



Center for the Environment at Catawba College
Campaign for Clean Air
No Idling Checklist for Schools

Frequently Asked Questions

Q: What is idling?

A: Idling is when a vehicle's engine is running, but the vehicle is not in motion. Idling a vehicle increases fuel consumption and the fuel is only partially combusted. This partial combustion leads to the build up of fossil fuel residues on the cylinder walls of the engine. Idling a vehicle has the potential to damage engine components such as: the cylinder, spark plugs and exhaust system.

Q: Why should a school take on a no idling program?

A: It is important for schools to combat idling issues and protect their students from vehicle emissions because emission related pollution has been linked to respiratory disease, cardiovascular disease, chronic bronchitis and premature death. Children are one of the most susceptible groups for these diseases because they have a high respiratory rate relative to their body weight. Their lungs have more surface area than their skin and the exposure to emissions can be detrimental to their health; this is also true for adults. For students that have asthma, emissions can exacerbate and trigger attacks.

This program can help improve health by reducing or eliminating emissions from idling vehicles on school property. Not only will the children thank you, but so will the parents, teachers and health professionals.

In addition, formalized no idling programs are proven to change behavior and reduce idling. Research shows no idling signs alone do not reduce idling, but conversations between volunteers and drivers where information cards and reminders are handed out can reduce the amount of time spent idling by 70%. In one study, people reduced their idling time from 40 minutes to 1 minute or less. Most parents are in favor of making a no idling program permanent for schools once they understand the health risks. After completion of a no idling program, drivers may also be more aware of the benefits of turning off their vehicles not only at schools, but any place they have the opportunity.

Q: What is the best age group for a no idling program?

A: This particular no idling program is designed for middle school aged students with activities geared toward that age group. Some of the activities could be used



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for younger or older students, but some may not be appropriate. The same concepts and information can be applied to Elementary and High Schools with some changes to find appropriate activities for the desired age group. Also take into consideration the level of student involvement will change depending on the age group and volunteer base.

The students are responsible for collecting, analyzing and reporting data. This program may be most appealing to sixth grade students because in many school systems they are not yet allowed to participate in sports or other extracurricular activities. This program allows students to be involved in their school.

It is important to understand that idling issues are not just at middle schools; they are anywhere vehicles have the opportunity to remain stationary. Idling hot spots include: schools, day care centers, hospitals, banks, restaurants and more. Involving schools is just one small important step to changing the behavior and perceptions of the entire community.

Q: What is the first step in implementing a no idling program?

A: The first step to a no idling program is to educate those interested or already involved in starting the program about health risks and costs associated with idling. Understanding issues related to vehicle emissions will motivate those involved to reduce or eliminate the amount of time they spend idling their vehicle.

Below are two first step components to build a foundation for volunteers and school leaders to create a personalized program that best fits their school.

Timeline. A timeline should take into consideration school events, critical academic periods and seasons. School events can be used to help promote the program and get parents and students to participate. Events are a perfect way for volunteers to educate others about the program and reveal the concluding data once the program is finished. Moreover, critical academic periods such as “End of Grade” testing need to be avoided. With this in mind, the acceptance of this program from teachers is critical. Remember the students are responsible for class work and testing. Also, seasons are important when designing a timeline for a no idling program because temperature is a comfort barrier for those that choose to idle. By choosing a season with the most comfortable temperature you



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can remove the comfort barrier and focus on other barriers that may affect your program.

Recruitment. Once a detailed time line and program are designed, they can be brought to the attention of other groups and clubs whose involvement would be beneficial. This is the recruitment aspect of the program. Teachers will be needed to help recruit other leaders and students.

Q: What types of program leaders are needed?

A: Program leaders are a way to ensure a successful no idling program for your school. Tasks should be delegated evenly among assigned roles. Here are some suggestions for program leaders:

Administrator: Oversees the entire project. He/she will provide updates of the project to the school administration and follow up with all other program leaders.

Resource Officer: Responsible for data instruction, collection and analysis. He/she will be responsible for creating projects for the volunteers and students to present their data.

Communication Manager: Media contact to gain attention within the school and the local community. He/she will be in charge of the “media blitz” and other promotional efforts. Also, the media contact will be involved in coordinating promotional events with existing school events.

Visuals Arts: The visual arts leader will assist students with creating posters, display boards and other visual materials.

Technical Arts: In coordination with the visual arts leader, the technical arts leader will take charge of plays, songs and other theatrical representations of the program. He/she will be responsible for photographing and recording the activities.

Some groups and organizations which you may want to include in your program are the school board, the school administration, Booster Club and the Parent Teacher Association (PTA). These groups can assist with fund raising efforts, promotional events and participation.



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Q: What perceptions and barriers can a program leader expect to encounter from drivers, teachers, and administrators?

A: Perceptions and barriers are beliefs and conditions that influence the choice to idle a vehicle. These are difficult to approach because most people are opposed to change, but it is necessary for the success of the program to overcome the barriers. Below is a list of barriers and perceptions that may be encountered by a program leader.

Drivers:

Comfort. The number one barrier for idling is comfort. Many drivers think that it is necessary to idle their vehicle in order to warm up the engine and their car. However, idling does more harm than good. Research shows that no more than 30 seconds is needed to warm an engine. Also, a car will warm up faster if it is in motion rather than being stationary. Therefore, the best way to warm the engine is to drive your vehicle and turn it off to avoid putting emissions into the air.

Efficiency. Many drivers believe that it is inefficient to turn a vehicle on and off when in reality it is the complete opposite versus idling. An idling vehicle can waste 22 gallons of gasoline per year. In addition, the average driver idles 5 minutes a day which equates to \$42 (\$83 for an 8-cylinder) additional annual fuel cost.

Damaging. A common misperception is that turning on and off your vehicle does more harm than idling. However, restarting a car many times will not put excess wear on the battery or the catalytic convertor. Catalytic convertors can stay warm and operational for up to 25 minutes after the engine has been turned off. In contrast, idling can damage a vehicle's engine because it is not working at its peak operating temperature. Without complete combustion, fuel residue contaminates engine parts such as spark plugs.

Teachers and the Administration:

Money. Every school has a strict budget so additional programs are looked at with contempt. To reassure teachers and the administration that no additional funds will be needed from the school or parents the program needs to have a detailed fund raising plan. First, volunteers can partner with local organizations that may already have many of the needed materials. For the remaining materials the program will need to calculate a budget. This is where the Booster Club, PTA, other groups and organizations are useful to help raise funds.



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Time. Introducing a new program into the school's agenda can easily be perceived as more work. Teachers and the administration need to see this program as a great way to encourage their students to become involved in an organized educational program and improve the health of their local community. By creating a detailed timeline that takes into consideration school events and critical academic periods they will be less likely to be opposed to such a program. A readily compiled list of volunteers and students who are interested will reassure the teachers and the administration that their involvement is only a small piece of the entire program.

Q: What kind of advance planning is needed?

A: This program requires minimal advance planning. This tool-kit helps reduce the amount of planning needed by giving a step by step plan on how to implement a no idling program in your school. However, the tool-kit does not provide a timeline for the program because a timeline will be specific to your school's academic and event calendar. Much of the planning will focus on defining your specific idling zone, training and recruitment of volunteers and fund raising.

Define an idling zone. General observation and taking measurements are the best way to define your schools idling zone. An idling zone is defined as an area where vehicles have been shown to idle while dropping off or picking up students. Observations will give you an idea of the best location for no idling signs and student- driver interactions. It may also lead to a more efficient way to direct traffic around the school.

Training. Once you have recruited your volunteers you will need to educate them about idling and the risks associated with it. Students involved need to be trained to collect data and how to approach idling vehicles. Next, discuss the barriers and perceptions that volunteers may come across and the appropriate way to handle them.

Fund Raising. Certain materials needed for the program may already be available to the school or found through a partnering group. For those materials that are not available, the program will need minimal fund raising efforts.

Q: Why are no idling signs important and where can I find them?

A: Although no idling signs by themselves have been shown not to be terribly effective at reducing idling times at school drop off and pick up locations where



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there is no educational program, they are an important part of an overall program as described in this toolkit. The signs reinforce the school's policy and commitment to idling reduction and are a visible reminder to parents. Many state Air Quality divisions provide the signs free to schools on request. For North Carolina, contact Jonathan Navarro at the NC Division of Air Quality in Raleigh. Phone: 919-733-1805 email: jonathan.navarro@ncdenr.gov Signs can also be ordered from a wide variety of private sign companies and can be personalized as desired. A sample no idling sign is included in the "template" section of this toolkit.

Q: How long should a project continue?

A: The timeline should be long enough to allow volunteers to acquire observational data and approach drivers with no idling information. Then allow at least 2 weeks after presenting drivers with information before gathering follow-up data, then analyze and present results.

If the program has good results and the school is interested in continuing the program, then a follow-up program the following year may be ideal. However, if the results are not what the school anticipated, another program the following semester may be helpful. These optional follow-up programs will help enforce the understanding that your school has a no idling policy.

Q: How can a school achieve ideal results?

A: Have a detailed plan for the program and train volunteers. It is imperative that the program is supported by the administration and faculty. Without the support of these groups, the program will have more barriers and obstacles to overcome. Once the program has been accepted, good results can be achieved with volunteers that are educated, interested, and engaged.

These volunteers have a great impact on the drivers and their ability to change driver behavior and perceptions. The students are a very important component to the program because they interact with the drivers. Educating students about idling risks, barriers and perceptions will prepare them for questions. Not all drivers will accept the idling program and may need to be further encouraged by students or adult volunteers.



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Q: How should a school determine success?

A: Success is measured by whether or not you reduced idling by any amount. The level of success will depend on the goals that were set for the program. The goals should take into consideration that a 100% success rate is not always achievable. Take into consideration the school's current conditions and barriers to set the program's goals. Behavioral change can be observed by comparing initial results to post driver education data.