fantasy Theatre Factory

http://www.ftfshows.com

FFT puts on creative shows that all have an environmental and ecology theme. Reasonably priced, these plays are a great way to blend many academic disciplines into one event. Performances are reasonably priced and usually perform for the entire school. Fieldtrips are available as well.

FPL's Captain Conservation

http://www.fpl.com/community/learning/captainconservation.shtml

Captain Conservation puts on an entertaining and unique program for students in grades K-3rd. He teaches the students the benefits of saving energy through his original songs and it is also FREE!

III So You Want to Start Recycling in School

With all the paperwork, cardboard boxes and used workbooks that are left behind in the classroom, now is the best time to start a recycling program at your school!

Here's how:

1. **Consult with your administration**. Of course you need their approval first, but they will also be a great liaison between you, the cafeteria staff and custodians.
2. **Get other teachers and staff members on board**. Let everyone know that this is a school-wide program.
3. **Call Choice Recycling**. 305.687.0177 and ask for Willie Hernandez. He will have the bins sent out to your school. Alert the custodial staff so they can expect the delivery.
4. **Figure out the logistics of the recycle bins**. They need to be in a clean and safe location on campus in order for the students to utilize them. They also need to be close to the loading dock where the other trash containers are located for easy access for other staff.
5. **Advertise your new program around school**! Let other teachers, parents and staff members know what can be recycled and where.
6. **Provide boxes for every classroom**. You can be fancy and purchase recycling bins for each class, or better yet, just reuse an old cardboard box! Have each class label them and place them. Make sure everyone knows only paper products go in these containers.
7. **Set up a method for recycling**. When the box is full of recyclables in the classroom, assign certain students to dump the box in the recycling bins. Make sure they bring the box back each time!
8. **Expand your program to include plastic and cans**! These items need to be separate from the paper items, and placed in a white trash bag. Do not commingle cans and plastic with the paper as the recycling company will recognize it all as trash and will not recycle any of it. When the white bags are full of plastic and cans, tie it up securely and dump it into the large recycling containers by the loading dock. Do not allow students there as it is considered outside of the school and a hazard.
9. **Start recycling milk containers**! Empty milk containers from the cafeteria can be recycled along with the plastic and cans. Make sure the students empty the containers first!

IV How to Turn Trash to Jewelry

Ever notice how many plastic bags, chip bags and candy wrappers get thrown away? Where does it all go? Unfortunately most of it heads to the landfill or the ocean but now you and your students can do something about it!

Science lesson Part 1 (integrated with Math)
Appropriate for students in grades 4-6

SSS addressed:

SC.D.2.2.1 The student knows that reusing, recycling and reducing the use of natural resources improves and protects the quality of life.
SC.H.1.2.2 Knows that a successful method to explore the natural world is to observe and record, then analyze and communicate the results.
SC.H. 3.2.1 Understands that people, alone or in groups, invent new tools to solve problems and do work that affects aspects of life outside of science.
MA.B.1.2 Measures quantities in the real world and uses the measures to solve problems.
MA.C.2.2.1 Understands the concepts of spatial relationships, symmetry, reflections, congruency and similarity

Materials: junk food bags (cleaned), used paper and scissors
Preparation: Don't start the activity until you have discussed with the students what they need to bring in and why. Make certain you have enough trash for all students to be able to participate and complete the activity.

ESE/ESOL Strategies:

Manipulatives, hands-on activites, oral strategies, peer interaction

Vocabulary

Conservation, Ecosystem, Environment, Reducing, Reusing, Recycling, Landfill

Directions:

1. Have students collect chip wrappers/and or snack bags from home and school. Make sure they have been cleaned and dried.
2. Students will have to measure and cut the bags and paper into pieces approximately 10cm long by 4cm wide (use the template provided) Students may want to measure and cut the template first.
3. Students will need about 18-22 pieces of wrappers and paper in order to make a bracelet that will fit their wrist. The pieces do not have to be the same color or same chip bag, but they all have to be the same size in order to work.
4. Follow the directions on how to fold the pieces using the template guide.
5. Fold pieces together and connect on the ends in order to wear!

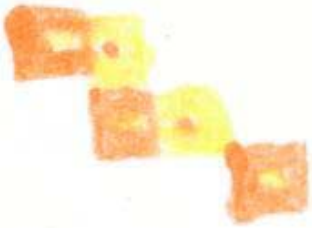
Assessment:

Students will have a lot of fun creating bracelets, but in order to assess, you need make certain that the students understand why they made them. Observations are one way to assess. You can also have the students create short oral presentations on why they made bracelets and what it has done for the environment. Students can also be assessed on written essays, or by writing thank you letters to the wrapper companies or individuals who collected the trash for the project.

Follow up:

Have students brainstorm and develop other forms of jewelry or uses for the trash. How about other trash, such as newspaper or plastic bottles? Their imagination will go far with ideas they create. Have them write their ideas up and create a booklet on how kids can make a difference in their environment!

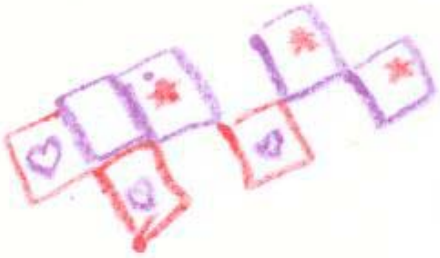
April 15, 2008



Dear Ecoist,

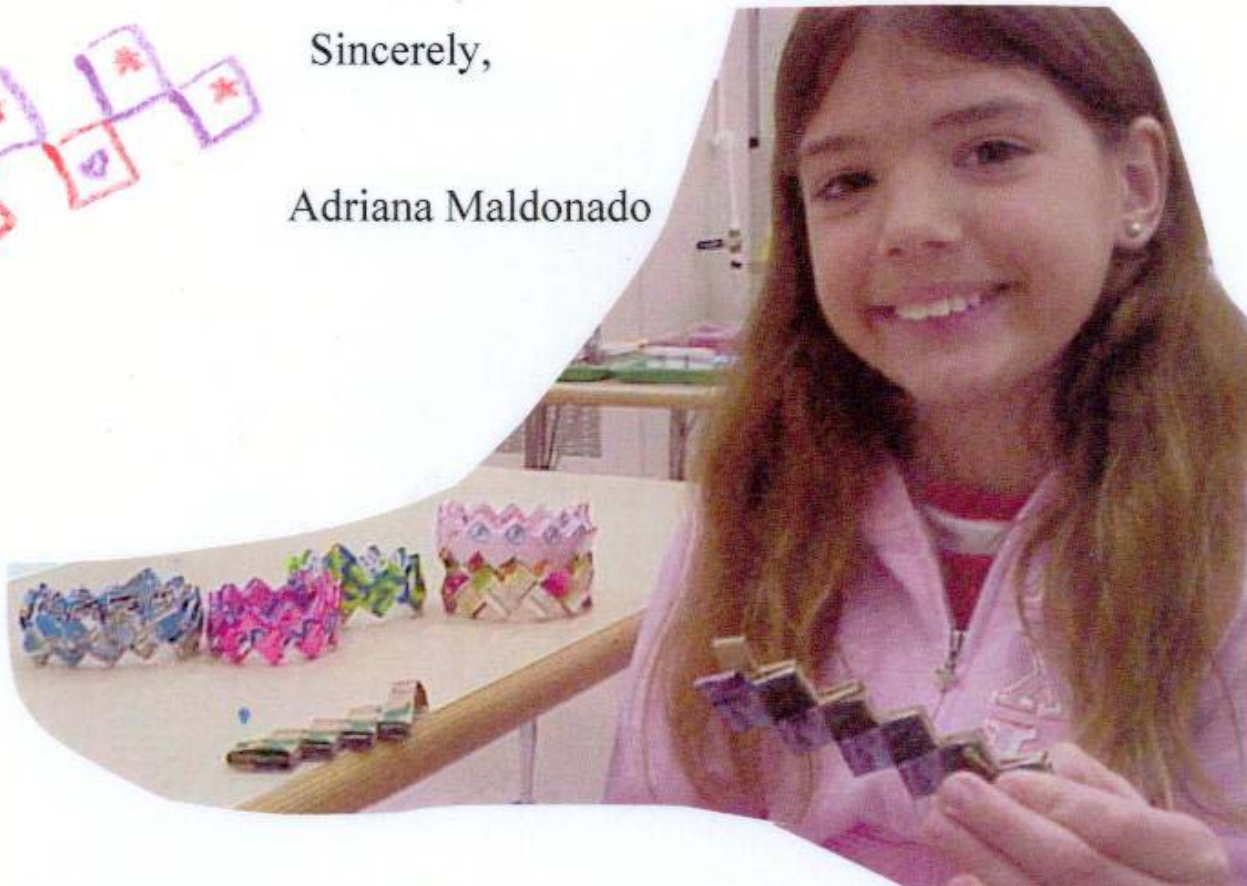
My name is Adriana Maldonado. I'm a 10 year old girl born in Argentina, and now I attend Fienberg Fisher K-8 Center.

I wanted to thank your company for donating trash so that we could make bracelets. Learning how to make bracelets was amusing, but the best part was to reuse the trash. By reusing the trash, we keep it out of the landfills. I love saving the planet. I hope everyone is making a big difference to protect the Earth. Thank you for donating trash and saving the environment.



Sincerely,

Adriana Maldonado



V Helpful Hints: Learning How to Make an Environmental Wheel

Our students sometimes have so much information about conservation and saving the environment, but don't have an easy way to present their knowledge. By making an environmental wheel, students can create an easy way to advertise their findings and spread the *green* word to others!

Science lesson Part 2 (integrated with Art and Math)
Appropriate for students in grades 4-6th

SSS addressed:

SC.D.2.2.1 The student knows that reusing, recycling and reducing the use of natural resources improves and protects the quality of life.
SC.H.1.2.2 Knows that a successful method to explore the natural world is to observe and record, then analyze and communicate the results.
SC.H. 3.2.1 Understands that people, alone or in groups, invent new tools to solve problems and do work that affects aspects of life outside of science.
VA.A.1.2.2 Uses control in handling tools and materials in a safe and responsible manner.
VA.B.1.2.2 Understands what makes different art media, techniques and processes effective or ineffective in communicating various ideas.
MA.B.1.2 The student measures quantities in the real world and uses the measures to solve problems.
MA.C.2.2.1 Understands the concepts of spatial relationships, symmetry, reflections, congruency and similarity

Materials: Tag board, markers, pencils, colored pencils and

Preparation: This takes a few days to create, but does not have to take up the entire lesson each day. Have the template drawn, laminated and cut out before you begin unless you want the students to measure on their own. Once the students have measured, drawn and colored on their wheel parts, you then have to laminate the parts (for best results) and return them to the students in order for them to finish creating the wheel. Measurements are given in both metric and customary, but if you are working in Science class, it is best to work on the metric unit.

Directions:

1. Have students trace (or measure) and cut out the wheel parts (2 parts). The radius of the circle is 3.5 inches (approximately 9 cm) with a diameter of 7 inches (approximately 18 cm).
2. Cut out the triangular piece in the middle.
3. Divide the circle into 8 equal triangles or copy from the template (next page).
4. The long piece should be folded in half. The crease will now be the top part of the learning wheel. Decorate and write your topic on the outside long piece.
5. Write your information that is to be presented to others in each of the triangles. There isn't much space, so make sure to write neatly and short sentences. Don't forget to title each triangle.
6. Once laminated, cut out the triangle pieces again so that it is like an open window.
7. Using a hole puncher, cut a hole in the center of both the circle and the long piece.
8. Fold the long piece again, and place the circle inside so that the holes align.
9. Attach the brass fasteners so that the wheel stays in place.

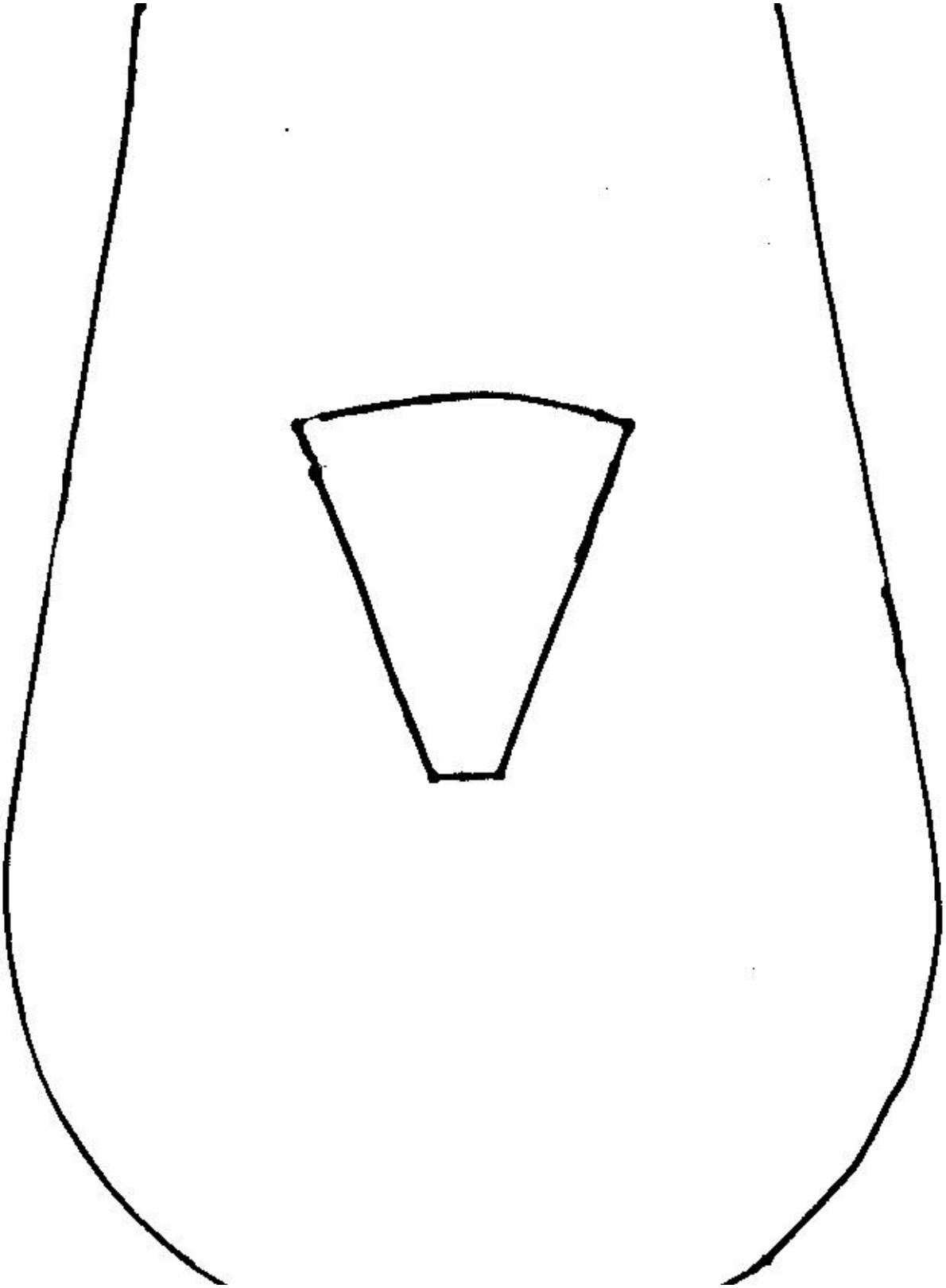
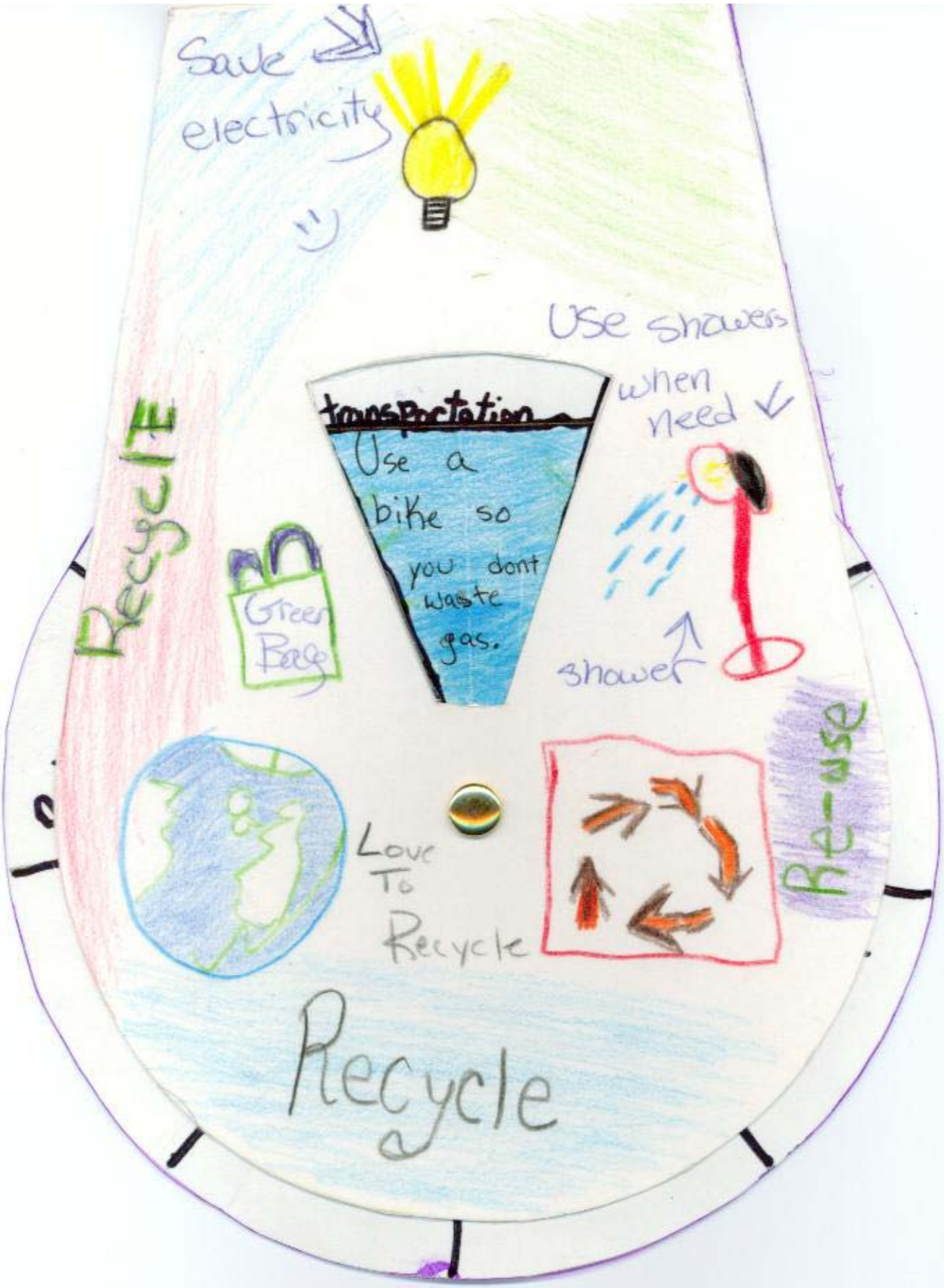
Assessment:

Not every student is artistic or creative, but you can assess them on whether or not they followed your directions or completed the activity. Allow students to present their work and explain to you why they chose the topics they did and if they are accurate.

Follow up:

Do the students not only understand why they are creating these wheels, but know how they can help others? Take the students and their wheels to another classroom to buddy up with another student. Have them share their work and even read it for the other class if they are younger or have special needs. Share their work at back to school night with the parents.

Environmental Wheel: Long Piece Template



Environmental Wheel: Student Work