

Green Patrol

Clean It Up. Turn It Off. Keep It Green.



Thank you for your interest in the Green Patrol Program. Green Patrol began in 2006 in San Antonio as an initiative to help schools reduce vehicle idling on their campuses. It was modeled after a similar program developed by Airwatch Northwest, a consortium of air quality agencies in Washington, Oregon, Idaho and British Columbia.

Inside this handbook, you will find the information you need to implement Green Patrol in your school or community including:

- A Green Patrol Overview
- Green Patrol Basics
- Green Patrol Program Plan
- Green Patrol Tips & Ideas
- Air Quality Facts
- Green Patrol Samples

For more information or to download Green Patrol material visit:
<http://www.cleanairdrive.com/greenpatrol/schools.html>



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Green Patrol Overview

School driveways and parking lots tend to become very congested during the after-school hours. Parents arrive at the same time, forming long lines to pick up their children. Students must walk across busy parking lots and streets, often breathing unhealthy levels of air pollution caused by vehicle idling.

Studies have shown motor vehicle exhaust contains chemicals that are harmful to breathe in, including cancer-causing agents and respiratory irritants. These chemicals are found in higher concentrations around busy or high traffic areas of schools. The risk of inhaling these harmful chemicals is higher for students than adults because children breathe more air per pound of body weight. Furthermore, children tend to spend a longer amount of time outdoors than adults, making them more susceptible to air pollutants.

What is Green Patrol?

Green Patrol is a school-based program designed to help improve outdoor air quality through the reduction of engine idling. The Green Patrol Program serves as a tool for creating a safer and healthier environment by reducing the number of idling cars on campus and promoting the reduction of petroleum consumption. Green Patrol is also used to teach students about the importance of air quality, the different effects of ozone location, where air pollution comes from, and alternative means of commuting.

A unique and highly effective aspect of this program is that students are empowered by taking responsibility for their own school. “Deputized” as Green Patrol Officers, students monitor their school driveways and parking zones, reminding parents to turn their cars off while they wait.

Overall Goal of Green Patrol

The overall goals of the Green Patrol Program are to educate people within the community about the effects of engine idling and to influence them to change their related habits. Studies have shown that turning off the engine when a vehicle is stopped for one minute or more saves fuel costs and reduces the amount of pollution that gets into the air. For schools dealing with excessive idling, fewer vehicles running provide an added safety cushion as noise levels and the likelihood of accidents are reduced.

Benefits of Green Patrol

- Protects student health
- Increases student safety
- Improves air quality
- Educates future leaders
- Helps parents save gas money

Green Patrol Basics

There are two phases for implementing the Green Patrol Program. Phase One includes reaching out to your school staff and parents to inform them you will implementing Green Patrol in the school. Phase Two will be you appointing Green Patrol officers to complete the program.

Here are the basic steps you can take to implementing Green Patrol once you have all parties onboard.

- Every teacher should receive a Green Patrol Letter to hand to his or her students along with a Green Patrol No Idle Pledge Card. This letter will explain the Green Patrol Program to parents.
- The students will then take the letter home to their parents. Once their parents have read the initial Green Patrol letter they will decide if they want to sign the No Idle Pledge Card.
- If a parent decides to sign the pledge, the child returns the signed form to their school.
- Each child who submits a signed Pledge Card receives a Thank You Letter to take home to his or her parent. Parents will also receive a static sticker, which they can place on their windshield, stating they have taken the No Idle Pledge.
- Designated Green Patrol Officers (students) will be assigned to monitor the No Idle Zones outside the school.
- While at their post, the Green Patrol Officers (dressed in green jersey vests) will hold signs they have created, which serve as a reminder for parents that they are in a No Idle Zone.

SAFETY NOTE: At no point during the program should children be encouraged to walk up to vehicles or try to force parents to turn their cars off. The primary job of a Green Patrol Officer is to hold their signs up as a reminder to parents that they are in a No Idle Zone.

Green Patrol Tip

You can download sample material from Clean Air Drive and modify it to fit your schools needs and wants!

Visit: <http://www.cleanairstdrive.com/greenpatrol/schools.html>

Green Patrol Program Plan

1. **Does Green Patrol Fit In Your School:** The Green Patrol Program could be ideal for your school if:
 - It is located in an area involving heavy traffic and
 - Has a large number of idling vehicles.
 - You want to teach students about air quality.

The Green Patrol Program can serve as a tool for schools trying to reduce vehicle idling on their campus. This program is simple to implement and requires minimal material to initiate.

2. **Material:** Green Patrol Material can be divided into two sections.
 - Printable Material: This material can be downloaded directly off www.cleanairdrive.com and reused in your school
 - Ordering Material: This material may be purchased from an outside source to enhance the program. Materials may include green jerseys, No Idle Signs, etc.
3. **Decide on a Start Date:** Ideally, the time to start the program would be at the beginning of the school year. However, this may be a busy time for teachers, staff, and students. If so, it might be best to initiate Green Patrol in mid fall when the pressures associated with starting new classes have waned.
4. **Conduct a Car Count (optional):** If you are looking for measurable results from this program, you may conduct a car count before and at the end of the program year. This step is helpful in evaluating the effectiveness of the program. You can find a sample car count at the end of the handbook.

Green Patrol Tip

Start thinking about the material you want to use during your initial development of the program. If you plan to buy any material, take into consideration the amount of time you will need to purchase everything. During this time, it is also important to begin thinking about how Green Patrol will be presented to the students, staff, and parents.

You can find a GP presentation on <http://www.cleanairdrive.com/greenpatrol/schools.html>.

5. **Recruit Green Patrol Officers:** Usually 15-20 students need to be selected as Green Patrol Officers so that they can provide monitoring duties on a routine basis (3-4 students per weekday). Ideally, students should rotate between days so that the same students are not missing the last ten minutes of class every day.

The duties of a Green Patrol Officer are as follows:

- Create Green Patrol Signs

- Monitor the No Idle Zones outside the school (usually 10 minutes before the end of the school day, before children start entering cars)

SAFETY NOTE: There are circumstances in which a car might need to idle (i.e. if a parent has an infant in the car or it is an extremely hot day). Not everyone is expected to shut their vehicles off and children should not be expected to try to enforce action. At no time, should a Green Patrol Officer walk up to vehicles or ask parents to shut their vehicles off.

6. Conduct Green Patrol Officer Training: Approximately 30 minutes. This presentation is given specifically to the students selected to be Green Patrol Officers. The actual length of the presentation is approximately 15 minutes plus extra time for the students to ask any questions or concerns they have regarding the program or their duties. **A sample Green Patrol Officer Training Guide can be found at the end of this packet.**

During the presentation, the role of the presenter will be to:

- Explain the importance of air quality, the different effects of the ozone layers, where air pollution comes from, and alternative means of commuting.
- Explain the Green Patrol Program and the role of the Green Patrol Officers.
- Clarify any questions the students may have.

In addition to explaining Green Patrol, the presenter should also have on hand sample material that the students can look at including:

- Green Patrol jerseys
- Green Patrol pledge card
- Green Patrol stickers
- Green Patrol Sample Signs
- Any other material the presenter finds pertinent to the program

Green Patrol Tip

Encourage Green Patrol Officers to make their own Green Patrol signs. Print out a few sample signs off <http://www.cleanairdrive.com/greenpatrol/schools.html> that the students can use as a reference guide. What better way to kick off the start of the Green Patrol Year than with a Green Patrol Sign Party! Have fun!

7. Conduct Green Patrol Presentation (entire school): Approximately 30 minutes per presentation. After the Green Patrol Officers have been trained, it is recommended to introduce Green Patrol to the entire school. Arrange with your school contact a date and time to conduct the Green Patrol Presentation. Depending on the school, the presentation can be giving as a whole at once or divided. The length of time allotted for the presenter should be at least 30 minutes, although the presenter might speak for roughly 15 minutes.

The extra time is allotted for the students to enter and exit the room. **A sample Green Presentation Guide can be found at the end of this packet.**

During the presentations, the role of the presenter will be to:

- Explain the importance of air quality, the different effects of the ozone layers, where air pollution comes from, and alternative means of commuting.
- Explain the Green Patrol Program, how it will be implemented in the school, and the role of the Green Patrol Officers.
- Clarify any questions the students may have.
- Announce any incentives discussed and approved by school officials.

- 8. Conduct a second car count:** To measure the success of the program a second car count should be conducted toward the end of the school year.
- 9. End-Of-The-Year Party:** The end of the school year is the ideal time to reward the Green Patrol Officers and/or any other group of children that have made the program successful, such as the class that gathered the highest percentage of signed pledges from parents. End-of-the-year parties may feature air quality-related games that reinforce Green Patrol Messages.

Green Patrol Tip

You can get as creative as you'd like with the End-Of-The-Year Party. Show the students how much you appreciate the work they do and encourage them to participate again next year.

- 10. Enjoy your Summer Vacation!**

Air Quality Facts

- A good way to monitor air pollution levels in your area is to track the air quality index (AQI) –a color-coded forecast system that indicates the expected air pollution level for the day and how that level indicates in terms of health risks.
- In 1999, the Environmental Protection Agency (EPA) adopted the version of the Air Quality Index that is still in use today. See chart below.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

- Ozone is a gas that occurs both in the Earth's upper atmosphere and at ground level. Ozone can be "good" or "bad" for your health and the environment, depending on its location in the atmosphere.
- Ground-level or "bad" ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight.
- At ground level, ozone is a harmful pollutant. Ozone pollution is a concern during the summer months because strong sunlight and hot weather result in harmful ozone concentrations in the air we breathe.

- Air pollution comes from many different sources: stationary sources such as factories, power plants, and smelters and smaller sources such as dry cleaners and degreasing operations; mobile sources such as cars, buses, planes, trucks, and trains; and naturally occurring sources such as windblown dust, and volcanic eruptions, all contribute to air pollution.
- In numerous cities across the country, the personal automobile is the single greatest polluter, as emissions from millions of vehicles on the road add up.
- Because ozone forms in hot weather, anyone who spends time outdoors in the summer may be affected, particularly children, outdoor workers and people exercising.
- Children are vulnerable to the effects of air pollution because their lungs and immune systems are developing, they are more active in environments with high levels of pollutants (e.g., while participating in sports in the afternoon), and they receive higher doses, relative to adults, because of differences in breathing rates and patterns.
- Air pollution tends to be worse in urban areas where vehicles and other sources of pollution are concentrated. However, wind can transport urban pollution many miles, often impacting rural areas as well.
- Idle reduction strategies can reduce idling-related emissions of nitrogen oxides, carbon monoxide, particulate matter, and other harmful pollutants by up to 99%.
- You will save gas by turning the engine off and restarting it again if you expect to idle for more than 30 seconds. You will also prevent pollution by avoiding long idles. Try parking your car and going into restaurants, banks, and the like instead of idling in drive-up lanes.
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Green Patrol Guides

Green Patrol Officer Training Guide

- Introduce yourself then thank students for participating in Green Patrol
- Describe the purposes behind the Green Patrol program
 - Air pollution is bad for our health; children are more susceptible to air pollution than adults.
 - Some pollution is visible (example: black smoke emitted from tailpipes). But even if there is no smoke coming out of a tailpipe, that doesn't mean the car isn't adding pollution to the air we breathe. Much of the pollution generated by vehicles is invisible to us. Some of the pollution is made up of chemicals that form ground-level ozone. Describe the difference between good and bad ozone.
 - Exhaust emissions are typically generated at higher rates when vehicle engines are idling because engines do not run as efficiently in idling mode.
 - Engine idling is common at schools while parents wait to pick up their students.
 - Other areas where engine idling is common: restaurant and bank drive-through lanes.
 - Green Patrol programs help reduce pollution by encouraging parents to turn off their engines (when appropriate) rather than leave them idling while waiting on school property or other areas.
- Describe how the Green Patrol program works
 - Parents/guardians receive a letter informing them about the Green Patrol program and asking them to participate by turning off their engines when waiting to pick up students. Parents are also asked to sign and return pledge cards to demonstrate their support for the program.
 - Green Patrol works somewhat like the school's Safety Patrol in that members monitor vehicle traffic during the time when parents are on campus to pick up their students.
 - Our Coalition provides the school with materials that help reinforce Green Patrol messages (no-idle yard signs, window clings) and help drivers recognize members of the Green Patrol (green vests, buttons).
 - Green Patrol Officers will create their own signs and posters. Show sample pictures of signs.
 - Members of the Green Patrol help remind drivers to turn off their engines.
 - If a parent refuses to turn off his/her car, that's okay. The driver may have the engine running for health reasons. Excessive heat can be bad for us and some people who are very sensitive to heat may have to leave their engines running so that they can maintain cool temperatures inside their vehicles.
- **REMEMBER, SAFETY ALWAYS COMES FIRST.**
- Describe Green Patrol rewards
- Each member receives a backpack filled with goodies at the end of the school year
- The class that receives the highest number of signed pledge cards from parents is treated to an end of the year party.

Green Patrol Short Training Quiz

1. Can anyone tell me what air pollution is?
Smoke/ fumes from cars (main answer for purpose of program).
2. What does Idling mean?
A car is turned on but not moving.
3. Can anyone tell me where idling happens?
Outside of school, drive-thru, etc...
4. Are there others ways get around town without using a car?
Walk, bike,
5. How are you (Green Patrol Officers) going to help reduce idling?
We are going to hold signs and wave at parents so they know not to idle.
6. What health problems are caused by air pollution?
Coughing, wheezing, asthma, reduced lung capacity.
7. What groups of people have to be most careful not to be exposed to air pollution?
Those who are very young, who already have lung or heart problems, or who exercise or work hard outdoors.
8. Why is it harmful for parents to let their cars run while they are waiting to pick up their kids outside school?
Damages lungs of growing kids.

Green Patrol Assembly Presentation Guide

- Good Morning /Afternoon/ Evening! (Introduce yourself).
- I'm here today to talk to you about an exciting new program happening right here at (Name of Elementary) called Green Patrol.
- Green Patrol is a school program that helps clean the air we breathe.
- Raise your hand if you have ever had to clean something like your room or your desk? It is important to keep our space clean, right?
- Well did you know our air gets dirty too, with air pollution?
- Air pollution can hurt our lungs or heart, especially if you are young and like to play outside
- Does anyone know where air pollution comes from?
- Cars and unnecessary idling are a major source of pollution.
- To show you how important it is to keep the air clean, we have a video for you to watch!
- (Optional) During this time, you can show a short 10-minute video from http://www.drivecleanacrosstexas.org/for_teachers/activity_book/
- Direct Video Link:
http://www.drivecleanacrosstexas.org/for_teachers/activity_book/clean_air_crew_video.wmv
- Did you see how the balloon's face changed from sad to happy after the air pollution was gone? If video was shown.
- The less gas we use in cars and trucks the cleaner our air is. There are tons of ways to not use gas; does anyone know of other ways to not use gas? (Walking, riding a bike, or not idling.)
- Does anybody know what idling means? It means having the car on without moving. This is bad for the environment and our health that is why your school is going to have the Green Patrol Program!
- Let me discuss with all of you how the Green Patrol program at your school work:
- Teachers will give you a letter to take home to parents with a card asking them not to idle [show them what the pledge card looks like] kids bring card back to school and give it to the teacher [or office, depending on how the school wants to do it] when you turn in a card, you get a thank you letter to take back to your parents with a sticker to put on their car [show them what the sticker looks like] the classroom bringing the most cards back will get party at the end of year.
- [Number of] kids have been selected to serve as Green Patrol Officers, who will patrol where the kids are picked up after school and hold signs asking the parents to shut off their cars because it is hurting their lungs.
- If time, ask if there are questions.

Car Count Guide

- Arrive at the school approximately 20-30 minutes before the end of the school day and last about 5 minutes afterward.
- Observe the cars in the school parking lot, both idling and not idling.

Idling Vehicle Count			
	Light Duty	Medium Duty	Heavy Duty
1	2:25	2:34	
2	2:26	2:34	
3	2:34	2:34	
4	2:43	2:36	
5	2:43	2:46	
6	2:44	2:46	
7	2:45	2:46	
8	2:46		
9	2:47		

An idling vehicle should be at a complete stop with the car turned on.

Record the time that the vehicle began idling under the appropriate vehicle type. (For type of vehicle breakdown, see explanation below).

Be sure to observe buses that are idling as well. Because buses are larger and emit tons of fumes, consider starting an anti-idling program specifically for school buses, if one is not in place. To start a NO-Idle Bus Campaign visit: <http://www.epa.gov/otaq/schoolbus/antiidling.htm>

Not Idling Vehicle Count			
	Light Duty	Medium Duty	Heavy Duty
1	2:14	2:14	2:11 (Bus)
2	2:22	2:20	2:12 (Bus)
3	2:33	2:25	2:14
4	2:35	2:27	2:17
5	2:39	2:34	
6	2:44	2:34	
7	2:45	2:35	
8	2:46	2:46	
9	2:47		

Vehicles in motion are not idling.

- Remember: A second car count should be conducted at the end of the school year. This count should show the result of having Green Patrol implemented within the school.
- Light-duty vehicles: sedans, pickup trucks, high-performance sports cars, sport-utility vehicles, and passenger vans
- Medium-duty vehicles: large pick-up trucks and SUVs, small school buses
- Heavy-duty vehicles: long-haul trucks, large buses

Resources

- www.cleanairdrive.com
- <http://www1.eere.energy.gov/cleancities/>
- <http://www.aacoq.com>
- <http://www.aacoq.com/cleancities/default.asp>
- <http://www.energy.gov/>
- <http://www.eere.energy.gov/>
- <http://www.drivecleanacrosstexas.org>

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