
GREEN GUIDE

GREEN TEAMS FOR TRANSPORTATION



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TEENS GO GREEN



Safe Routes to Schools is a program of the
Transportation Authority of Marin.

GREEN GUIDE: Green Teams for Transportation

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INTRODUCTION



What is a Green Team

Green Teams have been forming in schools across the country. A Green Team is a school-based committee that is focused on evaluating an aspect of the school's ecological footprint and then developing a program to reduce related effects. This can result in recycling programs, energy audits, the installation of energy generating devices like solar panels, planting a school garden, or reducing car usage. This is usually accomplished through classroom curriculum and activities that raise awareness, actions that have definitive results and long-term policy changes that promote the green activities.

Why a Transportation Focus to Promote Green Ways to School?

To date, most Green Teams have focused on projects on the school campus. They often center on physical changes to the school environment: providing recycling containers, planting gardens, or installing energy-efficient light bulbs or other appliances. These types of changes require little behavioral change, if any.

Transportation choices have a clear environmental effect, as so many parents now drive their children to and from school. Driving can cause severe traffic congestion at the school site, create air pollution and greenhouse gases, and promote a sedentary lifestyle for the students. Thus a transportation-focused Green Team can significantly reduce a school's environmental footprint. Transportation-focused Green Teams develop actions, education and policies that encourage students and/or families to take green ways to school: walking, biking, or traveling by scooter, skateboard, bus or carpool.

INTRODUCTION



Why a Transportation Focus to Promote Green Ways to School? cont.

Encouraging green ways to school requires a focus on individual behavior and a shift in cultural norms. Promoting green, active transportation choices such as walking and biking often involves making changes to the physical environment. These infrastructure changes are often off-campus, and require the cooperation of local jurisdictions. Infrastructure changes are usually accomplished with a Safe Routes to Schools Task Force, which evaluates the school entrances and the routes that lead to the school, recommends safety improvements and facilitates their implementation.

While transportation-focused Green Team actions present challenges, they also have many benefits for the school, the parents, and the students. Transportation is the largest contributor of greenhouse gases in the San Francisco Bay Area. In Marin County, it accounts for 62% of greenhouse gas emissions (in the overall Bay Area it accounts for 55%). Introducing children to green transportation choices at an early age can have long-lasting benefits: cleaner air, less traffic, active lifestyles, and reductions in the risk of obesity.

Active transportation has educational benefits as well. Children who walk or bike to school are more alert and ready to learn when they arrive. The California Department of Education found that students who score well on physical fitness tests usually also score well on academic tests. Green transportation can also provide parents and students with a social network that provides opportunities beyond the trips to and from school. Green transportation can save the parents time and money. It can also save schools money, particularly schools that, owing to dangerous conditions, provide hazard busing to students who live close to school.

ORGANIZING: TYPES OF GREEN TEAMS



The [SchoolPool Guide](#) also contains tips on [promoting](#) and [organizing](#) your program.

[PDF download](#)

Club-Focused Green Teams

The most common form of Green Team is a student club that focuses on green activities. These clubs meet at lunch or after school with parent and/or teacher advisors. Sometimes they are connected with a classroom-based curriculum, but the club also studies the issue outside the classroom. The students then promote green activities to the whole school. These clubs usually focus on raising awareness and taking action.

Transportation projects that are club focused:

- Students initiate regular Walk and Roll to School Days and then run a contest during those days to encourage participation.
- A Green Team that has been running Cool the Earth decides to focus on transportation, using the special actions and trading cards. Cards are traded on weekly Walk and Roll to School Days. They introduce transportation activities during lunch. (See page 12.)

Classroom-Focused Green Teams

These are spearheaded by a teacher with a particular interest in promoting green activity. The activities spring from educational curriculum that introduces the students to environmental impacts of motor-vehicle use, climate change and other relevant ecological information. The students evaluate the existing conditions at the school and choose an action that will address the issue. They then promote that activity to the whole school.

Transportation projects that are classroom focused:

- Students studying greenhouse effects register their fellow students for a [Save a Gallon](#) or

[Active4.me](#) contest and track their journeys to school for a four-week period. Measuring the results before, during and after the contest, they compute the amount of CO₂ reduced and the long-term sustainability of their efforts.

- Students analyze marketing strategies and study the influence of marketing on purchasing decisions. Students then create their own campaign to market eco-friendly transportation.

Stakeholder Green Teams

These Green Teams can be school based or district based and are largely made up of adults, although they often include student participation. These Green Teams include school administrators, teachers, parents, and representatives from other organizations or government agencies. Stakeholder Green Teams focus on developing policies for the school or the district. They often develop the curriculum that will be used in the classroom, promote school-wide actions, and create comprehensive plans for accomplishing their mission.

Transportation projects for stakeholders:

- Develop a SchoolPool program that helps parents find others in their neighborhoods to walk, bike, or carpool together. http://www.saferoutestoschools.org/schoolpool_guide.html
- Develop a comprehensive [Safe Routes to Schools Travel Plan](#).
- Develop policies that support walking and biking curriculum and promote Green Ways to School.

HOW TO SET UP A GREEN TEAM FOR TRANSPORTATION



Setting Up

As with any Green Team, the first step is to bring the people together. If this is a classroom-based Green Team, then it will be based in a teacher's classroom and will be following specific curriculum. If it is a student-club-based Green Team, you will want to identify the faculty and/or parent advisor. You will then promote the club and encourage participation among the students. For stakeholder-based Green Teams, you will be recruiting from within the school and possibly outside the school if you are using this as an opportunity to develop a School Travel Plan. This will include someone from administration, teachers, PTA representatives, the school or district transportation and/or facilities manager, and student government.

If your school already has a Safe Routes to School program, then you will want to team up with the Team leaders from that group. Your school may already participate in a Safe Routes to School Task Force as well. This group will already be developing (or may have completed) a School Travel Plan. If so, then you can work together to implement sections of the [Travel Plan](#).

EVALUATION

Evaluation is Important

It's always important to evaluate the success of your program in order to determine if you have made an impact and to choose the best programs that fit your school. The most important measure is to determine how students get to school before you begin your program and then measure again at the end of the school year. The National Center for Safe routes to School provides Student Tally Surveys and will enter the data for you if you send them the completed forms. These surveys are taken over a three day period and are collected in the classroom by the teachers. They ask the students how they got to school that day and how they plan to go home that afternoon. Through a raise of hands they determine how many walked, biked, carpooled or bused. The whole process takes less than five minutes.

Parent & Student Surveys

There are additional evaluation tools including parent surveys and student attitude surveys. These two tools are quite useful to assist you in determining which programs would be the best fit for your school before you launch a program. These surveys are generally sent home to the parents either through student backpack mail or via email. Email is always best if it is available because it saves you time entering data. Since the respondents are self selected it's good to have a goal of getting at least a 20% return; 50% is even better in order to have accurate information. A parent survey generally asks parents some key questions:

- The age or grade of their child
- The distance they live from school
- The frequency with which they use various modes
- Why they choose to drive
- What programs or changes would get them to change to another mode

Student attitude surveys are a great way to get students involved in the program right from the start. They are best used in middle and high schools but can also be done by upper grades in elementary school. They can help to design the questions and also to gather the information by interviewing their peers or distributing the surveys in the classrooms. They can also help out in entering the information on an on-line program. Some questions to include:

- Their grade
- How they get to school and how often
- What keeps them from walking or biking to school
- What are the benefits of walking and biking
- What would encourage them to walk or bike
- Similar questions for carpooling or bus
- What marketing/advertising gets their attention

You can download student and parent surveys at <http://www.saferoutesinfo.org/data-central>. You can also get more personalized versions of the parent survey and samples of student attitude surveys from Marin Safe Routes to Schools by emailing wendi@marinbike.org



ACTIVITIES OVERVIEW



SKILL BUILDING



RAISING AWARENESS



TAKING ACTION

Basic Steps to Green Team Activity, with Suggested Activities

Identify an ecological goal

e.g., Reducing the CO₂ emissions associated with car usage.

Study broad issues related to that concern

e.g., Greenhouse gases, air and water pollution, health advantages of active transportation.

Evaluate existing conditions at the school

- e.g., Survey the students' current travel patterns.
- Survey parent and student attitudes.
 - Evaluate the routes to schools and note hazards.

Brainstorm ideas and develop a short-term action plan to raise awareness

e.g., Organize regular Walk and Roll to School Days and an incentive program

Propose a long-term proposal to ensure future reductions

- e.g.: Develop a school travel plan.
- Create policies that promote walking and biking to school.
 - Recommend safety improvements for the routes to school.

Measure the success of the program

e.g., Measure student travel behavior and compare to baseline.

A comprehensive transportation program would encompass three elements:

Skill Building



For walking and biking, students should gain a basic understanding of the rules of the road and get tools and training to be safe, confident pedestrians and cyclists. Public transit use requires knowledge of the bus system and how to use it. Provide skill-building classes during school PE periods. Provide suggested-route maps to help parents to find the best ways to walk and bike to school, and provide transit guides for schools served by buses.

Raising Awareness



Neither students nor parents will shift their transportation choices without good reasons to behave differently. Raising awareness can range from classroom lessons that provide relevant educational information, to special events that give people the opportunity to experience different transportation modes and gain insight and enjoyment.

Taking Action



Once students have the skills and knowledge needed to walk or bike and know the reasons why they would choose those modes, many still need incentives to take that first step. Taking action can include regular Walk and Roll to School Days, setting up SchoolPools, and competitions or challenges that encourage new choices.

These elements can be introduced one at a time or simultaneously. Start small. There are a lot of great ideas out there, but don't try to do everything at once. Begin your program with simple projects that have a relatively high likelihood of success. This will help you gain additional support and credibility. You can then expand your program little by little.

ACTIVITIES: WALK AND ROLL TO SCHOOL DAYS



= TAKING ACTION



= RAISING AWARENESS



– Once a year or once a month



– Every Week

Walk and Roll to School Days are the best way to raise awareness and promote Green Ways to School. International Walk to School Day is a yearly event to promote walking and biking to school; it usually takes place the first Wednesday in October. Over 40 countries participate, including cities throughout the US. It is a great way to kick off a Green Ways to School program. The Green Team should follow this event with at least a monthly Walk and Roll to School Day to keep awareness alive. The Green Team should set a goal of holding weekly Walk and Roll to School Days to truly effect behavioral change, and, of course, promote and support daily green transportation. To find out more on how to organize a Walk and Roll to School Day [download the PDF guide](#).

NOTE FOR TEENS:

When students reach middle and high school they usually don't want to be associated with activities they did in elementary schools. W&R2SD can be renamed in middle school as Teens Go Green Days. Drake High School in San Anselmo held a **"No Cars on Campus"** day in which they closed down the parking lot.

ACTIVITIES:

TRIP TRACKING

CONTESTS



Trip Tracking contests encourage students to choose green ways to school through individual or group incentives. They provide fun ways for the students to track their trips and/or miles and then look at the benefits achieved. Tracking can be done through online systems or through lower tech methods such as punch cards or raffle tickets. Students can compete individually, and classes or grade levels can compete with each other. The whole school can also set a target to reduce carbon emissions, and track total miles accumulated to achieve that goal. Even when prizes are provided, the primary focus should be the increase in green trips and corresponding decrease in motor-vehicle trips, and the individual and community benefits incurred through that action. Trip tracking activities normally last for two to four weeks although some people run the tracking longer, even year-round.

Save a Gallon or Active4.me



Save a Gallon or **Active4.me** are online trip-tracking programs designed for use by school-age children. Save a Gallon is designed for individual users while Active4.me is set up for groups.

Once a student is registered, the programs offer multiple ways of recording trips:

- Students record individual trips online
- Teachers record collective trips of the whole class online
- Trips get texted through smart phones
- Trip information is scanned in via code tags issued to the students

Information provided includes:

- Gallons of gas saved
- Money saved
- CO₂ emissions saved



= TAKING ACTION

Pollution Punch Card



This is an individual competition in which students are issued punch cards which are marked during regular W&R2SD and also on another random day during the week. Students who complete a card get an instant reward and then the cards are placed into a raffle for bigger prizes.

Frequent Rider Miles



Frequent Rider Miles (FRM) is also an individual competition. In this case, the students are issued cards that show every day of the week and they check off every day that they take a Green Way to School. Like the Pollution Punch card, the FRM card is used as a raffle ticket and prizes are awarded. Special recognition can be given to students who “green-travel” the farthest or the most frequently.

ACTIVITIES: TRIP TRACKING CONTESTS



= TAKING ACTION



= RAISING AWARENESS

Golden Sneaker or Wheel Award



This is a classroom-level or grade-level competition in which the classes track their green trips to school and compete to generate the most trips. The winning class gets the Golden Sneaker or Golden Wheel. (Creating a Golden Sneaker or Wheel award is easy: Spray-paint a sneaker or a small bicycle wheel gold and place it on a pedestal.)

Green Ways to School Challenge



This is another classroom competition developed in Marin County in which the students count the number of green trips in the class and track those trips using leaf stickers on a tree poster. It ties in the connection between reducing car trips and planting trees; both help reduce greenhouse gases. The winning class is awarded a sculpture made out of bike parts.

ReThink Your Commute



This is the middle school version of Green Ways to School Challenge. Students track the trips through raffle tickets or through using the Save a Gallon scanning device. The winning class receives a special trophy at the end of the contest. In addition individual students are chosen at random for weekly prizes.

Adding an Educational Element



At many grade levels students study an area of history that involves long-distance routes: migration of explorers, the building of the missions, the expansion of railroads, highways or waterways. Any of these can be used to promote Green Ways to School. The students in the class create a map that shows the historical routes. They then sponsor a trip-tracking contest, in which the school accumulates the miles needed to travel along those routes. They can report on the progress and note interesting facts about the locations reached through their Green travels.

ACTIVITIES: COMPREHENSIVE PROJECTS:

A SchoolPool is two or more families that agree to share in transporting their children through Green Ways to School (walking school bus, bike train or carpool).

SchoolPoolMarin.org



= TAKING ACTION



= RAISING AWARENESS



= SKILL BUILDING

Cool the Earth



The Cool the Earth (CTE) program educates children about climate change and inspires them to become climate-change stewards. The program brings hands-on learning to K-8 students and uses a child-driven model to effect environmental behavior change. CTE provides the students with coupon books to take home; the books feature 20 no-cost or low-cost energy-efficiency and conservation actions, such as turning off lights when not in use, and combining errands. The coupons highlight both the economic benefits and the carbon savings of each action. In addition, the students participate in fun lunchtime learning projects about specific energy-saving actions found in the coupon book. A special set of transportation cards and activities have been developed by CTE.

Travel Planning



Travel planning is usually done with an adult-centered stakeholder group, although high school and even middle school students do have the ability to initiate a travel plan as long as the administration is involved in the process.

Travel planning is a comprehensive approach to transportation planning and is offered as part of a standard Safe Routes to Schools program, in which a task force is formed to create the plan. Steps to creating a Travel Plan include:

- Gathering stakeholders
- Setting goals
- Gathering information
- Conducting a site audit to identify walking and bicycling conditions
- Develop an Action Plan which includes education, engineering, enforcement, encouragement
- Evaluate the program
- Develop policies that support the program

Details on developing a travel plan can be found at <http://guide.saferoutesinfo.org/steps/index.cfm>

Neighborhood SchoolPools



This is another comprehensive program that should be initiated by an adult Green Team. Determine the logical neighborhoods within your school boundaries. Create a digital map that shows those neighborhood boundaries and then create route maps that illustrate suggested walking and bicycling routes to school. Recruit captains from each neighborhood to organize people into SchoolPools. Various techniques are used to determine who lives within each neighborhood, in order to assist the captains in their outreach efforts. [Download the PDF guidebook.](#)

OTHER ACTIVITIES

Other projects for Green Teams can also raise awareness and encourage green ways to school. They generally involve a smaller number of students and families, but participants often become leaders of wider efforts.



= TAKING ACTION



= RAISING AWARENESS



= SKILL BUILDING

After School Bike Clubs



After-school clubs can teach a select number of students more in-depth skills for riding bikes and offer them the opportunity to test those skills with group rides. These programs can be adapted to provide an earn-a-bike program in which low-income students learn bike mechanics and use those skills to earn their own bike.

Bicycle Field Trips



These can be organized both during and after school. During the school day they can be used to transport students to special events by using bicycles rather than renting a bus or organizing carpools. (link to Drake High article of Rock Field Trip). They can also take place after school as a reward for the Green Team.

Bicycle Give-a-Way

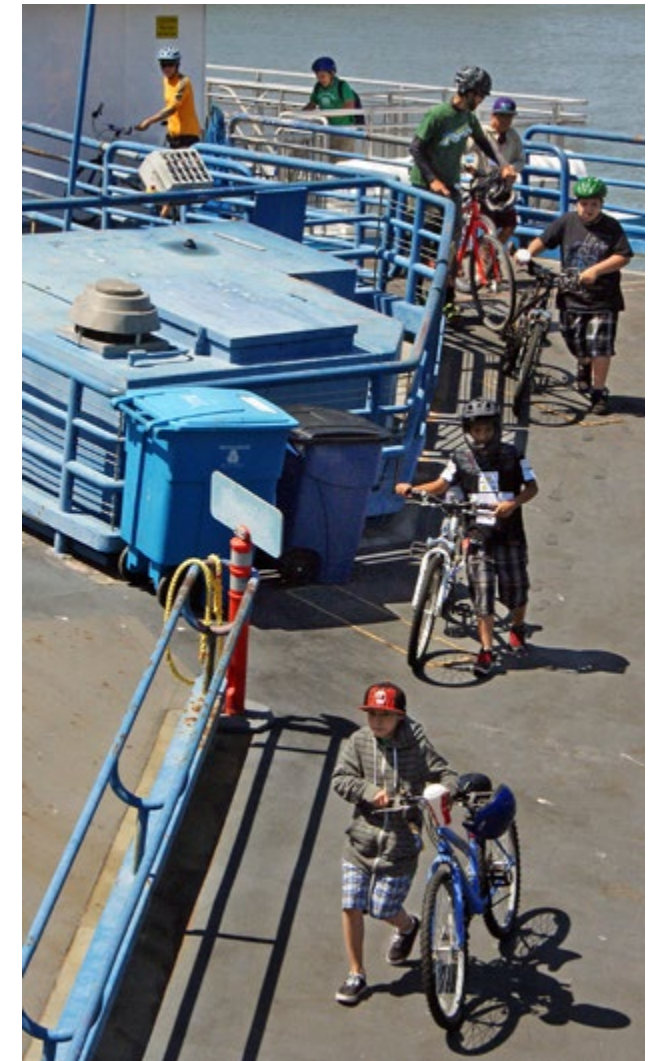


Green Team students can advertise to collect used bikes. This can be done right after the winter holidays when many people buy new bikes to replace their older or smaller bikes. The Green Team partners with a local bike shop to learn basic bike mechanics and repair the used bicycles, as needed. They then invite disadvantaged youth and their families to apply to receive the bikes, and set up a day for distribution. They can also use the activity to raise money to provide bikes for overseas students.

Multi-media



Green Team students create, and post online, digital films that promote walking and biking; provide relevant information on the ecological consequences of our transportation choices; record safety issues near their school; document their existing programs.



CURRICULUM

Safe Routes to Schools programs throughout the Bay Area have developed valuable curriculum that ties to State standards and will assist in raising awareness on the value of choose Green Ways to School. Use these lessons in conjunction with your Green Team actions in order to raise awareness and educate the students on the deeper lessons behind making green transportation choices.

[Curriculum Overview PDF download.](#)



= TAKING ACTION



= RAISING AWARENESS



= SKILL BUILDING

Marin County Bicycle Pedestrian Links

Pedestrian Safety:

2 lessons (K-2)

Teaches safe walking with an emphasis on crossing the street.

Beginning Bicycle Safety:

3 lessons (3-5)

Teaches the benefits of biking, how to check and fit both a bike and helmet, and teaches how to stay safe when riding in traffic. The unit culminates in a bicycle rodeo.

Advanced Bicycle Safety:

2 lessons (6-8)

Unit engages students with current images and video regarding the “why and how” of biking. The second lesson gets students on the bike to ride our traffic and obstacle courses. These lessons can be followed up by an optional field trip

Elementary School Green Activities



Transportation Location:

3 lessons, history/science (3-6)

Using Latitude and Longitude coordinates is a fundamental skill students need when navigating maps.

[Download PDF Guide \(2 MG\)](#)

[History of the Bike Powerpoint download \(4 MG\)](#)



Alameda County Curriculum

Lessons for K-5 related to Safe Routes to Schools and Environmental Awareness.



Sonoma County Curriculum

The Standard Stroll features easy-to-teach standards-based lessons for each grade level. The lessons span all subject levels, from Language Arts to Math, and integrate some crucial issues such as the environment, community, pedestrian and bicycle safety and health.



= TAKING ACTION



= RAISING AWARENESS



= SKILL BUILDING

Middle and High School



3-D Bike Maps:

1 lesson, science (6-8)

After an introduction to reading topographic maps, two fun activities allow students to practice using their topographic map skills.

[Download PDF Guide \(760 KB\)](#)



ECO2school

(Sonoma County Climate Protection Campaign)

Facilitates practical application of science-based solutions for significant and immediate greenhouse gas reductions in student commute. Through this project, students also learn the health and safety benefits of reducing driving to school.



Pollution and Evolution:

1 lesson, science (6-8)

A hands-on “natural selection” moth activity and scientific demonstration of atmospheric gases.

[Download PDF Guide \(880 KB\)](#)

[Pollution & Evolution Powerpoint download \(3.6 MB\)](#)



Marketing Strategy and Transportation:

2 lessons, health/art/psychology (6-12)

The historical use of emotional marketing is examined. Students view ads and identify the intended audiences and the type of emotional appeals. The second lesson allows students to present an ad they have made to promote environmentally friendly transportation.

[Download PDF Guide \(1 MB\)](#)

[Marketing Strategy and Transportation PowerPoint download \(4 MB\)](#)



The Cost of Transportation:

1 lesson, science (6-12)

This lesson focuses on the variety of transportation methods available and the costs and consequences associated with each mode of travel.

[Download PDF Guide \(1 MG\)](#)



What Do I Stand For?:

1 lesson (6-12) life skills

An activity that invites students to explore their beliefs, values, and their willingness to take action in response to environmental problems, particularly by using green transportation.

[Download PDF Guide \(670 KB\)](#)



Travel Journal:

3 lessons (6-12) health

Challenges students to explore their travel modes and discover how many trips they can reduce by choosing alternatives.

[Download PDF Guide \(1 MG\)](#)



History of Transportation:

2 lessons social science/English (9-12)

This lesson offers students a general overview of the evolution of transportation in Marin and California from the early days to modern times. Students are given an opportunity to look critically at current transportation systems and the interdependent relationship of transportation with modern cultural norms and values.

[Download PDF Guide \(986 KB\)](#)

[The History of Transportation PowerPoint download \(8.4 MG\)](#)

FACT SHEETS

Health Facts

Datos sobre la Salud

PDF download 293 KB

Environmental Facts

Datos ambientales

PDF download 207 KB

Safety Talking Points

Temas sobre Seguridad

PDF download 207 KB

History and Politics of Transportation in the United States

Historia y Política del Transporte en los Estados Unidos

PDF download 613 KB

Resources / Selected Bibliography

PDF download 83 KB

DEFINITIONS

Bike Pool or Bike Train

A Bike Pool or a Bike Train includes one or more adults who bike with children to and/or from school. Depending on the age and ability of the children, a Bike Pool generally requires a greater ratio of adults to children than does a Walking School Bus. As with Walk Pools, middle and high school students may want to form their own Bike Pool with minimal or no parent supervision, depending on the age of the students and their level of skill and responsibility.

Walk Pool or Walking School Bus

A Walk Pool, also called a Walking School Bus, is formed when one or more adults walk with children to and/or from school on a regular basis—daily, or weekly. Middle and high school students may want to form their own Walk Pool without parent supervision.

Travel Plans

A Safe Routes to Schools Travel Plan is a guide to increase walking and biking to school and to reduce traffic congestion around schools through promoting walking, biking, carpool or bus travel. This plan identifies the obstacles that keep parents from allowing their children to walk and bike, and the opportunities that would facilitate new behavior. It then maps out a plan of action that includes:

- **Engineering** – Design-concept plans for improving the physical infrastructure along the routes to schools.
- **Enforcement** – Traffic-safety plans that include increased police enforcement programs and education campaigns to increase safety awareness.
- **Education** – Classes and activities that educate children on safe walking and biking and teach the health and environmental benefits of active transportation.
- **Encouragement** – Contests and events that provide incentives for families to choose new travel options.

DEFINITIONS



Green Ways to School



Green Ways to School

The Green Ways to School campaign is a great way to have fun, do the planet a good turn.

If you live close-by

- Walk or bike

If you live too far away

- Carpool with one or more other families to school

- Park about $\frac{1}{4}$ mile at a secure location and walk the rest of the way
- Use the bus (if available)

If you must drive all the way

- Drive carefully and watch for children
- Turn off your engine – don't idle.



www.saferoutestoschools.org



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