ELEMENTARY SCHOOL LESSON PLANS

Environment

Campaign Objectives

- Students will be encouraged to become responsible for the environmental impact of their choices.
- Students will examine how they can take responsibility for lessening their impact on the environment through recycling.
- Students will take their knowledge and use it to educate others in their school, family and community.

Essential Questions for Students

- How do individual choices to recycle affect our community?
- What personal responsibility do individuals have to recycle?
- What responsibility do individuals have to advocate for recycling?

Outcomes

- Students will realize their ability to impact the environment.
- Students will develop oral and written presentation skills.
- Students will develop their ability to conduct research.

Targeted Content Standards

(Taken from www.mcrel.org/standards)

- *Language Arts, Reading, Standard 4:* Gathers and uses information for research purposes.
- *Language Arts, Reading, Standard 7:* Uses reading skills and strategies to understand and interpret a variety of informational texts.
- *Language Arts, Listening and Speaking, Standard 8:* Uses listening and speaking strategies for different purposes.
- *Mathematics, Standard 3:* Uses basic and advanced procedures while performing the processes of computation.
- *Mathematics, Standard 4:* Understands and applies basic and advanced properties of the concepts of measurement.
- *Mathematics, Standard 6:* Understands and applies basic and advanced concepts of statistics and data analysis.

Community Connections

- Order educational materials from a local recycling facility. Be sure to ask if they will send a speaker to the school.
- Visit a local recycling facility.
- Visit a local green business (restaurants that use local foods, businesses that use recycled materials or solar power, etc.).
- Check with local libraries to see if student work can be displayed for the community.

Materials

- Book(s) (see Curriculum Resources section)
- Materials from recycling facility or website (see Curriculum Resources section)
- Trash items (Collect trash for students to sort. Ideas include plastic bottles, toilet paper and paper towel tubes, newspapers, cereal boxes and bags, plastic grocery bags, milk cartons, food scraps, paper towels, etc., or use actual classroom trash.)
- Plastic gloves for students to use when sorting trash items
- Trash bags from school
- Scale
- Materials for building displays

Building Vocabulary

(Definitions taken from the Yahoo Kids Online Dictionary at www.kids.yahoo.com/reference).

Environment

- The circumstances or conditions that surround one.
- The totality of circumstances surrounding and organism or group of organisms; especially the combination of external physical conditions that affect and influence the growth, development and survival of organisms.

Recycle

- To extract useful materials from garbage or waste. To extract and reuse useful substances found in waste.

Sustainability

- The capacity to endure. For humans it is the potential for long-term maintenance of well-being, which in turn depends on the well-being of the natural world and the responsible use of natural resources.

Lessons

Building Knowledge (approximately 1 to 2 class periods)

- Read selected book(s) about the environment.
- Ask students key questions regarding recycling. If your school and community already participate in recycling programs, ask students what items can be recycled at school versus at home. If there are no local recycling programs, ask students what they believe recycling is and what could be recycled.
- Review educational recycling materials with students.
- Trash demo: Have students break into groups and sort items into “Recyclable” versus “Trash” piles. After they sort items, students should share their findings with the other groups in the class and in their journals.

Building Compassion (approximately 1 to 2 class periods)

- Break students into teams.
- Each team should estimate the number of trash cans in the school (and recycling bins if appropriate) and the weight of the trash thrown out each day.
- Send teams out to count all trash cans and recycling bins in the school.
- Have teams weigh some of the bags of trash (and recycling) in order to calculate approximately how many pounds of trash (and recycling) the school throws out each day.
- Have students estimate the amount of trash thrown out at the school each year. What about the entire school district?
- Have students journal about their findings. How do they believe all this trash is affecting their environment? What ideas do they have to recycle the trash?

Taking Action (approximately 2 to 4 class periods)

- Students should select one recyclable item or category of items (paper, plastic, etc.) to research.
- Students will use their knowledge to build informational displays regarding recycling to be exhibited in the school or local community.
- Your Roots & Shoots campaign should end on a day where your students present their displays at an event with parents, teachers, your school principal, and members of the community. See the “Campaign Resources” section for template letters to the community to invite them to attend your event, and media releases asking newspapers and television station to cover your event.

Extension Activities

- Host a “Recycling Night” and invite family and community members in to view the student’s displays and learn about recycling.
- Advocate for a recycling center in your community if one does not exist.
- Create a classroom recycling program for food scraps using worm composting (see Curriculum Resources section).
- Develop a recycling program for your school.

Additional Taking Action Activities

- Organize a “Going Green” contest for the school. Have classes submit ideas on how to make the school more environmentally friendly. Find ways to implement the top three ideas.
- Start a school garden to help provide organic vegetables for student lunches or snacks. Both pizza and salsa gardens are fun to grow and grow well in containers.
- Host a “Worm Composting” night at school. Have fun working together to build composting bins for families to use at home. Families can bring their own supplies or locate a donor for the supplies. This could also be used as a school fundraising activity (see Curriculum Resources section).

- Research a common food item from the school's lunch menu and find out what it takes to get this item to the table. Discover how many miles it has to travel before it comes to your school, how long it takes to get to school, what chemicals are used in the process, and how much fossil fuel is used. Can you figure out what the food's carbon footprint is? Once you have all the answers, find a way for your school lunch to make less of an environmental impact.
- Conduct a "water use audit" for your school and the school grounds. Look at where water is being wasted and what products or chemicals are being put into the water on a regular basis. Investigate ways your school can be less wasteful and more water-wise.
- Write your local representatives regarding environmental issues that are affecting you and your community.

Accommodations/Modifications

- Weigh trash from a single classroom and track over a few days.
- Research one trash item and ways to recycle that item as a whole class.
- Allow numerous ways for students to present their findings.

Family Connection

- Send an informative letter or email to student's families outlining your campaign (see Curriculum Resources section).
- Have students develop "recycling pledges" for family members to sign.