

How to Make a Difference at Your School

*A guide to starting environmental
programs in elementary schools*





Dear Educator

The right educator can set the stage for a lifetime of environmental stewardship among young students. As educators at the elementary level, you have the unique opportunity to give students what will likely be their first encounter with environmental issues. This is a very important role. Luckily, you have many resources available to start waste minimization programs: curriculum, grant money, and program advice, among others. This brochure was created to make this effort a little easier for schools by gathering a list of these resources into one booklet, including steps teachers and students can take to help make waste minimization programs successful.

When Indiana schools participate in waste minimization and pollution prevention programs, like recycling or composting, they help our environment, teach students about environmentalism and set an example for other organizations and their community. Plus, environmental programs can help save or even generate money for your school!

Watershed

A watershed is any area of land that contributes runoff to a body of water (DNR). Watersheds can act as vehicles for polluting these bodies of water, which provide us with drinking water, irrigation, fishing, and other valuable uses. Pollution in watersheds results from either point source pollution or by nonpoint source pollution. Point source pollution comes from traceable sources, such as construction site runoff or municipal or industrial waste runoff. Nonpoint source pollution comes from more broad sources, such as agricultural runoff or runoff from a pasture.

Schools can get students involved in watershed projects on school property or by teaching pollution prevention and clean-up techniques. Participating in watershed activities teaches students about how land use can affect the quality of our water.

Existing Programs and Resources

Hoosier Riverwatch: Hoosier Riverwatch is a state-sponsored water quality monitoring program, under the Indiana Department of Natural Resources, which provides education and training on watersheds and the relationship between land use and water quality (DNR). Hoosier Riverwatch increases public awareness about water quality issues and promotes stewardship by training volunteers to monitor the quality of Indiana stream water (DNR).

Adopt-A-River: Adopt-A-River (AAR) is a Hoosier Riverwatch initiative, created for volunteer groups interested in cleaning up Indiana waterways. Groups that commit to cleaning up a half-mile stream segment, twice a year, for two years, have the opportunity to be recognized with an AAR sign near the designated area (DNR).

Funding

Since working in a watershed involves many people, most grants are targeted towards larger organizations that bring people together to help plan and do things to improve water quality in your watershed.

To get involved in local watershed planning, schools can contact their local Soil and Water Conservation District office to see who's doing work in the watershed. Schools can also contact IDEM's Section 319 Grant Program to find out how to contribute to a watershed plan or partnering to improve water quality by attacking nonpoint source pollution on the ground. To find out your local Soil and Water Conservation District office, visit the Hoosier Riverwatch Web site, at www.IN.gov/dnr/riverwatch/watersheds.

For information about IDEM's watersheds and other water quality-related programs, please contact IDEM at (800) 451-6027 ext. 3-2481, or write to the Indiana Department of Environmental Management, Office of Water Quality, NPS/TMDL Section, 100 N. Senate Ave., MC 65-44 IGCN 1255, Indianapolis, IN 46204. Schools can also learn more by visiting the IDEM Web site, at www.IN.gov/idem/programs/water/wsp.

Setting Up a Program at Your School

- Use a proper pesticide setback. Observe a buffer zone to keep pesticide runoff from entering rivers, streams or ponds on school property.
- Fertilize grassy areas and use proper mowing practices.
- Mulch leaves that fall to the ground.

What students can do:

- Participate in the Adopt-A-River program, through Hoosier Riverwatch and the Indiana Department of Natural Resources.
- Plant and operate a rain garden which can beautify school grounds and provide a habitat for birds and butterflies. For information about starting a rain garden, visit the IDEM Web site, at www.IN.gov/idem/catalog/documents/water/iwpg.pdf.



Most of the pollutants entering our waters come from runoff from fields and streets.

Idle-Reduction

When school buses and cars idle excessively, they create an unnecessary amount of fine particle pollution in the form of exhaust. Particle pollution, also known as fine particulate matter (PM), can cause serious health problems like bronchitis or asthma when it is breathed in over a long period of time. Schools can take steps to reduce student exposure to diesel exhaust and reduce the amount of PM buses produce by enforcing a no-idling policy.

Schools that have no-idling policies save money on fuel and maintenance costs and reduce wear-and-tear on engines. Plus, taking steps to reduce idling means taking steps to help keep our air clean and keep students and staff healthy!

Existing Programs and Resources

DieselWise: The Indiana Department of Environmental Management (IDEM) has teamed up with the Student Transportation Association of Indiana (STAI) to introduce this voluntary no-idling program for Indiana schools and other entities. DieselWise aims to reduce diesel emissions through education, the use of retrofit technology, and cleaner fuel alternatives. Information is available on the IDEM Web site about: the health effects of diesel pollution, cleaner fuel alternatives, retrofit technology, idling facts and myths, existing Indiana initiatives and specific advice for schools. Learn more about DieselWise by visiting IDEM's Web site, at www.idem.IN.gov/programs/air/dieselwise.

Clean School Bus USA's National Idle-Reduction Campaign: This newly launched public information campaign from the U.S. Environmental Protection Agency focuses on idle-reduction as an easy way for schools to save money by conserving fuel and reducing wear-and-tear on engines. The program also protect drivers' health and the health of children, and improves air quality. The National Idle-Reduction

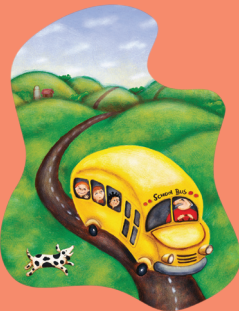
Campaign offers many valuable resources including: an idling calculator, an idle-reduction kit, information about emission reducing technologies, a list of idling myths, several pieces of literature, and a teacher's guide, including curriculum and activities. Learn more about Clean School Bus USA by visiting the U.S. EPA's Web site at www.epa.gov/cleanschoolbus/antiidling.

Funding

Funding is available for Indiana schools through the U.S. EPA's Midwest Clean Diesel Initiative for projects designed to retrofit and/or replace existing school buses. Schools interested in applying for funding should contact the U.S. EPA at (734) 214-4780 or CleanSchoolBusUSA@epa.gov, to be notified of new funding information as it becomes available. Learn more about the U.S. EPA's Midwest Clean Diesel Initiative, at www.epa.gov/midwestcleandiesel.

Setting Up a Program at Your School

- Establish no-idling policies for both buses and cars in the pick-up/drop-off line.
- Work with bus companies to ensure no-idling policies are adopted.
- Minimize the time that children spend outside when school buses are arriving or departing.
- If possible, shorten commute times for children.
- Discourage drivers from following directly behind other large vehicles, including school buses – especially if they see visible smoke being emitted.
- Deploy the cleanest fleet buses for the longest bus routes.
- Post no-idling signs on school grounds.



Minimize children's exposure to diesel exhaust by implementing a no-idling zone.



“Ask your parents to buy drinks in aluminum containers instead of plastic since aluminum is easier to recycle.”

- Provide a space inside the school where drivers can wait on cold or warm days. Eliminate idling of delivery vehicles on school grounds.
- Develop educational programs for students about air pollution.
- Park buses away from the air-intake vents of the school building.
- Park buses diagonally to prevent back-to-front transfer of emissions.

What students can do:

- Study the environmental and health impacts of idling and make a presentation to school officials and bus drivers about reducing school bus idling.
- Make and post no-idling signs inside the school and on the bus.
- Tell parents not to idle in the student pick-up/drop-off area.

Recycling

Schools have a tremendous opportunity to reduce waste through recycling. Kids are fantastic recyclers! Utilize their enthusiasm to start a recycling program. Think about what a huge contribution your school could

make if it merely recycled the paper, plastic bottles and aluminum cans used every day! Recycling helps reduce open burning, an illegal practice in Indiana, which causes air pollution. Starting a recycling program can be simple and inexpensive if done properly. For example, schools can perform an annual recycling drive for seasonal items, like phone books or Christmas trees, or establish an ongoing program to recycle any combination of materials including: plastic, glass, aluminum and paper.

There are many benefits to recycling. Recycling helps prevent the emission of many greenhouse gases, reduces the need for new landfills and incinerators, and saves energy. Plus, recycling saves school money by not throwing away so much, less trash = less hauling disposal costs. Your school can even make money by selling recyclables to solid waste management districts or recycling companies. When schools recycle, students learn an important lesson about the impact they have on their environment.

Existing Programs and Resources

RECYCLE INDIANA:

Recycle Indiana is an online infor-

mational guide about recycling and reuse opportunities in Indiana. Here, schools can find information about funding, solid waste management districts, links to IDEM educational resources, an array of recycling topics, and several online publications and links. There is even an interactive tool, called Measure Your Impact, which calculates how much recyclable material is wasted every year in Indiana, based on an amount the user enters. Learn more about resources available to your school by visiting the Recycle Indiana Web site, at www.recycle.IN.gov. To go directly to the Measure Your Impact tool, visit www.recycle.IN.gov/topics/impact/index.html.

WASTEWISE: Schools can participate in this free, voluntary waste reduction program operated by the U.S. EPA. The goal of WasteWise is to minimize waste by partnering with organizations, such as schools, to develop and implement individually tailored waste reduction programs. Through WasteWise, your school will have access to: waste assessments, employee education, program maintenance and tips for tracking your school's progress. WasteWise also provides free technical assistance, a toll-free helpline and publicly recognizes successful partners. Schools can also find publications regarding how to start or expand an existing recycling program and how to make sure that program is a success. Learn more about WasteWise by visiting the U.S. EPA's Web site, at www.epa.gov/wastewise/about/benefits.htm.

Funding

Funding is available for schools to start recycling programs through the Indiana Recycling Grant Program. Schools interested in applying for a recycling grant should contact their regional grant representative. To find out who your regional grant representative is, visit the Recycle Indiana Web site, at www.IN.gov/recycle/funding/regions.html.

School corporations, both public and non-

public, are also eligible for the Recycled Product Purchasing Grant. The Recycled Product Purchasing Grant promotes markets for recycled-content products and reused products by encouraging the purchase of these products. This practice helps build confidence in the purchase of recycled-content products. To learn more about the Recycled Product Purchasing Grant, visit the Recycle Indiana Web site, at <http://www.in.gov/recycle/funding/rppg.html>.

Setting Up a Program at Your School

- Conduct a one-time or periodic recycling drive.
- Conduct a waste assessment.
- Identify waste to be recycled.
- Organize a team to manage the recycling program.
- Work out a budget.
- Contact local authorities to ensure compliance.
- Establish a system for collecting and storing recyclable materials.
- Educate students about recycling and what they can do to help.
- Set recycling goals.
- Reward participants.
- Purchase school supplies made with recycled content.



Recycle or reuse everything you can. It takes more energy to make new products out of raw materials than to recycle them.



What students can do:

- Sort trash into recycle bins.
- Track the amount of items recycled (by weight) to estimate the total amount of reduction of waste to landfill during a school year.
- Suggest the school start a recycling program. Students can even run it.
- Make presentations at school board meetings or to parent/teacher organizations about the results of the schools current recycling program or about the impact a recycling program could have.
- Talk with parents and school officials about the importance of recycling.
- Bring lunch in a reusable lunch box to reduce waste.
- Make recycling posters and hang them around the school.
- Use notebooks, paper and pencils made with recycled content.

Waste Tire Reuse

Did you know there are currently at least 275 million waste tires in stockpiles in the U.S., according to the U.S. EPA? Waste tire stockpiles are bad for communities because they can attract disease-carrying pests, become fire hazards and, if burned, pollute our environment. Since the cost of reducing stockpiles is greater than the value gained by properly disposing of them, stockpile owners do little to fund cleanups. Other means, like outside funding and creative reuse solutions, must be provided to manage this public health and environmental hazard.

The good news is that many elementary schools are benefiting from waste tire reuse programs. Waste tires are being used in the construction of playground equipment and processed tire products are being used

as playground gravel substitute. Tire chips provide better cushioning than the standard stone and wood chips. Plus, they drain water easily, stay relatively clean and are long lasting. Tire chips are a good alternative to gravel or wood chips, which hurt when they are thrown and scrape the paint off of playground equipment.

Existing Programs and Resources

RECYCLE INDIANA: Recycle Indiana is an online informational guide about recycling and reuse opportunities in Indiana. Here, schools can find details about IDEM's Waste Tire Recycling Grant. Learn more about Recycle Indiana by visiting www.recycle.IN.gov.

Funding

Funding is available to schools interested in participating in a waste tire recycling project through the IDEM Waste Tire Recycling Grant. This grant is designed to help start or expand waste tire recycling programs in Indiana and target new and innovative projects that reuse or recycle waste tires. To learn more about IDEM's Waste Tire Recycling Grant, visit the IDEM Web site at www.IN.gov/idem/resources/grants_loans.

Setting Up a Program at Your School

Waste tire reuse projects are going to be operated differently than other environmental programs for schools. The footwork for waste tire reuse projects will be carried out by administrators. Grant funds will help cover the costs of equipment, personnel, supplies, contractual and other direct costs that are integral to the project. Schools can request either a loan or grant application by visiting the Recycle Indiana Web site at www.recycle.IN.gov.



In Indiana alone, up to 6 million tires each year could be sent to landfills.



“If you compost five pounds of leaves or grass clippings you will prevent one pound of air pollution.”

E-Scrap

The disposal of electronic products is rapidly becoming a serious environmental issue. Technological advances are quickly rendering formerly useful electronics obsolete. When items such as computer monitors, copiers, printers, televisions and batteries are thrown out, the toxic substances used in these products, like lead and mercury, can pose a risk to human health. Once these electronic products are ready to be discarded, they are referred to as “e-scrap.” Schools produce a good deal of e-scrap and have a responsibility to dispose of it properly.

Instead of throwing out e-scrap, schools should sell, donate or recycle it. If electronic products are merely broken, fix and reuse them instead of throwing them out. If repair is not an option, donation is the next step. Donating electronics often benefits low-income citizens, keeps toxic waste out of landfills, and creates jobs for Hoosiers through refurbish shops. By donating or even recycling e-scrap, schools will save resources, like metal and plastic, used to create electronic products. This helps prevent companies from having

to mine for raw materials to be used in production. E-scrap can be donated to a thrift store, a used computer store, non-profit companies or other schools. E-scrap that cannot be repaired or donated will need to be recycled.

Existing Programs and Resources

PLUG-IN TO ECYCLING: The U.S. EPA’s Plug-in To eCycling campaign’s goal is to help organizations, such as schools, donate or recycle — “eCycle” — used electronics. This program provides schools with information on how and where they can donate or safely recycle used electronics and facilitates partnerships with communities, electronics manufacturers and retailers to promote shared responsibility for safe electronics recycling. Schools can find a list of other current donation and recycling programs on the Plug-in To eCycling Web site.

To learn more about Plug-in To eCycling, visit the U.S. EPA’s Web site at www.epa.gov/epaoswer/osw/consERVE/plugin.



At least four pounds of lead is contained in each old computer monitor or television.

COMPUTER TAKEBACK CAMPAIGN:

The Computer TakeBack Campaign offers information about computer manufacturers that operate computer recycling services, often free of charge. The Computer Take-Back Campaign offers tips for getting your school's electronic products recycled for free and information about the best way to sell used electronics. To learn more, visit the Computer TakeBack Campaign Web site at www.computertakeback.com.

Funding

Annual or periodic e-scrap collections are sometimes funded by solid waste management districts, retailers or other community entities. Schools may be able to find other organizations to manage collected e-scrap. These organizations would include brokers, processors, and not-for-profits. These organizations will reuse, resell or scrap materials for schools usually at no cost.

Setting Up a Program at Your School

- Before recycling or donating electronics, especially computers, remove personal information and data.
- Assess the amount and type of e-scrap your school has.
- Consider repair or upgrade.
- Explore reuse options, such as thrift shops, other schools or nonprofits.
- Select a recycler.
- Organize a drive to collect used electronics from the community to donate or recycle along with the school's e-scrap.
- Document your school's e-scrap disposal.

What students can do:

- Make and post signs to advertise a community e-scrap collection.

- Tell parents about the correct way to discard e-scrap. Encourage them to properly dispose of: keyboards, computers, cell phones, pagers, scanners, VCRs, DVD players, and televisions.

Composting

When schools throw away organic waste, they fill up landfills unnecessarily. One way schools can reduce waste in landfills is by composting. Composting is the same process that nature uses to nourish the forest floor when leaves and other organic materials fall to the ground and decompose.

Composting is the controlled biological decomposition of organic matter into a soil-conditioner, called humus. There are two ways schools can compost: composting and vermicomposting (also called worm composting). Vermicomposting is a great way to get students involved. When schools compost their organic materials, including materials like yard clippings and lunch scraps, they keep organic waste out of landfills. Because compost is a soil conditioner, schools can save money by using it in landscaping or gardening projects. Your school can even sell the compost to earn money for other environmental programs!

Existing Programs and Resources

RECYCLE INDIANA: Recycle Indiana is an online informational guide about recycling and reuse opportunities in Indiana. Here, schools can find information about composting and vermicomposting. Recycle Indiana also provides information about finding your local solid waste management district and Indiana's registered composting facilities. Learn more by visiting the Recycle Indiana Web site at www.recycle.IN.gov.

U.S. EPA COMPOSTING: The U.S. EPA is a great resource for composting information. Here, schools can learn basic composting information, the benefits of composting, laws and regulations regarding composting, how to set up a composting program, review frequently asked questions, and gain a host of resources for further composting tips.



For more information about the U.S. EPA's recommended composting practices, visit the U.S. EPA's Web site, at www.epa.gov/epaoswer/non-hw/composting

Funding

Composting is an inexpensive way schools can help our environment. Schools interested in starting a compost bin can brainstorm ways to fund the minimal amount of supplies needed. For example, schools could look for plastic bins to use in reuse shops or host a bake sale to raise money for supplies. Schools can also apply for an Indiana Recycling Grant to fund composting efforts. For more information about Indiana Recycling Grants, visit the Recycle Indiana Web site, at www.recycle.IN.gov/funding/irg.html.

Setting Up a Program at Your School

- Order worms and gather all other necessary supplies: plastic bin with lid, water, shredded newspaper, and a small amount of soil.

- Assemble the worm bins with the ingredients listed, demonstrating to the class as you do so. Let students help.
- Establish program goals. Decide what and how much organic material will go into the worm bin. Items that should go into the classroom worm bin are tea leaves, fruit peelings and vegetable scraps, coffee grounds, vacuum dust, crushed eggshells, lawn clippings (from grounds maintenance) and leaves.
- Clearly mark containers “garbage” and “compost” so students can more easily separate food scraps.
- Teach students about recycling and composting, and explain their role in helping our environment.
- Decide how to best use the valuable compost created. Schools can sell this or use it for gardening or landscaping, or even for potting soil in classroom plants.

What students can do:

- Help put the worm bin together.
- Make up the bedding by saving paper towels and fruit and vegetable wastes for worm bins.
- Check the bin and record data.
- Harvest the worms when it is time.

Students and teachers can also sell excess worms or even start an organics recycling program with the cafeteria.

School waste minimization programs help students to understand the impact their actions have on the environment. By allowing students to participate and see the results of their efforts, schools teach them a very important lesson—that they can make a difference! So, go ahead and decide which programs will work best at your school and help keep our planet beautiful and bountiful for generations to come.

Success Stories

Recycling

Sometimes, the actions of one individual can inspire an entire community. That is exactly what happened in the summer of 2006 when a third-grader from Webb Elementary School began a recycling campaign to benefit her hometown of Franklin, Indiana.

The student's recycling efforts began by asking fellow classmates and church members to bring plastic bottles and milk jugs to bins at her school and church. When an Evansville company heard of the student's recycling efforts, it offered to recycle the collected plastic into a park bench to be placed at Webb Elementary. The bench manufacturer even invited the student and her family to come and watch the bench be made.

With the confidence gained from this success, the student then set an even more ambitious goal—to raise enough money to purchase 12 benches made from recycled plastic for the Franklin town square.

The student was able to meet and exceed her goal when she was awarded a recycling grant worth \$3,500 by the Indiana Office of Energy and Defense Development. Plus, by encouraging other area elementary schools to recycle and enlisting the help of some local fraternities and sororities, the student was able to collect a whopping 800 pounds of plastic.

This student's ambition and efforts have shown her community that one person can make a difference for our environment—even if that person is a kid. Thanks to this student, Franklin, Indiana now



has 12 benches made from recycled plastic for community members to enjoy and hundreds of pounds of plastic were rescued from going into a landfill. Good work!

Composting

Composting programs are another way schools can minimize waste, keeping unnecessary waste from taking up space in landfills and teaching students about responsible environmental practices. Both Templeton Elementary and Eastside Elementary schools have been awarded grants by the Indiana Department of Environmental Management to start composting programs.

With approximately \$1,500 in grant funds, Templeton Elementary and the Monroe County Solid Waste Management District were able to build a 4-by-5 worm composting bin. The school also purchased a food grinder and hosted a teacher workshop. Eastside Elementary used their grant to set-up 13, 28-gallon worm bins and purchase a chipper.

To learn more about these and other environmental programs happening in Indiana, visit the IDEM Green Steps Web site, at www.IN.gov/idem/greensteps.



Recycle or reuse everything you can. It takes more energy to make new products out of raw materials than to recycle them.





www.idem.IN.gov/greensteps
(800) 451-6027