SECTION III
Projects
RECYCLING

Most of you are probably familiar with the idea of recycling. Your family may already collect aluminum cans or glass bottles and take them to a local recycling center. You probably recognize the three-arrow symbol that says a container can be recycled.

Many groups make a project of collecting materials for recycling. If your county or city has a litter control council or clean community office, they probably can give you valuable advice about planning a recycling program.

If you collect recyclable materials, decide what kinds of materials you will collect. Most recycling centers accept aluminum cans, glass bottles, newspapers, and some kinds of plastics. Some will also accept office paper or writing paper. Contact your local Department of Sanitation or the waste Division of the Virginia Department of Environmental Quality to ask for information about recycling in your area.

Decide what items you will collect and from whom you are going to collect them. You may start by collecting materials in your school. Later you could expand your collection to your community. However, if your school is large you may decide to start by collecting in just one wing or on one floor. If your project is successful, you can always expand your collection area later.

Decide what kind of containers to use. Where will you place them? Are you going to use cardboard boxes or plastic bins? Are you going to locate them in the classrooms, the hallway, or the cafeteria?

Sometimes school recycling projects fail because student groups expect the maintenance staff to take care of all problems. Most maintenance crews are happy to work with recycling projects, but they need to be part of planning from the beginning. Decide who is going to be responsible for collecting the materials from the containers. Decide who will take them to the recycling center. You may
need to ask adult volunteers (parents or teachers) to drive you with the collected materials.

Many people think recycling is over when you drop off your cans and bottles at the recycling center. It’s important to know about the entire recycling process. Think about what happens to recycled material—is it made into new bottles or cans or newspapers? It’s very important to collect materials for recycling. It’s also important to choose products which companies make from recycled materials. See Precycling for more information about how to prevent trash in the first place.

You might want to try to develop a project about using recycled materials in your community. For example, many school systems are using recycled paper in offices, classrooms, cafeteria, or even bathrooms. If your school is not using recycled paper, you could prepare a report for the principal or supervisor.

Your report might convince them to make that decision. Interview the purchasing office to find out what kinds of paper they are now using. Why did they choose those brands? How much do they cost? Find out about other school systems or other schools that use recycled paper. Ask them why they switched and how they switched. Prepare a list of companies that sell recycled paper goods. Compare their prices to the amounts your school now spends on non-recycled items. If you do a thorough job, you may show that recycled materials are comparable in quality and cost to non-recycled items. You may convince the purchasing office to switch to recycled materials.

Reusing is part of recycling. Reusing can mean using something again for the same purpose or finding a new use for it. For example, you could refill an empty juice bottle with juice made from concentrate, or use it as a vase for flowers. You could sponsor a contest for the most inventive reuse of an item. Have a sale of items students collected and made into new and useful objects. Reusing can also mean finding a new owner for an item. You could collect clothes you and your classmates don’t wear anymore. Then donate them to charity.

If you will be setting up a school recycling program, you might find this publication helpful. It costs $5.00.

How to Set Up a School Recycling Program
Council for Solid Waste Solutions
1275 K Street, N.W., Suite 400
Washington, D.C. 20005
1-800-2HELP90
PRECYCLING

Precycling is about thinking before you buy. It means making choices among different products. Sometimes it means deciding to buy nothing. Recycling is something you do with your trash. Precycling is different. When you precycle you do not create trash in the first place.

If you are precycling, you won’t have to throw away or recycle as much. You won’t be creating as much trash. Becoming an active "precycler" means considering carefully the items you buy. It means making choices between brands or sizes for environmental reasons; instead of buying the most popular or least expensive product. For example, you might choose to buy one 20-ounce box of cereal instead of two 10-ounce boxes. Instead of two boxes to throw away, you will have only one. You could choose products with packaging you can recycle instead of throw-away packaging. This is as simple as checking for a recyclable symbol on each plastic container before you buy peanut butter or soda. You could choose to use china dishes and cloth napkins instead of paper plates and paper napkins.

These appear to be easy choices, but there are many possible problems to consider. You may decide to use cloth napkins instead of paper napkins. Then you can use them until they wear out. If you use paper napkins, you will throw them away at the end of each meal. Suppose a cloth napkin lasts for five years. At the end of five years, you would throw away one napkin. (However, you could reuse it as a dishrag, or a stuffing for a pillow — see Recycling for more ideas about reusing.) If you used paper napkins at every meal for five years, you would throw away 5,475 napkins. That’s a lot of trash! Wait a minute. Someone will have to wash that cloth napkin. Who is going to wash it? How much water must they use? How much soap? Suddenly it’s not such an easy decision.
It sounds like precycling often includes making individual choices. How are you going to use your individual choices in a project for your whole group? After you have done everything you can do to precycle, next persuade others to precycle. There are several ways you can do this.

Start by finding out why people do or don't precycle. People often have good reasons for making the choices they make. For example, they consider convenience and cost. One project your group could do is to survey people's buying habits. Ask people what they buy. Then ask them why they buy it. Keep surveys (and survey questions) short and simple. Consider the following sample questions: Do you buy products with little or no disposable packaging? Do you buy products in reusable or recyclable packages? Do you buy economy sizes or bulk products? Why or why not? You could target various groups such as classmates, parents, teachers, or others in your community for your survey.

You may find that the survey group is already making the choice to precycle. If so, that's wonderful! Your project might be recognizing these folks for their actions. See Awards and Contests for ideas about setting up your own environmental awards program.

If the results of your survey show people are not choosing to recycle, you can try to persuade them to do so. One approach might be to start an advertising campaign. Your group could design a series of posters for the hallways in your school. You could write a series of articles or advertisements for the school or local paper. See Getting the Word Out. Also see Writing a Press Release and Getting into Print in the TOOL KIT section.

Another project might be to invent a product people could use (and reuse) instead of something they now use and throw away. You could design and produce a cloth lunch sack. Students could use these cloth sacks instead of paper ones they throw away every day. You could design a cup or mug people could use and wash instead of paper or polystyrene cups which they would throw away. Try to think of other items you use frequently and throw away after each use. Then create a durable and reusable substitute for the item.

If you are interested in what other students think about precycling, you might like to subscribe to this publication. A one-year subscription costs $16.00.

**Zillions: Consumer Reports for Kids**  
Consumers Union  
P.O. Box 3760  
Jefferson City, MO 65102
CLEANUPS

You probably know that each of us is responsible for cleaning up our own mess. However, we sometimes see places where someone needs to clean up the mess others left behind. An obvious project you can do is to clean up an ugly area in your community. We design cleanups to remove litter from our land or waterways and dispose of it properly. We can put some litter in the trash. We can recycle some items.

Streets and streams are much cleaner than they were 20 years ago. People have been conducting more cleanups. All it took to make places cleaner were groups like your class. Areas remain that we need to clean up. You know cleaning up your own mess can be a big job. Getting help for a big cleanup requires more planning. Some trash piles or other polluted places can be dangerous. Make sure you have plans to protect your health and safety before you start picking up the mess. This chapter describes how you can plan for a safe, successful cleanup.

When people look at trash on the ground all the time, they get careless and think one more piece won’t make any difference. Before long all of those single pieces of litter pile up into a big mess. Trash can hurt people, animals, and plants. It makes water unsafe to drink and land unsafe to live or grow food on. When people look at a clean environment, they begin to take pride in that place. They begin to do more to take care of their natural resources. Here’s where your class comes in. Just by cleaning up a dirty lot, you can help people take pride in their community. Then maybe they will take better care of it themselves.

You may easily find a site on your school grounds or in your community that needs to be cleaned up. If your class can’t find the perfect cleanup site, here are a few suggestions that might help. It’s a good idea to ask the whole class to begin noticing potential cleanup sites in the community. Have your classmates report their findings to the class. Then
you can start a list of possible sites. Look for litter along stretches of roads or highways, and in or along streams and rivers. Even look at lots in town. Consider asking parents, grandparents, and friends to suggest places your class can investigate.

Keep a list of all potential cleanup sites. Decide which is the right site for your class. A couple of factors will help you narrow down your choices. First, consider the size of each site and how dirty each is. If you pick a site that has little trash, your class may not notice much difference after the cleanup day. But you might choose this kind of site if your class wanted to clean up an area regularly, like every month. If you pick a site that is too large, you might not have enough people or time to clean it up very well. Then you might feel dissatisfied with your work. Select a site that is convenient. A site may be so far away from your school that your classmates can’t get there to work.

**Advance Planning**

Before anyone picks up trash on your cleanup site, adults must help conduct a safety inspection to look for harmful items. Medical wastes and explosives are dangerous. Large containers such as 55 gallon drums may contain toxic chemicals. If you find these items or others you cannot identify, contact your local fire chief to report what you’ve found. Maybe you can clean up these areas after professionals have removed the hazardous materials. Wait until you receive permission from authorities. Safety is very important. Please talk about it with your teacher and classmates.

If you decide to clean up a section of a road, contact the Virginia Division of Transportation "Adopt-a-Highway" program. If you have decided to clean up a specific spot, the Virginia Department of Environmental Quality can help you with their "Adopt-a-Spot" material. If you’ve selected a stream, the Izaak Walton League’s "Save-our-Streams" program can help. See the list of resources in the chapter on established programs.

Now that you’ve selected a site, make a plan of action to clean it up. You need to decide who will help. Will your class do the cleanup alone or will you recruit help from other classes or from the community? Be sure to include people in your planning committee who have had experience conducting a cleanup. Cleaning up trash may get the newspaper’s attention. To recruit help from the whole community before your cleanup begins, though, you need publicity in newspapers and on radio or TV. See Writing a Press Release in the TOOL KIT section of this guide. Even if your class plans to conduct the entire cleanup, you should let the press know what you are doing.

In addition to lining up help and publicity, planning includes scheduling days for cleanups. Be sure to schedule rain dates. There might not be time on a school day to
get everyone to a site and to clean it up. It might be easier to use a weekend day for your cleanup, but there are problems with weekend cleanups. It may be hard for everyone to come. Most public works departments close on weekends. This means you would have to schedule special pickup times for some materials that you clean up. You can’t take heavy items (stoves, refrigerators, furniture) to the dump or recycling site yourselves. If there is a fee for disposing of your trash, you might ask to be excused from paying it. Advertise your rain date, so rain won’t wash out your entire project.

Getting permission from the land owners before beginning is an essential part of planning. Even if it’s obvious the site needs cleaning, some land owners may not want you on their property. They may worry about having the right kind of insurance. You will need written permission from landowners, teachers, and principals before beginning the cleanup project. Your teacher can help with this. Your school may have forms already prepared.

Details, Details

You must get necessary equipment for the cleanup. You don’t need many special tools for a cleanup, but you will probably need trash bags. You will have some unhappy workers if you run out of trash bags before you finish. Some established cleanup programs provide trash bags. Sometimes local businesses donate them. You will need work gloves. Many people have a pair of work gloves at home or can borrow them. If you need more gloves, ask your school maintenance staff to help you find more. A few yard rakes and shovels could be helpful at some sites. Maybe you can get some of these from home. If you need to borrow them, try contacting your town maintenance shop or government agency. Each cleanup site should have a first aid kit. A responsible adult at the site must know how to use it, and what to do in case of emergencies.

Choose locations for sorting trash into recyclables. Your project will help clean up the environment, and it may also earn money. You may sell aluminum cans to a buy-back center. If you recycle items from your cleanup, you will save natural resources like energy and clean water. You can separate the recyclables out of all your trash after collecting it. You may prefer to put each piece into separate containers for aluminum, glass, or plastic as you pick it up. As you plan, locate the recycling buy-back centers and recycling drop-off locations near your cleanup site.

Consider providing drinks and food for the cleanup workers. Sometimes restaurants, grocery stores, or drink bottling companies will donate refreshments.

Just before cleanup day, meet to go over a map of the cleanup area and to see that everyone knows their job assignments. Make sure you have everyone’s signed
permission forms. During this meeting inform your workers about proper clothing for safety. Each person should wear long pants, sturdy shoes, work gloves, and sun protection. Even if your cleanup day is warm, everyone needs to wear a long sleeve shirt for protection from scratches or insects. If your cleanup is near a road, each person should wear a brightly colored vest. The “Adopt-a-Highway” program can provide these.

On Cleanup Day

If you have done all of the proper planning, the rest should be easy and fun! You’ll need a list of each person helping and their assignment. If your cleanup is during a school day you won’t have to worry about where to park cars. You’ll either be walking to the site or the school bus driver will take care of parking. If your cleanup is on a Saturday, you will need to find a parking place for the cars that bring your cleanup crew. Make a checklist to see that everyone is following these important plans:

- The helpers are dressed properly for their own safety.
- All necessary permission forms are signed.
- Someone is responsible for handing out the trash bags.
- Each team knows its assigned work area.
- People are working together in teams of at least three people.
- Each person has instructions about avoiding dangers like snakes and bees.
- Each person knows to watch out for sharp objects like broken glass.
- Everyone knows break times and quitting time.
- Each person knows what they should do if someone gets hurt.
- A responsible adult is prepared for emergencies.

As a follow-up, you could keep track of how many bags of trash you collected and where you found most of the trash. Some established programs ask for this and other information. How large an area did you clean up? How many people helped in your cleanup? How many pounds of trash did you collect? How many pounds of recyclables did you collect? If you choose to work with an established program, someone will tell you what kind of records to keep.

Finally, write thank-you letters to everyone who helped with the cleanup or gave food, drinks, or materials. Remember to reward yourself and your classmates, too, for all of the hard work.

This publication contains helpful information about managing a cleanup project:

Organizing and Conducting a Cleanup on Public Lands and Waterways
Water Quality Series, Booklet 3
TVA Central Land Resources District Office, 1101 Congress Parkway
P.O. Box 606
Athens, TN 37303-0606
Most of the time when you are at school, you are sitting inside a classroom at your desk, working on your assignments. Sometimes you might look out the window and wish you could be outdoors.

What if your school had an outdoor area which was used for special learning activities? An outdoor classroom can be a very exciting place for students and teachers to learn about weather, plants, animals, geology, history, and many other subjects which you read about in your textbooks. This special area can also make your schoolyard a better place for plants and animals. Plants can cover bare areas, reduce soil erosion, or improve a not-so-pretty view. There are many good reasons to build an outdoor classroom.

Where will you locate your outdoor classroom? Every school is different, so your outdoor classroom will need to be designed to fit your special situation. Consider the following questions:

- What kind of activities will be conducted there?
- What kind of learning activities are important to us?
- How much space is available?
- What areas are accessible to students of all ages and all abilities?
- What are the special features (rocky area, hillside, big trees, stream, sunny field, etc.)?
- Are there places with safety hazards which must be avoided, or can these safety problems be solved?

Here are some ideas for an outdoor classroom:
- Gardens for native plants, such as grasses and wildflowers.
- Nature trail.
- Weather study area with equipment to measure weather changes.

If the area you have chosen is small, focus on one idea, such as a bird feeding station or a flower or vegetable garden.
You will need permission and support from your principal and the grounds staff to carry out the project. Develop a written plan with a description of your ideas for the outdoor classroom. Include the answers to the following questions:

- Why is this study area important for our school?
- What supplies do we need to construct it?
- Where will we get them?
- If we need money to purchase supplies, how will we raise it?
- What people in the community will help us?
- Who will take care of the area after it is built?
- How will we make sure that the area is safe during construction and after it is open?

When you answer these questions, you show that you have put a lot of careful thought into the project, and your principal will be more likely to approve of your project plans.

Define a goal and purpose for your project. For example, if you want to create a nature trail behind your school, your written statement might read: "The goal of our outdoor classroom project is to construct a nature study area in the woods behind the school playground. The purpose of the area is to provide a place for students at all grade levels to observe plants, animals, and other natural features. The trail will be safe and accessible to all students in our school. We will plan the construction of the trail so that we do as little harm as possible to the natural area.

As you work on your outdoor classroom, keep your goal in mind. Refer back to your written statement from time to time, and compare what you have done with what you said you would do. This will help you keep your work on track.

Whatever project idea you choose, there are many resources available to help you plan and carry it out. Some of the places you might contact for help are listed below:

- Local libraries
- City and county parks and recreation offices
- Forestry, biology, horticulture, and science education departments at a local university or college
- County agriculture extension service
- National or state parks, forests, wildlife refuges
- Science centers, science museums, botanical gardens
- Gardening and landscape centers, and greenhouses
- Garden clubs
- State wildlife department
You may want work with other groups in your school or community. Someone else could produce a guide to the outdoor study areas and develop lesson plans for using your outdoor classroom. See the chapters on guidebooks and teaching and sharing for ideas.

Developing an outdoor classroom will probably take most of the school year. Different types of sites will require different plans, but most plans can be approached in phases.

- **Phase 1** (one month): Survey site and prepare map showing location and special features. Develop budget and fund raising plan. Review plan with principal and grounds maintenance supervisor; revise if necessary.
- **Phase 2** (two months): Present final plan to principal (and, to the school board, if required). Write a press release about the project and send it, with principal’s approval, to local newspaper, television, and other media. Begin contacting people who will help with construction. Begin fund raising. Work with group to draft the site study guide. Design explanatory signs.
- **Phase 3** (one month): Continue fund raising and, work on guide. Schedule construction date. Make explanatory signs.
- **Phase 4** (one month): Acquire materials for construction, such as mulch or landscape timbers. Complete guide and have copies printed.
- **Phase 5** (one month): Construct site. Complete plantings. Plan dedication ceremony (including speakers, guest list, press coverage). Establish schedule for routine maintenance. Check site at least weekly and correct problems.
- **Phase 6**: Hold dedication ceremony. Enjoy your new outdoor classroom!

Three publications that might help you to develop an outdoor classroom area:

**A Guide to the Planning and Development of Outdoor Classrooms**  
Missouri Department of Conservation  
P.O. Box 180  
Jefferson City, MO 65102-0180

**A Habitat-Forming Experience: Cultivating a Native Plant Ecosystem**  

**BayScapes**  
Alliance for the Chesapeake Bay  
P.O. Box 1981  
Richmond, VA 23216
You probably know a lot about some of your favorite interests. How did you learn about those subjects? Books can answer questions for us just like other people do. Usually, though, we learn by doing. Even when we're learning on our own, certain kinds of books can serve as guides to help in our understanding. Guide books help people understand interesting subjects and help make their work easier. One type of guide you might consider developing is a "field guide." Another type is a "resource guide." We'll look at how you get started writing your guide, and where you go for help.

Field Guides
You can take field guides along with you when you go outside, just like the name suggests. This type of guide helps you to identify different plants or animals you might see living out there. For example, people who enjoy watching birds will carry a bird field guide to help them identify birds they see.

There are many different types of field guides. One series of field guides, called the Peterson Field Guides, covers about 40 different natural subjects. Subjects include everthing from birds and insects, to sea shells and stars. Peterson's guides use pictures along with descriptions.

Although these are very popular guides, they don't have something that your guide can have. Yours can give information specific to your local area. Your class researches the area and prepares the guides. Begin by looking at other field guides for information about the plants, animals, or other topics in your general area. Check your library or a bookstore to find these field guides. Field guides can be about any topic you choose. Your class should agree on a field site and decide what your guide will include. Your guide really will be unique.
Your class might watch the different birds that visit your school yard throughout the year. Then you can write a field guide to the birds of your school. Be sure to include all of the knowledge you have about your guide book topic so others can learn from it. For example, in addition to listing the different types of birds (cardinal, bluejay, robin), tell in which season you saw each bird (fall, winter). Note the behavior of different birds (climbing down the tree upside down) when you saw them. You could even list unique characteristics you noticed to help others recognize the bird.

If your school has a nature area, or if a park is close by, a useful field guide might be a map for that area. Other ideas are guides to plants, animals, trees, history, geology, or water resources of the area. Find out if there is already a guide for the site you chose as the subject of your field guide. For example, many state parks have them.

Whatever the subject of your guide, it should be more than just a list. It should explain why those animals; plants, or rocks are where they are. It should answer interesting questions.

**Resource Guides**

You are probably familiar with resource guides too, but you may have a different name for them. What book is the most useful resource guide? How about the phone book? It provides us with sources of information. A resource guide is a list of people, places, objects, or services that we can use to get help. Can you think of any other resource guides?

Your class might list all the people in your community who would be willing to visit classrooms and talk about their environmentally related jobs. Instead of listing just the names and phone numbers, your guide should give information about each speaker. It might tell where each works, what each can talk about, when each is available to speak.

Your class could produce a resource guide listing and describing all of the good field trip locations. Include hiking areas or natural places within a certain distance of your community. You should visit each site to see if you like it. Make sure that you have the correct address for each site as well as directions for getting there.

You could write a resource guide explaining where to get seedling trees and how to plant them. The Virginia Department of Forestry probably can help you with this.

Another possibility is a resource guide about what to take on a hike, or what tools you will need to do your own landscaping. Still another idea is a resource guide to environmentally safe household cleaners. Again, remember that you are doing more
than compiling a list. Explain the harmful effects of dangerous chemicals. Tell why the safer ones are better even if they’re more expensive.

General Instructions

• To get started on your guide book project, find a topic that interests you. If another class within your school plans to do one of the other projects from Rally Round!, selecting a topic will be easy. For example, if a class is doing a trail cleanup project, what guide would complement that project? How about a field guide for people walking that trail?

• Decide what you want to accomplish with your guide. This is like setting up your goals or objectives in the Teaching/Sharing chapter of Rally Round! Do you want to inform people or convince them to protect their natural environment? Your field guide might name and illustrate the flowers along a trail. People reading your guide may want to preserve the trail when they see the beautiful flowers that grow there.

• Who is your audience? Knowing this helps you decide how to write your guide for particular readers to understand it. Would you prepare the guide the same way for adults in the community as you would for third graders?

• Collect the information you will offer in your guide. If you are writing a field guide, go to the field site to identify the birds, plants, animals, etc. that you will include in your guide. Existing field guides can be a big help. If you are writing a resource guide, track down the names and telephone numbers of the people for your guide. Get permission from site owners or managers before listing sites in the guide. Give information about how to contact the correct person for groups to get permission to go there.

• Write text. Put information in your guide in a logical order. For example, if you write a trail guide, you would start by listing plants found at the beginning of the trail (work with English classes).

• Design the appearance of the book (work with art or computer classes), and send a copy to anyone who needs to approve the guide before printing.

• Decide how many copies you need. Arrange for printing them (see Getting into Print).

• Arrange for distributing the guide books. You may sell them to pay for printing expenses. You might put some in the school office or libraries.
TEACHING & SHARING

One important project you can do, and, one of the best ways to learn, is to teach other people. Younger people look up to you. They even try to act like you or dress like you. Sometimes adults cannot see and explain things the way you can. You may have this advantage over adults in teaching. Sometimes adults listen to children more than to each other, so at times you can teach adults. This chapter is about helping you design ways to teach others and share the neat things you have learned.

Deciding what to teach may be the hardest but most fun part of teaching and sharing. What do you think? What is important to you?

You can use this chapter to help people understand important issues. You can teach other classes to get involved. You can do a school play or musical to get your whole school involved. You can even write a newsletter or article for your town newspaper to get the entire town involved in helping your class solve an environmental problem. Your class might start by making a list of environmental problems that they care about. See Choosing a Project for help. What group would you like to teach about these issues? Your teacher can advise you about ways to accomplish your teaching plan.

Some people think that they can never teach because they don’t know enough. Knowing a lot is not the only important characteristic of good teachers. Knowing where to go to find the answers to hard questions is very important. Good teachers help people to learn.

Since we are all different, we all have different ways of learning. So if you are going to teach somebody you have to think about how they learn. Stop and think about the different ways that people have taught you. How did you learn the most?
Do you learn better when someone tells you what to do, or do you want to experiment on your own? Have you discovered for yourself that you can find your belongings better when you always put them in certain places in your room? Did you have to try certain foods or play certain games to learn which was better? Your parents probably taught you how to ride a bike by taking you outside and actually putting you on a bike. Everybody learns in different ways; but most people believe the best way to teach is to let people make discoveries for themselves. We call this “hands-on” teaching. Use this method as much as possible.

Sometimes people try to teach us by giving us orders or information. For example, has anyone ever ordered you to clean your room? Television commercials tell you that some kinds of food taste better, or that certain toys are more fun. Teachers might use this type of teaching by telling you a story, then asking you to remember what they said. Could you ever learn to ride a bike if someone told you how, but you didn’t practice on a bike? Teach by giving information if you are teaching a really big group, and cannot help each person to learn individually.

Once you have decided what you want to teach to other people, try to design ways that allow your students to learn by doing. They learn better through activities that are interesting and fun. For example, instead of showing your audience a video about erosion control, let them design a way to keep soil inside a small area of bare ground when it rains. They would have even more fun if they hosed down the area rather than waiting for rain. Then they could see right away if their plan controlled erosion. How about suggesting that your students try applying different materials to the bare ground to see if any control erosion better than others? They may think to try straw, leaves, or sod. They may enjoy trying some unusual material.

After your class agrees on a topic to teach and you think about how you will teach, then develop lesson plans. Your lesson plan will be the guide you will follow while teaching your lesson. If you spend a little time getting the lesson plan right, then teaching the lesson will be easy. Here are some rules to help you develop a useful lesson plan:

- First list exactly what you want your students to learn to do. These are objectives. Here is an example of one objective: “Students will sort trash into piles of either recyclable or non-recyclable.” Some lesson plans may have only one objective, while others may have several. In the example about sorting recyclables, you may want to add the objective “Students will explain what recycling means.”

- After you list your objectives, develop activities you can use to help your students reach each objective. This is the bulk of your lesson, so plan to spend
enough time, or to do enough activities, so your students understand. For example, you might ask your students to make new paper out of old paper, or find objects made from recycled materials. These activities help them understand recycling. Describe the activities and procedures so anyone could teach the lesson with your plans.

- Next, look at your lesson and list any materials you will need to take with you to teach the lesson. Having a list is easier than trying to remember.

- Finally, list follow-up questions, activities, or worksheets that you can use to test your success in meeting your objectives.

Sometimes you can concentrate on teaching just one person or a small group. Using "hands on" teaching works best then. At other times you need to try to teach a whole class or larger group of people. Then it can be fun to develop your own newspaper. You can pick out a name for the paper. Different members of the class can be the reporters, editors, cartoonists, photographers. Others can do the paper layout and design in the school computer lab.

If you want to teach people in your community how to get involved in environmental protection, your group might work together to write a regular column for the local newspaper (See Writing a Press Release).

Many school libraries have video cameras. You might consider making a short video to show on school or local TV.
Environmental festivals are learning parties. You plan for them as you would plan for any other party. You'll need a theme, goals, a location, a date, a budget, guests, invitations, a schedule, cleanup, and maybe decorations, entertainment, and food. If you have ever given a party, you know all this can be a lot of work, and a lot of fun, too. Organization and planning are the keys to success.

1. First decide exactly what the goal of the event is. This goal should be something you can achieve through a festival. The more specific the goal is, the easier it is to select activities to achieve it. Begin by conducting a brainstorming session with the entire class. List as many ideas as you can. Select the few ideas that most interest the group. Consider the resources available. Then discard impossible ideas. Let's say your group's two favorite ideas are hot air balloon rides and toy recycling. You know you have no money, you know you must have the festival on a Saturday morning, and you know that you must have it in your classroom. Hot air balloon rides would not be possible, but you could have a toy recycling "garage sale." Work closely with your teacher to select the idea (or theme) for the festival.

To develop the goal, consider exactly what you expect to happen. Think in numbers (how many or how much?). For example, the goal for a toy recycling festival might be to collect and recycle 75 toys.

2. Now brainstorm a list of all the tasks you can think of that should be done to reach the goal. Think hard and make this a long list. Make sure your list includes contacting people whose help you need, and getting necessary permissions. Note costs for festival activities, decorations, entertainment and food. Decide who will clean up. Decide what informational materials you need. Organize the items on your list into several short lists of jobs that are similar. For example, you could combine putting a news release in the local newspaper, making an announcement on the school loudspeaker, and sending invitations to parents. They all have to do with publicity. Assign the lists to workgroups. Will you think of every thing? You probably will not. Keep the lists posted. As you think of the other jobs that need to be done, add them to the lists.
3. After workgroups meet to make detailed plans, the whole class should meet again. At this meeting choose a definite date and set a complete **master plan and schedule**. Allow plenty of planning and preparation time before the event. The class should elect a chairperson (or two "co-chairs") to be in charge of making sure all the workgroups cooperate and stay on schedule. The chairperson is responsible for calling meetings for progress reports, and bringing groups together to solve problems. When necessary, the chairperson would add new jobs to workgroup task lists.

4. Whatever your plan, be sure your teacher or club sponsor and your principal **approve** it. As you discuss your plans with these people, ask them if there is anyone else whose permission you need. Also ask them who you need to inform about your festival.

5. You might have to pay for printing, photography, postage, telephone, supplies for activities, entertainment, tables, or signs. You must make advance arrangements for these. The school or other organizations may be able to help with some or all of these items with no cost to your class.

We have adapted the following tips and ideas from *The Earth Day Guide* (May 1992, Earth Day Committee of Richmond, Maymont Foundation, Virginia Environmental Endowment)

**Here are several places to call for help with arrangements and advice:**

- Local parks and recreation departments and state parks can offer sites for special events.
- Some youth groups such as Scouts or high school ecology clubs may want to participate in your festival or help in some way. Local recycling associations, environmental groups, outdoor sports clubs, museums, nature centers, and civic groups also may want to join you.
- Businesses related to the environment may donate materials or exhibits.
- Radio, television, and newspapers may publicize your festival.
- Local elected and administrative officials may tell you about tax-supported help available in your community.

**Here's advice for asking local businesses for help:**

- Call the local Chamber of Commerce to ask to borrow a copy of its membership directory, listing local businesses.
- Use this directory to locate public relations offices of businesses. See *Who Ya Gonna Call for Help* for directions.
- Call or write businesses and offer them the opportunity to donate equipment or
Here are a few ideas about hands-on activities and demonstrations:

- Tree planting
- Recycled paper making
- Recycled art
- Mini-landfills
- Foil ball competition
- Electric or solar power demonstration
- Sample environmental products
- Organic gardening demonstrations
- Natural product demonstrations
- Meet your elected officials
- Mock election
- Surveys
- Learning stations sponsored by classes
- Bag-a-thon litter collection
- Poster contest display
- Story telling
- Environmental personal opinion bulletin board
- Skits and plays
- Environmentally friendly household cleaners demonstration
- Junk mail canceling cards
- Reuse idea contest