

Make a Difference in Your School

**A How-to Guide for Engaging Students
in Resource Conservation and Waste Reduction**



What the Students Said...

"I learned that the environment affects everything from jobs to the air we breathe and the water we drink."

—John, 7th grade

"Everyone, no matter what their career, can help protect the environment—whether they're a teacher or a carpenter."

—Abby, 7th grade

"My habits will change due to this environmental day because I know that when I pollute, it makes a lot of work for someone else to clean up."

—Matt, 7th grade

"It was nice for me to know that I was making a difference in this world. I could set a good example for the little ones."

—Aaron, 7th grade

"Ordinary people can do a lot to help the environment, and when people work together, they can do anything."

—Lee, 7th grade

"I learned how to be more creative and how to be more open to other people's ideas."

—Ben, 7th grade

"We should do more things like this environmental day to show the rest of the nation and the world that this is a real issue."

—J, 7th grade

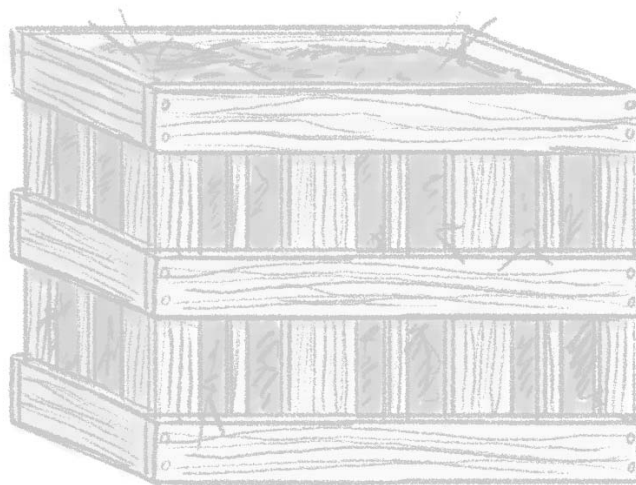
Special Thanks

Special thanks to the following people for participating in the development of this guide: Ana Carvalho of the City of San Diego Environmental Services Department and other planners associated with the San Diego event; and Principals Len Ference, Mechanicsburg Middle School, and Dennis Queen, Kingsview Middle Schools, and all of the middle school teachers.

Photos courtesy of Mechanicsburg (PA) Middle School and Kingsview (MD) Middle School.

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"The kids had a great time. They loved it. I heard kids say, 'This is the best day we had in school all year.'"

—Len Ference, principal, Mechanicsburg Middle School

About This Guide

For Communities and Youth Groups

Activities in this guide can be easily adapted by community and youth groups in planning a volunteer day or service-learning experience for young people. Engaging people in hands-on activities to protect the environment is beneficial no matter what the venue.

The U.S. Environmental Protection Agency (EPA) developed this guide to provide advice, ideas, and inspiration to teachers, school administrators, and others for planning a hands-on environmental day at school.



Students apply mulch to trees on campus.

Many of the tips and ideas in this guide come from "Make a Difference Day" events supported by EPA. EPA launched its "Make a Difference" campaign in October 2003 at an Environmental Symposium for middle and high school students held by the City of San Diego Environmental Services Department and the San Diego County Office of Education. EPA also supported Environmental Challenge days in May 2004 and May 2005 at Mechanicsburg Middle School in Mechanicsburg, Pennsylvania. EPA also assisted Kingsview Middle School in Germantown, Maryland, with the school's "It's a Green Day at Kingsview" event, held in April 2005. EPA hopes that schools across the country will embrace the ideas presented here and involve their students in environmental studies and activities.

Send Us Your Success Story

After you plan and successfully run a "Make a Difference Day" of your own, e-mail EPA about your event! We will post success stories on our Web site so everyone can share in the good news! Send to <www.rcc-challenge@epa.gov>.



"Kids LOVED the hands-on activities. They want to DO."
—Mechanicsburg teacher

What Is a “Make a Difference Day”?

A “Make a Difference Day” involves hands-on activities that engage students in learning about reducing waste, reusing materials instead of throwing them away, recycling, composting, and conserving natural resources and energy. Whether it involves conducting a “waste-free lunch” or building art sculptures out of cans, bottles, and other recyclable trash, a “Make a Difference Day” engages students in a variety of environmental activities. These activities help foster an appreciation for the environment and life-long environmental stewardship.

Your “Make a Difference Day” can include other environmental topics as well, such as water quality, biodiversity, or ecosystems. Depending on the location and nature of your school, you might want to include stream cleanups, trail maintenance, or other environmental activities.

Why Teach Kids About Waste Reduction and Resource Conservation?

Waste reduction activities (which include preventing waste, reusing, and recycling) can:

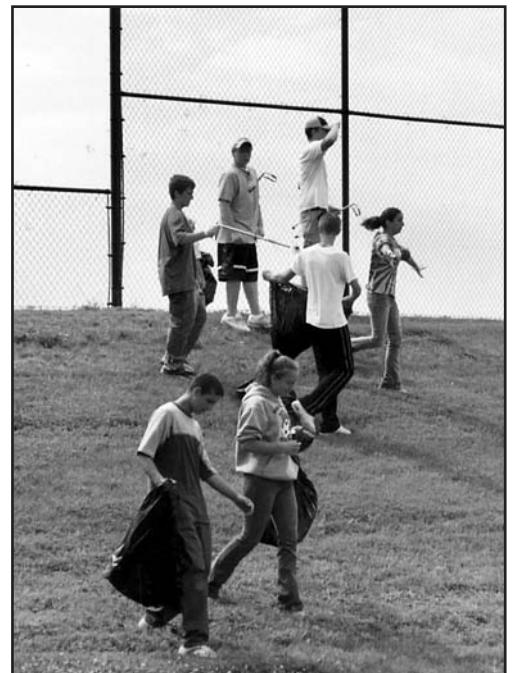
- Prevent pollution created by manufacturing new products, or products made from virgin materials.
- Save energy in manufacturing, transportation, and disposal of products.
- Decrease greenhouse gas emissions, which contribute to global climate change.
- Conserve natural resources, such as timber, water, metals, and fossil fuels.
- Reduce the need for landfilling and incineration, which are expensive to operate and maintain.
- Protect and expand U.S. manufacturing jobs and increase U.S. competitiveness.
- Help sustain the environment for future generations.

“Some of the things people throw out still have uses. We learned what we can do with those things.”

—York, Grade 7

“Even though you're young, you can still do stuff that makes a difference.”

—Lauren, Grade 7, on what she learned and could teach others.



Students pick up litter from school grounds.

“Most kids want to make a difference. They are motivated when they see the possibility.”

—Mechanicsburg teacher

Planning a “Make a Difference Day”

Advance planning is essential to running a smooth, productive “Make a Difference Day.” Based on suggestions from previous “Make a Difference Days,” EPA recommends the following basic planning activities. You can conduct these activities in the order that is appropriate to you depending on your school’s needs and priorities, or it might make sense to conduct several of these activities simultaneously. Use the checklist at the back of this section to make sure you’ve covered all the bases.

Organize a team and committees.

A “Make a Difference Day” needs a team leader, such as a principal or a lead teacher, who organizes and oversees all planning and operations. The team leader in turn needs teacher volunteers to help coordinate the event and brainstorm, plan, and run activities. The team should plan to meet every one to three weeks, and each person should be willing to spend anywhere from one to 10 extra hours per week on planning, depending on the number of months you have to plan, the number of students involved, and the nature of the activities.

Form committees within the team to take charge of specific tasks, such as:

- Setting an agenda or schedule of activities for the event
- Securing materials donations (e.g., tools) and ensuring their return
- Soliciting financial contributions
- Making necessary purchases (e.g., plants for gardening)
- Engaging parents and volunteers
- Inviting and confirming speakers/presenters
- Ensuring event receives local media attention

Benefits of a “Make a Difference Day”

Planning a “Make a Difference Day” has many benefits for your school, students, teachers, and the local community. It can:

- Help foster a sense of personal responsibility and an appreciation for the environment at a young age.
- Show students that they can make a difference in the environment at home, at school, and in the community.
- Teach students specific, easy actions they can do that lead to regional, national, or global environmental results.

Words of Wisdom

To help plan Mechanicsburg's Environmental Challenge Day, the principal (team leader) asked for teacher volunteers. A team of science, art, family/consumer science, and physical educational/environmental club teachers came forward. The principal also involved three retired teachers who had an interest in environmental issues. At Kingsview, the committee approached individuals outside of the school—those they knew had environmental expertise, such as representatives from local and state agencies.



Students learn about pond management.

Set goals for event and determine measures of success.

Setting specific goals for the event will help keep all planning and brainstorming on target and will ensure that all members of the team are working toward the same outcome. This is one of the first activities that should be conducted when organizing a “Make a Difference Day.”

Because teachers and schools are held accountable for complying with specific state and/or national standards of learning, and because classroom curricula are already planned around these standards, the goals for your “Make a Difference Day” should also align with these standards. The activities and experiences that the students participate in during the event should directly support the concepts, lessons, or goals set for their grade range based on the state and/or national standards and your school’s grade-specific curricula.

“The goal of our youth environmental outreach program is to teach students how they can individually and collectively make an impact on the quality of the environment—air, water, and land.”—Ana Carvalho, City of San Diego Environmental Services Department

Measuring the success of your event is a way of measuring whether your goals were met. Ideally, you should conduct a pre-assessment as well as a post-assessment, to determine how much students learned about environmental issues, how their appreciation of the environment has changed, and how their behaviors have changed or will change. Quantifying results in some way will not only help you improve your program for future years, it will help explain and justify the benefits of the event to others and the need for the required time and budget for the event. The success of the event will help sell the event, and may even help obtain grants or donations in the future.

Determine grade level and how many students will participate.

Among the first tasks of the team leader or the team should be determining the grade level and number of students to be involved. You can start off small by conducting “Make a Difference Day” activities within individual classrooms (we recommend consulting with EPA’s *The Quest for Less* for relevant classroom activities), or you can plan for a single grade or a school-wide effort. It all depends on the number of teachers on your

Student Reflections

Mechanicsburg Middle School students answered the following questions after participating in Environmental Challenge Day 2005:

- Explain what our school should do to be a leader in environmental conservation.
- Using the 4 R’s (reduce, reuse, recycle, rebuy), how can you make your home more environmentally friendly?
- What is the most important thing you learned during this Environmental Challenge?
- Explain how your habits will change because of your Environmental Challenge experience.
- What changes would you like to see in your community that will help conserve and protect the environment?
- After today’s experience, what changes would you suggest being made to the learning experience for next year?

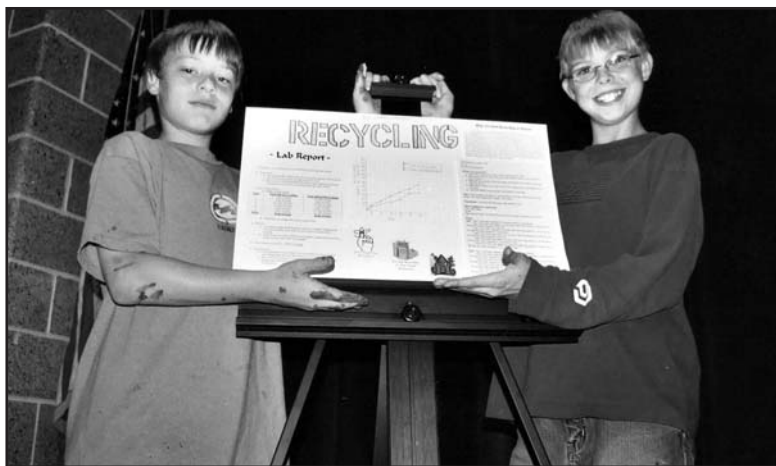
“We wanted the activities at “It’s a Green Day at Kingsview” to reinforce the work students did in class. We reviewed the curricula and decided the event aligned well with the 8th grade science classes. Students studied the themes in class before the event and then had the opportunity to experience what they discussed.”

—Dennis Queen, principal, Kingsview Middle School

team, the level of effort you wish to undertake, and the resources available for the event. Part of the decision about how many students and grades should be included might be dictated by the financial budget for the event. Keep financial constraints in mind when setting goals and brainstorming activities.

Select a date and be sure you have enough lead time.

Early in the planning process, select a date that allows for three to five months of lead time to plan and organize the event. San Diego planned its event in about three months. Mechanicsburg spent four to five months but would recommend even more time. Kingsview started planning in the fall for its spring event.



Students show off their solid waste management plan science project.

Brainstorm activities for the event.

Gather the team together to brainstorm activities for your event. (You might even want to include some students in the planning and brainstorming.) The ideas presented in this guide are intended as a springboard, or jumping off point, for discussion and consideration by the team. You also might want to consider unique possibilities that might be available at your school or in your community (e.g., an onsite environmental center or wooded trails; an inner city location close to a residential neighborhood). Activities may be hands-on (e.g., art projects) or informational (e.g., environmental career sessions).

Words of Wisdom

In Mechanicsburg and at Kingsview, the teams met in person regularly to plan and discuss the event. The city of San Diego worked closely with county planners in planning the event.

Designate a notetaker and keep notes on every idea that is mentioned; later, you can weed through the list of ideas to identify the strongest ones.

"Our goal for the event was to actively engage our kids in a hands-on experience so they would have an appreciation for the environment, think of what they could do on a daily basis to help the environment, and give them ownership of the campus and the school.

"We succeeded in this goal. We still have groups who want to finish the projects they started on our Environmental Challenge day: painting, planting, cleanup, weeding. They voluntarily approached us and asked that they be allowed to finish."

—Len Ference, principal, Mechanicsburg Middle School

Select activities, develop a preliminary agenda, and assign responsibilities.

Review your list of activities based on potential for pre-event preparation, resource and staffing requirements, and whether they meet your goal.

Be sure to plan how you will structure the day: How long will each activity last? Where will each activity be located? How many activities will each student participate in during the day? How many students can reasonably and safely participate in each activity? When will students sign up for activities?

Also determine who is going to lead each activity and whether parents or others are needed to assist. For example, you might want to send a note home with students or through the parent-teacher association asking for parent volunteers to assist with a gardening activity. Perhaps you want to contact your local Master Gardeners or Master Composters or bring in a nearby environmental nonprofit group to lead an activity in which they specialize. You might also want to assess what community partnerships you have already established and could draw on for financial or other support.

See appendix on page 29 for a sample schedule.

Determine materials, tools, and financial resources needed for each activity.

As you refine and finalize your activity list for the day, determine what materials and tools are needed for each activity (e.g., garden shovels for composting, art supplies for trash sculpture). Then identify whether you have any of the supplies already, whether you can borrow any from parents or local businesses. Tally any financial support received to date and calculate the cost of what you will need to buy. If funds fall short, consider holding bake sales or other fundraising events or soliciting funding support from local businesses. You might also ask students to bring common supplies to the event (e.g., clearly marked gardening tools).

Plan for first aid

The school nurse should set up a first-aid station if kids are working outside on a hot day and have supplies and staff available to deal with and prevent dehydration, heat exhaustion, or other injuries. All staff involved in the event should be aware of students' special medical needs.

"We assessed the event based on teachers' evaluations and direct feedback from students, especially during a discussion session held by EPA."

*—Ana Carvalho, City of San Diego
Environmental Services Department*



Students prepare their tools for a day of green gardening and beautification.

Provide time and/or place for students to refill water bottles several times during outdoor physical activities.

Address publicity needs.

Let your community know what you are doing! Be sure to follow protocol for public relations established by your school district. Suggested activities include:

- Publishing an article about the event in your school newspaper or other school- or district-wide publications.
- Issuing a press release to your local media (both print and broadcast), and even the statewide media.
- Posting information on your school's Web site.

"Getting the word out to the community is essential. Not only will it increase interest in the event, but it can help take the strain off the planning team. By publicizing the "It's a Green Day at Kingsview" in the local paper, volunteers approached us, asking to participate."

—Dennis Queen, principal, Kingsview Middle School

Other miscellaneous planning needs:

Depending on the nature of your event, you may need to consider the following additional planning steps:

- Preparing name tags
- Preparing certificates and goodie bags for students (e.g., water bottles)
- Securing parental permission, if necessary
- Preparing a map for participants



Students prepare to apply mulch to wooded hiking trails on campus.



Students plant a “green” garden.

Words of Wisdom

Mechanicsburg Middle School spent about \$1,100 in school funds on its Environmental Challenge Day. Without donations from local businesses, Principal Len Ference estimates the cost would have been closer to \$3,000.

"We had no problem getting volunteers. We involved the parent-teacher organization and sent e-mails to parents to get donations and tools. Our office contacted local businesses, who were happy to get involved and donate tools, flowers, etc. We have partnerships with a lot of them already. Next year, we hope to do more recognition and promotion of the businesses that help us, to help keep them involved."

—Len Ference, principal, Mechanicsburg Middle School

Planning Checklist

In addition to following the initial planning steps outlined in this guide, use this checklist to ensure that you've considered or implemented these important planning activities:

- ☐ Identify a team leader.
- ☐ Solicit teacher volunteers.
- ☐ Form committees for each specific task.
- ☐ Set educational goals and measures of success for event.
- ☐ Determine grade level and how many students will participate in event.
- ☐ Select a date and location for the event.
- ☐ Brainstorm activities for event.
- ☐ Designate a notetaker for all meetings regarding the event.
- ☐ Select activities for event.
- ☐ Set an agenda or schedule for event.
- ☐ Assign teachers/volunteers to each activity.
- ☐ Give the event a name.
- ☐ Inform staff and students of event.
- ☐ Determine specific material needs for each activity (donation and purchase).
- ☐ Determine specific tools necessary for each activity (donation and purchase).
- ☐ Contact local businesses for donations or financial contributions.
- ☐ Send letter home to parents for volunteers or donations.
- ☐ Encourage the PTA, Master Gardeners/Composters, or other relevant organizations or local government entities to participate as volunteers or provide expertise, donations, or financial contributions.
- ☐ Assess available funding versus needs.
- ☐ Engage a speaker/presenter for the event.
- ☐ Invite special guests (e.g., mayor, governor).
- ☐ Follow public relations procedures to gain publicity (e.g., write press release).
- ☐ Prepare a map for all participants.

- ☐ Determine how activities will operate during the day (timing, periods).
- ☐ Allow students to choose activities.
- ☐ Schedule students for activities/provide an agenda/schedule to students and teachers.
- ☐ Plan for inclement weather.
- ☐ Prepare students for the day (e.g., discuss scheduling, timing).
- ☐ Send letter home to parents with clothing/supplies needed for event (e.g., shoes, no sandals; water bottle).
- ☐ Prepare name tags, if necessary.
- ☐ Prepare certificates and/or goodie bags for students.
- ☐ Secure any necessary parental permission.
- ☐ Prepare first aid station for outdoor activities, including ready access to water.
- ☐ Consider methods for assessing learning after event (e.g., students fill out reflection sheet).



“Make a Difference Day” Activities

The following pages provide a few sample activities to consider for your “Make a Difference Day.” Each activity includes a description, objectives, materials needed, and steps to consider when planning the exercise. Feel free to improvise or add additional lessons or themes to make your day a success!

*Be sure to check EPA’s *Quest for Less* for other relevant activities (see Resources).

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Waste-Free Lunch

Activity Description

Hold a waste-free lunch on your “Make a Difference Day.” Order EPA’s free Waste-Free Lunch poster listed in the Resources section of this guide to educate students, parents, teachers, and administrative staff about planning and packing a waste-free lunch. Students will bring in lunches from home and measure the amount of waste they create. This activity will help students realize ways in which they can reduce waste in their daily lives.

Objectives

- To show students how to reduce their individual impact on the environment, using their lunches as an example.
- To help students learn more about reusing, recycling, and composting materials.

Materials Needed

- Packed lunches brought from home.
- Measurement worksheet (see the Waste-Free Lunch Poster in the Resources section).

Activity Checklist

- ☐ Be sure that the school has access to a recycling and composting program and find out what materials can be recycled or composted.
 - If a recycling program is not available at your school or in your community, contact your state, municipal, or county solid waste management agency to find out what you can do to get a recycling program started in your community, or have a one-time collection event at your school.
- ☐ Plan a waste-free lunch as part of “Make a Difference Day” by working with the planning team to educate parents about waste-free lunches.
 - Send a letter home to parents explaining waste-free lunches and asking them to help students bring in lunches from home on “Make a Difference Day” and a pre-determined day prior to “Make a Difference Day.”
- ☐ On the pre-selected day prior to “Make a Difference Day” have students bring in a regular lunch from home. After lunch, have students make a detailed record of the items left over. Note whether they are recycled, composted, reused, or thrown away. These items can be recorded on the measurement worksheet found on the Waste-Free Lunch poster or a similar measurement sheet can be created.
 - Once the items have been recorded, help students place the recyclable or compostable items in the proper receptacles.
- ☐ After the lunch items have been recorded, have students brainstorm ways to replace the items they threw away in their lunch with items that can be reused, recycled, or composted.

- ❑ On “Make a Difference Day” have students bring in a lunch that they consider to be waste-free. Students should again take measurements of items in their lunch that can be reused, recycled, composted, or thrown away.
- ❑ Have students compare the number of items that they threw away prior to “Make a Difference Day” to the number of items they threw away on that day. The goal is to have the majority of the items from the waste-free lunches be reusable, recyclable, or compostable.

Waste-Free Lunch Poster Contest

Activity Description

Students will work with their art teacher during class or after school to design and make posters illustrating waste reduction, and specifically promoting the waste-free lunch that will take place during “Make a Difference Day.” This event could also be used to kick off a school composting program.

Objectives

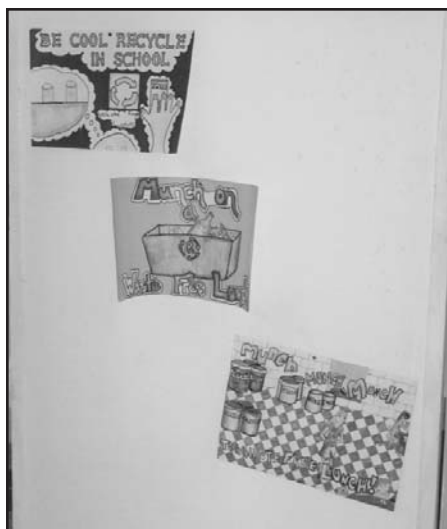
- To show students the importance of waste reduction in their everyday lives, using lunch-time as an example.
- To allow students to consider ways to communicate the importance of waste reduction to their classmates through art work and creativity.

Materials Needed

- Poster board
- Art supplies (markers, crayons, paint, erasers, scissors, construction paper, glue, glitter)

Activity Checklist

- ☐ Work within the planning team to determine guidelines for the poster contest before announcing it to students. Whether created by the full team or perhaps just the art teacher, guidelines will help students stay on topic and will also provide them with due dates, allowable materials, and judging criteria.
 - Be sure to consider when students will work on the contest (e.g., during art class, during home-room, after school).
 - Determine who will judge the contest and how the winners will be notified (e.g., during morning announcements, at lunch on “Make a Difference Day”).
 - Create a plan for where the winning posters will be on display (e.g., in the cafeteria, throughout school hallways).



Waste-Free Lunch Poster Contest entries.

- ❑ Ask students to keep a journal for a full day to note which of their everyday activities generate waste. In particular, ask your students to log the types of waste they generate at lunch.
- ❑ Using their daily logs, discuss ways to reduce waste throughout the day. Refer to the resources section for helpful Web sites to visit.
- ❑ Once students have a better idea of how to reduce waste, ask them to brainstorm ways to illustrate what they've learned. Remember to refer them to the guidelines of the poster contest to see if there are any themes or topics they should cover.
- ❑ Now that students know how to reduce waste at lunch, they can begin making their posters! Using available materials, students should spend time drawing/painting/illustrating what they think is the best way to remind people to reduce waste during lunch. They can illustrate actions, objects, or anything they think will make an impact and help their friends and classmates learn about waste reduction.
- ❑ Judges will determine winners based on the judging criteria and students will be notified.

Recycled Art Sculpture

Activity Description

Students will work in teams during art class or after school under supervision to make sculptures using recyclable materials or materials that would otherwise be thrown away. This activity illustrates creative uses for materials that have reached the end of their “useful” life.

Objectives

- To illustrate to students the importance of waste reduction in their everyday lives.
- To allow students to consider ways to communicate the importance of waste reduction to their classmates through art work and creativity.

Materials Needed

- Various recyclable materials and/or non-recyclable materials such as: plastic bottles and containers, aluminum cans, wood, paper, newspaper, magazines, hangers, wire, or cloth.
- Glue, paint, markers, rulers, and other art supplies.
- Hammers, nails, screws, pliers, screw drivers, wire cutters, dremel tool.
- Try to avoid sharp objects and glass.

Activity Checklist

- ☐ Work with the planning team to determine where the sculptures will be displayed once they are completed.
- ☐ Prior to “Make a Difference Day,” ask students to bring in clean recyclables or reusable items and/or collect clean recyclables from school.
- ☐ On “Make a Difference Day,” have students split into teams.
- ☐ Teams should use the collected materials to create a sculpture about waste reduction. They should work together to help connect or attach materials to one another. Students should be instructed to make a sculpture that will either stand or hang easily.



Students create a “trashy” Statue of Liberty.

- ❑ Once the sculptures are complete, each team should give their sculptures a name and should write a brief paragraph describing its meaning, what materials were used, and what they hope students will learn from their work.
- ❑ Students should weigh their sculptures to see how much waste they diverted from the waste stream.



Students show off their "trash sculpture"....

- ❑ Display the sculptures and descriptions around the school after the "Make a Difference Day" to remind students of the importance of waste reduction and the creativity of reuse and recycling.
- ❑ Check with local malls, post offices, grocery stores, banks, libraries, and other community locations to see if they would like to display the art sculptures.



...and "trash pizza."

Swap Shop

Activity Description

Students will bring in, collect, and organize items (e.g., clothing, toys, books) that they no longer want or use and will swap with one another for different items. This activity illustrates the ease and effectiveness of extending an item's useful life, by simply allowing others to reuse the items.

Objectives

- To illustrate to students the importance and ease of reuse and recycling in their everyday lives.
- To allow students to consider ways to reuse items they may no longer want or need, instead of throwing them away.
- To illustrate to students that sometimes items they no longer use can be used by others.

Materials Needed

- Various items that students would enjoy swapping, including clothes, toys, books, and CDs. Instruct students not to bring large appliances, broken items, dirty or badly worn clothes, books with missing pages, puzzle pieces, etc.

Activity Checklist

- ☐ Work with the planning team to determine when students should start collecting items to bring in, how many students should be in the shop at a time, and how the swapping will take place (i.e., guidelines for swapping). Consider allowing students who donate something to visit the shop first to take what they like, then open it up to everyone.
- ☐ Work with the planning team to determine where items will be stored prior to the "Make a Difference Day."
- ☐ Plan for where remaining items will go: To a charity? Back home with the students who brought them? Make sure everyone knows this and agrees.
- ☐ Assign students and volunteers to help organize items prior to the "Make a Difference Day." Be sure to weigh the items that are brought in so students can measure how reusing materials helps reduce the amount of waste going in the waste stream.
- ☐ On the "Make a Difference Day," have students and volunteers help set up the "shop," so that items will be on display. Start swapping!

Outdoor Composting

*EPA's *Quest for Less* offers a variety of composting activities, including indoor composting and worm bins. Choose the activity that is right for your students.

Activity Description

Students will learn about composting and will have an opportunity to create a compost bin for the school. This activity illustrates ways to reduce waste by reusing outdoor materials for landscaping and gardening.

Objectives

- To allow students to learn about a new way to reuse items and reduce waste.
- To illustrate to students how natural materials can act as a natural fertilizer for gardens.

Materials Needed

This activity works best for creating a compost area on school grounds.

- Leaves, grass, landscaping trimmings.
- Wood; pallets or another material to build your container; nails, hammer.
- Shovels, gloves, wheelbarrow.
- Thermometer.

Activity Checklist

- ☐ Work with the planning team to identify a Master Gardener or Composter, teacher, volunteer, or community member who is an “expert” on composting and can teach students about its benefits.
- ☐ Work with the planning team to decide where you will put the outdoor composting “center,” and what kind of container you will use to hold the compost. Consider using old wooden pallets from deliveries, instead of purchasing lumber or plastic containers.
- ☐ Work with the planning team and appropriate staff at school to determine who will continue caring for the compost (e.g., science classes, student volunteers).



Students build compost bins from old pallets.

- ❑ Work with your composting “expert” to design a composting container, noting the steps it will take to build the container and how students can participate.
 - ❑ Prior to “Make a Difference Day,” ask students to rake leaves and collect grass clippings and place in a pile near the composting site.
 - ❑ Prior to “Make a Difference Day,” work with the planning team to ensure students are learning about composting and how it can be used in gardens/landscaping.
 - ❑ On “Make a Difference Day,” spend time reviewing the design of the composting container, and work with 10 to 12 students to build the container and place the first batch of compost (the leaves and grass clippings) into the first bin.
- In order to prevent dehydration, be sure students have ready access to water during this activity, as they may be participating in physically challenging activities for several hours.



Students gather leaves and grass clippings to compost.

Environmental Expressions Contest

Adapted from <www.ibuydifferent.org>, part of *Be, Live, Buy Different—Make a Difference*, a national campaign from World Wildlife Fund (WWF) and the Center for a New American Dream.

Activity Description

Students will create an original song or poem or other creative work about an environmental issue that's important to them. A performance will be held on "Make a Difference Day" for students to showcase their creativity. Judges will be invited to select the winners.

Objectives

- To allow students to creatively voice their opinion on environmental issues.
- To allow students to focus on an environmental issue of their choice.
- To illustrate to students that environmental issues may be addressed through all types of media (water, air, land).

Activity Checklist

- ☐ Work with the planning team to determine guidelines for the contest. Be sure to identify when students will work on creative pieces (e.g., music class, English class, after-school, at home). You may also need to consider:
 - Limiting the type of performance media.
 - Restricting performance time.
 - Allowing student supplied props.
 - How performers will sign up.
 - Prizes such as a recording session, backstage passes to a radio station, or publication in a newsletter.
- ☐ Identify judges who are experts in the music, arts, or environmental fields. Judging should be based upon enthusiasm, creativity, and environmental awareness.
- ☐ Introduce the contest prior to "Make a Difference Day" and ask students to pick an environmental topic that is important to them. You may choose to limit the topics to themes that will be studied on "Make a Difference Day."
- ☐ Ask students to research the topic they choose (see the Resources section) and to create an original song or poem or other creative work.
- ☐ Students will perform their original piece on "Make a Difference Day." Judges will select winners and provide feedback for all participants.

RecycleMania

Adapted from the RecycleMania competition for colleges and universities across the United States. For more information, please see the RecycleMania Web site at <www.recyclemaniacs.org>.

Activity Description

Students will be teamed up—by class, grade, cafeteria period, lunch table, or other logical grouping—and compete over a 10-week period to collect the largest amount of recyclables from waste generated in classrooms and/or to increase the waste reduction rate.

Objectives

- To illustrate to students the importance of recycling and waste prevention.
- To allow students to become aware of the school's waste management and recycling programs.

Materials Needed

- Plastic bags or baling material for collected materials
- Weight scale or volume metric for measurement
- Recycling containers for classrooms and cafeterias
- Collection and pick-up areas for recyclables

Activity Checklist

- ☐ Work with planning team to create guidelines and select a competition format for this activity before announcing it to students. Schools may choose to run both competitions simultaneously, or may choose only one competition format.
 - Option A – Per Capita Recycling Competition: Teams will compete to see who can collect the largest amount of recyclables in 10 weeks. All classrooms (or other applicable rooms) will be outfitted with recycling containers, which must be used to collect recyclables. Teams report measurements on a weekly basis in pounds recycled per student. This option focuses on increasing the amount of recycling in a school.
 - Option B – Recycling Rate Competition: Teams will compete to increase the waste reduction rate by increasing the amount of recyclables collected and decreasing waste generated. Teams report the weight of the trash generated in addition to the recycling weight in option A. This option focuses on overall waste reduction.
- ☐ Students are teamed up according to individual classes, grades, or other specified designation. Each team will need a teacher or other volunteer to lead the team and report measurements.
- ☐ Identify materials to recycle depending on the school's recycling program. Standard recyclable materials include paper, aluminum cans, glass and plastic bottles, and cardboard. Make sure there is a market for the recyclables, and contact a local hauler about collection of the materials.

- ❑ Educate teachers and students about recycling and waste prevention. Refer to the Resources section for helpful Web sites to visit. *Reuse + Recycling = Waste Reduction: A Guide for Schools and Groups* will be especially helpful.
- ❑ Determine how winning teams will be notified (e.g., during morning announcements or at an awards ceremony on “Make a Difference Day”) and what, if anything, the teams will win.
- ❑ Competition should be started approximately three months before your “Make a Difference Day.”
- ❑ For 10 weeks prior to your “Make a Difference Day,” teams will collect pre-determined materials for recycling.
- ❑ Develop a measurement system for teams to follow. This may include physically weighing the recyclables and/or trash or using a volume metric available from EPA at <www.recyclemaniacs.org/doc/measurement-tracking/conversions.pdf>. Each team is responsible for measuring and reporting their own recyclables and trash collected.
 - Use the following formula to determine the per capita recycling:

$$\frac{\text{Weight of Recyclables}}{\text{Number of Students in Class (or other unit)}}$$

- Use the following formula to determine recycling rate:

$$\frac{\text{Weight of Recyclables}}{\text{Weight of Recyclables Collected} + \text{Weight of Trash Generated}}$$

- ❑ Continue educational activities throughout the 10-week period to encourage participation.
- ❑ The winner of competition A is the team that recycles the most per student over the 10-week period. The winner of competition B is the team that has the highest recycling rate.
- ❑ Announce winners on “Make a Difference Day.”

Science Fair Fun

Students will work in small groups during science class or after school under supervision to make science projects to display on “Make a Difference Day.” Students will design their own environmental experiments, based on a list of ideas provided by the school. Projects will correspond to activities that will be held on “Make a Difference Day.” This activity allows students to use critical thinking skills to focus on environmental problems. In addition, this activity ties classwork to “Make a Difference Day.”

Objectives

- To illustrate to students that they have the ability to solve some of the environmental problems they encounter in their own lives.
- To allow students to work together and help them to develop critical-thinking and problem-solving skills.

Materials Needed

Each project might have different material requirements, but all teams will need access to the following materials to present their findings:

- Poster board
- Paint, markers, rulers, and other art supplies

Activity Checklist

- ☐ Work with the planning team to determine guidelines for the science fair before announcing it to students. Guidelines will help students stay on topic and will also provide them with due dates and judging criteria.
 - Be sure to consider where students will work on the science fair (e.g., during science class, during home-room, after school)
 - Identify where the science projects will be displayed once they are completed (e.g., in the cafeteria, throughout school hallways)
- ☐ Determine who will judge the science fair and how the winners will be notified (e.g., during morning announcements, at lunch on “Make a Difference Day”).
- ☐ Develop judging criteria for judges to follow. Judges should consider the following attributes for each project:
 - Adherence to guidelines and the scientific method
 - Clear presentation of hypothesis, procedures, and results
 - Creativity and analytical skills
 - Accurate conclusions
 - Thoroughness
 - Teamwork

- ❑ Several weeks prior to “Make a Difference Day,” split science classes into groups of three or four. Present topics and ask students to choose a topic to explore or to develop an environmental inquiry of their own. Refer to the resources section for EPA’s *Science Fair Fun* for detailed topic ideas and the scientific method. Topic areas include:
 - Environmental benefits of bulk purchasing
 - Performance of recycled content products
 - Waste analysis and/or recycling survey
 - Composting
 - Household hazardous wastes alternatives
- ❑ Outline project expectations to students. See EPA’s *Science Fair Fun* for step-by-step instructions to conduct a science fair project. Students will be expected to:
 - State the purpose of the project and craft a hypothesis
 - Design an environmental procedure to test the hypothesis
 - Perform the experiment; record data and observations; perform calculations
 - Summarize results and draw conclusions
 - Prepare a poster to enter into science fair and present findings
- ❑ Completed posters should be submitted according to the guidelines.
- ❑ On “Make a Difference Day,” have students display poster boards to the class or the school.
- ❑ Judges will determine winners based on the judging criteria and students will be notified.

Resources

EPA Resources

The following resources are available for free from EPA. Call (800) 490-9198 or (513) 490-8190 or visit www.epa.gov/epaoswer/osw/publicat.htm to order copies.

- *The Quest for Less: Activities and Resources for Teaching K-8, A Teacher's Guide to Reducing, Reusing, and Recycling* (EPA530-R-05-005)—A 200+ page resource of classroom activities related to the product life cycles, from manufacturing to disposal. Includes fact sheets for teachers, worksheets for students, glossary, and other helpful tools.
- The "Make a Difference" Kit: *Your Life, Your World, Your Choices: Everything You Do Can Make a Difference* (EPA530-E-03-001)—A collection of resources for middle and high school students to help them learn about volunteering, service learning, environmental careers, school and community waste reduction programs, and the life cycle of everyday products, and more. The following are some of the resources included in the kit:
 - *The Life Cycle of a CD or DVD* (EPA530-H-03-002), *The Life Cycle of a Cell Phone* (EPA530-H-04-002), and *The Life Cycle of a Soccer Ball* (EPA530-H-05-001)—Colorful posters showing product life cycles from production to reuse/remanufacturing/recycling disposal, with classroom or take-home activities. When ordering, ask about other life cycle posters that might be available.
 - *Reuse + Recycling = Waste Reduction: A Guide for Schools and Groups* (EPA530-K-03-001)—A how-to handbook providing innovative ideas for setting up a waste reduction program in a school or community group.
 - *Service Learning: Education Beyond the Classroom* (EPA530-K-02-001)—A booklet for students and adults highlighting successful service-learning case studies from around the country, involving schools, local governments, businesses, and communities.
 - *Science Fair Fun: Designing Environmental Science Fair Projects* (EPA530-K-00-008)—A booklet for teachers and students on how to conduct a science fair project, including sample projects that address reducing, reusing, and recycling.



Students make birdfeeders.

- [Pack a Waste-Free Lunch](#) (EPA530-H-05-002)—A poster to help students create less waste at lunch.
- [Environmental Protection Begins with You: A Guide to Environmental Community Service](#) (EPA530-K-06-001)—A booklet for community volunteers with ideas for environmental service.

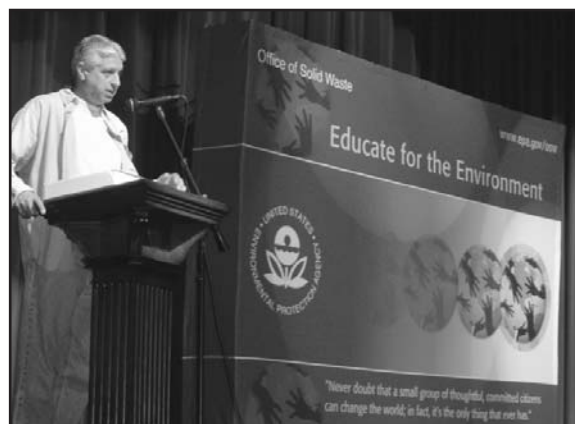
For more information on waste reduction, visit EPA's Web site at www.epa.gov/osw.

Other Resources

Make a Difference Day

www.makeadifferenceday.com

Sponsored by USA Weekend Magazine, "Make a Difference Day" is a single national day of volunteering that inspires and rewards volunteers. Everyone who helps others on the selected day each year, and sends in an entry form, is eligible for an award and a cash donation to a charitable cause.



A school principal kicks off "Make a Difference Day" with a schoolwide assembly.

Project WILD

www.projectwild.org

Project WILD is a joint project of the Council for Environmental Education (CEE) and the Western Association of Fish and Wildlife Agencies (WAFWA). It is an interdisciplinary, supplementary environmental and conservation education program for educators of K-12. The program emphasizes wildlife because of its intrinsic and ecological values, as well as its importance as a basis for teaching how ecosystems function.

Project WET

www.projectwet.org

Project WET (Water Education for Teachers) is a water education program for educators and young people ages 5 through 18. The program facilitates and promotes awareness, appreciation, knowledge, and stewardship of water resources through the dissemination of classroom-ready teaching aids.

Earth Day Network's Teacher's Corner

www.earthday.net/involved/teachers/default.aspx

The Earth Day Network Teacher's Corner provides interactive lesson plans and activities; local, national, and international news updates; and current information on the activities Earth Day Network is engaged in around the globe. It is geared toward teachers of any subject who want to incorporate environmental curricula into their classes.



Students repaint an old shed to help preserve it.

Appendix: Sample Schedule

ABC Middle School

Make a Difference Day, May 15, 2006

Session	Activity	Number of Students	Facilitator	Location
Session 1 (10:00 a.m. – 10:45 a.m.)	Art			
	Recycled sculpture	14 teams x 5	Teacher 1	051
	Greenscapes			
	Clearing trails	6 teams x 10	Teacher 3	Environmental Center
	Flower beds	3 teams x 6	Teacher 4	Pavilion
	Gardening	10	Teacher 5	Courtyard
	Mulch runners	6 teams x 4	Teacher 6	Environmental Center
	Rebuild picnic tables	4 teams x 6	Teacher 7	Pavilion
	Reduce, Reuse, Recycle			
	Composting	8	Teacher 8	Environmental Center
	Educational Workshops, Etc.			
	Career presentation	15	Teacher 9	021
	Environmental Jeopardy	12	Teacher 10	025
	Photography/Reporters	8	Teacher 11	015
Session 2 (10:50 a.m. – 11:35 a.m.)	Art			
	Recycled sculpture	14 teams x 5	Teacher 1	051
	Greenscapes			
	Clearing trails	6 teams x 10	Teacher 3	Environmental Center
	Flower beds	3 teams x 6	Teacher 4	Pavilion
	Gardening	10	Teacher 5	Courtyard
	Mulch runners	6 teams x 4	Teacher 6	Environmental Center
	Rebuild picnic tables	4 teams x 6	Teacher 7	Pavilion

Appendix: Sample Schedule (continued)

Session	Activity	Number of Students	Facilitator	Location
Session 2 (cont.) (10:50 a.m. – 11:35 a.m.)	Reduce, Reuse, Recycle			
	Composting	8	Teacher 8	Environmental Center
	Educational Workshops, Etc.			
	Career presentation	15	Teacher 9	021
	Environmental Jeopardy	12	Teacher 10	025
	Photography/Reporters	8	Teacher 11	015
	Population sampling	15	Teacher 14	022
	Project Wild – wildlife poetry	20	Teacher 13	027
Session 3 (11:40 a.m. – 12:25 p.m.)	Art			
	Insects paper	18	Teacher 15	052
	Sewing recycled class	12	Teacher 16	053
	Recycled sculpture	14 teams x 5	Teacher 1	051
	Greenscapes			
	Clearing trails	6 teams x 10	Teacher 3	Environmental Center
	Flower beds	3 teams x 6	Teacher 4	Pavilion
	Mulch runners	6 teams x 4	Teacher 6	Environmental Center
	Rebuild picnic tables	4 teams x 6	Teacher 7	Pavilion
	Reduce, Reuse, Recycle			
	Composting	8	Teacher 8	Environmental Center

Appendix: Sample Schedule (continued)

Session	Activity	Number of Students	Facilitator	Location
Session 3 (cont.) (11:40 a.m. – 12:25 p.m.)	Educational Workshops, Etc.			
	Career presentation	15	Teacher 9	021
	Environmental Jeopardy	12	Teacher 10	025
	Photography/Reporters	8	Teacher 11	015
	Schoolyard report card	7	Teacher 17	Courtyard
Lunch (12:30 p.m. – 1:00 p.m.)	LUNCH			
Session 4 (1:10 pm. – 1:55 p.m.)	Art			
	Insects paper	18	Teacher 15	052
	Sewing recycled class	12	Teacher 16	053
	Recycled sculpture	14 teams x 5	Teacher 1	051
	Greenscapes			
	Clearing trails	6 teams x 10	Teacher 3	Environmental Center
	Flower beds	3 teams x 6	Teacher 4	Pavilion
	Mulch runners	6 teams x 4	Teacher 6	Environmental Center
	Rebuild picnic tables	4 teams x 6	Teacher 7	Pavilion
	Reduce, Reuse, Recycle			
	Composting	8	Teacher 8	Environmental Center
	Litter pickup	3 teams x 12	Teacher 18	Pavilion
	Educational Workshops, Etc.			
	Career presentation	15	Teacher 9	021
	Environmental Jeopardy	12	Teacher 10	025
	Photography/Reporters	8	Teacher 11	015



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EPA-530-K-06-003
May 2006
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