



# Assessment Guide - Transportation & Outdoor Air Quality

Now that you have completed **Step 1: Build a Green Team**, you are ready to proceed in your process of becoming a Washington Green School.

## Objective

**Step 2: Assess.** Transportation & Outdoor Air Quality Assessment Guide provides tips on how to complete the Transportation & Outdoor Air Quality Assessment, and some recommended resources. The goal of completing the Assessment is for your Green Team and other school members to get a good overview of current practices relating to modes of transportation and fuels are being used by students, staff, and in school operations, and why. In addition, you'll find opportunities and learn ways to reduce the amount of particulate matter released into the atmosphere, as well as how daily school operations and transportation choices impact outdoor air quality.

Once your Assessment is complete, you will be able to use the answers and information to identify a Lasting Change (for Step 3) that you can implement for an ongoing significant impact in transportation practices and actions to improve outdoor air quality in general.

## Things to Consider for a Successful Process

### 1. Careful planning is the key to successfully completing the Assessment.

First, meet with your Green Team and decide who will complete the Assessment?

- The whole Green Team?
- Or a combination of Green Team members, classrooms, staff or grade levels?

### 2. Who do you need to call or meet to answer the questions?

You may wish to include:

- Teachers who specialize in this topic
- School district staff
- Facilities staff
- School fleet managers
- School bus drivers
- Local transportation providers such as your local transit authority
- Non-profit organizations that promote alternative transportation modes and fuel choices.

### 3. How will you save the information you've collected for the future?

- To certify as a Washington Green School, you must enter 10 key findings from your Assessment in the Online Form for Step 2. You may also want to save the information you gather on site at your school, so that students who repeat this Assessment in the future can learn from what you did, and compare results. This could show how the actions you completed helped reduce transportation needs and improve outdoor air quality. Find a central location that's easily accessible to store all your Assessment findings and other Washington Green Schools materials. Make sure to inform future key school staff and future Green Team members where to find it
- Remember, in order to certify, you must also scan (or take a picture of) your hand-written assessment findings, and upload them with your other Washington Green School records in your school account at [www.wagreenschools.org](http://www.wagreenschools.org).

## Support Information for Assessment Questions

Assessment Question	Hint	Why It's Important	Related Action Items
<b>General Transportation</b>			
<p>1. What mode of transportation do staff and students usually use to get to school? (Use approximate %)</p>	<p>Complete the Classroom Transportation Worksheet on page 5 of the Assessment for each classroom to find and record the answers for this question. Then compile all results to fill in the school totals in the table provided. Calculate both staff and student percentages. You'll need to complete the Assessment Key Findings on the website.</p>	<p>Knowing transportation modes and choices of students and staff will help establish a baseline that can be used to measure the impact of future improvements in transportation methods. It also provides the initial data you'll need in order to calculate your school's transportation carbon footprint.</p>	<ul style="list-style-type: none"> <li>• Create and send a transportation options survey home with students and display results.</li> <li>• Create a school-wide recognition program for students who participate in alternative transportation activities and/or have students partner with a community groups, non-profits, businesses, etc. on alternative transportation related projects</li> <li>• Using one of the online carbon calculator tools, measure your school's carbon footprint reduction or the energy saved from using alternative forms of transportation.</li> <li>• Have students calculate the school's "ecological or global footprint" using one of the many online calculators, and present information, findings and recommendations to school community or other appropriate audience. Example: <a href="http://www.globalfootprints.org/issues/footprint/quiz1.htm">http://www.globalfootprints.org/issues/footprint/quiz1.htm</a></li> <li>• Research how much money your school/district spends on fuel each year. Use an online calculator to calculate your emissions.</li> </ul>
<p>2. Approximately what percentage of the students and staff carpool to school?</p> <ul style="list-style-type: none"> <li>• Students?</li> <li>• Staff?</li> </ul>	<p>Include this as part of your transportation survey questions, or add it as a question to the classroom transportation worksheet. You may also want to include a question about total miles traveled to calculate your school's transportation carbon footprint.</p>	<p>Knowing the percentage of students and staff that carpool will help determine success rates of future carpool education campaigns. You will also be able to calculate avoided emissions that would have been produced if carpoolers had used single occupant vehicles instead.</p>	
<p>3. Approximately how many school buses stop at your school during the day?</p> <ul style="list-style-type: none"> <li>• Before school?</li> <li>• After school?</li> <li>• During school?</li> </ul>	<p>Work with your school administration to determine how many buses stop at your school. Or, do a school bus and student count with your Green Team members on a regular school day.</p>	<p>Knowing the percentage of students that currently arrive by bus will help determine success rates of future walk and bike campaigns. You will also be able to calculate avoided emissions that that would have been produced if bus riders had used single occupant vehicles instead.</p>	

Assessment Question	Hint	Why It's Important	Related Action Items
<p>4. Do school buses frequently idle their engines for longer than 3 minutes while parked outside the school?</p>	<p>Interview bus drivers and ask them whether they turn off their engines while waiting. Or, have the Green Team observe and document school buses that are idling for more than three minutes at a time.</p>	<p>School buses idling for longer than three minutes contribute to poor air quality surrounding the schools from unnecessary tail pipe emissions, and waste fuel.</p>	<ul style="list-style-type: none"> <li>• Research the environmental and health impacts of idling cars and buses at school, and present your findings to the school community. Include recommendations for changes.</li> <li>• Measure idling behavior at school (average number of cars/buses idling, use stop watches to time idling and find the average idling time for cars and buses, etc.). Present your findings and recommendations to the school community. <i>See the following links for more info:</i> <a href="http://airwatchnorthwest.org/wa/NO_IDLE/Measure_Idling.html#top">http://airwatchnorthwest.org/wa/NO_IDLE/Measure_Idling.html#top</a> and <a href="http://airwatchnorthwest.org/wa/NO_IDLE/PDFs/Idlingmeasurement_form.pdf">http://airwatchnorthwest.org/wa/NO_IDLE/PDFs/Idlingmeasurement_form.pdf</a></li> <li>• Use the EPA online calculator to calculate the amount of fuel and money your school/district will save by reducing school bus idle time. Present your findings to the school community. <a href="http://www.epa.gov/cleanschoolbus/idle_fuel_calc.htm">http://www.epa.gov/cleanschoolbus/idle_fuel_calc.htm</a>.</li> </ul>
<p>5. Has your school district already joined the free Diesel School Bus Retrofit program through your local clean air agency?</p>	<p>Ask your school administration for the answer to this question.</p>	<p>The Diesel Bus Retrofit Program offers free resources to schools with older bus fleets. Join the program to cost effectively upgrade your fleet and enjoy better air quality as well as improved fuel economy.</p>	<ul style="list-style-type: none"> <li>• If your district hasn't already, join the free Diesel School Bus Retrofit program through your local clean air agency</li> <li>• Contact your local clean air agency or Washington Department of Ecology to find out what resources, programs and technical assistance is available for your school (speakers, classroom resources, technical assistance, grant programs, special projects, etc.) and schedule a speaker, program, or technical assistance for your school.</li> </ul>
<p>6. How many food deliveries come to your school each week for each category?</p> <ul style="list-style-type: none"> <li>• Ready-made lunches from a central kitchen</li> <li>• Food from distributors?</li> <li>• Direct from farms?</li> </ul>	<p>Work with your school administration to determine how many trucks stop at your school. Or, pick a couple of random school days and have your Green Team perform a truck count.</p>	<p>They way your school receives its supplies can affect air quality and impact fuel use. Opportunities to reduce and/or combine truck trips will have direct air quality benefits.</p>	<ul style="list-style-type: none"> <li>• Start a school garden that can provide some food for the cafeteria, or serve food from an existing school garden or horticulture program. This can help reduce transportation pollution from long-distance deliveries.</li> <li>• Learn about food, farming, culture and the environment and map some food paths to your community. Display in the cafeteria <a href="http://www.ecoliteracy.org">www.ecoliteracy.org</a> and <a href="http://www.agr.wa.gov/farmtoschool/edres">www.agr.wa.gov/farmtoschool/edres</a></li> <li>• Set up your school as a drop-site for a local Community Supported Agriculture (CSA) farm or farmers market, so parents and teachers can pick up locally grown foods there, rather than making separate trips to buy food.</li> <li>• Work with your school board to amend your Wellness Policy to include goals and priorities for local food and a sustainable food system that reduces pollution caused by food transportation and processing</li> </ul>

Assessment Question	Hint	Why It's Important	Related Action Items
7. Does your school district have a "School Walk Route Plan"?	Contact your school administration / staff to see what bike and walk to school policies and programs are in place, and what resources may be available to the school.	Washington State school districts are required to have suggested walking route plans for every elementary school. Walking to school is an effective way for students to get to school without contributing any harmful emissions to the atmosphere.	<ul style="list-style-type: none"> <li>• Have students research what "Safe Routes to School" projects have received grant funding in other schools. Come up with a potential project for your school. <i>Example:</i> <a href="http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm">http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm</a>.</li> <li>• Apply for Safe Routes to School grant funding through WA Dept. of Transportation. <a href="http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm">http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm</a>.</li> <li>• Offer a bicycle safety workshop such as a "Bicycle Rodeo," helmet fitting, or other biking safety event. Research if this is already being offered by a local organization in your area that could come, and do provide this at your school free of charge for free.</li> <li>• Celebrate International Walk to School Month in October by having an activity or event. See <a href="http://www.walktoschool.org/">http://www.walktoschool.org/</a> to get ideas and to register your event.</li> <li>• Celebrate Bicycle Month in May by having bicycle-to-school activities. May is also Clean Air and Asthma Awareness month. Coordinate with Bike-to-Work Week in May if it exists in your community.</li> <li>• Create a school-wide recognition program for students who participate in alternative transportation activities and/or have students partner with a community groups, non-profits, businesses, etc. on alternative transportation related projects.</li> <li>• Design a display for the foyer, commons, cafeteria or other public spaces to educate students and staff about your school's transportation alternatives or outdoor air quality actions.</li> </ul>
8. Does your school allow students to bike to school?		Biking to school is an effective way for students to get to school without contributing any harmful emissions to the atmosphere.	
9. Does your school provide bicycle parking racks for students and staff?		Inadequate/ insufficient bicycle storage can be a barrier for students and staff to bike-commute to and from school.	

Assessment Question	Hint	Why It's Important	Related Action Items
<p>10. Which of the following options are available for students and staff to get to and from school?</p> <ul style="list-style-type: none"> <li>• Sidewalks</li> <li>• Public Transportation (Bus)</li> <li>• Bike paths</li> <li>• School Buses</li> <li>• Bike lanes</li> <li>• Other _____</li> </ul>	<p>Conduct a site and community survey on transportation options, or include a transportation infrastructure survey and analysis into the curriculum of an existing class that teaches about urban planning and design, or community infrastructure.</p> <p>Work with school administrative staff to get answers to the Assessment questions about crossing guard programs, adequate lighting, and existing programs and resources for pedestrian and bike facilities.</p>	<p>Exploring and educating students and staff about all safe transportation options available to get to and from school, and encouraging them to try these alternate modes may lead to permanent commute behavior changes that can help reduce vehicle emissions.</p>	<ul style="list-style-type: none"> <li>• Have students research what "Safe Routes to School" projects have received grant funding in other schools. Come up with a potential project for your school. <i>Example:</i> <a href="http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm">http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm</a>.</li> <li>• Apply for Safe Routes to School grant funding through WA Dept. of Transportation. <a href="http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm">http://www.wsdot.wa.gov/bike/SafeRoutesResources.htm</a>.</li> <li>• Offer a bicycle safety workshop such as a "Bicycle Rodeo," helmet fitting, or other biking safety event. Research if this is already being offered by a local organization in your area that could come, and do provide this at your school free of charge for free.</li> <li>• Celebrate International Walk to School Month in October by having an activity or event. See <a href="http://www.walktoschool.org/">http://www.walktoschool.org/</a> to get ideas and to register your event.</li> <li>• Celebrate Bicycle Month in May by having bicycle-to-school activities. May is also Clean Air and Asthma Awareness month. Coordinate with Bike-to-Work Week in May if it exists in your community.</li> <li>• Create a school-wide recognition program for students who participate in alternative transportation activities and/or have students partner with a community groups, non-profits, businesses, etc. on alternative transportation related projects.</li> <li>• Design a display for the foyer, commons, cafeteria or other public spaces to educate students and staff about your school's transportation alternatives or outdoor air quality actions.</li> </ul>
<p>11. Are sidewalks and bike paths within a quarter-mile radius of the school safe and accessible for all?</p>			
<p>12. Do sidewalks and bike paths within a quarter-mile of the school have:</p> <ul style="list-style-type: none"> <li>• Adequate lighting</li> <li>• Access ramps</li> <li>• Smooth paved surfaces</li> </ul>		<p>Adequate lighting, access ramps, and smooth paved surfaces make using sidewalks and bike paths for transportation to and from school safer for students and staff.</p>	
<p>13. Are crossing guards provided before and after school for students who walk or bike to school?</p>		<p>Crossing guards at intersections near the school serve to reduce accidents between students and vehicles by increasing the visibility of students crossing intersections.</p>	
<p>14. Does your school have a "Walking School Bus" program?</p>		<p>"Walking School Bus" programs are a way for students that live near schools to coordinate walking between school and home safely with increased visibility.</p>	

Assessment Question	Hint	Why It's Important	Related Action Items
15. Besides buses, what types of vehicles does your school own or use, what are they used for, and what kind of gas mileage do they get?	Contact your school/ district fleet manager for this information. Also tally the number of vehicles.	This information can help determine the amount of fuel used by the schools and the total emissions of the fleet. This could also help identify some alternate fuel sources.	<ul style="list-style-type: none"> <li>• Research how much money your school/ district spends on fuel each year, and use an online calculator to calculate your emissions.</li> </ul>
16. If your school has a driver's education program, does it use fuel-efficient vehicles for instruction?	Contact your driver's education program staff to determine the types of vehicles used.	Fleet vehicles used by driver education programs require the driving of vehicles for instruction purposes. Using vehicles that are more fuel efficient and are also low emitting vehicles can help reduce the negative impacts to the outdoor air quality surrounding the school.	<ul style="list-style-type: none"> <li>• Research the use of an alternative fuel source (biodiesel or natural gas) for the school bus fleet or landscaping equipment and provide information to the district fleet manager or related position.</li> </ul>
17. Does your school/district use biodiesel for any cars, trucks or buses?	Contact your school/ district fleet manager to determine what fuel types are used by cars, trucks and buses that are part of the schools fleet of vehicles.	Cars, trucks and buses that are part of the schools fleet that use biodiesel as a fuel source decrease the demand for foreign oil. Biodiesel can be generated by less environmentally harmful ways than drilling and is easier to clean up if spilled.	<ul style="list-style-type: none"> <li>• Research the use of an alternative fuel source for the school bus fleet or landscaping equipment and provide information to the district fleet manager or a related position.</li> </ul>

Assessment Question	Hint	Why It's Important	Related Action Items
<b>Curriculum &amp; Community</b>			
18. Does your school have a garden? If yes, do you use food from that garden in the cafeteria, snack program or classroom?	Meet with your school chef and the District's food services manager to discuss what types of foods could be grown at the school and used for meals or snacks. Find out where they are currently sourcing food for your cafeteria, and whether the school is participating in any CSA efforts or would be interested in hosting a CSA drop-off site.	Using food grown on-site has many benefits. From a transportation standpoint, it reduces the need for deliveries to your school. And, an organic garden will also reduce transportation and fuels used in the production of synthetic fertilizers, pesticides, and herbicides.  Using locally grown foods reduces long distance transportation needs. Talking with the local farmer who grows your food can be a powerful educational experience for students. Serving as a community distributor of healthy, locally grown, and preferably organic foods for the community through a CSA program is a helpful community service.	<ul style="list-style-type: none"> <li>• Start a school garden that can provide some food for the cafeteria, or serve food from an existing school garden or horticulture program. This can help reduce transportation pollution from long-distance deliveries.</li> <li>• Learn about food, farming, culture and the environment and map some food paths to your community. Display in the cafeteria. <a href="http://www.ecoliteracy.org">www.ecoliteracy.org</a> and <a href="http://www.agr.wa.gov/farmtoschool/edres">www.agr.wa.gov/farmtoschool/edres</a>.</li> <li>• Establish your school as a drop-site for the local CSA or farmers market, so parents and teachers can pick up locally grown foods, rather than making separate trips to buy food. (CSA stands for "Community Supported Agriculture," a program where customers pay farmers for weekly deliveries of farm-fresh produce throughout the season).</li> <li>• Work with your school board to amend your Wellness Policy to include goals and priorities for local food and a sustainable food system that reduces pollution caused by food transportation and processing.</li> </ul>
19. Does your school or district purchase any foods grown locally or within the state?			
20. Does your school host a CSA (Community Supported Agriculture) drop-off, farmers market, or other community foods access program?			
21. Does your school curriculum include transportation-related topics covering health, safety and environmental impacts of transportation choices?  If yes: which subjects or courses? What grades?	Contact your school administration / staff to see what transportation-related curriculum is being taught in the school.	Teaching students about transportation- related topics and how transportation impacts health, safety and the environment can increase awareness and help students understand the importance of transportation choices.	<ul style="list-style-type: none"> <li>• Perform a skit, puppet show, or other type of entertainment about transportation alternatives or outdoor air quality to the school community, or another school.</li> </ul>
22. Does your school curriculum include transportation safety (use of seat belts, bike helmets, pedestrian and bike safety, etc)?	Ask your school administration / staff.	Teaching students about the importance of transportation safety can help to reduce the number of accidents surrounding schools.	<ul style="list-style-type: none"> <li>• Offer a bicycle safety workshop such as a "Bicycle Rodeo", helmet fitting, or other bike safety event. Research if this is already being offered by an organization in your area that could provide this to your school free of charge.</li> </ul>

Assessment Question	Hint	Why It's Important	Related Action Items
23. Does your school sponsor or participate in any programs to encourage carpooling, use of public transportation, or non-vehicular transportation to and from school?	Ask your school administration /staff.	Increasing student and staff use of carpools or high occupant transportation types can decrease the individual impact to the environment by lessening the amount of emissions per person.	
24. Does your school have anti-idling policy for school buses, delivery vehicles and all vehicles at student pick-up areas?	Contact your school administration / staff to see what policies are in place regarding idling vehicles.	Idling vehicles contribute to poor air quality surrounding school due to tail pipe emissions. Reducing idling time can significantly reduce emissions and fuel use,	<b><i>See all actions listed for Assessment question 4.</i></b>
25. Does your school encourage use of public transportation for school trips?	Contact your school administration / staff to see what protocols are in place for the use of public transportation for school trips.	Use public transportation when possible for school trips to reduce transportation emissions by replacing individual car or school bus trips.	<ul style="list-style-type: none"> <li>• Ask your local transportation providers (bus, light rail) how to get additional services to your school.</li> </ul>
26. Do you have transportation and outdoor air quality educators in your community?	Research community organizations, non-profits, government agencies and businesses to find local expert educator on this subject	Transportation and outdoor air quality educators can help you with the challenging questions in this assessment. They can also provide tips on changes you can make to improve outdoor air quality and transportation choices to and from your school, as well as information about alternative fuel sources that may be available in your community.	<ul style="list-style-type: none"> <li>• Contact your local clean air agency to find out what resources, programs and technical assistance are available for your school (speakers, classroom resources, technical assistance, grant programs, special projects, etc.). Schedule a speaker, program, or technical assistance.</li> </ul>
27. Do you have technical assistance in your community for transportation and outdoor air quality issues at your school?		They can also identify other actions you could take that are not listed in the Washington Green Schools program but are appropriate for your school.	<ul style="list-style-type: none"> <li>• Research three local or international schools to learn what they are doing on transportation alternatives and improving outdoor air quality, and how they are measuring and evaluating their results. Present your findings to the school community or other appropriate audience.</li> </ul>