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TEACHER'S HANDBOOK

Paper or Plastic?

A complete how-to guide to staging the play, as well as follow-up lesson plans and activities

Rockin' Readers Theater

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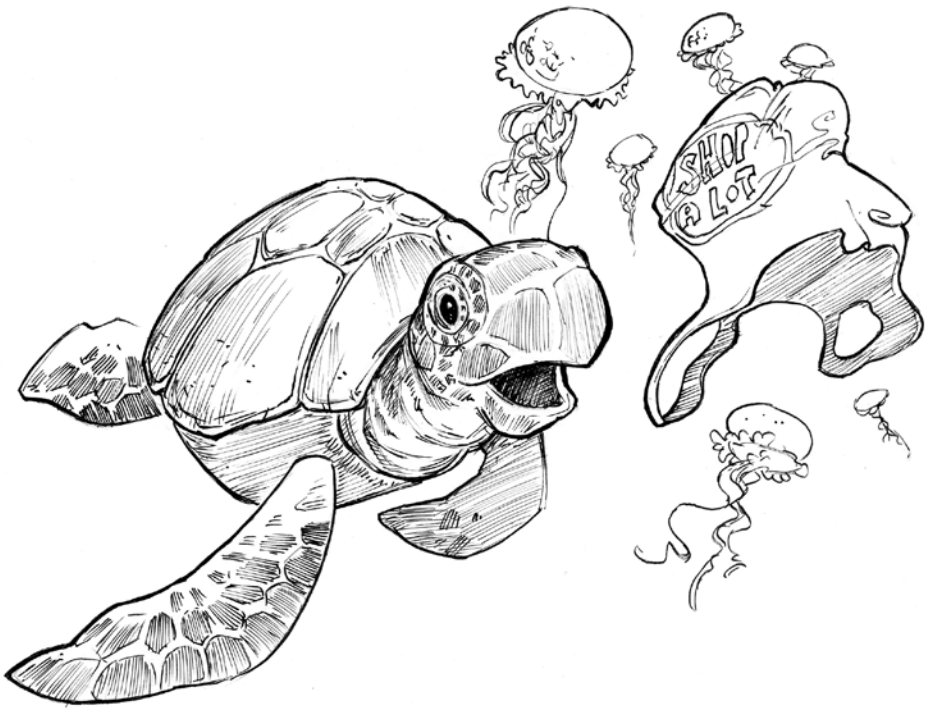

Rockin' Readers Theater

Paper or Plastic?

TEACHER'S HANDBOOK

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I. Introduction

CONGRATULATIONS! You're about to embark on a richly rewarding experience—directing your students in *Paper or Plastic?*, a musical play about protecting our environment. Even if you've never taken a drama class, been in a play, or sung a note, this Teacher's Handbook will provide everything you need to know to take *Paper or Plastic?* from script to stage.

The play can serve as a springboard to launch learning more about environmental issues in the classroom. To help you make this play-to-classroom connection, this guide includes a wealth of follow-up discussion guides, lesson plans, and activities related to conserving and protecting our environment. These materials can all help to extend learning about the environment for students participating in the play, as well as for other students in your school who see the play.

This Teacher's Handbook includes the following sections:

PUTTING ON *PAPER OR PLASTIC*?—This section describes the specifics of this play, including running time and all the information you need to cast your students in appropriate roles. It also gives suggestions for simple props and costumes, as well as movement and choreography that would enhance the play.

HOW TO PUT ON A PLAY—If you've never put on a play, don't despair. This section gives you the information you need, including warm-up exercises, how to familiarize your students with the play, production jobs, the audition process, rehearsals, and more.

LESSON PLANS—Included in this section are discussion guides and lesson plans on recycling, habitats, electricity, and water conservation. Each lesson plan includes background, vocabulary, and activities for students in grades 2 through 4 and grades 5 through 7. (Note, however, that some activities may also be appropriate for lower or higher grades than indicated.)

RESOURCES—Information on additional research resources is also provided. These include books, magazines, newsletters, and websites, some of which are specific to the lesson plans.

Now, have fun! And no matter what happens, trust that you are giving your students an experience they will always remember and lessons that will last a lifetime.

2. Putting On *Paper or Plastic?*

This section describes the nuts and bolts of the play, along with specific details you'll need to cast the roles to best suit your students' abilities.

RUNNING TIME

The *Paper or Plastic?* show is approximately 30 to 40 minutes long, but there are several options for a shorter show to fit your time constraints. Any or all of the following scenes may be cut:

Scene Five, *We Are All Connected* song
(approximately 4 minutes)

Scene Seven, Meet the Polys
(approximately 4 to 5 minutes)

Scene Eleven, *The Frog Song*
(approximately 4 minutes)

Scene Thirteen, Recycle Section
(approximately 5 to 6 minutes)

THE CAST

Paper or Plastic? has 47 singing and speaking roles. A cast as small as 19 is possible by having students play multiple roles. The cast can also be expanded by increasing the size of the chorus. There are many solo singing roles—some with full songs, some with just a few lines. The entire cast sings in the chorus.

The solo singing and speaking roles are outlined in Table 1 by the size of the role,

Table 1. Solo singing and speaking roles

ROLE	AMOUNT OF SINGING	MOVEMENT SKILLS	READING LEVEL	MULTIPLE ROLES	AUDITION PAGE
Lead Roles					
Jesse	Some		Medium	No	3–5, 24–25
Pat	Some		Medium	No	3–5, 24–25
Garbage Can	Lead		Medium	No	11, 37
Featured Roles					
Dramatic Plastic Kid	Some		Lower	No	4, 28, 48
Dramatic Paper Kid	Some		Medium	No	4, 28, 46
Orangutan One (a Plastic Kid)	Lead	Strong	Medium	Yes	18–19
Orangutan Two (a Plastic Kid)	Lead	Strong	Medium	Yes	18–19
Miss Cascade Frog	Lead		Medium	Yes	39
Miss Crawfish Frog	Lead		Medium	Yes	40
Miss Barking Tree Frog	Lead		Lower	Yes	39
Miss Dusty Gopher Frog	Lead		Medium	Yes	40
Roles with Some Lines					
Plastic Kid One	Some	Strong	Medium	Yes	14–17
Plastic Kid Two	Some	Strong	Medium	Yes	14–17
Plastic Kid Three	Some	Strong	Upper	Yes	14–17
Plastic Kid Four	Some	Strong	Upper	Yes	14–17
Paper Kid One	Some	Strong	Medium	Yes	26–28
Paper Kid Two	Some	Strong	Upper	Yes	26–28
Paper Kid Three	Some	Strong	Medium	Yes	26–28
Paper Kid Four	Some	Strong	Medium	Yes	26–28

how much singing is required, whether the role might benefit from strong movement skills, the relative reading level for the role, whether the actor can play multiple roles, and a suggested page number from the script for auditioning.

Table 2 lists the speaking/chorus roles that may be double-cast from the solo singing and speaking roles listed in Table 1. No movement skills are required for these roles. You do not need to audition all of these parts, but it is recommended to audition the Beauty Pageant Announcer and Plastic Kid Five.

Table 2. Speaking and chorus roles

Role	Reading Level	Audition Page
Announcer (featured role)	Medium	38–40
Plastic Kid Five	Upper	14–17
Tree One	Lower	na
Tree Two	Lower	na
Tree Three	Lower	na
Animal One	Lower	na
Animal Two	Lower	na
Animal Three	Medium	na
Paper Kid Five	Medium	na
Paper Kid Six	Upper	na
Paper Kid Seven	Medium	na
Paper Kid Eight	Medium	na
Six Evil Kids (three Paper Kids and three Plastic Kids)	Medium	na
Six Sweet Kids (three Paper Kids and three Plastic Kids)	Medium	na
Mural-Carrying Kid One	Lower	na
Mural-Carrying Kid Two	Lower	na
Mural-Carrying Kid Three	Medium	na
Mural-Carrying Kid Four	Lower	na

SONGS

Knowledge Is the Key

This is a melodic song sung by the following cast members:

- Garbage Can
- Dramatic Paper Kid
- Dramatic Plastic Kid
- Plastic Chorus
- Paper Chorus

We Are All Connected

This is a melodic song sung by the following cast members:

- Orangutan One
- Orangutan Two
- Plastic Chorus
- Paper Chorus

Toxic Chemical Song

This is a rhythmic song sung by the following cast members:

- Plastic Kid One
- Plastic Kid Two
- Plastic Kid Three
- Plastic Kid Four
- Paper Kid One
- Paper Kid Two
- Paper Kid Three
- Paper Kid Four
- Plastic Chorus
- Paper Chorus

The Frog Song

This is a melodic song sung by the following cast members:

- Cascade Frog
- Crawfish Frog
- Barking Tree Frog
- Dusty Gopher Frog

Knowledge Is the Key—Reprise
This is a melodic song sung by the following cast members:

- Garbage Can
- Pat
- Jesse
- Dramatic Paper Kid
- Dramatic Plastic Kid
- Plastic Chorus
- Paper Chorus

MUSIC FOR REHEARSAL AND PERFORMANCE

The music CD for the play includes both instrumental and vocal versions for each of the songs. You might want to start by rehearsing with the Full Vocal versions and then rehearse with the Instrumental or Background Vocal versions. There is also sheet music available for all the songs in case you would like to rehearse or perform with piano or guitar accompaniment.

You will probably want to use the Instrumental or Background Vocal versions for performances. (Consider using the Background Vocal versions if your singers need a little extra support.) Playing the music from the CD during the performance is a critical job, and you might want to do this yourself or assign this job to someone you trust will do it correctly and on time.

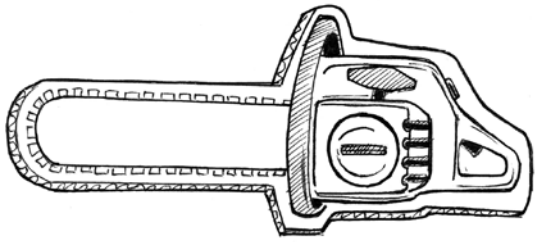
Helpful hint: Test using the pause button on your CD player to end a song and then using the next-track or previous-track button to cue up the track for the next song you want to play.

PROPS

Having the cast build props together is a great opportunity for team building. It is also a wonderful way to use the talents of students who may be too shy to actually appear on stage.

Creating props from reused or recycled materials reinforces the theme of the show. These are the recommend props:

- Paper cup
- Plastic water bottle
- Whistle
- Oversized cardboard chain saw
- Six small squirt bottles
- Plaid or loud-colored suit coat
- Oversized mock microphone
- Beauty pageant sashes with names of various endangered frogs
- Envelope for winner of Miss Extinct Animal
- Mural (see page 41)
- Two reusable (aluminum or steel) sports bottles



Prop example: drawing of a chain saw on cardboard

COSTUMES

Minimal costuming is needed for this show, but you can get more elaborate if you wish. To reinforce the theme of the show, try to create at least some the costumes from clothing and materials the children already have.

PLASTIC CHORUS and PAPER CHORUS. Visually splitting the cast by color will reinforce the idea of the paper vs. plastic debate. You might use all blue T-shirts for the Paper Chorus and all orange for the

Plastic Chorus. Or, if your class is artistically inclined, students could make hats out of plastic bottles and paper bags to represent their side.

GARBAGE CAN. This character wears a neutral color as the moderator in the debate. Consider making a sign that says "Garbage Can" or a garbage can costume out of a cardboard box (with the bottom cut out and shoulder straps).

JESSE and PAT. These characters have more elaborate elements to their costumes to make them stand out from the chorus.

BEAUTY PAGEANT FROGS. For these costumes, consider adding sashes and frog-like headpieces (and perhaps frog-like flipper hands).

SETS

This show is designed to be staged without any sets.

BLOCKING

Refer to the "How to Put On a Play" section for basic blocking techniques. Where specific blocking may be useful, it is included in the script, but feel free to stray from this blocking if you or the students like something better.

MOVEMENT AND CHOREOGRAPHY

An important element of movement in this show is the movement used to create an Information Station (see Scene Three in the script). You can use the exercise below to work with your actors on creating movements for the Information Station.

Machine Game Exercise

This exercise explains how to create the information Station in Scene Three of the *Paper or Plastic?* script.

First give students the idea of how to use their bodies and movement to create various types of "machines" together. Break up students into teams of five to eight. Before they begin, remind them how important it is to work together to create their machine. Call out the type of machine you want each team to create. Start with typical machines like a washing machine or a dishwasher. One at a time, the actors enter the machine and contribute a repetitive sound and a movement or gesture that represents one small part of a larger machine. Once an actor has established his sound and gesture, he should continue repeating it until all the actors have joined in. As each new actor enters the machine, he should somehow "attach" himself to the rest of the machine. Encourage the actors to use various levels to create physical dimensions to their machines; they can stand, sit, squat, or even lie on their backs. Once the teams get the idea, move to more whimsical types of machines. They can create dream machines, back-to-school machines, rock band machines, homework machines, ocean machines, recycling machines—just about anything!

Next, ask the students to do the same thing to create an "Information Station." You might want to first discuss what kind of "machine" the Information Station is and what it does. Then do this exercise multiple times to create different Information Stations, starting with different students each time, and encouraging the actors to try different movements and sounds each time. As you and your actors experiment with this, you will find movements and sounds that work together well to create your own special version of the Information Station.

To see this "machine game" being played, go to YouTube.com and search for "improv game machine."

Choreography

In terms of choreography, many of the students in your cast will probably have watched *Glee* or other musical shows on TV and have some seen some sophisticated dancing. Don't worry—any moves you give them will be perceived as equally spectacular in their minds!

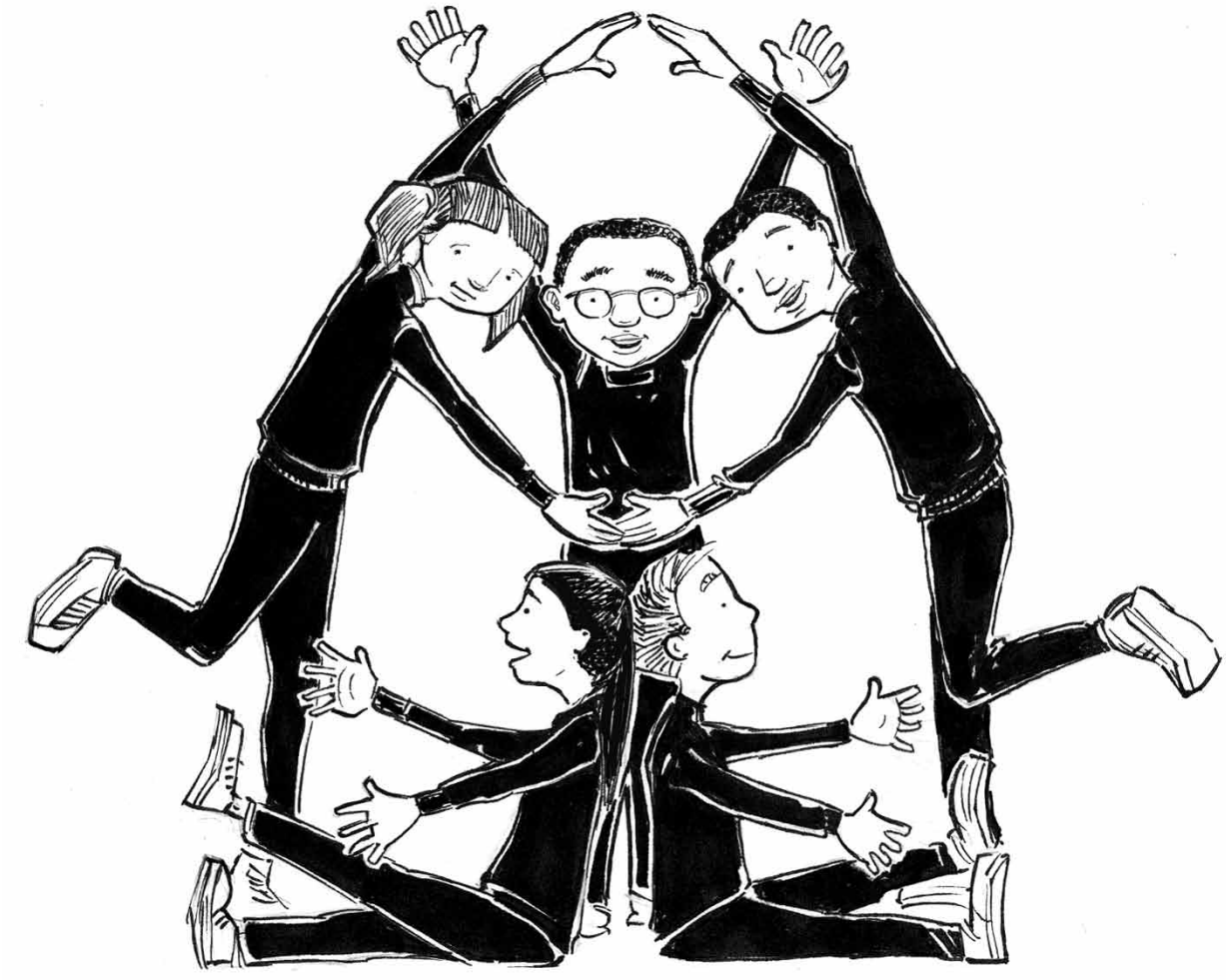
Simple movement is best. Clapping and stepping in time to the music while moving in simple patterns around the stage looks very impressive. Arm movements in unison are also easy and look impressive.

If any students can do a cartwheel, are taking dance lessons and can do a pirouette, can perform a hip-hop dance, or have any other special talents, consider using those talents as part of the movement in the show. Give them small, featured parts to showcase their talents.

If you are uncomfortable coaching your students on movement, ask the parents of your students if anyone has taken dance lessons. Someone may jump at the chance to be a choreographer for your play.

There are sections in the script where the students can "free form" dance—always fun!

YouTube.com is a fabulous resource for inspiration. Keywords such as "children dancing" or "children dancing Glee" or "children dancing High School Musical" should bring up videos with ideas.



3. How to Put On a Play

This section gives you easy-to-follow directions on how to put on a play. If you've produced plays before and don't need a refresher, you may wish to move to the following section on lesson plans.

PLANNING

Putting on a play can be a lot of work, but teachers have been doing it successfully for many, many years. This comprehensive handbook includes all the information you need to put on a great production, but if you feel that you need more information, your community library and the Internet are great resources. Lots of experienced teachers and other professionals have written about how to put on a play, and there are hundreds of books and guides on amateur musical and play production with valuable suggestions about how to survive and thrive while putting on a show.

First and foremost, maintain good communication with your principal. Be sure to involve him or her in all major decisions. The principal is the gatekeeper to the auditorium, gymnasium, and rehearsal spaces you'll need. The principal knows about district policy and district resources. He or she will have knowledge about what budget (if any) is available and whether or not parents can be directly involved. The principal can provide you with the school's tax identification number and school letterhead for requests and receipts. This number is essential when approaching local businesses for donations of materials or services. **If you *ever* have any question in your mind, *ask the principal first*.**

Sharing the Work

Don't try to do this alone! Delegate to other teachers, and make this a group effort. If you're planning an elaborate production, consider dividing the production work into several areas: director, stage manager, choreographer, vocal music coach, lighting and sound, fundraising and donations.

Parents and grandparents are great resources. They can be terrific at fundraising; helping the actors and singers learn their lines, music, and lyrics; as well as sewing costumes and building sets. Getting young children to work together can be a challenge. Involving a few parents (adult supervisors) to help everyone stay focused can keep your rehearsals on track.

Fundraising

Many plays can be put on for very little cost. However, having at least some funds available for your production expenses can be very helpful. To raise funds, consider putting together a fundraising and donations team. These are the teachers and/or parents who will visit the local merchants and businesses and ask for contributions, donations, and/or sell them advertising space in the program.

Your fundraisers need to be outgoing, polite, and talkative. They need to be people who are not afraid to ask for a donation. Make sure they have an introductory letter on school letterhead along with the school's tax identification number. They should also have some blank receipt forms to offer a receipt for any donation. These receipts are proof of the merchant's donation to the school. (Donations to schools are tax deductible in most states.) You will be surprised how often you can get donated items by just

asking and providing a receipt. Thrift shops often donate props and clothing that can be used as costumes. Building centers and lumberyards often discard imperfect lumber and flawed materials that are not of salable quality but would be fine for set building. Hardware stores and paint centers often have paint that is returned due to improper color matching or mismixing. Check with local printers to see if they will donate their printing services in exchange for an advertisement in a playbill or program. If you have a playbill or program, always leave space to acknowledge all the people and companies that have made a donation of material, services, or cash.

Consider selling advertising space in the playbill or program. Arm your sales team with the latest list of advertisers to encourage other competing businesses to advertise their business or service too. You can also sell space to parents to acknowledge their child and wish them well in the production. Keep this cost low to encourage participation.

Make sure that whoever is responsible for producing the playbill or program has double- and triple-checked the spelling of the principal's and ALL donor's names before printing! **Don't risk losing a future donation by rushing to print and misspelling a donor's name**. (You can use the image on the inside cover of this handbook for your program.)

Involve the Parent Teacher Association. The PTA can hold snack sales, car washes, bake sales, and other fundraisers dedicated to funding the musical and drama program.

Parents, grandparents, aunts, and uncles love seeing their kids perform, so fundraising shouldn't stop on the day of the performance. You can have a videographer make a video and sell DVDs of the performance. Before the show is a great time to sell brownies, cookies, or flowers to be given to the performers along with a card wishing them good luck.

Selling tickets is usually not a big fundraiser. School districts differ on ticket-selling policies. Some allow it, others don't, so check with the principal. If your district doesn't allow ticket sales, put a big donation box near the entrance. The pricing of tickets will be different for a school in an affluent area than at an inner city school. Contacting other schools in your area will give you some guidance. Be sure to pick a ticket price that all the parents and grandparents can afford.

GETTING STARTED WITH YOUR STUDENTS

The first thing you'll want to do is to create an atmosphere of trust and creative freedom. Students are often so preoccupied with what their peers think that they become inexpressive, try to be invisible, or become constant attention seekers. Improvisational games are a great way to level the playing field. They help students loosen up, and they help establish a safe environment where everyone creates without fear of judgment.

Improvisational Warm-up Games

There are countless improvisational exercises to prepare students for performing. They not only help to encourage imagination, they also promote listening, concentration, body movement, language skills, and teamwork. Here are three exercises that work well with this age group.

You may know of other games from your own experiences. Use what works

best for you and makes your students most comfortable.

Crazy Eights

This exercise helps promotes teamwork as all count, move together, and stay in eye contact. It also helps everyone focus and get rid of the jitters.

In a large open space, have the students form a circle. Make sure no one is squeezed out and that everyone is able to make eye contact, even from across the circle. Instruct the students to follow along as you lead them in a countdown from the number eight. Raise your right hand and shake it while loudly counting to eight and making eye contact with everyone around the circle. Remember, the students should perform along with you. Raise your left hand and repeat along with your students. Now raise your right leg and shake it while counting to eight. Students perform right along. Remind everyone to keep making eye contact with one another. Raise your left leg, shake it, and repeat the counting as students perform along. Repeat the sequence, this time starting with seven, then six, and so on until you reach one.

Zip, Zap, Zop!

This exercise helps promote teamwork, focus, and concentration.

Standing in a circle, initiate the throwing of an imaginary lightning bolt around the circle. To do this, make direct eye contact with someone in the circle (indicating where the lightning bolt will be going), put your hands together, and then push your hands rapidly out in front of you while loudly saying "ZIP!" The team member receiving the lightning bolt must quickly "catch" it, then send it to someone else the same way, but this time they must say "ZAP!" The third person catches the bolt and sends it off toward another student, this time saying "ZOP!" The lightning bolt is thrown faster and faster around the circle—ZIP, ZAP, ZOP! ZIP, ZAP, ZOP!

If students lose focus, they may say the words out of sequence or miss catching the lightning bolt. If this happens, stop the game, and practice the sequence of the words and what it looks like to catch and then throw a lightning bolt. They can't hold onto one for too long or—SIZZLE!

One-Word Story

This exercise promotes teamwork and, most importantly, listening.

Break students into two to four teams. The first team stands next to each other in a line in the front of the room and must spontaneously tell a made-up story. However, each person can say only one word at a time as the story moves down the line. Stop the story if a student says more than one word, can't think of a word, or says a word that does not make logical sense in the story. Coach students to add "periods" at the end of sentences if they feel the sentence is getting too long. A "period" signals the following student to start a new sentence.

For additional improvisational games as warm-ups before rehearsals and shows, you might look for books on improvisational acting for kids in your school or local library.

THE FIRST READING AND DISCUSSION

Once your students are warmed up and primed to begin, pass out copies of the play and prepare to do a reading. Students can sit at their desks or do the reading in a circle. If some of the dialogue in the play will be difficult for any of your students, keep this in mind as you choose students to do the first reading. (Refer to Table 1 and Table 2 on pages 5 and 6 for the reading level of each role.) If reading level is not an issue, choose students at random to read different parts. Tell them that no one is auditioning for a part just yet; they're all just reading the play together to hear the story. When coming to a song, play the "Full Vocal" version of the song from the CD and then continue reading. After reading through the play once, ask your students what they like about the play and discuss anything they may not like or understand. Then choose different readers, and read the play again. Afterward, discuss the play:

1. Discuss the characters. Why do they act the way they do?
2. Why do they sing the songs they sing?
3. What are the songs about?

It's important that your students take ownership of the play. Even though they didn't write it, they are certain to bring something special to it, adding their creativity and making their performance wonderfully unique.

In the same or following class, ask who has been in a play before. Have students describe their experience. What was good? What wasn't? How could their experience have been better? Some may say that they don't want to be in the play. These students may have fears about being in front of people, not learning their lines, and not being "good enough." Once kids talk about it, most of their fears are likely to lessen considerably or even go away. Students who are afraid to audition may change their minds once they see how fun the audition process can be.

For students who are adamant about not being in the play, assure them that it's okay. There are many production jobs involved in putting on a play, and these students can participate in some of these functions.

PRODUCTION JOBS

For students who are not interested in being in the play, one of the following production jobs can keep them involved.

Stage manager. The stage manager has a great deal of responsibility, so it's important to choose someone who has the ability to rise to the occasion. This student (or parent volunteer) works side by side with you, the director, and records all choices about blocking and notes for the actors. The stage manager also coordinates the work of the stage crew, makes sure all props and furnishings are available for the actors, and keeps a master copy of the script. If an actor misses a line during rehearsal, he asks the stage manager for his missing line by calling out "Line!" The stage manager must follow along with the script and be ready to give out lines when called for. If an actor misses a rehearsal or even the show, it's the stage manager's responsibility (script in hand) to fill in.

NOTE: When an actor struggles with his lines, other actors may try to help by calling out the line. It's important to acknowledge them for their help while stressing that they should focus on their own work while trusting the stage manager to assist the struggling actor.

Sound operator. This is a major responsibility as the sound operator is in charge of running the music for the show. Since music is such an integral part of the play, you might want to consider doing this yourself or giving this job to an older child or even a parent volunteer or other adult.

The jobs listed below are not essential but are fun ways to involve students who may not wish to act.

Property master. The property master is in charge of helping the crew design and build props for the show. She may also be responsible for the props during the show.

Costumer. The costumer is in charge of helping the cast design or build costumes, or coordinate bringing in costumes from home.

Light operator. The light operator is in charge of turning on and off lights and running a spotlight if available.

Makeup artist. The makeup artist is in charge of helping the cast design and apply appropriate makeup for the show. (You don't need makeup for your show, but if a parent volunteer or other adult has some experience and wants to do makeup, it could be a good way to get them involved.)

THE AUDITION PROCESS

Preparing for the Audition

Print all the character's names from the play on a piece of lined paper for your notes. Table 1 on page 5 includes suggested script pages for audition dialogue for each role. Select specific lines, choosing dialogue that will give each auditioning actor the best opportunity to shine.

Now have a student or your stage manager write the name of each character on the board, leaving plenty of room by each name. Select small groups to go to the board to write their names next to their desired roles. Encourage students to audition for many roles—not just one. In fact, the more they audition, the more they will relax, making casting easier for you as you become acquainted with your students' talents.

Auditioning is a skill in itself so here are some helpful hints for your students:

1. Stand straight with both feet planted firmly on the floor.
2. Hold the script away from the body just below chest level to avoid blocking the face.
3. Speak clearly and with enough volume to be heard in the back of the room or use a "playground voice."
4. Read the dialogue with enthusiasm and feeling. Be the character. Say the line as the character would say it.

The Reading Audition

Choose a character from the list on the board. Ask everyone auditioning for that character to go to the front of the room. Have these actors line up next to one another with scripts in hand. One by one, each actor should step out, clearly say her

name and what part she is auditioning for, and read the lines of dialogue. (See Table 1 on page 5 for suggestions of audition dialogue by role.)

NOTE: Sometimes students struggle with reading and, therefore, stumble through their audition. Try positioning these students in the line so that they can audition after hearing the line read a number of times by others. Often struggling readers who are released from the tension of having to decipher the words give incredible performances For your reference, a relative reading level for each role is listed in Table 1 and Table 2. However, since your students will probably memorize their lines for the real performance, this might be an opportunity for a reluctant or struggling reader to shine and perform beyond their usual level.

You may want to audition multiple roles at the same time (for example by using a page from the script with dialogue for three characters). However, it is likely that you will find it easier (and faster) to audition one role at a time and read the dialogue on the page for other roles yourself.

It is usually best to hold auditions for each role in the play; however, you may want to audition just the larger roles and assign the smaller roles. Make notes as to which students might best play the role. Write down a few choices in case you need to shuffle around casting to get the right balance.

The Singing Audition

Spend some time practicing a song from the show, and then have each team member sing a few bars. Or you can have students sing a few bars from their favorite song. Singing *Happy Birthday* works well in a pinch. If there is resistance to singing alone, students can sing in small groups.

CASTING

Take your notes home. Think about the auditions and the skills needed for each role, and come up with your cast.

The next day, announce your casting, and get right to work. If a student is disappointed with his role, it can help to get him working right away. Dissatisfaction is likely to be forgotten as the group fun begins.

A fun way to get everyone moving is to play the Stage Direction game:

1. Explain the stage direction terms to your team: *upstage* (toward the backstage wall), *downstage* (toward the audience), *stage left* (actor's left), *stage right* (actor's right), and *center stage*.
2. Divide the team into small groups.
3. One group takes the stage. The director calls out a stage direction like "Stage left!" and the team must quickly move to stage left.
4. Going faster and faster, practice a few times with all the teams until everyone is comfortable with all the stage directions.

LEARNING LINES

You may decide to do the play as "readers theater" and have the actors read from the script during the performance. However, the play will look and feel better if your students learn and practice their lines. Encourage your students to *learn* their lines rather than memorize them. If they learn their lines, they will understand what their lines mean and why they are saying them, and they will always know

where they are in the play. This comes in handy if they forget a line during rehearsal or even during the performance. If they understand the intentions behind the lines, they can paraphrase and keep the play going, often without the audience catching on.

PROP AND COSTUME STORAGE

Have each member of your cast bring a brown paper bag to school. The actors should put their own names on a bag and pack up their props and costumes after each rehearsal.

REHEARSALS AND BLOCKING

A good way to start each rehearsal is with a warm-up exercise. Pick from some of the warm-up exercises on pages 12 and 13, or choose some of your own.

Since most classes have only one or two periods in which they can practice or rehearse, it's important to get your actors, scripts in hand, up on stage right away. Have them play the scene the way they want a few times to see what kind of movement and interpretation comes naturally to them. Inexperienced actors often turn their backs to the audience, so it's important to remind them that if they can't see the audience, the audience can't see them. A helpful way for actors to keep their bodies "turned out" so that they are more visible to the audience is to have them stand facing you with their upstage leg out slightly in front.

Music Rehearsals

Musical Warm-ups

If you have access to a piano and to someone who plays, have actors warm up their voices while singing scales. If the piano is not an option, try these easy ways to help your students get in good shape vocally:

1. Pick one of the show's songs, and have the actors softly hum the song. Humming should not be forced but done with the top and bottom lip slightly touching.
2. Staying on one note, have them sing: "Many mumbling mice are making midnight music in the moonlight, mighty nice." Keep singing light and easy as you have them repeat the lyric, each time taking the note vocally higher. When the actors have sung as high as they can go, begin again, this time going lower. This exercise will not only warm up the actors' voices, but the words can help build enunciation skills.

Blocking

Begin blocking rehearsals along with music rehearsals. Blocking is when you and your actors work out where, when, and how they will move around the stage during a performance. You can set your actors' blocking right away, or keep it fluid and experimental until you feel it's ready to "set in stone" for the performance.

Do song and stage blocking with the idea of creating a "stage picture." Try not to simply line up actors on the stage while they say their lines. Think in three levels: low, medium, and high. Can you seat some actors at the edge of the stage (low) while others stand (high)?

Remember to use the space and your actors creatively. For example, if your play calls for green trees on stage, perhaps rather than building trees out of cardboard, actors can create the feeling of trees with their bodies, enhanced with color and

costuming. If you have running water in your play, experiment with actors moving like water, or have them manipulate blue cloth across the stage. Doing this keeps more actors involved and helps build your ensemble into a cohesive team.

Planning Rehearsals

You may want to rehearse music on one day, do blocking the next, and then combine both on the third day. Just remember to plan your daily rehearsals so that the precious time you have is fully utilized. For example, if you have 50 minutes, you might schedule your rehearsal like this:

9:00–9:05 – Crazy Eights warm-up (see page 13)
9:05–9:15 – Vocal warm-up and sing one show song
9:15–9:35 – Block Scene One
9:35–9:40 – Run Scene One all the way through
9:40–9:50 – Notes and short discussion of planned work the next day

Set a goal of blocking a certain number of scenes per day. The following day, run those scenes, make any needed changes, and continue until you've finished blocking the entire play. After every rehearsal, discuss with your actors and crew how they think it went that day. Keep criticism constructive. If an actor points out a problem, ask for ways to solve that problem. Allow no blame, only support.

Crazy Rehearsals

Sometimes rehearsals just feel flat. Your actors may not be feeling energetic, or they may have run out of creative ideas. Try something different by having your actors perform the show as fast as they can or as loudly as they can. It's amazing how changes like these can perk things up!

Dress Rehearsals

A dress rehearsal is when your cast performs the show "for real" but without an audience watching. This will give you and your cast another chance to work out any surprises or problems. Have one or two dress rehearsals before the actual opening of the show. You can even invite a small audience (for example, students from lower grades) to watch your dress rehearsal.

OPENING NIGHT

Whether your performance is during the day or in the evening, make sure you have time to prepare and take care of any last minute issues that might come up. Have your crew and cast arrive one full hour before the show. Have actors work together to get into costume (with help from the crew or an adult volunteer, if possible), while the crew readies the set, props, and music.

When cast and crew are ready, gather them to do Crazy Eights (see page 13) and a vocal warm-up together. Remind everyone that, as hard as everyone tries, mistakes happen. Tell the students to let go of mistakes. Often "mistakes" on stage turn out to be creative opportunities.

Next the stage manager calls "Places!" and cast and crew take their spots before opening the curtain (if you have one). Now, Director, sit back and watch the magic as everything miraculously comes together to make a great play!

4. Lesson Plans

LESSON 1—RECYCLING

"Paper or plastic?" When you're asked this question at the grocery store, do you pause to consider it? Unless you've brought your own bag or your purchase is small enough to slip into a pocket or purse, you may find yourself thinking, "Paper or plastic, indeed? Which is the best choice?"

The students in *Paper or Plastic?* wrestle with the same question and find that the production and disposal of both materials harm the environment. Ultimately they figure out that recycling materials and using reusable containers are actions they can take to reduce their environmental footprint.

Even so, "paper or plastic?" remains an issue. Paper, for example, strikes many as a more environmentally friendly choice. After all, it breaks down, or *biodegrades*. This quality, however, is compromised by the facts of paper production and disposal.

First and foremost, paper production requires cutting down trees. According to the Natural Resources Defense Council, it takes 14 million trees to produce the 10 billion paper grocery bags used in just one year in the United States. The pulp for this paper comes from many forests, ranging from the boreal forests of Canada to the tropical rainforests of Indonesia. Cutting these forests destroys habitat that is home to wildlife. It also affects the livelihoods of native peoples living in and around them. The pace of rainforest destruction for the production of paper and other wood products contributes to local flooding and may also be a factor in climate change.

The transport of logs to pulp mills requires energy and causes pollution, as does the subsequent transport of paper bags to stores. Paper bags take up more room than plastic ones do, requiring more trucks and thus using more energy. Making paper bags from virgin wood (as opposed to recycled paper) and recycling them also uses more energy than does the production and recycling of plastic bags. (More information on this topic can be found on the Environmental Protection Agency's (EPA's) paper recycling website at www.epa.gov/osw/conserve/materials/paper/index.htm.

In addition, paper does not biodegrade quickly when it is entombed in a landfill. A landfill is sealed so that pollutants don't leak out into the air, soil, or groundwater. Researchers for the University of Arizona's "Garbage Project" have found 40-year-old newspapers in landfills that had degraded so little they could still be read quite easily.

Plastic bags likewise do not biodegrade in landfills. But they do not biodegrade in the environment either. Plastic bags that end up as litter (such as by blowing away or being tossed carelessly) find their way,

intact, into bodies of water such as oceans. There they may kill thousands of sea turtles, seals, and other marine mammals annually; the animals typically die because they mistake the bags for food items, according to the EPA (water.epa.gov/type/oceb/assessmonitor/debris/md_impacts.cfm). Over time, the bags do break down into small fragments, but this doesn't make them less of a pollutant. The tiny fragments find their way into the bodies of fish, seabirds, and other marine organisms. Plastic is the main component of what's infamously known as the Great Pacific Garbage Patch—an area of concentrated debris caught up in a spiral of ocean currents. Much of the debris consists of tiny plastic particles spread over an area about the size of Texas.

Plastic is made from petroleum, so its manufacturing begins with the extraction of oil. Like logging, oil extraction can cause environmental harm. Oil spills kill wildlife and pollute waterways. Some oil is also extracted from tropical lands and thus also contributes to the destruction of rainforests.

According to the *New York Times* (September 30, 2007) about 100 billion plastic bags are used in the United States each year—that's more than 300 bags per person, representing 12 million gallons of oil.

Although recycling plastic bags uses less energy than recycling paper, it is an expensive process, and thus far the recycling rate is low; according to the *Washington Post* (October 3, 2007), it hovers between one and three percent. (The recycling rate of paper bags is closer to 15 percent.) A large proportion of our discarded plastic bags end up in landfills (where they take up less room than paper, but don't degrade) or are shipped to developing countries to be burned (producing air pollution).

The decision faced at the grocery checkout regarding bags is akin to the debate about plastic bottles versus paper cups in *Paper or Plastic?*

Disposable plastic water bottles are usually made out of a plastic called *polyethylene terephthalate* (PET for short). According to the Pacific Institute, a nonpartisan environmental research organization, the annual production of plastic water bottles for use in the United States consumes more than 17 million barrels of oil.

Unfortunately most disposable water bottles and other containers made of PET end up in landfills, and only about 27 percent of PET bottles and jars were recycled in the United States in 2008, according to the EPA.

Most of the 130 billion paper cups used in North America each year also end up in the trash. Producing these cups requires millions of trees.

Clearly, "paper or plastic?" isn't a simple either-or choice—but there is a simple answer: bring your own reusable bag (whether it's a canvas tote or a reused plastic or paper one), and don't forget your reusable metal beverage container. (Reusing disposable plastic water bottles isn't advised, as chemicals can leach from plastic over time.)

Vocabulary

biodegrade—to decay as a result of microbial action

boreal forest—an evergreen subarctic forest

deforestation—the removal of forests by logging or burning

environment—one's surroundings

habitat—a place in which a plant or animal lives

landfill—a place where solid waste is dumped and buried under controlled conditions

municipal solid waste: trash produced by households and businesses (as opposed to construction, industrial, or hazardous waste)

pollutant—a substance that harms the environment and living things

polyethylene terephthalate (PET)—a kind of plastic

rainforest—an evergreen forest that receives 100 inches or more of rain per year

recycling—using discarded materials to make new products

Discussion

Before reading, performing, or seeing *Paper or Plastic?* take a vote in class: How many students think paper is the more environmentally friendly choice for a cup of water? How many students think a plastic water bottle is a more environmentally friendly choice? Write the results on the board. Take another vote after reading the play and see if the numbers have changed.

Ask students to tell you what they know about trash and recycling. The information they share need not be perfectly accurate or true at this stage; they are just pooling what they may have heard or read. Here are some questions to help generate discussion. Use the basic questions with students in any grade, the advanced ones with older students.

Basic Questions

1. What kinds of things do we throw in the garbage? What happens to them? Where do garbage trucks take garbage?
2. What is the environment?
3. What do you think a landfill is? What do you think happens to garbage that goes into a landfill?
4. What is recycling? What are some things that you recycle at home? at school? What happens to things we put in the recycling bin?
5. How can we cut down on the amount of garbage that goes into both the trash and the recycling bin?
6. Is it possible or necessary for us to completely give up using plastic and/or paper? Why or why not?

Advanced Questions

1. In the play, the Plastic Kids talk about the destruction of rainforests. Do you think some forests or other habitats need more protection than others?
2. The Plastic Kids describe the rainforest as a "perfect system." What do you think this phrase means? How might logging or other activities destroy a "perfect system"?
3. The Paper Kids in the play talk about how oil can harm the environment.

Can you think of any oil spills that have been in the news recently? What do you know about them?

4. In the play, four frogs talk about how frogs and other amphibians have suffered population losses possibly due to pollution, climate change, and other factors. How does this relate to what we as individuals do in our daily lives?
5. How might habitat destruction harm people as well as wildlife?
6. Jesse and Pat had strong opinions at the start of the play. At the end, they found a solution they both liked. Can you think of a time when you held a strong opinion but changed it when you learned new information?
7. Has the play sparked ideas in your mind as to how you might use paper and plastic in the future?

Show students a plastic grocery bag and a paper grocery bag. Ask, "What other things can we use these bags for?" Write students' responses on the board or a large sheet of paper. (This can easily be extended into an activity—perhaps using paper cut from grocery bags to make the pages of a book about reusing bags.)

Tell students that the average person living in the United States uses more than 300 plastic bags a year just to carry items home from stores. Have students calculate how many bags their class alone would use up by multiplying the number of students by 300. What do they think of the answer? Brainstorm alternatives to using bags. Together weigh the pros and cons of grocery-store bags and brought-from-home bags (e.g., grocery-store bags are convenient if you forget your tote bag; tote bags are sturdy and reusable and cut down on waste).

Activities for Grades 2–4

Papermaking 101

Objective: Students use old paper to make new paper, learning about historical and current recycling of old paper in the process.

MATERIALS

- Paper from classroom recycling bin (white, loose-leaf, or construction paper) (Note that any colored paper will tint the final result, which can be a desirable quality if the paper will be used to make cards or artwork. Newsprint will work too, but the result will be gray. Do not use glossy magazine paper.)
- Containers such as buckets, stockpots, and plastic bins to hold water
- Sections of screening used for window screens stapled to a small (approximately 8.5 x 11 in.) picture frame
- A sponge and or old towels
- Slotted spoons and a spatula
- Optional: books by author-illustrator Eric Carle showing how he uses paper to create his collages

PROCEDURE

1. Provide each student with paper to rip and cut into pieces about the size of a dime or smaller.
2. Have students submerge the paper pieces in water. Have students stir the mixture. Then let it sit for several hours or, even better, overnight. The paper will become very mushy.
3. Prop the screen over a sink or other catch basin. Have students use slotted spoons to lift the mushy paper from the water and spread it on the screen. Then have students use their hands to spread and press the mushy paper

across the screeen as thinly and evenly as possible.

4. Dab a towel or sponge on the underside of the screen to soak up extra water dripping from the paper. Then gently press a folded towel on the papered side and flip it over. Lay the felt or towel, with the screen on top, on a firm, flat surface. The screen can be carefully lifted now so that it will be used again.
5. Set the damp sheets on a flat surface in a warm or sunny place to dry. Drying time will depend on temperature and humidity, so the paper may be dry within hours, but it can take longer.
6. Use the paper in class projects, such as collages and murals. Pale paper also makes great stationery. Consider having students use the paper to make posters about recycling.

The Life of Trash

How long does it take for litter to decay in the environment? Table 3 shows decay rates students could use to put together an informational poster or a class museum with actual objects (with the exception of actual banana peels and apple cores!).

Table 3. Decay rates of everyday items

ITEM	DECAY RATE
Banana peel	2 to 5 weeks
Paper bag	4 weeks
Newspaper	6 weeks
Apple core	2 months
Cigarette butt	1 to 5 years
"Tin" can	50 years
Aluminum can	80 to 200 years
Plastic water bottle	450 years
Glass bottle	1 million years

Sources: U.S. National Park Service; Mote Marine Laboratory, Sarasota, Florida

T-Shirt Tote

Objective: Students turn old T-shirts into useful, easily stowed tote bags that can be used instead of plastic or paper grocery bags.

MATERIALS

- Old T-shirts (clean, not badly torn) Small holes can be repaired with patches if they're not big enough to compromise the bag's carrying ability.
- Chalk
- Fabric paints or markers
- Scissors
- Adult volunteer with sewing machine

PROCEDURE

1. Ask each student to bring in an old T-shirt to convert into a tote bag. (Have some extras on hand, if possible.) Have the adult volunteer turn each shirt inside out and sew its bottom closed.
2. Have each student cut off the sleeves of his or her T-shirt along the seam. Then have each student use chalk to draw a U shape below the neckline on both the front and back of the shirt, and cut along the lines.
3. Each student can then decorate his or her bag using fabric paint and markers.

NOTE: If desired, you can find instructions online for lining a T-shirt tote bag with duct tape to make it even more durable.

Activities for Grades 5–7

Waste-Free Lunches

Visit the following website, or similar websites, for detailed instructions on how to conduct a lunchroom audit designed to analyze what your school cafeteria's garbage consists of and how to possibly reduce the amount of material thrown away: www.astc.org/exhibitions/rotten/audsch.htm.

Trash—More or Less?

Objective: Students compare data from two EPA reports to see if rates of recycling are moving up or slipping back.

MATERIALS

- Data from the EPA's 2006 and 2007 reports (Table 4). Write each fact, e.g., material plus recycling rate, on a separate slip of scrap paper, so that pairs or small groups of students each get one fact.
- Art supplies for making bar graph (paper and colored pencils, paints, markers, crayons)

NOTE: You can use other years' data. The EPA Municipal Waste website (www.epa.gov/osw/nonhaz/municipal/msw99.htm) has information dating back to 1995. Terminology and categories have changed over the years, so consider this in selecting which data to present, so you can use comparable data.

PROCEDURE

1. As a class, discuss recycling. Do students feel that Americans are getting better at recycling? Why or why not?
2. Tell students they will examine and graphically portray data showing recycling rates over a two-year span. First, as a class, prepare a large graph, with the *x* axis showing categories of waste (e.g., steel cans) and the *y* axis showing recycling rate percentages (from 0 to 100). Then prepare and distribute the data from Table 4.
3. Have some students draw bars on the graph to show 2006 data. Then have other students do the same with 2007 data, putting their bars to the right of the 2006 bars.
4. As a class, discuss the graph. Which items showed an improvement in the recycling rate? Which stayed the same? Did any rates drop?

Table 4. Recycling rates per EPA (rounded)

ITEM	2006 (Percent)	2007 (Percent)
Auto batteries	99	99
Paper and paperboard	50	54
Steel cans	63	64
Aluminum beverage cans	45	49
Tires	36	35
Glass containers	25	28
Plastic soft drink bottle	34.1	37
White translucent bottles*	29	28

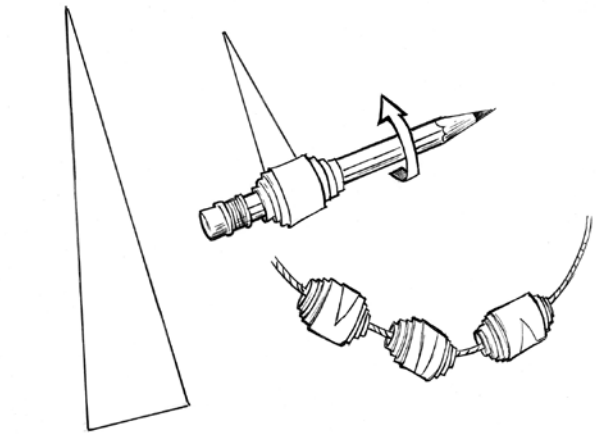
**e.g., milk jugs*

Trash to Treasure

Objective: Students turn the pages of discarded magazines into beads for art projects.

MATERIALS

- Old glossy magazines (with many pictures so the beads will be colorful)
- Scissors
- Glue
- Pencils



PROCEDURE

1. Have students cut magazine pages into long, tapered, triangular strips. The strips should be about an inch wide at the base.
2. To make a bead, the student lays a pencil on the base of a strip, then rolls up the paper so that it wraps tightly around the pencil. Glue the pointed end of the strip to the bead. Slip the bead off the pencil.
3. Let the beads dry. They can then be used to make jewelry or embellish other art projects.

Lesson 2—Healthy Habitats

A *habitat* is a place where a plant or animal lives. It offers its inhabitants food, water, and shelter. For animals, a habitat also provides a safe place to raise their young.

A human being's surroundings are a habitat too. Because human beings can eat many kinds of foods and find shelter in varied settings, they can make themselves at home in a wide variety of habitats. They can shape and change their habitats in ways that most living things can't.

A healthy habitat can provide the essentials of life to the animals and plants that have adapted to living in it over time. It's a self-sustaining system that's linked to other habitats spread across a larger area.

The health of a habitat can be compromised or destroyed, however—a catastrophe that we've seen occur numerous times. These threats include pollution, deforestation, urban sprawl, overgrazing, and alterations caused by building dams, roads, and housing tracts as well as the replacement of native plants by invasive nonnative species. Climate change due to human activities that create greenhouse gases may also be harming habitats.

Harm to habitats harms people too, of course. Polluting a waterway harms both the life within it and the drinking water of communities. Heavily logging a forest in one area may cause flooding in another.

Many people get involved in actions to change policies in order to preserve habitats. For example, they participate in organizations, write letters, visit politicians, donate money, or run for office. But many people, particularly children, aren't sure how they can help save habitats if they don't have the time or money to give.

The good news is every little bit helps when it comes to keeping habitats healthy—even using less plastic to pack a lunch, fixing a leaky toilet, or turning off lights when they are not in use.

It may seem as if wildlife habitat is far removed from simple, everyday activities such as replacing a light bulb. But consider this calculation presented by Energy Star (a program run by the Environmental Protection Agency and the Department of Energy): if one incandescent light bulb were replaced with a compact fluorescent light bulb in every household in the United States, enough energy would be saved in just one year to light more than 3 million homes and prevent the release of greenhouse gas emissions equivalent to the emissions of about 800,000 cars.

What's that got to do with habitat? Plenty. Using less energy means consuming less petroleum or hydropower. Petroleum extraction and dam building affect habitats, so if we can meet our energy needs utilizing existing infrastructure without building oil wells in sensitive regions, we can potentially stave off future habitat destruction. That's a powerful impact just for swapping out a light bulb!

Individuals can also help to restore habitats that have been degraded or destroyed. Habitat restoration can turn such places into healthy spaces again. A wetland that has been filled, for example, can be cleaned up and replanted to encourage it to become a viable wetland once again. Removing invasive plants, cleaning up a beach, replanting a prairie, and restoring a diverted or buried stream (known as "daylighting") are all examples of habitat restoration at work.

Vocabulary

adapt—to adjust or change to be well suited for life in a particular habitat

climate change—the alteration of worldwide weather patterns considered over a long period of time

daylighting—restoring the natural, visible flow of a stream, creek, or other waterway that was previously covered or channeled into pipes or culverts

compact fluorescent (CFL)—a light bulb that shines when electric current flows through a gaseous mixture of argon and mercury, causing the bulb's interior fluorescent coating to glow

greenhouse gases—gases that trap heat energy given off by Earth's surface, such as carbon dioxide, methane, and water vapor

habitat—a place where a plant or animal naturally lives

hydropower—power produced by harnessing the energy of flowing water

incandescent bulb—a light bulb containing a metallic filament that heats up and glows as electricity flows through it

invasive nonnative—a species, such as a plant, that is not native to a habitat but has been introduced into it, where it thrives and replaces some native species, altering the habitat in ways that make it unsuitable for native species

native—a species that has existed in a particular habitat for a very long time

species—a group of living things that share many traits and can reproduce to continue their species

Discussion

Ask students to tell you what they know about habitats and living things. The information they share need not be perfectly accurate or true at this stage; they are just pooling what they may have heard or read. Here are some questions to help generate discussion. Use the basic questions with students in any grade, the advanced ones with older students.

Basic Questions

1. What do animals and plants need so that they can live and be healthy?
2. What are some of the foods that animals eat? How do they find their food?
3. What do plants need in addition to water? Do plants need "food"?
4. What is a habitat?
5. What sorts of things do you have in your habitat? What could happen to your habitat to make it a poor place to live?
6. What happens to a plant or animal if its habitat is destroyed or badly polluted?
7. How can harming wildlife habitats harm people too?

Advanced Questions

1. What environmental disasters have you heard about? What caused them? What did people do to stop the problem or fix the situation?
2. What kinds of human activities have harmed the environment?
3. In the play, the Plastic Kids outline some causes of rainforest destruction and its consequences. They describe the rainforest as "a perfect ecosystem." What is an *ecosystem*? What makes it "perfect"? What happens when a rainforest is cut down without consideration for the environmental impact?
4. The kids in the play also stage a contest in which they hear from four endangered frog species. What are some of the reasons suggested for the decline of these frogs?

NOTE: According to the International Union for Conservation of Nature (IUCN) and the Amphibian Specialist Group, nearly one-third of amphibian species are endangered or already extinct. Their decline appears to be spurred by a combination of pollution, climate change, habitat destruction and fragmentation, over harvesting, the introduction of non-native species, and disease, including a deadly fungal infection.

Activities for Grades 2–4

Habitat Survey

Objective: Students take a close look at minihabitats to survey what lives in them.

MATERIALS

- Items that can be used to mark off equivalent patches of ground for study (for example, 3-foot lengths of string, Mardi Gras bead necklaces, large embroidery hoops, Hula-Hoops, picture frames without glass; all groups or pairs should use the same items)
- Safe area of turf, such as a playing field or schoolyard
- Pencils, paper, clipboards for each group or pair of students