THE BG GREENHELP GREENTEAM TOOLKIT

NICKELODEON



Ideas & Activities for Your School, Club, or Community Green Team

EARTH DAY - SUMMER CAMP - BACK TO SCHOOL



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THE EGGENHELP GREENTEAM TOOLKIT

Part One:

The Big Green Help

WHAT IS THIS?

The Big Green Help is Nickelodeon's environmental initiative created to educate, inspire, and empower youth to take care of the Earth. With the help of environmental and community partners, Nickelodeon created The Green Team Toolkit to connect teachers and group organizers to environmental education resources that are fun, practical, and engaging. The Green Team Toolkit contains practical Earth-friendly activities kids can do every day at home, school, or in their communities.

WHAT IS A "GREEN TEAM"?

Big Green Help Teams are popping up at schools, clubs, troops and community organizations across the country! A Green Team is a group of kids working together to make smart, eco-friendly changes in their home, school, and community. This Toolkit contains Earth-friendly ideas and activities to help YOU put together a Green Team and plan a Big Green Help Project in YOUR community.

WE DID OUR HOMEWORK

Nickelodeon collaborated with the Pew Center on Global Climate Change to conduct extensive research that would help us better understand kids' and parents' attitudes and behaviors relating to the environment. Through this research, we learned the environment is a major concern, but neither kids nor parents understand how their everyday decisions and actions have a positive or negative impact. We also learned that much of the environmental revolution will happen online digitally, a medium with which we are very familiar in engaging kids. With this research in mind, we crafted a campaign model that would introduce kids to some basic environmental themes through messaging, created a series of online video games and tools to keep them engaged, and are connecting them to national and local partners (LIKE YOU) interested in talking to kids about this important issue.

With the help of the National Wildlife Federation and the Natural Resources Defense Council, the Big Green Help created five key themes to serve as the focus of the campaign. These themes are: Grow the Green, Recycle/Precycle, Slow the Flow, Curb the Car, and SpongeBob and You Save the Big Blue. Each of the themes has its own unique on-air messaging, games, and activities to keep kids engaged. These resources have been bundled together here in this Toolkit as an 8-part lesson plan for you. Use this Toolkit in its entirety as an 8-week curriculum leading up to Earth Day (April 22nd) as part of a back-to-school project or à la carte as inspirational activities for your class or afterschool program, club, or troop.

Nickelodeon needs YOUR help to make the Big Green Help come to life in your community.

WHO'S INVOLVED

With the help of partners, Nickelodeon mobilized millions of kids to get involved and take interest in the environment. These partnerships play an integral role in making the campaign come to life in schools and communities nationwide. Our partners are the Boys & Girls Clubs of America, the Natural Resources Defense Council, National Wildlife Federation, Girl Scouts USA, The National 4-H, LeBron James Family Foundation, National Football League, and the National Environmental Education Foundation.

WE NEED YOU!

The future of the planet is in our children's hands. As adults, it is our responsibility to empower kids with the tools and resources they need to take action on protecting and improving the environment. Kids need to be encouraged with a support system around them, and with the help of club leaders, teachers, recreation directors, after-school groups, local organizations and parents, we can mobilize an entire generation to be more accountable.

The Big Green Help is a call-to-action for kids to "Play It, Pledge It and Live It" when it comes to saving the planet! Online and in life, kids can play and take part in activities that show them how they can make a difference!

PLAY IT

The activities in this Toolkit were designed to help kids learn "hands on" in a way that is fun and engaging. With the help of our partners, Nickelodeon created a series of environmentally-themed games for kids called the Big Green Help Global Challenge. Kids can log onto **www.biggreenhelp.com** to play educational games and track their progress along with other kids around the world! We have even created the first-ever global multiplayer online green game. Kids can connect with players all over the world to learn how they can save our planet! Please see brief reviews of each game on pages 7-9 of this section (Part One).

PLEDGE IT

Through the Big Green Help, kids pledge real-world hours in their homes, schools and communities to help save the environment. The ideas in this Toolkit include group activities that will help kids support and learn about the 5 Green Themes and select their very own pledges to live greener. To help kids make good on these pledges, we have created a number of resources in this Toolkit and online at **www.biggreenhelp.com** to track the progress and impact their individual and collective pledges have on the environment.

LIVE IT

After kids pick their pledges, the Toolkit helps YOU help kids make good on their pledges by adopting their very own Big Green Help projects at home, school or a local community organization.

How to Use This Toolkit

OVERVIEW

The goal of the Big Green Help Toolkit is to provide resources, activities, and tools for teachers and group leaders that encourage kids to be more responsible for the environment. From in-depth classroom lesson plans and hands-on home activities, to detailed plans for constructing an event in your community, the Toolkit offers thought-provoking assignments and actionable ways to protect and improve the environment one kid at a time.

NOTE: Though Big Green Help Activities are written in language appropriate for classroom settings, all activities are adaptable for use by groups outside of school organizations such as community centers, scout troops, kids clubs, etc. Additionally, each of the activities and events is only an idea and can be modified to best represent the locale, the school, the particular interest group or intent.

MATERIALS PROVIDED

- Six Group Activities (includes necessary worksheets, etc.)
- Six Home Activities (includes necessary worksheets, etc.)
- Planning Materials for a Big Green Help Event (includes permission slips, checklists, registration forms, certificates of completion, etc.)

SCHEDULE

This program was designed to take place over the course of 2 to 8 weeks (whichever works best for your Green Team). Three suggestions for planning these activities are as Earth Day, over the summer, or Back to School projects. The following is a suggested schedule with built in flexibility to account for spring breaks, school holidays or any other interruptions that may arise. Please review the activities and plan according to your specific needs.

- ACTIVITY ONE: Introduction to the Big Green Help
- ACTIVITY TWO: Grow the Green
- ACTIVITY THREE: Recycle / Precycle
- ACTIVITY FOUR: Slow the Flow
- ACTIVITY FIVE: Curb the Car
- ACTIVITY SIX: SpongeBob and You Save the Big Blue

BIG GREEN HELP EVENT: Selecting, planning and conducting your Big Green Help Event

Big Green Help Global Challenge Games

The BIG GREEN HELP GLOBAL CHALLENGE GAMES at **www.biggreenhelp.com** are online games for kids to play that reinforce the 5 Green Themes. Each game teaches kids the challenges of being green and then rewards them for working hard to save the planet. The following is a description of each online game and the Green Theme to which it applies.

GAME	THEME	DESCRIPTION	GREEN ACTION
SPONGEBOB DIRTY BUBBLE BUSTERS	Recycle/ Precycle	To tropical tunes, root around at the bottom of the ocean with SpongeBob and Patrick to suck up ugly brown blobs of trash and help them keep Bikini Bottom clean.	Don't forget the mega-importance of keeping our oceans clean and free of unwanted trash.
LEBRON JAMES BIKEATHON	Curb the Car	Curbing the Car is easy when you get to take a round-the- world bike ride with LeBron James! See the sights and learn lots of green tips along the way.	Riding a bike is one way to Curb the Car, but it's also awesome exercise and an emissions-free form of transportation! Get rollin'.
FAIRLY ODDPARENTS ENERGY BEAT BREAKDOWN	Slow the Flow	Help Cosmo and Wanda unplug unused electronics and save big on energy bills. Unplug to the changing rhythms and your score will soar!	Don't forget to turn off appliances, lights and other electronics when they are not in use your family will save serious dough on their electric bill and you'll keep from wasting the planet's precious energy.
MIGHTY B! BACKYARD HABITAT HEROES!	Grow the Green	Bessie is all about creating a backyard habitat for birds, bees and other wildlife, not to mention native plants and trees. Help her clean up the yard and get great green tips along the way.	Creating a better backyard habitat with Bessie helps Grow the Green and attract native plants and animals.

THE RUMBLIN', STUMBLIN' SIDEWALK SPRINT GAME	Curb the Car	Practice your running game on the way to school, picking up plastic bottles and leaping over trash cans and cracks in the sidewalk on your wayall while getting helpful green hints to save the planet.	When you run (or walk) to school instead of driving, you Curb the Car in a major way (zero emissions, baby). Save the world while getting in shape for the team at the same time.
AVATAR EARTH HEALERS	Grow the Green	The Fire Nation has scorched the Earth and you have to protect it by re-greening the landscape to save the planet from this evil plot!	Re-greening the landscape means to Grow the Green and re-plant areas of deforestation. Get growing!
ICARLY CAFETERIA RECYCLORAMA	Recycle/ Precycle	Carly's school cafeteria is seriously in need of recycling help. Join Carly in her recyclorama quest to put trays in the recycling bin in record time.	Recycle and precycle everything you can and your planet will be a better place tomorrow!
JIMMY NEUTRON FLIP N' FLOW	Slow the Flow	Help Jimmy connect leak- free pipes to safely deliver life-giving water to his friends and family. But be careful not to waste a drop!	Got water? Take only what you need and learn to conserve the rest. Saving water saves energy and \$!
BIG GREEN HELP GLOBAL CHALLENGE	Grow the Green, Curb the Car, Recycle/ Precycle, Slow the Flow	Pick your favorite Nicktoon and team up with players from around the world to battle the malicious CO_2 monsters! Collect cards on each monster to learn more on how you and your global gang of CO_2 busters can save the planet.	Tackling the mission of each monster allows you to Grow the Green, Curb the Car, Recycle/Precycle and Slow the Flow! Pledge real-world hours and show the world you are making a difference.
ADDICTING GAMES' BIG GREEN THUMB BUDDY	Grow the Green	Meet your Big Green Thumb Buddy! Together, you'll save the earth by growing trees. Click to grow those saplings into mighty oaks, but hurry!	Combat deforestation and Grow the Green.

NEOPETS' BIG GREEN HELP TRIVIA	Grow the Green, Curb the Car, Recycle/ Precycle, Slow the Flow	Think you know what it means to be green? Test your environmental knowledge with this interactive trivia game.	Learn a ton of enviro- friendly tips and gobs of new green info.
THE N'S POWER HOUSE	Slow the Flow	This house has some major energy-wasting issues and it's your job to find out where to Slow the Flow and fix 'em. You have the power to waste less energy in every room of the house.	Use your Slow the Flow knowledge to turn off appliances, lights and faucets to conserve energy.
THE N'S HOW GREEN ARE YOU! QUIZ	Grow the Green, Curb the Car, Recycle/ Precycle, Slow the Flow	Find out if you are a true ecostar or anti-green grump with this quiz. It uses examples from your everyday life and sorts your answers into different "bins" of greennesskinda like recycling.	It's not easy being green, but it's important and can save the planet if you start now. With this quiz, learn how to Grow the Green, Slow the Flow, Curb the Car, and Recycle/ Precycle.

About Nickelodeon and the Big Green Help Partners

ABOUT NICKELODEON



For 30 years now, Nickelodeon has given a voice to kids and to their concerns and causes. Whether it's entertainment, information or current events, Nickelodeon connects kids to their world in relevant and empowering ways. It is our core philosophy that kids can lead the way on important issues of our time, and when given the opportunity and tools, they indeed can be

agents of change that make our world a better place. The Nickelodeon Kids & Family brand includes television programming and production in the United States and around the world, plus consumer products, online, music, recreation, books, magazine and feature films. Nickelodeon's U.S. television network is seen in 96 million households and has been the number-one-rated basic cable network overall for the past 14 consecutive years. **Visit www.nick.com**

THE FOLLOWING ARE NICKELODEON'S PARTNERS IN THE BIG GREEN HELP INITIATIVE.

BOYS & GIRLS CLUBS OF AMERICA



Boys & Girls Clubs of America comprises a national network of more than 4,000 neighborhood-based facilities, with 4.8 million youth served through Club membership and community outreach, in all 50 states and on U.S. military bases worldwide. Known as "The Positive Place

for Kids," the Clubs provide guidance-oriented character development programs on a daily basis for children 6-18 years old, conducted by a full-time professional staff. Key Boys & Girls Club programs emphasize leadership development, education and career exploration, financial literacy, health and life skills, the arts, sports, fitness and recreation, and family outreach. **Visit www.bgca.org**

GIRL SCOUTS OF THE USA



Girl Scouts of the USA is the largest organization for girls in the world, providing girls with the opportunity for fun and friendship, while fostering the development of leadership skills and self-esteem. The mission is to build girls of courage, confidence, and character who make the world a better place. Through Girl Scouting, girls see the Earth as their home. Whether they're learning about

endangered wildlife, developing creative recycling projects, or working towards such earned age-level awards as the Environmental Health Badge or the Eco-Action Interest Project Award, girls focus on care, conservation, and responsibility and ensure the safety of our planet for future generations. Founded in 1912, Girl Scouts of the USA is the preeminent leadership development organization for girls, with 3.6 million girl and adult members worldwide. If you are interested in joining, volunteering or donating to Girl Scouts in your community, please call 800 GSUSA 4 U (800-478-7248) or visit Visit www.girlscouts.org

THE LEBRON JAMES FAMILY FOUNDATION



Founded in 2004, the LeBron James Family Foundation empowers children and single-parent households through innovative programming and initiatives, strengthening the ties between family members and building hope through education, physical fitness and better health for those who are dealing with adversity. Among the Foundation's most important national

programs are the Playground Build Initiative, which is focused on developing familycentered safe play spaces where children can be physically active in a multi-dimensional environment that encourages creative play; and "Meal & A Movie" events, which provide disadvantaged families with the opportunity to spend quality time together by enjoying a special meal and viewing a not-yet-released family-friendly movie. In addition, the Foundation hosts the "King for Kids Bikeathon," a fun-filled family event that honors area children while promoting physical fitness and raising awareness and critical funding for important community initiatives focused on empowering children and families. **Visit www.lebroniamesff.org**

NATIONAL WILDLIFE FEDERATION



National Wildlife Federation inspires Americans to protect wildlife for our children's future. Conservation efforts focus on confronting and providing solutions to the top challenges facing America's wildlife, by empowering concerned citizens in communities from coast-to-coast to:

CONFRONT GLOBAL WARMING. As the greatest threat to the future of wildlife, we are confronting global warming by advancing bold yet practical solutions for everyone from families to lawmakers, colleges and large corporations —with the goal of reducing global warming pollution by two percent annually to meet the goal of an eighty percent reduction by 2050.

PROTECT AND RESTORE WILDLIFE HABITAT. NWF promotes habitat protection and restoration projects from wetlands and great waters to prairies and mountains. It helps others help wildlife through programs like Wildlife Habitat that enable people to create wildlife-friendly places in their own backyards, schoolyards and business parks.

CONNECT WITH NATURE. The Green Hour and Great American Backyard Campout programs, as well as the award-winning publications Ranger Rick, Your Big Backyard, and Wild Animal Baby, bring today's children closer to the natural world—building a sense of conservation stewardship to protect the future of wildlife and wild places. **Visit www.nwf.org**

THE NATURAL RESOURCES DEFENSE COUNCIL



The Natural Resources Defense Council is the nation's most effective environmental action group, combining the grassroots power of 1.2 million members and online activists with the expertise of more than 350 lawyers, scientists and other professionals. NRDC works to protect people, the places they live, and the natural resources they depend on. The efforts to

curb global warming extend from the courtroom to the boardroom, from Capitol Hill to Main Street. NRDC is fighting to make sure politicians and big corporations stick to the rules. At the same time, its cooperative dialogue with business and government leaders helps to make our communities and our planet a safer, healthier place for all. **Visit www.nwf.org**





Young people become confident, mature adults ready for success in today's challenging world through 4-H, the nation's largest youth development organization, and the only youth program with a direct connection to technological advances and research from the nation's 106 land-grant universities.

Boys and girls of all backgrounds in urban, suburban and rural communities across America participate in three primary program areas: science, engineering and technology; healthy living; and citizenship. Youth learn leadership and life skills through thousands of projects with topics as varied as rocketry, GPS mapping, DNA analysis, public speaking, photography, nutrition and community service.

4-H is operated and supported by a shared leadership of public and private partners including National 4-H Headquarters at USDA; Cooperative Extension educators at land-grant universities; National 4-H Council; 4-H associations and foundations; and more than 500,000 volunteers. **Visit www.4-h.org**

NFLRUSH.COM



As the official kids' website of the National Football League, NFLRUSH.com offers unique, customizable content, games, contests, fun daily features on NFL players and information on the NFL's Youth Football programs, solely for kids. NFLRUSH.com, targeted to kids 6-15, provides an environment where kids can share their interest in

the NFL and delivers the NFL experience they want to have-as a fan, player or both. As part of the NFL PLAY 60, NFLRUSH.com offers fun and interactive games, player stories, workouts and other NFL information which inspires and motivates kids to be active for 60 minutes a day. The NFL is committed to make the next generation the most active and healthy knows a clean, healthy environment is critical to a youth's health and wellness. **Visit www.nflrush.com**

THE EG GREENHELP GREENTEAM TOOLKIT

Part Two: Activities 1-6 & Worksheets

Toolkit: Part Two Contents

ACTIVITY ONE: Introducing the Big Green Help

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ACTIVITY TWO: Grow the Green

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ACTIVITY FIVE: Curb the Car

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activity six: SpongeBob and You Save the Big Blue

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FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY ONE: Introducing the Big Green Help

LEARNING GOALS:

- 1. Introduce participants to The Big Green Help and its mission to help kids learn to make environmentally-friendly decisions in their everyday lives while learning new, energy-saving activities to practice at school and at home.
- 2. Inspire participants to save the planet by taking action in their own lives and spreading the green word!

MATERIALS:

- 1. The Big Green Help "5 Green Themes" worksheet
- 2. The Big Green Help Pledge Form
- 3. The Big Green Help "50 Green Tips" handout
- 4. Chalkboard or whiteboard
- 5. Access to www.biggreenhelp.com

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of the "5 Green Themes" worksheet for each participant*.
- 2. Print a copy of the the Big Green Help Pledge Form for each participant*.
- 3. Print a copy of the 50 Green Tips handout to post in class and for each participant to take home*.
- 4. Bring in physical examples that represent "being green" (e.g., recycled paper, recycle bin, low-flow shower head, compact fluorescent bulb, reusable grocery bags, etc.)

*AS A GREEN OPTION, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Give each participant a copy of the "5 Green Themes" worksheet.
- 2. Read the introduction section to participants and pick 5 participants to read each theme.
- 3. Group participants in pairs to fill out the questions and share answers with the whole class.
- 4. Review the Pledge Form and emphasize to participants that they need to keep this and continue to fill it out until the program is finished (for 2+ months).
- 5. Hand out the 50 Green Tips list for kids to take home and share with their families.

5 GREEN THEMES

INTRODUCTION:

Welcome to The Big Green Help, Nickelodeon's youth-led campaign that encourages making Earth-friendly decisions and doing energy-saving activities every day.

The future of the Earth is in our hands. We need to learn how to save the Earth for our tomorrow. So it's important to get the tools we need to take action and help the environment—making our home planet a better place to live. We are about to embark on a serious mission to help save the world while having some serious fun. Let's learn how to be GREEN!

GROUP DISCUSSION:

- What is the environment and why do we need to save it? (What has happened to our planet?)
- What does it mean to be GREEN?
- Are you or your family currently doing anything in your daily routines to try and be green? (Do you have recycle bins at home? Do you turn off the faucet while brushing your teeth? Give examples.)
- Share examples that represent being green (e.g., recycled paper, recycle bin, low-flow shower head, compact fluorescent bulb, reusable grocery bags, etc.). Draw or take pictures of green activities that you and your family do at home.

THERE ARE LOTS OF THINGS WE CAN DO TO BE GREEN. LET'S START WITH A LOOK AT THE BIG GREEN HELP'S 5 GREEN THEMES!

1. SLOW THE FLOW...OF WASTE, WATER, AND ENERGY!

Turn off the faucet when you are brushing your teeth, use energyefficient light bulbs, and unplug electronics when they are not in use. Get your school and community on board as well!

SOME EXAMPLES OF HOW TO "SLOW THE FLOW" ARE TO:

- Turn off the lights (and power down computers) when they're not in use.
- Replace ordinary light bulbs with compact fluorescent light bulbs (CFLs).
- Use a power strip for chargers and TVs and turn it off when they're not in use.
- Take shorter showers and challenge your family members to do the same.

2. CURB THE CAR...WALK, BIKE, SKATE OR TAKE PUBLIC TRANSPORTATION.

If it's not too far, don't use a car! Start a no-idle program at school in the bus and pickup line; start a bike day program; and try to carpool to school, activities and play dates.

SOME EXAMPLES OF HOW TO "CURB THE CAR" ARE TO:

- Travel by foot, bike, skateboard, rollerblade, etc., instead of by car.
- Tell your parents not to keep the engine running (known as "idling") while they're waiting in the car.
- Remind your parents to always keep their car tires properly inflated.

3. RECYCLE/PRECYCLE...MOST OF OUR GARBAGE ENDS UP IN LANDFILLS.

It's time to stop this and reduce waste by consuming only what we need. Use dishes, not paper plates; use lunch boxes, not brown paper bags; and drink from a glass, not plastic bottles. Start a recycling program in your school or community and encourage everyone around you to use reusable drink bottles and shopping bags.

SOME EXAMPLES OF HOW TO RECYCLE AND PRECYCLE ARE TO:

- Recycle your family's paper, plastic, aluminum and glass each week.
- Skip bottled water and drink filtered tap water instead.
- Bring your own reusable bag to the mall or grocery store.

4. GROW THE GREEN...PLANT TREES AND CLEAN UP THE OUTDOORS.

Plant a garden in your backyard, schoolyard or town and buy green school supplies like recycled paper. To "grow the green" also means to spread the green word. Tell everyone you can about going green and even start a letter-writing campaign to your local government!

SOME EXAMPLES OF HOW TO "GROW THE GREEN" ARE TO:

- Plant native trees in your yard or community (you will need permission to plant in your community!)
- Use recycled paper and paper products at home and in school.
- Buy locally grown and organic foods.

5. SPONGEBOB AND YOU SAVE THE BIG BLUE...

by conserving water and keeping our oceans and waterways clean. Take a shower instead of a bath, fix the leaky faucets in your house, recycle plastics and make sure to dispose of hazardous materials (paint, oil, etc.) correctly. Get your neighborhood, community and friends Involved and organize a beach, lake or river cleanup day!

SOME EXAMPLES OF HOW TO "SAVE THE BIG BLUE" ARE TO:

- Conserve water by shutting it off while brushing your teeth.
- Keep our water clean by using a reusable aluminum water bottle instead of plastic water bottles.
- Never litter, it can end up in the water system.
- Use eco-friendly household products and cleaners.

QUESTIONS (WORK IN PAIRS):

- 1. What are 2 other things you can do to Slow the Flow?
- 2. What are ways you could Curb the Car in your neighborhood?
- 3. How can we Recycle/Precycle? Give a few more examples of how to do this.
- 4. Name 3 additional ways you can help Grow the Green.
- 5. What other actions can you take to conserve water and Save the Big Blue?

SUMMARY:

Good work on getting to know what it means to be green! You will explore all these green themes and more in the coming weeks both at home and in your school or after-school program. You will track your findings and fill out pledge forms to make your commitment to greening the planet official. Then, at the end of your studies, you'll create a green event to have fun, demonstrate what you've learned, and celebrate changing the world for the greener!

HOMEWORK ASSIGNMENT:

- 1. Read the "50 Green Tips" list (provided) and share these tips with your family. Check off which tips you are already doing at home (if any), and circle the tips you and your family would like to try together (pick a minimum of 3).
- 2. At home, the computer lab, or the library, log onto the Internet and go to The Big Green Help website: http://www.biggreenhelp.com . Check out the site and pick 2 (or more) green video games to play (see the "Play Big Green Games" button on the top left side of the home page). By playing these games, you'll learn more about The Big Green Help and the green ideas we will be exploring in the weeks ahead. Invite a sibling, friend, or a parent to play! And if your class has access to the Internet at school, tell your group leader you'd like to play there too!
- 3. NAME YOUR GREEN TEAM! Your group will be working individually and collectively to make your environment greener. Think of some cool names to call your Green Team.

GREEN TEAM NAME:

I,______(Print Full Name), pledge to help save the planet by trying to make Earth-friendly decisions and participate in energy-saving activities that I have learned through The Big Green Help.

DGEFORM

GROW THE GREEN:

I pledge to help Grow the Green and make the planet a better place to live. (Initials) _____(Date)

RECYCLE/PRECYCLE:

I will try hard to Recycle & Precycle whenever possible. (Initials) (Date)

SLOW THE FLOW:

I will try to help Slow the Flow of using the Earth's resources.

_____ (Initials) ______ (Date)

CURB THE CAR:

I will work with parents and others to help Curb the Car.

____ (Initials) _____ (Date)

SPONGEBOB AND YOU SAVE THE BIG BLUE:

I will conserve water and keep the Earth's oceans and waterways clean.

(Initials) (Date)

YOUR SIGNATURE

PARENT OR GUARDIAN SIGNATURE

THE PLANET THANKS YOU!

The Big Green Help 50 Green Team Tips

For more ideas on how you can combat climate change and help save the environment, check out the Green Tips below:

- **1. REDUCE**, **REUSE**, **RECYCLE**: Be sure to recycle in your home and school, and try to use reusable products as often as possible.
- 2. USE LESS HEAT AND AC: Reduce the energy you consume to cool and heat your home. Turn your thermostat down or up by 2 degrees.
- 3. CHANGE YOUR LIGHT BULBS: Energy-efficient compact fluorescent light bulbs use less energy and last longer than regular lightbulbs.
- 4. DRIVE LESS, WALK AND GET YOUR ROLL ON!: Walking, biking, skateboarding, and rollerblading are not only better for the environment, they are also better for your health.
- 5. PLANT A TREE: Plants absorb carbon dioxide and emit oxygen. Planting trees will help counteract some of the effects of manufacturing, cars and other damaging activities to the environment.
- 6. GET SMART ABOUT THE ENVIRONMENT: Educate yourself about the issues that our planet faces, and learn new ways to make a difference by researching on the Internet. Try visiting the NRDC and NWF sites.
- 7. SPREAD THE WORD: Share information about the environment with your parents, friends, school and community. The more people that are in the know, the bigger the impact we can have on reducing climate change.
- 8. USE LESS WATER: Each year Americans use 149 trillion gallons of water. To help conserve this important resource, take shorter showers and turn the water off while brushing your teeth.
- **9. TURN ELECTRONICS OFF:** To save energy, turn your electronics off when you're not using them. And remember to recycle your old electronics.
- **10. EAT LOCALLY:** Eating local foods means that the food did not waste carbon emissions traveling to market.
- **11. ENCOURAGE YOUR PARENTS TO USE RENEWABLE ENERGY:** Solar power is an energy-efficient alternative to regular energy sources. When purchasing products, opt for those made by renewable energy whenever possible.
- 12. TURN YOUR COMPUTER OFF: The average desktop computer uses 200 watts of electricity per hour. Turning it off when not in use will save 300 pounds of C0, a year!
- **13. SET UP A NO IDLING ZONE OUTSIDE OF YOUR SCHOOL:** Talk to your principal to have buses and cars turn off their engines while waiting for participants at the end of the day.
- 14. ENCOURAGE YOUR SCHOOL OR CLUB TO START A RECYCLING PROGRAM: Write a petition and have your friends sign it. Work with your group leader to get it in the right people's hands.

- 15. START A BIKING CLUB: Encourage your friends to walk or bike as often as possible.
- **16. RECYCLE ALL OF YOUR PAPER AT HOME AND ENCOURAGE YOUR SCHOOL TO DO THE SAME:** Recycling one ton of paper saves 17 trees, 380 gallons of oil, 3 cubic yards of landfill space, 4,000 kilowatts of energy and 7,000 gallons of water!
- 17. SET UP A RECYCLING BIN IN YOUR KITCHEN: Recycle bottles, cans and plastics.
- **18. RECYCLE OTHER WASTES PROPERLY:** Things like electronics, batteries, and ink cartridges can—and should—all be recycled. Contact your local recycling center to find out how to safely recycle these items without damaging the environment.
- **19. PRINT ON BOTH SIDES OF THE PAPER:** Talk to your principal to find out if double-sided printing is possible at your school. It saves paper and money!
- **20. DRINK TAP WATER OUT OF A REUSABLE BOTTLE:** 2.5 million plastic bottles are thrown away every hour in America.
- 21. TELL YOUR PARENTS TO CHECK THE AIR PRESSURE IN THEIR CAR TIRES: Keeping tires properly inflated can save about 250 lbs of carbon a year.
- 22. TELL YOUR PARENTS TO CHANGE THEIR CAR AIR FILTER: Changing the air filter can save about 800 lbs of carbon a year.
- FILL THE DISHWASHER TO CAPACITY: To save water and energy, only run the dishwasher when it is full.
- 24. USE RECYCLED PAPER: Only use 100% recycled paper and always remember to recycle your paper when you are finished with it.
- 25. CHECK THE WATER HEATER IN YOUR HOUSE: Keep your water heater no higher than 120 degrees and you will save about 550 lbs of carbon a year.
- **26. CHANGE THE AC FILTERS:** Clean or replace AC filters routinely to ensure that the AC unit is as energy efficient as possible.
- 27. TAKE SHORTER SHOWERS: Long showers account for 2/3 of all water heating costs.
- **28. USE A LOW-FLOW SHOWER HEAD:** A low-flow shower head conserves water and lowers your heating costs to heat the water.
- 29. SAY NO TO PLASTIC BAGS: Use a reusable bag when shopping.
- 30. BUY MINIMALLY PACKAGED GOODS: Less packaging will reduce your garbage.
- 31. ENCOURAGE YOUR PARENTS TO BUY A HYBRID CAR: They save 16,000 lbs of CO, a year.
- **32. CARPOOL WHENEVER POSSIBLE:** Set up carpools with your friends and neighbors for school, practice and social events.
- 33. MAKE LESS GARBAGE: Conserve, reuse and recycle whenever possible.
- 34. INSULATE YOUR WATER HEATER: Keeping your water heater insulated will make it more energy efficient and can save up to \$40 dollars a year.
- **35. ENCOURAGE YOUR PARENTS TO LOOK INTO ENERGY:EFFICIENT APPLIANCES WHEN REPLACING OLD ONES:** Old appliances can be inefficient and waste energy and money.

- **36. WEATHERIZE YOUR HOME:** Caulk and weather-strip your doorways and windows to cut down on drafts.
- **37. SAVE ENERGY WHILE DOING GARDEN CHORES:** Volunteer to push a lawnmower rather than use an energy-hogging powered lawnmower. You will save 80 lbs of CO, a year.
- **38. BE A PLUG:PATROLLER:** Ask your parents for permission to unplug all electronics when they are not in use.
- **39. DRESS WARMLY:** Instead of heating your home and using more energy, dress in warm clothes in the winter months.
- 40. AIR:DRY YOUR CLOTHES: Set up a clothesline in your backyard and air-dry your clothes.
- **41. ENCOURAGE YOUR FAMILY TO BUY AND EAT ORGANIC FOODS:** Organic food does not use harmful agricultural chemicals that can damage the environment.
- **42. COLLECT RAINWATER:** Use rainwater for watering plants and washing the family car (with biodegradable soap, of course).
- 43. USE BOTH SIDES OF YOUR NOTEBOOK PAPER: Use both sides of all of your loose-leaf paper.
- 44. BE ENERGY EFFICIENT WHEN WASHING THE DISHES: Fill the sink with water instead of running the water as you clean your dishes.
- **45. GET THE MOST OUT OF YOUR DISHWASHER:** Scrape scraps of food off plates so you do not waste water scrubbing them off or using a longer cycle in your dishwasher.
- **46. WRITE TO CONGRESS:** Set up a letter-writing campaign in your school to urge Congress to pass green legislation.
- **47. TURN OFF THE WATER AT THE SINK:** Turn the water off when you are brushing your teeth or washing your face.
- RAKE YOUR LEAVES INSTEAD OF USING A LEAF BLOWER: Save energy while getting upperbody exercise.
- 49. AIR:DRY YOUR HAIR: Let your hair air-dry instead of using a blow dryer.
- **50.** ALWAYS TURN DOWN THE HEAT DOWN AND THE AC OFF WHEN YOU ARE NOT HOME: In addition to turning the thermostat down or up 2 degrees when you are home, remember to turn your AC off when you leave the house.

FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY TWO: GROW THE GREEN: PLANT A GARDEN

LEARNING OBJECTIVES:

- 1. Participants will be able to understand the concept "Grow the Green." This includes knowing the negative effects of cutting down trees and clearing vegetation as well as the benefits of planting trees for the health of the environment.
- 2. Participants will be able to make energy-efficient decisions by learning the difference between buying imported fruits and veggies and buying local, or growing their own.
- 3. Specifically, participants will learn how to plant, nurture and harvest a garden while becoming more familiar with the produce grown by local farmers in their area. They will learn how being a "locavore" and Growing the Green can help save the planet!

MATERIALS:

- 1. Green Team Activity 2 "Plant a Garden" worksheet (including "Grow the Green" Vocabulary).
- 2. Field Trip Activity 2 "Befriend a Farmer" worksheet.
- 3. Pledge Form (handed out during Activity 1).
- 4. Seeds, soil, watering cans, water, small planters or one large outdoor area, a ruler or measuring tape, organic fertilizer, growing instructions (provided), and patience.
- 5. Access to BGH Online Games (www.biggreenhelp.com).

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of the Green Team Activity 2 "Plant a Garden" worksheet (including "Grow the Green" Vocabulary) for each participant.*
- 2. Print a copy of the Field Trip Activity 2 "Befriend a Farmer" worksheet for each participant.*
- 3. Have handy the Pledge Form (handed out during Activity 1).
- 4. Bring in physical examples that represent how to "Grow the Green" (e.g., potted plants, farmers market information, tree-planting society info, etc.).

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Give each participant a copy of the Green Team Activity 2 "Plant a Garden" worksheet.
- 2. Read the introduction section to participants and choose one participant to read each of the Grow the Green Vocabulary terms and definitions.
- 3. Discuss the concept of Growing the Green with the whole class.
- 4. Collect data from the Green Team Activity 2 during the growing season (up to 8 weeks).
- 5. Hand out the Home Activity 2 "Befriend a Farmer" worksheet; discuss results in class.
- 6. Instruct participants to complete the Pledge Form under "Grow the Green" once the home activity has been completed. Remind them to hang onto this form as they will continue to fill it out until the program is finished (for 2+ months).

FOR TEACHER/GROUP LEADER'S EYES ONLY:

Answers to Group Discussion Questions.

- 4. True. The food miles for items you buy in the grocery store tend to be 27 times higher than the food miles for goods bought from local sources.
- 5. True. According to the Worldwatch Institute, in the United States, food typically travels between 1,500 and 2,500 miles from farm to plate—as much as 25 percent farther than in 1980.

GROW THE GREEN: PLANT A GARDEN

INTRODUCTION:

Every day trees are cut down and vegetation is cleared to make products or make room for development. We use trees to build homes, make paper, cardboard, milk cartons and more. As we'll learn in Activity 3, we can reduce the waste of precious paper by recycling it and by buying products made from recycled materials. But we can do even more. Trees help us to breathe by cleaning the air and absorbing CO_2 , so we need to make sure there are plenty of trees and plants around to gobble up these harmful emissions. In addition to cutting down fewer trees and recycling, we can also replant deforested areas and plant new trees where there were no trees before to give the planet a boost! How do we do it? Grow the Green!

What does it mean to Grow the Green? It means to plant trees and clean up the outdoors! Plant a garden in your backyard, schoolyard or town. Grow the Green also means choosing to use locally grown produce (fruits, veggies and more), which is also called being a "locavore." This practice not only supports area farmers who give back to our communities, it also reduces the use of fossil fuels when transporting goods versus wasting the energy needed to deliver products far, far away. Those who Grow the Green might also consider organic foods (grown with zero chemicals and using renewable resources) and the practice of composting (reusing organic waste for fertilizers).

In addition, Grow the Green means to grow the awareness of green practices, or to spread the green word! Tell everyone you can about going green and even start a letterwriting campaign to your local government! Remember, the future of the Earth is in our hands. So let's learn how to Grow the Green!

GROW THE GREEN VOCABULARY:

- LOCAVORE: Someone who eats primarily locally grown and produced foods.
- **ORGANIC:** Food that has been grown and/or prepared without chemicals, manmade fertilizers or pesticides. It is produced by farmers who use renewable resources like the sun and the preservation of soil and water to create the best quality. Organic meat, poultry, eggs, and dairy products come from animals that are fed no chemicals.
- **COMPOST:** It's food for the soil! It is what you get when organic wastes like fruit or vegetable food scraps, paper and yard trimmings decompose naturally. Compost is rich in minerals and is a great fertilizer for gardening and farming.
- **DEFORESTATION:** The removal of all trees in a forest without replanting.
- SUSTAINABLE: A sustainable community is capable of maintaining its present level of growth without damaging effects to the environment.

GROUP DISCUSSION:

- 1. What are a few ways we can Grow the Green at school? How about at home?
- 2. What are some native trees and common local crops grown or produced in our area?
- 3. Do you or your family currently buy local food and produce (made or grown within 100 miles of home)? Give examples.
- 4. True or False: In the U.S., the average grocery store's produce travels nearly 1,500 miles between the farm where it was grown and your refrigerator.
- 5. True or False: Even though broccoli is likely to be grown within 20 miles of one's house, the broccoli Americans buy at the supermarket travels an average of 1,800 miles ot get there. In addition, about 40 percent of our fruit is produced overseas.

DISCUSSION QUESTIONS:

What can we do to reduce the use of fossil fuels used to transport our groceries? How can we clean the polluted air by planting trees? Let's start with Growing the Green in our very own classroom and learn to plant a garden!

GREEN TEAM ACTIVITY:

Have you ever stopped to think about where your food comes from each day or how far it travels to get to you? Every time we eat cereal in the morning or munch an apple at lunch, we are consuming food grown somewhere else by someone else—by a farmer in your very own town or perhaps a farmer as far away as New Zealand! To truly appreciate the food we eat each day, it's important to get our own hands dirty and see for ourselves what it takes to Grow the Green!

- 1. Before it's time to get growin', pick one of the following fast-germinating veggies that your class would like to grow: radishes, lettuce or sweet peas (or, if you're ambitious, try all three).
- 2. Carefully read the growing instructions carefully below and keep a log of your crop (making sure you have dated progress reports each week).
- 3. Get ready to plant a vegetable garden at your school, club, or in your community! If the weather and grounds allow, try an outdoor garden. If not, plant your garden in a barrel, pot or indoor planter.

Keep track of soil type, amount of water used, hours of sunlight, time to grow each vegetable variety, and which seeds grew better than others (and why) to understand the attention needed to grow the things we eat every day that we may take for granted.

GROWING INSTRUCTIONS FOR RADISHES

Radishes are one of the fastest maturing crops you can grow. They germinate in 3 to 7 days and many are ready for harvest in about a month. As underground growers, the roots of this vegetable are the prize—red, white and delicious. Radishes come in a wide variety of shapes (round to oblong), colors (including red, white, pink, purple and yellow), and sizes. Most are eaten raw to add a spicy flavor to salads, veggie trays and more.

HERE'S HOW TO GET GROWIN':

- 1. Fill your garden or indoor container with rich, well-drained soil (radishes will grow in the top 6 inches of soil). If working an outdoor garden, remove any rocks or weeds.
- Sow radish seeds a half-inch deep. Space them 1¹/₂ to 2 inches apart. Separate rows by 8 to 10 inches. Double rows are recommended, with wider rows between the double rows to make for easy access. Radishes do not like to be crowded and will not bulb properly if overcrowded by other radishes or weeds.
- 3. Fertilize with organic fertilizer.
- 4. If you have an outdoor garden, be sure to continue to weed, especially during the first 2 weeks. It's important for proper bulb growth. If you have an indoor garden, make sure your pot or planter is placed in an area with ample sunlight.
- 5. Keep your radishes cool, and water them frequently without over-saturating the soil. They do not perform well in high heat or in overly dry soil.
- 6. Watch, water, wait and harvest! Radishes typically take 20 to 30 days to mature.

(Note: some cylindrical varieties may require a bit more time).

GROWING INSTRUCTIONS FOR LETTUCE

Ever eaten a salad? Surely it would not be the same without lettuce—the primary ingredient in most salads. Lettuce is also a basic in sandwiches. It is nutritious and tastes great! Loose leaf varieties can be ready to cut in as little as 3 weeks. Because there are so many varieties from Arugula to Endive and Mesclun to Black Seeded Simpson (note: this is the fastest and easiest to grow), check the information on the seed packet for more specific growing times.

HERE'S HOW TO GET GROWIN':

- 1. Fill your garden or indoor container with rich, well-drained soil. If working in an outdoor garden, remove any rocks or weeds.
- 2. Sow lettuce seeds in rows, spreading the seeds as thinly as possible.
- 3. Cover the seeds with a very fine layer of loose soil.
- 4. Fertilize with organic fertilizer.
- 5. If you have an indoor garden, make sure your pot or planter is placed in an area with ample sunlight.
- 6. Water thoroughly every day for about a week (unless you have an outdoor garden and it rains, then hold off on watering). Lettuce likes cool weather and lots of moisture.
- 7. Watch, water, wait and harvest! Loose leaf lettuce can be ready to cut in as little as three weeks. Pick lettuce as soon as it is big enough to use.

GROWING INSTRUCTIONS FOR SWEET PEAS

Sweet Peas are nutritious vegetables grown for their seeds. Growing sweet peas is easy and they're a good source of protein, minerals, and vitamins, and they're fun to pick. Most have a vining habit and need support in order to yield a good crop. Try growing them on a trellis, fence, or bamboo tepee.

HERE'S HOW TO GET GROWIN':

- 1. Fill your garden or indoor container with rich, well-drained soil. If working in an outdoor garden, remove any rocks or weeds.
- 2. For outdoor gardens, select an area that gets full sun. For indoor gardens, make sure your pot or planter is placed in an area with plenty of sunlight.
- 3. Mound soil for spring planting if your area receives heavy and frequent spring rains. This slight elevation helps to warm the soil. Most importantly, it keeps excess water and spring rain from rotting the seeds before they sprout.
- 4. Fertilize with organic fertilizer.
- 5. Sow sweet pea seeds 1 to 1¹/₂ inches apart. Plant double rows approximately 2 feet apart. A fence or trellis for the vines to climb up is later placed between the double rows.
- 6. Water well, as needed. Sweet peas do not grow well in hot weather.

- 7. Once peas begin to sprout, add the lightweight fence or trellis for them to begin climbing.
- 8. Watch, water, wait and harvest! Sweet peas typically take anywhere from 55 to 70 days, depending on variety. Harvest while young and tender. Sweet peas lose their sweetness and become hard if left on the vine too long.

SUMMARY:

Growing the Green can be very rewarding, but it takes time, effort and attention to detail. After taking the time to nurture your crops and waiting patiently for them to grow, you may have found a new appreciation for the food you eat each day.

Now that you know how to Grow the Green, continue to plant vegetables, fruits and trees whenever you can—in your community and at home. Tell friends and family how learning to Grow the Green can be fun and can help save the planet!

FIELD TRIP: BEFRIEND A FARMER

Once you have begun to Grow the Green at school, it's time to learn more from the experts—your local farmers. Befriend a farmer, a worker at a local farmers market, or an organic retailer and find out what it's like to Grow the Green full-time. Find out what they grow, when and how they do it. Do they grow organic fruits or vegetables or do they use pesticides and chemical fertilizers? Ask them what it means to be a locavore and why it's important to support our local farmers.

Before you begin, ask your family the following multiple-choice question and share the answer to provide some important facts on Growing the Green.

MULTIPLE CHOICE QUESTIONS:

Buying locally grown produce from family farmers is important because:

- a) Local family farmers spend their money with local merchants. The money stays in town where it benefits everyone and builds a stronger local economy.
- b) Eating locally grown, healthy food strengthens your family and community.
- c) Local farmers who sell direct to consumers receive a larger share of the profit for their food.
- **d)** Buying locally grown food eliminates the need to use precious non-renewable resources for lengthy transport and delivery, therefore reducing harmful emissions from burning fossil fuels.
- e) All of the above.

INSTRUCTIONS:

- With the help of your teacher or group leader, plan a visit to a local farmers market, fruit stand or local food store near you. There are over 3,100 farmers markets in the U.S.—to find one in your area, ask around or see a listing online at http://www.ams.usda.gov/ farmersmarkets/facts.htm. If a farmers market or local fruit stand is still hard to come by in your neighborhood, visit the grocery store and instead of interviewing a farmer (as described in the next step), talk to a produce specialist about what fruits and vegetables are grown closest to home during the current season.
- 2. At the farmers market or fruit stand, talk to the farmers and observe what kinds of fruits and vegetables are available during the current season. Find out what they grow, when and how they do it. Do they grow organic fruits or vegetables or do they use pesticides and chemical fertilizers? Ask them what it means to be a locavore and why it's important to support our local farmers.

- 3. Record your results and compare them with the class.
- 4. Share the "10 Easy Steps to Become a Locavore" with your family and have them pledge to be a better locavore with you, to help you Grow the Green, and to save the planet.

10 EASY STEPS TO BECOME A LOCAVORE -TRY ONE OR ALL OF THE STEPS BELOW!

- 1. Visit a farmers market
- 2. Choose products in your grocery store supplied by local farmers
- 3. Find 5 foods in your house that you can buy locally
- 4. Find a local CSA (Community Supported Agriculture) program and sign up
- 5. Preserve local food for the winter
- 6. Find out which restaurants in your area support local farmers
- 7. Host a local Thanksgiving
- 8. Buy from local vendors
- 9. Ask about the origins of your food
- 10. Visit a farm in your area

EXTRA CREDIT: Find your "50 Green Tips" sheet from the last class, Activity 1, and circle which of the 50 Green Tips are tips that help "Grow the Green."

TRACK YOUR PROGRESS: Keep a log of your results or track your progress online at www.biggreenhelp.com

FINISHED? IT'S TIME TO PLAY!

Reward yourself for completing your Grow the Green activities by playing The Big Green Help's interactive games that help us practice how to Grow the Green. At home, a computer lab or at the library, visit **www.biggreenhelp.com** and play one (or all) of the following games:

- Big Green Help Multiplayer Game
- Mighty B! Backyard Habitat Heroes
- Avatar Earth Healers

If you love these games, and have Internet access at school, or club, challenge your friends to see who can get the highest score. Encourage your teacher to let the class play!

SIGN THE PLEDGE FORM:

When Home Activity 2: Grow the Green has been completed, initial the Pledge Form under "Grow the Green" (distributed during Activity 1).

FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY 3: RECYCLE/PRECYCLE: SOLVE THE PAPER CAPER

LEARNING OBJECTIVES:

- 1. Participants will be able to understand the concept "Recycle/Precycle." This includes knowing the difference between recyclables and garbage, how creating garbage or waste is harmful to the environment, and ways to reduce waste.
- 2. Participants will be able to make energy-efficient decisions by learning how to Recycle/Precycle.
- 3. Specifically, participants will learn how using recycled paper and reducing the overall use of paper products can help save millions of trees!

MATERIALS:

- 1. Green Team Activity 3 "Solve the Paper Caper" worksheet (including "Recycle/ Precycle" Vocabulary).
- 2. Home Activity 3 "Recycle/Precycle" worksheet.
- 3. Pledge Form (handed out during Activity 1).
- 4. Garbage bins or large cardboard boxes to be used as recycle bins; pens to mark them.
- 5. OPTIONAL: Access to BGH Online Games (www.biggreenhelp.com)

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of Activity 3 "Solve the Paper Caper" worksheet (including "Recycle/ Precycle" Vocabulary and Home Activity 3) for each participant.*
- 2. Print a copy of the Home Activity 3 "Recycle/Precycle" worksheet for each participant.*
- 3. Have handy the Pledge Form (handed out during Activity 1).
- 4. Bring in physical examples that represent how to "Recycle/Precycle" (e.g., reusable grocery bags, recycled paper, etc.).

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Give each participant a copy of the Green Team Activity 3 "Solve the Paper Caper" worksheet.
- 2. Read the introduction section to participants and choose one participant to read each of the Recycle/Precycle Vocabulary terms and definitions.
- 3. Discuss the concept of Recycle/Precycle with the whole class.
- 4. Collect data from the Green Team Activity before the aggressive recycling program begins and compare the data two weeks after the program has been in progress.
- 5. Hand out the Home Activity 3 "Recycle/Precycle" worksheet; discuss results in class.
- 6. Instruct participants to complete the Pledge Form under "Recycle/Precycle" once the Home Activity has been completed. Remind them to hang onto this form as they will continue to fill it out until the program is finished.

FOR TEACHER/GROUP LEADER'S EYES ONLY:

Answers to Group Discussion Questions

- True. It was not until the 1850's when Friedrich Gottlieb Keller created a revolution by crushing wood with a wet grindstone that our vast natural forests began to fall for the production of paper.
- 5. True. You can save one tree for every four feet of paper you recycle.
- 6. True. It takes more than 100 million trees to produce the total volume of junk mail that arrives in American mailboxes each year.

RECYCLE/PRECYCLE: SOLVE THE PAPER CAPER: INTRODUCTION

Every day, we use materials made from the Earth's resources for school, home and play. We use paper to write on and read from. We use plastic bottles to drink from. And we use glass jars to store food like jelly or spaghetti sauce. But what happens when we are done using these materials? Many people simply throw them away. That's right. Perfectly good, reusable materials go to waste as garbage. And unfortunately, most of our garbage ends up in landfills! But we can stop these wasteful ways and learn to reduce waste by consuming only what we need and reusing the materials when we're finished. How do we do it? Recycle/Precycle!

What does it mean to Recycle/Precycle? It means to create less waste by recycling materials and choosing to buy products made from recycled materials. Use dishes, not paper plates; use lunch boxes, not brown paper bags; drink from a glass, not from plastic bottles; and bring reusable shopping bags to the store instead of taking the store's plastic bags.

It also means choosing to use products that are made with recycled materials to begin with or precycling! Take paper, for example. If we buy paper that has already been recycled (versus paper made from virgin trees) and then recycle it when we are done with it, we can do a double service to the environment by using fewer trees and creating fewer harmful pollutants. Remember, the future of the Earth is in our hands. So let's learn how to be GREEN and Recycle/Precycle!

RECYCLE/PRECYCLE VOCABULARY:

- **RECYCLE:** To collect, sort and reprocess old materials to be used to make new things.
- **PRECYCLE**: To use products made with sustainable or recycled materials.
- DEFORESTATION: The removal of all trees in a forest without replanting.
- **SUSTAINABLE:** Capable of maintaining its present level of growth without damaging effects to the environment. (introduced in Activity 2)
- NONRENEWABLE RESOURCES: Energy resources that have a limited supply such as coal, oil and natural gas.
- CARBON EMISSIONS: C0₂ released into the atmosphere by the burning of fossil fuels like coal and oil.

GROUP DISCUSSION:

- 1. How many and what kinds of materials do you throw away each day (from paper and cans to plastic bottles and packaging)? Make a list on the chalkboard.
- 2. What are some ways to reduce the amount of trash we produce?
- 3. Are you or your family currently doing anything in your daily routines to Recycle/ Precycle? (Do you recycle pop cans or newspapers? Give examples.)
- 4. True or False: Using wood to make paper is a fairly recent innovation. Linen, straw and hemp were the primary material sources for paper throughout the centuries.
- 5. True or False: If every American recycled his or her newspaper just one day a week, we would save about 36 million trees a year.
- 6. True or False: The amount of junk mail that arrives in American mailboxes each year equals the clear-cutting of the entire Rocky Mountain National Park every 4 months.

DISCUSS ANSWERS TO TRUE/FALSE: QUESTIONS.

What can we do to reduce waste and keep garbage from piling up in landfills? Let's start with Recycling/Precycling in our very own classroom and learn to solve the paper caper!

GREEN TEAM ACTIVITY:

Do you know how much paper our class goes through each week? From handouts and tests to graded homework assignments and instructions, we generate some serious piles of paper. With our planet in peril and deforestation happening at an alarming rate, it's time to Solve the Paper Caper and learn to Recycle/Precycle. But before we can come up with the best plan to Recycle/Precycle, we need to know the stats. How many sheets of paper get tossed out by our class each week and what does that amount to in an average school year?

- 1. Monitor how many sheets of paper our class throws away in one week. Assign "counters" to tally up the number of sheets used each day. Once counted, put sheets away and mark "counted" along with the date atop the pile. Then, at the end of the week, counters will tally up their daily results and report the weekly total to the class.
- 2. Upon receiving the weekly total of sheets used in class, calculate how much paper would typically be thrown away in one entire school year (most school years are approximately 40 weeks, so multiply your weekly total by the number 40 to get the answer).
- 3. After all the data has been gathered, determine how many trees are wasted in a typical school year using the Paper Sheets-to-Trees Conversion Chart below.
- FOR 4TH GRADE AND OLDER: Now, assuming other classes use similar amounts of paper each week, determine how much paper would be used by all the classes in your school in one year.
- 5. Come up with a plan to Solve the Paper Caper for your class and try to Recycle/

Precycle. If your class is not recycling now, start by creating separate recycle bins in your classroom. If your class is already recycling, discuss how else you could save on paper. Encourage teachers and staff to print double-sided and come up with ideas on how to use email, the Internet, overhead projectors, whiteboards and chalkboards in place of paper when possible (see more ideas on the Tree-Savers' To-Do List below).

- Two weeks after your class has practiced new efforts to Recycle/Precycle, repeat step 1 (count the sheets your class goes through in one week) and track the improvement. IMPORTANT: Please save the results for a potential green event at the end of the program.
- 7. Want to make an even bigger difference? Challenge other classes in your school (and your school's office of administration) to Solve the Paper Caper too and create a school-wide competition to see which class can save the most paper (and the most trees)!

PAPER SHEETS-TO-TREES CONVERSION CHART

This chart shows how the number of sheets of paper equates to the number of trees used to make the paper. To find out how many trees are used at your school in one week, divide the total number of sheets used by 8,333. (i.e 10,000 sheets $\div 8,333 = 1.2$ trees).

# OF PAPER SHEETS THROWN AWAY	TREES USED*
8,333 sheets	1 tree
16,666 sheets	2 trees
24,999 sheets	3 trees

*Please note: All trees vary by size and thickness, so this is an approximate figure.

TREE-SAVERS' TO-DO LIST:

- **GET DOUBLE DUTY OUT OF YOUR WRITING PAPER:** Use both sides of the page in your notebooks and when you use scrap paper.
- **PRINT SINGLE-SPACED**: Single-spacing your documents uses half the paper.
- **PRINT DOUBLE-SIDED:** Lots of paper is printed on only one side. Keep it and reuse the second side as scratch paper or print twice the amount of info on one sheet by using both sides.
- **RECYCLE PAPER:** When both sides of the paper have been used, don't throw it out recycle it. The rules and methods for recycling differ from area to area, so it's important to find out what materials can be recycled and how they should be sorted.
- **BUY RECYCLED PAPER:** When you buy notebook paper, choose paper that has been recycled and made without chlorine bleach (this is what we call "precycling").
- USE A CHALKBOARD, WHITEBOARD OR OVERHEAD PROJECTOR: Make information available to the class in one large format instead of individual pieces of printed paper.
- CUT PAPER USE IN HALF: Use half-size sheets for short memos and letters.

- **CONSOLIDATE OR EMAIL SCHOOL ANNOUNCEMENTS:** Mailings should be consolidated whenever possible or sent via email.
- SUGGEST AIR DRYERS: Instead of paper towels, suggest that the school install air dryers.
- USE RECYCLED PAPER AND PAPER:BASED SUPPLIES: Ask your school to buy only recycled paper, toilet paper, lunch trays, napkins, paper towels, etc.
- **DITCH THE PLASTICWARE:** Make sure the cafeteria uses reusable silverware, not disposable plastic.
- **REUSE INK CARTRIDGES:** Suggest that the school office use reusable laser toner cartridges and printer ribbons.
- **REDUCE "TO GO" PACKAGING:** Staff and participants should bring reusable dishes, mugs, cups and utensils to school (this should also be done for class parties). Use Facebook or other digital/web/Internet programs to invite friends to parties.

SUMMARY:

When we count how many sheets of paper are used in class each day, the number of trees used in the process can seem pretty small. But when we add up these numbers for an entire year and consider how much is being used by other classes and the whole school, the number of trees we fell is huge!

Now that you know how to Recycle/Precycle, continue to work diligently in your school (and at home and in the community) to reduce waste, combat deforestation and use only recycled products or products that are recyclable. Solving the Paper Caper and learning to Recycle/Precycle can help save the planet!

RECYCLE/PRECYCLE: SOLVE THE PAPER CAPER HOME ACTIVITY

Once you have collected information at school, it's time to collect data on your family's recycling habits! Be a tree-saver at home and tell your parents and siblings that if they just learn to recycle and precycle, they can help you save the planet from unnecessary waste and overflowing landfills.

Before you begin, ask your family the following multiple choice question and share the answer to provide some little-known facts on recycling paper.

EACH TON OF PAPER THAT IS RECYCLED SAVES:

- a) 17 35-foot trees, which could make 11,500 pages of 8.5" x 11" paper
- **b)** 380 gallons of oil, which is equivalent to 2 barrels of oil enough to run the average car for 1,260 miles
- c) 3.1 cubic yards of landfill space (9 cubic yards if it was cardboard instead)
- **d)** 4,077 kilowatts of energy—enough to heat and air-condition an average American home for six months
- e) 6,953 gallons of water, which is equivalent to one person drinking eight 8-ounce glasses of water every day for a little more than 38 years
- f) All of the above

INSTRUCTIONS:

- 1. With the help of a parent or sibling, consult your local waste management company to find out which items are recyclable in your area (most companies have websites and will list their requirements online). For a rough guide to recyclable materials, see the List of Common Recyclables below.
- Set up a recycling station at home. Depending on how your area separates recyclables (usually paper, cans and glass are separated), create a bin for each type of recyclable (many companies will provide these bins if you request them). Make sure cardboard milk cartons are cleaned and rinsed before recycling. Find out where in your community you can take your recycled materials to turn them in.
- 3. Create a plan for buying only recycled products and using fewer products in general. Install a chalkboard or a white board in common family areas instead of writing post-it notes. Use write on, wipe off calendars instead of paper calendars you recycle each year. See the Family Tree-Savers' To-Do List below and share with your family.
- 4. Have your family pledge to help you Recycle/Precycle and save the planet.

AusWER: F) All of the above. Recycling a TON of paper or paper products does a TON of good for the planet because much fewer resources (and way fewer trees) than are needed to produce recycled paper than it is needed to produce paper from scratch. In fact, every ton of recycled paper we produce keeps almost 60 pounds of pollutants out of the atmosphere (versus producing the paper from first-use resources).

LIST OF COMMON RECYCLABLES:

The list below features common recyclable items. Please consult your local recycling and waste management services to see what items are acceptable for your area.

- Butter boxes
- Cardboard (flatten first)
- · Coated containers, such as milk cartons, soy milk boxes, juice boxes (clean and rinse first)
- Coated cardboard such as frozen food boxes (clean and rinse first)
- Food boxes such as cereal or cracker boxes (liners are not recyclable and must be tossed)
- Frozen juice containers (lids and plastic tabs must be tossed)
- Hardback books (remove hard covers, recycle the pages)
- Juice boxes
- Mail (with or without window envelopes)
- Newspapers and magazines
- Paper (staples are permitted)
- Paperback books
- Phone books

FAMILY TREE-SAVERS' TO DO LIST

Here are some ways families can reduce wasting paper at home:

- **ELIMINATE UNWANTED CATALOGS:** Contact companies from which you no longer want to receive mail and/or catalogs. You can do this online by visiting websites to select the catalogs you wish to receive and stop receiving those you don't.
- **BE REMOVED FROM MAILING LISTS:** Go to online websites to remove your family's name from many unwanted mailings.
- USE WASHABLE CLOTH VERSUS PAPER OR PLASTIC PRODUCTS: Use a cotton handkerchief instead of tissues, cloth diapers instead of disposable ones, or hand towels versus paper towels in the kitchen.
- **BRING REUSABLE SHOPPING BAGS TO SUPERMARKETS:** Don't use plastic bags provided by the stores.
- **REQUEST INFORMATION TO BE SENT ONLINE:** Don't pick up leaflets, fliers and other advertising.
- **CUT BACK ON PRINTING:** Print documents only when absolutely necessary. And when you have to print, make everything double-sided.

EXTRA CREDIT:

Find your 50 Green Tips sheet from Activity 1 and circle which of them help Recycle/Precycle.

TRACK YOUR PROGRESS:

Update your journal or track your progress online at: www.biggreenhelp.com

FINISHED? IT'S TIME TO PLAY!

Reward yourself for completing your Home Activity 3 by playing The Big Green Help's video games that help us practice how to Recycle/Precycle. At home, a computer lab or at the library, visit **www.biggreenhelp.com** and play one (or all) of the following games:

- Big Green Help Multiplayer Game
- Spongebob Dirty Bubble Busters

IF YOU LOVE THESE GAMES, AND HAVE INTERNET ACCESS AT SCHOOL, ENCOURAGE YOUR TEACHER TO LET THE CLASS PLAY!

SIGN THE PLEDGE FORM:

When Home Activity 3: Recycle/Precycle has been completed, initial the Pledge Form under "Recycle/Precycle" (distributed during Activity 1).

FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY 4: SLOW THE FLOW: OPERATION PLUG PATROL

LEARNING OBJECTIVES:

- 1. Participants will be able to understand the concept "Slow the Flow." This includes knowing what natural resources are, how they are used in daily life, how they are wasted, and how they are in need of conserving.
- 2. Participants will be able to make energy-efficient decisions by learning how to reduce the waste of natural resources.
- 3. Specifically, participants will learn how unplugging unused electronics can help save the planet!

MATERIALS:

- 1. Green Team Activity 4 "Operation Plug Patrol" worksheet (including "Slow the Flow" Vocabulary)
- 2. Home Activity 4 "Operation Plug Patrol" worksheet
- 3. Pledge Form (handed out during Activity 1)
- 4. OPTIONAL: Access to BGH Online Games (www.biggreenhelp.com)

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of Green Team Activity 4 "Operation Plug Patrol" worksheet (including "Slow the Flow" Vocabulary) for each participant.*
- 2. Print a copy of the Home Activity 4 "Operation Plug Patrol" worksheet for each participant.*
- 3. Have handy the Pledge Form (handed out during Activity 1).
- 4. Bring in physical examples that represent how to "Slow the Flow" (e.g., low-flow shower head, compact fluorescent bulbs, reusable grocery bags, etc.)

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Give each participant a copy of the Green Team Activity 4 "Operation Plug Patrol" worksheet.
- 2. Read the introduction section to participants and pick one participant to read each of the Slow the Flow Vocabulary terms and definitions.
- 3. Discuss the concept of Slow the Flow with the whole class.
- 4. Use the data table provided to gather information on the room selected to study.
- 5. Hand out the Home Activity 4 "Operation Plug Patrol" worksheet; discuss results in class.
- 6. Instruct participants to complete the Pledge Form under "Slow the Flow" once the home activity has been completed. Remind them to hang onto this form as they will continue to fill it out until the program is finished (for 2+ months).

SLOW THE FLOW: OPERATION PLUG PATROL: INTRODUCTION

Every day, we use the Earth's natural resources. When we take a shower, we use water. If we get to school by car or bus, we are using oil to fuel the vehicle. Unfortunately, many of the Earth's resources are nonrenewable, meaning once they're gone, they're gone! So, in addition to finding new, alternative energy sources, we need to learn how to use these valuable resources more efficiently and not to waste them! How do we do it? Slow the Flow!

What does it mean to Slow the Flow? It means slowing down the use of our natural resources and learning how to use them more efficiently. For example, we can turn off the water while brushing our teeth, use more energy-efficient lightbulbs, take shorter showers and unplug electronics when they are not being used. Remember, the future of the Earth is in our hands. So let's learn how to be GREEN and Slow the Flow in our schools, at home, and in our communities!

SLOW THE FLOW VOCABULARY:

- **FOSSIL FUELS**: Fuels such as coal, oil and natural gas that are formed in the Earth from animal or plant remains.
- NONRENEWABLE RESOURCES: Energy resources that have a limited supply such as coal, oil and natural gas. (introduced in Activity 3)
- **RENEWABLE RESOURCES:** Energy resources that do not get used up but continue to produce more energy, such as wind energy and solar energy (energy from the sun).
- LOW IMPACT: Doing as little damage to the environment as humanly possible. For example, riding a bike is a low-impact form of transportation versus a car, which uses a nonrenewable resource: oil.
- **CARBON DIOXIDE** (CO₂): A colorless, odorless gas made from carbon and oxygen that is given off when fossil fuels like oil and gas are burned. Plants also use it to make food.
- **CARBON EMISSIONS:** CO₂ released into the atmosphere by the burning of fossil fuels like gasoline. (introduced in Activity 3)
- **CARBON FOOTPRINT:** A measure of the amount of CO₂ that a person or group of people emit or produce by burning fossil fuels.
- **GLOBAL WARMING:** An increase in the Earth's average temperature that is caused by extra greenhouse gases, like too much CO₂ in the atmosphere.
- **CLIMATE CHANGE:** Any change in the climate, including rising temperatures due to global warming.

• **STANDBY POWER:** Also called phantom load, vampire power or leaking electricity, standby power is the electric power consumed by electronic appliances while they are switched off or in standby mode, yet still plugged in (and still drawing power).

GROUP DISCUSSION:

- 1. What kind of natural resources do you use on a typical day?
- 2. Are you or your family currently doing anything in your daily routine to Slow the Flow? (Do you have energy-efficient lightbulbs or recycle bins at home? Give examples.)
- 3. Share examples of what it means to Slow the Flow (e.g., low-flow shower head, reusable grocery bags, etc.)
- 4. True or False: Even when appliances are turned off, if they are plugged in, they are still using power.

True! Even appliances that are switched off still waste power (it's called standby power, vampire power, phantom load or leaking electricity). For example, a TV set that's switched on for 3 hours a day but in standby mode during the remaining 21 hours uses about 40% of its energy in standby mode while it's not even on!

What can we do to stop wasting standby power? Let's start with Operation Plug Patrol, where you can learn to become an Outlet Officer!

GREEN TEAM ACTIVITY: OPERATION PLUG PATROL! BECOME AN OUTLET OFFICER

SAFETY WARNING SUPERVISION OF AN ADULT REQUIRED: Use caution around electrical outlets! Only plugs or plug guards should be placed in outlets (not fingers or any other object). Unplug unused electronics by handling the cords with care. To prevent damage, pull by the plug, not the cord.

- 1. Survey a room in your school or club (like your classroom or meeting room) and determine the electronic items that can be unplugged before you go home for the night.
- 2. Using the data table below, make a list of the items and note the approximate output of electricity you will save (in energy and \$) by unplugging these items each night.
- 3. Assign a classroom monitor to be your Plug Patrol Officer—unplug everything not in use at end of the day and re-plug things in the next morning.
- 4. Conduct weekly inspections—enforce the unplugging of appliances in other rooms that are not in use to save energy (you must consult with teachers/group leaders before unplugging anything).

STANDBY POWER DATA TABLE

This table shows common electrical appliances used in school or at home. These appliances can be unplugged to save energy when they are not in use. The Typical Consumption column shows how many watts of energy are wasted if we leave an item plugged in for one night (or 8 hours). The Cost column reflects the price we pay for leaving the appliance plugged in for one night can cost.

ELECTRICAL APPLIANCE	TYPICAL CONSUMPTION / 8 HOURS	COST PER NIGHT (8 HOURS)
Desktop Computer	60 watts	.60 cents
Laptop Computer	50 watts	.50 cents
Printer	16 watts	.16 cents
TV	64 watts	.64 cents
Stereo	50 watts	.50 cents
DVD Player	40 watts	.40 cents
VCR	45 watts	.45 cents
CD Player/Boombox	40 watts	.40 cents
Microwave	24 watts	.24 cents
Cordless Phone	20 watts	.20 cents
Cell Phone Charger	18 watts	.18 cents
Electric Burner/Range	24 watts	.24 cents

This table assumes that a kilowatt-hour of electricity costs 10 cents, which is an average rate depending on your location.

(Sources: http://standby.lbl.gov/summary-chart.html; http://www.enviroharvest.ca/ phantom_loads.htm; http://www.greenlivingtips.com/articles/93/1/Standby-power-

electricity-consumption.html

Note which items in your room can be unplugged when not in use and list them below:

ELECTRICAL APPLIANCE	TYPICAL CONSUMPTION / 8 HOURS	COST PER NIGHT (8 HOURS)
TOTAL		

By adding everything together from the Cost per Night column above, calculate how much you save in one night (after school hours). Then start saving now!

4TH GRADE AND ABOVE: Take the amount of daily savings and multiply it by how much

energy you can save in one school week (5 days) and in one school year (45 weeks)! Then start saving now!

SUMMARY:

When we look at them one at a time, individual products draw a small amount of standby power each night. But when we add them together and calculate the power wasted each week or each year, the numbers are huge!

Becoming a Plug Patroller at school, at home and in your community can help Slow the Flow and save the planet!

SLOW THE FLOW: OPERATION PLUG PATROL: HOME ACTIVITY

Just like you did at school, be on Plug Patrol at home and show others how to be officers of the outlets! Share what you learned in class with your family and show them the consumption chart. Explain that you can help your family save energy and money. And be a green hero at home!

Before you begin, always ask parents for their permission (and help) with unplugging electronics not in use. Remember to BE SAFE and use caution around electrical outlets! Only plugs or plug guards should be placed in outlets (not fingers or any other object). Unplug unused electronics by handling the cords with care. To prevent damage, pull by the plug, not the cord.

INSTRUCTIONS:

- 1. Make a list of all electrical appliances currently plugged in at home.
- 2. On your list, circle the items that can be unplugged when not in use.
- 3. Create an "unplug" checklist for each room and post it on the door as a reminder.
- 4. Walk your family through each room to share your "unplug" lists.
- 5. Patrol rooms once daily before going to bed at night and keep track of any "violations." Encourage your family members to do the same.
- 6. Repeat step #5 over, and over, and over all the time to and help save the planet!
- 7. Track your progress online at **www.biggreenhelp.com** with The Big Green Help Global Challenge Tracker!

NOTE ANY VIOLATIONS BELOW:

ROOM	VIOLATION	DATE

EXTRA CREDIT: Find your 50 Green Tips sheet from Activity 1 and circle which of them help Slow the Flow.

TRACK YOUR PROGRESS:

Update your journal or track your progress online at: www.biggreenhelp.com

FINISHED? IT'S TIME TO PLAY!

Reward yourself for completing your Home Activity 4 by playing The Big Green Help's video games that help us practice how to Slow the Flow. At home, a computer lab or at the library, visit **www.biggreenhelp.com** and play one (or all) of the following games:

- Big Green Help Multiplayer Game
- Fairly OddParents Energy Beat Breakdown
- The N's Power House

IF YOU LOVE THESE GAMES, AND HAVE INTERNET ACCESS AT SCHOOL, ENCOURAGE YOUR TEACHER OR GROUP LEADER TO LET YOUR GREEN TEAM PLAY!

SIGN THE PLEDGE FORM:

When Home Activity 4: Slow the Flow has been completed, initial the Pledge Form under "Slow the Flow" (distributed during Activity 1).

FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY 5: CURB THE CAR: BECOME AN ANTI-IDLER

LEARNING OBJECTIVES:

- 1. Participants will be able to understand the concept "Curb the Car." This includes knowing what fossil fuels are, how they contribute to CO_2 emissions in cars and other vehicles, and how these emissions can be decreased to combat global warming.
- 2. Participants will be able to make energy-efficient decisions by learning how to reduce the waste of fossil fuels and use alternative methods of fuel and transportation.
- 3. Specifically, participants will learn how minimizing vehicle idling time can help improve their health while improving the health of the planet!

MATERIALS:

- 1. Green Team Activity 5 "Become an Anti-Idler" worksheet (including "Curb the Car" Vocabulary).
- 2. Home Activity 5 "Become an Anti-Idler" worksheet (Please note: This activity can be done by families not participating in the full classroom curriculum.)
- 3. Pledge Form (handed out during Activity 1).
- 4. Stopwatches or wrist watches with a second hand or timer function (to time car idling).
- 5. Large roll of paper or poster board and colored markers to create idling chart.
- 6. OPTIONAL: Access to BGH Online Games (www.biggreenhelp.com)

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of Green Team Activity 5 "Become an Anti-Idler" worksheet (including "Curb the Car" Vocabulary) for each participant.*
- 2. Print a copy of the Home Activity 5 "Become an Anti-Idler!" worksheet for each participant.*
- 3. Have handy the Pledge Form (handed out during Activity 1).
- 4. Bring in physical examples that represent how to "Curb the Car" (e.g., bicycle, skateboard, razor scooter, bio diesel, walking shoes, etc.)

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

1. Give each participant a copy of the Green Team Activity 5 "Become an Anti-Idler" worksheet.

- 2. Read the introduction section to participants and choose one participant to read each of the Curb the Car Vocabulary terms and definitions.
- 3. Discuss the concept of Curb the Car with the whole class.
- 4. Collect data from the Green Team Activity and post this data on a large chart for the whole school.
- 5. Hand out the Home Activity 5 "Become an Anti-Idler" worksheet; discuss results in class.
- 6. Instruct participants to complete the Pledge Form under "Curb the Car" once the home activity has been completed. Remind them to hang onto this form as they will continue to fill it out until the program is finished (for 2+ months).

FOR TEACHER/GROUP LEADER'S EYES ONLY:

Answers to Group Discussion Questions

- 3. True: If you're going to be stopped for more than 10 seconds (except in traffic), you'll save fuel and money by turning off the vehicle and then restarting it when you're ready to drive again.
- 4. True: Because the engine isn't working at its peak operating temperature while it's idling, the fuel doesn't undergo complete combustion. This leaves fuel residues that can contaminate engine oil and damage engine parts.
- 5. False: Due to today's fuel injection versus the old carburetor, cars do not need to be warmed up before driving. Unless it's below freezing, driving cars gently is the best warm-up there is.

CURB THE CAR: BECOME AN ANTI-IDLER: INTRODUCTION

Each day we need to get from point A to point B and back, multiple times, whether it's going to school, dance class, soccer practice, or the store. Using cars is a quick and easy way to zip around town and get where we need to go when we want to go, but they also burn fossil fuels which are non-renewable resources that pollute the air and cause global warming by emitting CO_2 . So, in addition to finding new, cleaner-burning fuels and building more fuel-efficient cars, we need to practice other ways to get from point A to point B. How do we do it? Curb the Car!

What does it mean to Curb the Car? It means instead of driving everywhere, find other ways to get there! Try walking, biking, skateboarding, or taking public transportation. If it's not too far, don't use a car! And when you do have to use a car, be efficient with your trips, try to carpool with others, and make sure to minimize the car's idling time.

Idling is when the car is running but not being driven. And idling is not an idle threat! In fact, the emissions caused from idling are even worse than the emissions caused by driving!

If you have to drive, reducing idling is an easy way to reduce vehicle emissions. Remember, the future of the Earth is in our hands. So let's learn how to be GREEN and Curb the Car!

CURB THE CAR VOCABULARY:

- **CARBON NEUTRAL:** Having no carbon footprint, giving off no CO₂. Riding a bike or walking is a carbon neutral form of transportation.
- **GREENHOUSE GAS:** Any gas that traps heat in the atmosphere such as CO₂, methane, and water vapor. To protect the Earth, we need to decrease the amounts of these gases in our atmosphere.
- **GREENHOUSE EFFECT:** When greenhouse gases keep the Earth warm by trapping heat from the sun.
- **FOSSIL FUELS:** Fuels such as coal, oil and natural gas that are formed in the Earth from animal or plant remains. (introduced in Activity 4)
- NONRENEWABLE RESOURCES: Energy resources that have a limited supply such as coal, oil and natural gas. (introduced in Activity 3)
- LOW IMPACT: Doing as little damage to the environment as humanly possible. For example, riding a bike is a low-impact form of transportation versus a car which uses a nonrenewable resource: oil. (introduced in Activity 4)
- **CARBON EMISSIONS:** CO₂ released into the atmosphere by the burning of fossil fuels like gasoline. (introduced in Activity 2) (introduced in Activity 3)

GROUP DISCUSSION:

- 1. How often does your family use a car or other vehicle that emits pollutants (bus, scooter, etc.)?
 - A. Once a week
 - B. Once a day
 - C. Several times each day
 - D. Never
- 2. Are you or your family currently doing anything in your daily routine to Curb the Car? (Do you try to ride bikes to the store or walk when possible? Give examples.)
- 3. True or False: It is more economical and fuel-efficient to turn a car on and off continuously than it is to leave the car running (idling).
- 4. True or False: Car idling can damage a car's engine.
- 5. True or False: Cars need to warm up before driving by idling.

DISCUSS ANSWERS TO TRUE/FALSE: QUESTIONS.

What can we do to stop wasting fuel and polluting the atmosphere with CO_2 ? Let's start with zapping emissions by learning to become Anti-Idlers!

GREEN TEAM ACTIVITY: Zap Harmful Emissions!: Become an Anti-Idler

SAFETY WARNING: Please use caution around moving vehicles. Wear brightly colored clothing and make sure drivers are aware that you are there!

Do you know how many cars and other vehicles access your school or club each day? It's not just parents dropping off and picking up participants, we're talking teacher and staff cars coming and going, school buses, cafeteria delivery trucks, office supply trucks, and more. Before we can work to Curb the Car, we need to know the stats. How many vehicles come and go each day and what is the approximate time that all these vehicles spend idling every day?

- For one day, keep track of every vehicle that arrives at your school or club during "rush hour" including the amount of time (if any) that each vehicle is idling (it's very important to track idle times). Depending on your school or club's structure and schedules, create a plan to observe vehicles and idle times at peak drop-off and pickup times. For most, this is a 30- to 40-minute period before and after school.
- 2. With teacher supervision, work in teams of 4 to count every car and assign "idle patrollers" with stopwatches to time idling correctly during the two 30-40 minute periods of "rush hour." Of the 4-person team, one participant will count cars while another records the data, and one participant will time the idlings while another records that

data. (Teacher/Group Leader's note: This activity may require participants to arrive extra early or stay late after school. If necessary, provide permission slips to participate).

- 3. After all the data has been gathered, compare all the teams' findings and determine the average number of vehicles that visited as well as an average total idling time.
- 4. Make a large chart to display the total vehicles visited, including peak visiting times, and display the total number of vehicles that visited. Convert that idling time into carbon emissions to include on your display (see chart below).
- 5. Display the chart in a prominent place at school where everyone can see it.

CAR IDLING CONVERSION CHART

This chart shows how time spent idling translates to the amount of gasoline a vehicle consumes and the amount of carbon dioxide that is emitted due to idling.

TIME IDLING	GALLONS OF GASOLINE USED	CO2 EMISSIONS
60 minutes	.5 gallons	10 lbs.

To find out how many pounds of CO_2 emissions occur at your school in one day, divide the total number of idling minutes by 6 (e.g., 60 minutes \div 6 = 10 lbss of CO2)

EXTRA CREDIT:

To find out how many pounds of CO_2 are generated by idling in one school year, multiply the answer above by 200 (a typical school year is approximately 40 weeks times 5 days/week, equals 200 days).

SUMMARY:

When we calculate the idling time of each individual car, the amount of CO_2 seems miniscule. But when we add all the cars' and other vehicles' idling times together and multiply them by the number of days in a school year, the amount of harmful emissions is huge!

Now that you know the facts on idling, tell your friends, family, school bus drivers and more to turn the key and become idle free! Becoming an Anti-Idler can help save the planet!

CURB THE CAR: BECOME AN ANTI-IDLER HOME ACTIVITY

Once you have collected information at school, it's time to collect data on your family's idling time and go green together! Be an Anti-Idler at home and tell your parents and siblings that if they just turn the key, they can be idle-free. You will save your family gas money and help save the planet from unnecessary CO_2 emissions.

Before you begin, ask your family the following question and share the answer to provide a little-known fact of idling education.

TRIVIA QUESTION: Is it more economical and fuel-efficient to leave your car running for a few minutes than to constantly turn it off and on?

ANSWER: NO! If you're going to be stopped for more than 10 seconds (except in traffic), you'll save fuel and money by turning off the vehicle and then restarting it when you're ready to drive again. Restarting a car many times doesn't wear out the battery and starter motor too soon. And catalytic converters stay warm for up to 25 minutes after you turn off the engine, so frequent stops and starts don't produce the large amount of harmful emissions seen with cold starts. There's no question about it—idling gets you nowhere. Instead, it wastes fuel and money and damages the environment.

INSTRUCTIONS:

- Keep track of your family's car idling time for one week using the chart below. Compile idling times while you are in the car with your parents and have them pledge to keep track on their own while you are at school or baseball practice.
- 2. Each day for one week, calculate how much time is spent idling and convert idling time to carbon emissions using the conversion chart below.
- 3. Have your family pledge to turn the car off if they plan to idle for more than 10 seconds.

IDLE TIME CHART:

Record your idle time in minutes on the chart below. Use tally marks to make it simple and save space (e.g., III)

	MON	TUES	WEDS	THURS	FRI	SAT	SUN
BEFORE 6AM							
6:8AM							
8:10AM							
10-12PM							
12-2PM							
2-4PM							
4-6PM							
6-8PM							
8-10PM							
AFTER 10PM							
SUB-TOTAL							
						TOTAL	

CAR IDLING CONVERSION CHART

This chart shows how time spent idling translates to the amount of gasoline a vehicle consumes and the amount of carbon dioxide that is emitted due to idling.

TIME IDLING	GALLONS OF GASOLINE USED	CO ² EMISSIONS
60 minutes	.5 gallons	10 lbs.

To find out how many pounds of CO_2 emissions occur from your family in one week, divide the total number of idling minutes per day by 6 (e.g., 60 minutes \div 6 = 10 lbs of CO₂).

EXTRA CREDIT:

To find out how many pounds of CO_2 your family generates by idling in one year, multiply the answer above by 365 (the number of days in one year). Share this number with your family.

EXTRA-EXTRA CREDIT:

Find your 50 Green Tips sheet fromActivity 1 and circle which of them help Curb the Car.

TRACK YOUR PROGRESS:

Update your journal or track your progress online at: www.biggreenhelp.com

FINISHED? IT'S TIME TO PLAY!

Reward yourself for completing your Home Activity 5 by playing The Big Green Help's video games that help us practice how to Curb the Car. At home, a computer lab or at the library, visit **www.biggreenhelp.com** and play one (or all) of the following games:

- Big Green Help Multiplayer Game
- LeBron James Bikeathon
- The Rumblin', Stumblin' Sidewalk Sprint Game

IF YOU LOVE THESE GAMES, AND HAVE INTERNET ACCESS AT SCHOOL, ENCOURAGE YOUR TEACHER TO LET THE CLASS PLAY!

SIGN THE PLEDGE FORM:

When Home Activity 5: Curb the Car has been completed, initial the Pledge Form under "Curb the Car" (distributed during Activity 1).

FOR TEACHER/GROUP LEADER'S EYES ONLY

ACTIVITY SIX: SPONGEBOB AND YOU SAVE THE BIG BLUE

LEARNING OBJECTIVES:

- 1. Participants will be able to understand the concept "Save the Big Blue." This includes understanding the negative effects of wasting and polluting water, as well as the benefits of conserving water and keeping water clean for all living things.
- 2. Participants will learn that the Earth's waterways are interconnected and find out ways to preserve the local waterways in their communities.
- 3. Specifically, participants will learn how to build their own aquifers and reduce tap water use at home. They will learn Saving the Big Blue also means being green to help save the planet!

MATERIALS:

- 1. Green Team Activity 6 "Build Your Own Aquifer" worksheet (including "Save the Big Blue" Vocabulary).
- 2. Home Activity 6 "Tame the Tap" worksheet.
- 3. Pledge Form (handed out during Activity 1).
- 4. Materials for Green Team Activity 6: Clear plastic cups for each participant (measuring 2 3/4" deep x 3 1/4"), enough modeling clay for each participant to create a 2" flat "pancake," enough white play sand to measure 1/4" in bottom of each participant's cup, ½ cup of aquarium gravel (natural color if possible) per participant, red food coloring and 1 bucket of clean water.
- 5. OPTIONAL: Access to BGH Online Games (www.biggreenhelp.com)

TEACHER/GROUP LEADER PREP*:

- 1. Print a copy of Green Team Activity 6 "Build Your Own Aquifer" worksheet (including "Save the Big Blue" Vocabulary) for each student.
- 2. Print a copy of the Home Activity 6 "Tame the Tap" worksheet for each participant.*
- 3. Have handy the "Pledge Form" (handed out during Activity 1).
- 4. Bring in physical examples that represent what can harm the world's waterways and things we can do help "Save the Big Blue" (i.e. plastic bottles, plastic pop can "rings", eco-friendly car wash soap, low-flow shower head, reusable water bottles, info on local stream restoration projects, etc.)
- 5. Before dividing the aquarium gravel among participant, rinse and dry the rocks to remove their powdery residue (it can add cloudiness to water if not washed first).

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Give each participant a copy of the Green Team Activity 6 "Build Your Own Aquifer" worksheet.
- 2. Read the introduction section to participants and pick one participant to read each of the Save the Big Blue Vocabulary terms and definitions.
- 3. Discuss the concept of Saving the Big Blue with the whole class.
- 4. Hand out the Home Activity 6 "Tame the Tap" worksheet; discuss results in class.
- 5. Instruct participants to complete the Pledge Form under "SpongeBob and You Save the Big Blue" once the home activity has been completed.Remind them to hang onto this form as they will continue to fill it out until the program is finished (2+ months).

FOR TEACHER/GROUP LEADER'S EYES ONLY:

Answers to Group Discussion Questions

- 3. True. Carbon dioxide from burning oil and gasoline is changing the basic chemistry of the seas.
- 4. True. Run-off from chemicals used in homes seeps into our local water systems and can eventually reach and pollute the oceans.
- 5. True. Reefs, also called the "rainforests of the sea," occupy less than 1% of the Earth's surface but are home to 25% of ALL marine life!

SAVE THE BIG BLUE: BUILD YOUR OWN AQUIFER

INTRODUCTION:

Can you imagine a world without water? Or even a day without water? Life on our planet simply would not exist. Water and the earth's waterways (like oceans, lakes and rivers) are what give life to the planet! But due to pollution, plastics and toxic waste, our underwater ecosystems and marine life (like SpongeBob) are at risk. As we learned in previous activities, we can reduce the use of plastics by recycling them and by buying products made from recycled materials. But there's more we can do too. We can clean up areas that have been harmed and try hard not to waste water in our daily lives.

What does it mean to Save the Big Blue? It means to conserve water and keep our oceans and waterways clean. Take a shower instead of a bath, fix the leaky faucets in your house, and don't waste a drop. Recycle plastics (or even limit the use of plastics at all), buy eco-friendly cleaning products, and make sure to dispose of hazardous materials (paint, oil, etc.) correctly. Get your neighborhood, community and friends involved and organize a beach, lake or river cleanup day! Remember, the future of the earth is in our hands. So let's learn how to Save the Big Blue!

SAVE THE BIG BLUE VOCABULARY:

- **CONSERVE:** To use wisely and protect from depletion and pollution.
- POLLUTANT: To harm water quality.
- **ECOSYSTEM:** The relationship between all the parts (living and non-living) within an environmental community.
- WATERWAYS: Bodies of water in addition to the oceans, like rivers, lakes, ponds, etc.
- AQUATIC: Living or growing in water.
- **AQUIFER:** The porous (holey), water-bearing layer of sand, gravel, and rock below the Earth's surface that filters our water naturally.
- **GROUND WATER:** Water that seeps into the earth and is stored in usable amounts in the soil and rock below the surface.
- EVAPORATION: Converts to vapor form (like clouds).
- ACID RAIN: Rain mixed with pollutants emitted from burning fossil fuels that can cause damage to buildings, car finishes, crops, forests, and aquatic life.

GROUP DISCUSSION:

- 1. What are a few ways we can Save the Big Blue at school?
- 2. Are you or your family currently doing anything at home to Save the Big Blue? Give examples.
- 3. True or False. Pollution changes the basic chemistry of the water, harming the oceans and waterways.
- 4. True or False. Many household products that we use every day end up polluting our water systems and killing marine life.
- 5. True or False. At the current rate of destruction, 70% of our coral reefs will be killed in our lifetime.

DISCUSS ANSWERS TO TRUE/FALSE QUESTIONS.

What can we do to reduce the use of plastics and pollutants? How can we clean already polluted waters? Let's start with learning how to Save the Big Blue in our very own classroom and learn to Build Your Own Aquifer!

GREEN TEAM ACTIVITY: BUILD YOUR OWN AQUIFER

Even though two-thirds of the planet is made of water, did you know that only 1% of the fresh water on earth is available for us to drink? Just because there's a ton of water out there (literally, oceans full), it doesn't mean it's all drinkable.

Water either has to be treated or filtered in order to help and not harm us. In fact, many people all over the planet get their drinking water from underground sources called aquifers. By drilling wells through soil and rock into aquifers, we can use ground water for drinking. And though ground water seeps through many layers of rock and sand (natural filters), it can still become contaminated by harmful chemicals, such as lawn care products and household cleaners that were used or disposed of improperly. This contamination can be dangerous to our health.

By building our own mini-aquifers, we can see how aquifers work, how water is stored, how ground water can become contaminated, and how this contamination ends up in drinking water. Before our very own eyes, we'll see how the careless use and disposal of harmful contaminants above the ground can often end up in the drinking water below the ground. This experiment can also help illustrate the "big picture" of how contaminants can get into our oceans and other waterways as well, harming all aquatic life.

INSTRUCTIONS:

1. Hand out aquifer building materials to each participant including:

- 1 clear plastic cup (2 ³/₄" deep x 3 ¹/₄" wide)
- 1 piece of modeling clay to create a 2" flat 'pancake'

2. Also have on hand:

- White play sand (to measure ¹/₄" in the bottom of each cup)
- Aquarium gravel (to measure 1/2 a cup)
- Red food coloring
- 1 bucket of clean water and a small cup to dip water from bucket

3. Pour ¹/₄" of white sand into each cup completely covering the bottom of the container.

4. Pour water into the sand, wetting it completely (there should be no standing water on top of sand). Take note of how the water is absorbed in the sand but remains around the sand particles as it is stored in the ground, ultimately forming part of the aquifer.

5. Have each participant flatten the modeling clay (like a pancake) and cover half of the sand with the clay (press the clay to one side of the container to seal off that side). The clay represents a "confining layer" that keeps water from passing through it. Pour a small amount of water onto the clay. Notice how the water remains on top of the clay, only flowing into the sand below in areas not covered by the clay.

6. Use the aquarium rocks to form the next layer of earth. Place the rocks on top of the sand and clay, covering the entire container. Slope the rocks to one side of hte cup, forming a valley explaining how these layers represent the many layers contained in the earth's surface.

7. Pour water into the aquifer until the water in the valley is even with your hill. See how the water acts with the porous rocks, allowing storage of water within the openings between them. Notice that a "surface" supply of water (a small lake) has formed. This shows how both the ground and surface water supplies can be used for drinking water.

8. Put a few drops of the food coloring (representing contaminants) on top of the rock hill as close to the inside wall of the cup as possible. Explain how old wells are often used to dispose of farm chemicals, trash, and used motor oil. This practice can show up in the ground water and drinking water. The food coloring (contaminant) spreads not only through the rocks, but also to the surface water and into the white sand at the bottom of the cup. This is one way pollution can spread throughout the aquifer over time.

GROUP DISCUSSION:

What other human and industrial activities might pollute aquifers? How does the example of the aquifer relate to the water in our oceans and waterways? What can we do to protect those waters in addition to our drinking water?

HOME ACTIVITY: TAME THE TAP!

Now that we've seen how careful we have to be to keep our drinking water safe and clean, maybe we can appreciate each droplet of water a little bit more. Clean drinking water is a precious resource, and we can help save the planet by conserving it.

Where do we start? How about at home? The amount of water we use at home each day can be drastically reduced if we just take a few simple steps, like:

- Take a shower instead of a bath (and take a short one when you do).
- Make sure the dishwasher is full before running a load (the same goes for washing clothes).
- Use a low-flow shower head and/or a low-flow toilet.
- Reduce car washing and over-watering the lawn.
- Repair leaky faucets and pipes.
- Shut the water off while brushing your teeth (see the experiment below).

Please share the simple steps above with your family and encourage them to participate in your home experiment—Taming the Tap!

TAME THE TAP: STOP WASTING WATER WHILE YOU BRUSH

In the U.S. we are currently wasting approximately 60 billion gallons of water every year while simply washing our hands or brushing our teeth. That translates into \$350 million in water utility bills and about \$600 million in energy costs to supply, heat, and treat that water! What can we do about it? Tame the Tap!

INSTRUCTIONS:

- 1. With the help of a parent or sibling, gather the following materials:
 - A measuring cup (the bigger the better)
 - A large bowl that fits easily in your bathroom sink
 - Toothpaste and toothbrush

2. Make note of your normal water usage for one day while brushing your teeth with the faucet running (BEFORE). Then make note of your water usage for one day while brushing your teeth with minimal use of the faucet (AFTER) by filling out the worksheet below.

3. Brush away! On the first day, just brush your teeth in the morning and run the water as you normally would. Place a bowl underneath the faucet to catch all the running water used while you brush. (Note: If your bowl fills up before you're done, turn off the faucet and make note that one bowlful was already used. Then pour out the water, place the empty bowl back under the faucet and turn the faucet back on until you are finished brushing.) When you're done, turn off the faucet and measure out how many cups of water were used from your bowl. Mark down the amount of water used on the table. 4. Repeat step 3 for your normal evening brushing. When finished, add the amount of water used during each brushing to determine how much water was used in one day of your average use.

WORKSHEET:

BEFORE (letting the water run while brushing):

When I brushed my teeth in the morning with the water running, I used _____ cups.

When I brushed my teeth at night with the water running, I used _____ cups.

In one day, I used _____ cups (add morning and night together).

In 30 days, I will use _____ cups of water!!! (multiply one day's use by the number 30)

In 1 day I used:	In 1 week I would use (1 day use x 7)	In 1 month I would use (1 day x 30)	In 1 year I would use (1 day x 365)
2 cups of water	14 cups	60 cups	730 cups
3 cups of water	21 cups	90 cups	
4 cups of water			
5 cups of water			
6 cups of water			
7 cups of water			
8 cups of water	56 cups	240 cups	2,920 cups
9 cups of water			
10 cups of water			
11 cups of water			
12 cups of water			
13 cups of water			
14 cups of water			
15 cups of water			
16 cups of water	112 cups	480 cups	5,840 cups
17 cups of water			
18 cups of water			
19 cups of water			
20 cups of water			

5. The next morning, with conservation in mind, limit your water use to the very smallest amount of water you need to brush your teeth (using the faucet only when necessary). Collect the water you use in the bowl as in step 3.

6. Again, try to conserve water while brushing at night. When finished, add the amount of water used in each brushing to determine how much water was used in one day of your water conservation.

7. Now let's see the difference when comparing your average use to your use while trying to conserve water to find out how much water you will SAVE.

Before, when I ran the water, I used _____ cups in one day.

After, when I began turning the water off, I used_____ cups in one day.

How much water did I save in one day? _____ cups (subtract "after" from "before")

Find out how much water you saved in 1 week (7 days).

Find out how much water you saved in 1 month (30 days).

8. Record your results and compare them with the class.

9. What other ways can you conserve water use at home, at school, and in the community?

TRACK YOUR PROGRESS:

Update your journal or track your progress online at: www.biggreenhelp.com

FINISHED? IT'S TIME TO PLAY!

Reward yourself for completing your Home Activity 6 by playing The Big Green Help's video games that help us practice how to Save the Big Blue. At home, a computer lab or at the library, visit **www.biggreenhelp.com** and play one (or all) of the following games:

- Big Green Help Multiplayer Game
- SpongeBob Dirty Bubble Busters
- Jimmy Neutron Flip N' Flow
- The N's Power House
- Neopets' Big Green Help Trivia
- The N's How Green Are You? Quiz

If you love these games, and have internet access at school, encourage your teacher to let the class play!

SIGN THE PLEDGE FORM:

When Home Activity 6: Save the Big Blue has been completed, initial the Pledge Form under "Save the Big Blue" (distributed during Activity 1).



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BIG GREEN HELP EVENT

You can organize a Big Green Help Event to celebrate Earth Day, as part of a summer program back to school, or whenever works for you!

LEARNING OBJECTIVES:

- 1. Participants will be able to take a look at the big picture and see how a few small green efforts can make a big impact.
- 2. Participants will be able to take an active role in making energy-efficient decisions by practicing what they've learned with the 5 Green Themes.
- 3. Specifically, participants will learn how to focus on 1 of the 5 Green Themes, learn the logistics involved in planning a multi-faceted event, and make a difference in their schools or communities by conducting a planet-saving event.
- 4. Participants will be inspired to continue conducting green practices and make energyefficient decisions upon the completion of their Big Green Help Event.

MATERIALS:

- 1. List of potential "Big Green Help Events" (choose one).
- 2. General Event Checklist.
- 3. Event-Specific Checklist.
- 4. Supplies and materials associated with both event checklists.
- 5. Final, signed "Pledge Forms" (handed out during Activity 1).
- 6. Event Registration Form.
- 7. Permission Slips for parents to sign (included at the end of the Toolkit).
- 8. Certificate of Completion (included at the end of the Toolkit).

TEACHER/GROUP LEADER PREP:

- 1. Print a copy of the General Event Checklist for each participant.*
- 2. Print a copy of the Event-Specific Checklist for each participant.*
- 3. Distrubute supplies and materials associated with both checklists.
- 4. Print one copy of the Event Registration Form for the entire class.
- 5. Print a copy of the Permission Slips for each participant to bring home for parents to sign.
- 6. Print and complete a Certificates of Completion for each participant (included at the end of the Toolkit).

*As a green option, consider double-sided printing, or better yet, go paperless by using an overhead projector or digital worksheet to share with the class.

INSTRUCTIONS:

- 1. Discuss the Big Green Help program with participants and ask what they've learned.
- 2. Collect signed and completed Pledge Forms, and get participants excited for the grand finale: the Big Green Help Event!
- 3. Review potential event ideas and vote as a class on which event to conduct.
- 4. Review the General Event Checklist and Event-Specific Checklist and assign participants to different tasks. Open the class up for event questions/discussion.
- 5. Register the event as a class.
- 6. Hand out the permission slips for parents to sign and return before the event.
- 7. Hand out the Certificate of Completion to each participant at or after the event.

PLAN YOUR BIG GREEN HELP EVENT

For the past several weeks, we have been learning to make energy-efficient decisions and reduce the waste of the planet's valuable resources with the Big Green Help. We have learned how to Grow the Green, Recycle/Precycle, Slow the Flow, Curb the Car and Save the Big Blue. Now, for all your serious work and dedication to being GREEN, we are going to have some serious fun. Are you ready to go mega-GREEN and do a green event?

Let's take a look at some special events we can do to make a difference on saving the planet and celebrate what it means to go GREEN. Here are five event options, one for each of the 5 Green Themes. We will review the potential events and pick one to perform in celebration of going Green!

BIG GREEN HELP EVENTS-PICK ONE!

1. GROW THE GREEN EVENT: PLAN A LOCAVORE DINNER PARTY

Create a new menu based on the success of your classroom vegetable garden's growth and the local seasonal fruits and vegetables you've researched at the farmers market or on your own. Then, prepare a fresh, locally grown meal for parents at school along with a brief presentation on each major fruit or vegetable used. Educate parents on the importance of eating locally grown food to save on fuel costs, avoid harmful pesticides, etc. with a game or a quiz. The winner of the game gets dessert first!

2. RECYCLE/PRECYCLE EVENT: BUILD GIANT PAPER CONSUMPTION CHARTS

Make a giant thermometer and color in the number of paper sheets used each day for the first 2 weeks of your observations (during the "before" period, or average use). Readings may be marked per 500 or 1,000 sheets. Then, make a second thermometer displaying the information gathered during the second 2 weeks of your Recycle/Precycle program (using the "after" numbers, or the amount of paper used once the class begins conserving). Display these before and after thermometers for the whole school to see and pledge to keep saving! Propose a plan to your principal to buy only recycled paper and to use less paper overall at school.

3. SLOW THE FLOW EVENT: POWER DOWN

Present an evening of "Outlet Observation" to family, friends, community members, and local media. Althoug live music is usually played with plugged in electric instruments, brainstorm with your school's music teacher or your classroom teacher to select teacher and participant performers to play unplugged acoustic instruments on stage. While the music is playing, the class will report what we've learned about Slowing the Flow in the form of poems, songs, or spoken word that tell the audience how to save the planet by becoming "unplugged."

Challenge the school to power down and stop using electricity for a class period—or the whole day! Build in a reward that if the entire school participates the principal will perform a stunt such as jumping double-dutch at an assembly. Give awards to classes who bring in the most "energy conservation contracts" from home (signed agreements by parents to work with kids to unplug at home).

4. CURB THE CAR EVENT: CREATE AN ANTI:IDLING ZONE

Present an anti-idling plan to your school principal. Suggest that any necessary idling (or better yet, waiting with vehicles turned off) be confined to the school's back gate while the school's front gate is open for quick drop-offs/pickups (a "zero idling zone"). Place class officers at both gates to enforce the no- and low-idling zones to remind vehicles' drivers of your new plan to save the planet! Build no-idle zone signs to post in appropriate areas with an explanation of how idling produces harmful emissions.

5. SPONGEBOB AND YOU SAVE THE BIG BLUE: LEARN ABOUT LOCAL WATERWAYS

Investigate your community's local waterways and drainage system.Re-create a largescale map of your town's drainage system to learn about how waste and garbage can end up in the waterways. Pick a local waterway and organize an event to clean it up!

PICK YOUR EVENT

These are all great GREEN events, but now you must vote as a class to pick one to conduct! And get ready to have fun...

BIG GREEN HELP EVENT PROJECT CHECKLIST

The following is a General Event Checklist to begin preparing for your Big Green Help Event! Please review and start planning your event now. The next Green Team activity will include specific planning needs for each event, but it's important to start "big picture" planning now with this list:

GENERAL EVENT CHECKLIST

\cup	Select a DATE AND TIME for your event.
\bigcirc	Select a LOCATION for the event.
	Obtain APPROVAL for selected date, time and location from the school board, program director, administration, etc., if required.
\bigcirc	Collect and create a list of EMERGENCY CONTACT names and phone numbers.
\bigcirc	Obtain any necessary city or park PERMITS.
	Create Evites, flyers and/or other PROMOTIONAL MATERIALS that include event information and details to be sent home to parents, posted around the school, parks, churches, local community, etc. Also post event information on the school website and/or school marquee.
	Create, distribute and collect PERMISSION SLIPS from participants and parents.
	Organize VOLUNTEER SIGN-UPS for the day of the event through the school office, PTA, booster clubs, etc.
\bigcirc	Print BIG GREEN HELP CERTIFICATES, included in the Toolkit.
\bigcirc	NOTIFY NICKELODEON about your event (publicaffairs@nick.com).
\bigcirc	SUBMIT EVENT DETAILS and information to local press.
	CONTACT LOCAL ORGANIZATIONS that might wish to promote, advertise or take part in the event, host a booth or activity, etc.
	SEEK A PROCLAMATION/sanction and promotion from the mayor's office, city hall or other local government.
	CREATE A SCHEDULE and/or program of activities for the day of the event.
	Organize the purchase or donation of REFRESHMENTS AND SNACKS for the day of the event.
	VISIT www.BigGreenHelp.com for more information, ideas, and resources.

PLAN YOUR BIG GREEN HELP EVENT: GROW THE GREEN

PLAN A LOCAVORE DINNER PARTY

Based on the success of your classroom vegetable garden's growth and the local seasonal fruits and vegetables researched at the farmers market, or on your own, create a menu. Then, prepare a fresh, locally grown meal for parents at school, along with a brief presentation on each major fruit or vegetable used. Educate parents on the importance of eating locally grown food to save on fuel costs, harmful pesticides, etc. with a game or a quiz. The winner of the game gets dessert first!

EVENT-SPECIFIC CHECKLIST

- 1. Each participant's homework is to bring in a recipe using the ingredients from the class vegetable garden and/or seasonal local produce. Recipes should be assigned by starter/ appetizer, entrée, and dessert (divide the class into 3 parts and assign accordingly).
- Divide the class into three groups and assign starters/appetizers to one group, entrées to another group, and desserts to the third group. Assigned to: _____
- Create a menu with a colorful description of each dish, including the vegetables and/or ingredients and where they came from (class garden or local grower). Consider printing out only one menu per table or one description card per dish if planning to serve buffet style. Assigned to: _____
- 4. Create an invite for parents to your Locavore Dinner Party (via email or Evite). Give them hints as to what kind of food to expect and get them excited for an evening of local food deliciousness! Ask them to RSVP at least a week before the event date and with the RSVP have them include a list of any food allergies or dietary restrictions. Assigned to: ______
- 5. Create a schedule of participant presentations based on the menu. Assigned to: _____
- Contact local growers who might be interested in presenting at this event, or possibly donating some fresh fruits or vegetables. Assigned to:
- Create quiz questions for parents with fun facts about local produce, being a locavore, organic food, composting and sustainable farming. Create an award or prize for the parent who wins (the award may simply be standing first in line at the buffet table). Assigned to: ______

- Organize the purchase, donation or usage of plates, glasses, silverware and napkins. Use non-disposable plates and real silverware to reduce the amount of waste. Assigned to:
- 9. Create a voluntary cleanup crew for post dinner party festivities. Assigned to: _____
- 10. Create a timeline for all checklist items above and make sure your class stays on task. Assigned to: _____

PLAN YOUR BIG GREEN HELP EVENT: RECYCLE/ PRECYCLE

BUILD GIANT PAPER CONSUMPTION CHARTS

Make a giant thermometer and color in the number of paper sheets used each day for the first 2 weeks of your observations (during the "before" period, or average use). Readings may be marked per 500 or 1,000 sheets. Then, make a second thermometer displaying the information gathered during the second 2 weeks of your Recycle/Precycle program (using the "after" numbers, or tallying the number of paper used once the class begins conserving). Display these before and after thermometers for the whole school to see and pledge to keep saving! Propose a plan to your principal to buy only recycled paper and to use less paper overall at school.

EVENT-SPECIFIC CHECKLIST

- Make a giant thermometer and color in the number of paper sheets used each day for the first 2 weeks of your observations (during the "before" period, or average use). Readings may be marked per 500 or 1,000 sheets. Assigned to: ______
- Then, make a second thermometer displaying the information gathered during the second 2 weeks of your Recycle/Precycle program (using the "after" numbers, or the amount of paper used once the class begins conserving). Assigned to: ______
- Display these before and after thermometers for the whole school to see and pledge to keep saving! Assigned to: ______
- Propose and obtain approval from the principal and/or school administration to buy only recycled paper for the remainder of the school year. Assigned to:
- Create and deliver paper recycling boxes to every classroom, the library and the cafeteria.
 Assigned to: ______
- Optional: Consider creating plastics and glass recycling bins for the classrooms, cafeteria, playground, and parking areas as well. Assigned to: ______
- 7. Send out Evites to each classroom to join you in your recycle/precycle program. Assigned to: ______

- 9. Create awards for the "least paper used" classroom. Assigned to: ______
- 10. Create a timeline for all checklist items above and make sure your class stays on task. Assigned to: _____

PLAN YOUR BIG GREEN HELP EVENT: SLOW THE FLOW

POWER DOWN

Present an evening of "outlet observation" to family, friends and community members (and local media)." While music is usually played with plugged in electric instruments, instead brainstorm with your school's music teachers to select teacher and participant performers to play acoustic instruments, keyboards, turntables, unplugged on stage. While the music is playing the class will report what they've learned about Slowing the Flow in the form of poems, songs, or raps to teach the audience how to save the planet by becoming "unplugged."

Challenge the school to power down and stop using electricity for an hour class period or whole day! Build in a reward that if the entire school participaes the principal will perform a stunt such as jumping double-dutch at an assembly. Give awards to classes who bring in the most "energy conservation contracts" from home (signed agreements by parents to work with kids to unplug at home).

EVENT-SPECIFIC CHECKLIST

- Arrange a meeting with the school music director/teacher to recruit performer(s) to play acoustic instruments on stage for your "unplugged" event (performers can be teachers, participants, parents, local artists, siblings, etc.). Assigned to:
- Pick a minimum of 3 acts and work with the performers to select songs or create original poems. Set a deadline for any song or poem submissions to give adequate time for teacher approval and revisions, if necessary. Assigned to: ______
- Create a program of chosen performances and musical acts. Promote the program with Earth-friendly emails, websites, blogs, your school marquee, and by word of mouth (versus wasting paper and printing programs) to share with your school, parents, your local community, and the media. Assigned to: ______
- Create and organize awards for performances based on creativity/energy/most original/popular vote, etc.
 Assigned to:

OPTIONAL: If presenting a school-wide event, conduct class competitions based on which class can bring in the most "energy conservation contracts" signed by parents and community members. Create these contracts in email format vs. paper contracts. Assigned to: ______

5. Organize at least one dress rehearsal in advance of the program to make it shine. Assigned to: ______ 6. Create a timeline for all checklist items above and make sure your class stays on task. Assigned to: _____

PLAN YOUR BIG GREEN HELP EVENT: CURB THE CAR

CREATE AN ANTI-IDLING ZONE

Present an anti-idling plan to your school principal. Suggest any necessary idling (or better yet, waiting with vehicles turned off) be confined to the school's back gate while the front gate is open for quick drop off/pick ups (a "zero idling zone"). Place class officers at both gates to enforce the no- and low-idling zones to remind vehicles' drivers of your new plan to save the planet! Build no-idle zone signs to post in appropriate areas explaining how idling produces harmful emissions.

EVENT-SPECIFIC CHECKLIST

- Create an anti-idling plan for your school. In the plan, identify two zones for traffic: a quick drop-off/pickup zone and a waiting/anti-idling zone. Assigned to:
- 2. Obtain the principal's approval and adjust the plan based on school restrictions. Assigned to: ______
- Set up a meeting with the school administration, operations manager and school security to discuss the most efficient placement and routing for the two zones. Assigned to: ______
- Organize volunteers and choose class officers to enforce the new zones. Create a rotating schedule so there is always a team on anti-idling patrol. Assigned to: ______
- Contact the local school district to propose that school buses take part in the no- and lowidling program. (School buses emit four times more CO₂ than standard cars.) Assigned to: ______
- Build no-idle zone signs to post in appropriate areas, explaining how idling produces harmful emissions. Perhaps this is a project for shop or art class. Assigned to:
- 7. A week prior to the program initiation, begin a countdown (via email, flyer, posting on school website and/or marquee) to inspire excitement and to inform parents, bus drivers, etc., to plan ahead for the transition. Include a list of FAQs and answers to reduce the number of questions and concerns the zone enforcers may encounter. Assigned to: ______
- 8. Rehearse the answers so they are second nature.

- 9. Schedule a walk-through of the process with class officers, school officials, security, etc. Assigned to: _____
- 11. Create a timeline for all checklist items above and make sure your class stays on task. Assigned to: _____
- 12. Extra credit: Create a carpool signup to be posted at the school office. Assigned to: ______

PLAN YOUR EVENT: SAVE THE BIG BLUE

LEARNING ABOUT LOCAL WATERWAYS

Do you know what flows through your hometown's drains and waterways...and where the contents end up? What goes into a drainage system eventually comes out somewhere in our waters (whether it be in our rivers, lakes or oceans). Find out where our waste goes and what effect these materials have on the bodies of water they flow into, as well as the effect on our planet. Investigate what's in the gutters and what goes down storm drains (in addition to rain). Check out local waterways and note what lies around them (gas stations, industrial plants, farms, parks, houses, etc.). Then obtain a map of your area showing its drainage system (many city maps show this) and re-create a large-scale version of this map to show school staff, parents and community members. Pinpoint locations that generate waste, showing where it goes and if it gets treated along the way. Once you've determined its final destination, research the effect it has on wildlife, marine life, plant life and human life. Pick a waterway in your community and organize an event to clean it up!

EVENT-SPECIFIC CHECKLIST

- 1. As a class, observe where and how water is drained around your school. Take note of what is in the gutters and what materials might go down the street's storm drains.
- 2. As a group, discuss your local waterways, then choose one or more locations to study.
- 3. Assign research groups to each waterway chosen and study the area around each to find out what kinds of activities take place there.

Waterway 1 assigned to: _	
Waterway 2 assigned to:	
Waterway 3 assigned to:	

- 4. Based on the findings above, as a class, determine what materials are likely to wash into the waterways (e.g., if there is a gas station next to an ocean, some oil may go into the ocean; if there is a farm next to a river, farm chemicals may seep into the river, etc.).
- 5. Find a detailed map that covers the area around your selected waterways and shows drainage systems. You may need to get a city map featuring utilities information or call the local utility company to see if they can provide you with a map. Assigned to: ______
- Once the map is in hand, make note of locations that generate waste, showing where it goes and if it gets treated along the way. Assigned to: ______
- 7. Now assign an artists to re-draw the map at a larger size (noting wastegenerating locations and how the waste flows into local waterways or whether it is treated along the way). Leave room on the map for factoids about effects on the environment.

Assigned to: _____

- 8. While the large map is being created, pick class members to research the effects of waste on the wildlife, aquatic life and humans in or near these local waterways. You can do general research and/or call local environmental groups for more information. Assigned to: ______
- 9. Pick a date to host a Local Waterways Education Night" at school. Choose participants to create an Evite to send out to school staff, parents, and community members. Invite them to see the waterways map, and have participants explain how to reduce waste and how to protect and clean up area waterways. You can also invite guests to join in a cleanup effort. Assigned to: ______
- 10. Pick participants to present at the Local Waterways Education Night. Rehearse. Assigned to: _____
- 11. At the event, pool together a work party and organize a cleanup effort for one or more of your local waterways. Have guests sign up to participate. Assigned to:
- 12. Create a timeline for all checklist items above, and make sure your class stays on task. Assigned to: _____

EVENT REVIEW/SUMMARY:

- 1. Turn in all signed and completed Pledge Forms.
- 2. Take one last look at your General Event Checklist and Event-Specific Checklist and review any last-minute questions.
- 3. Then, get ready for the big event and don't forget to celebrate! Good Luck!

CERTIFICATE OF COMPLETION

After or at your Big Green Event, you will be awarded Nickelodeon's Big Green Help Certificate of Completion. Good work! Post your certificate somewhere prominent—in your classroom or at home on your bedroom wall—so you can remember your important role in saving the planet every day!

WHEN THE PARTY'S OVER, CONTINUE BEING GREEN

And just because the Big Green Help Event Day will eventually come to an end, it doesn't mean that all your green ideas and practices should as well. Instead, continue being green and keep working to help save the planet. There is so much we can do to conserve our natural resources, save energy and waste less. Spread the word and let everyone know what it means to be green. Let the Big Green Help be your launching pad for a life of green living and a better, healthier planet tomorrow! The future of the Earth is in your hands...

REGISTER YOUR GREEN TEAM GREEN EVENT

Tell Us What You're Doing! Nickelodeon wants to know how YOU are helping to save the planet! Sign up to Officially Register your Big Green Help Projects!

All registered organizations are eligible to receive Nickelodeon resources for their events while supplies last! Simply send an email with the following information to Publicaffairs@nick.com. (If you do not have access to email, please mail all information to the address below.)

CONTACT INFORMATION

VENT

- Name of Organization, School or Club
- Mailing Address
- Contact Person (First & Last Names)
- Name of Green Team
- **Contact Title**
- Email
- Phone Number

REGISTRATION

PROGRAM PARTICIPATION

- 1. Will you be using the Big Green Help activities? (If so, how many kids will participate?)
- 2. Will you be conducting a Big Green Help Event? (If so, has your group selected one of the Green Events suggested in the Toolkit or has your group created their own? Please describe.)
- 3. Are you doing any additional activities to help the environment?

CONTACT INFORMATION

Nickelodeon Public Affairs 1515 Broadway New York, NY 10036 212-846-4333 Publicaffairs@nick.com

PERMISSION SLIP

DEAR PARENT/GUARDIAN:

On(Date),	(Organization/School/Club Name) is holding a
Nickelodeon Big Green Help Event.	

The Big Green Help is Nickelodeon's kid-led, pro-social initiative aimed at empowering kids worldwide to take action on the environment with Earth-friendly and energy-saving activities.

Family and friends are welcome to support your child's participation by giving them permission to participate in this event.

Please fill in and sign this Permission Slip so your child can take part in ______''s (Organization/School/Club Name) Big Green Help Event.

Please support the event! If you have any questions or are interested in volunteering at the event, contact us at ______ (Phone Number).

Parent or Guardian Name_____

Address___

Phone

Emergency Contact Name

Emer	aencv	Contac	ct Pl	none
E	301103	oomu		10110

Child's Doctor_

Child's Doctor's Phone

Any allergies or medical conditions we should know about?

SINCERELY,

(Organization/Event Contact)

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CERTIFICATE OF COMPLETION

NICKELODEON'S BIG GREEN HELP CERTIFICATE OF COMPLETION

This Official Green Helper Certificate of Recognition is awarded to:

for outstanding participation in Nickelodeon's Big Green Help and for demonstrating a stellar commitment to the environment and the planet.

Presented by

in partnership with Nickelodeon

Signature_

Date

OFFICIAL BIG GREEN HELPER



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BOYS & GIRLS CLUBS