

# Cleaner Air, Cleaner World: Schools Toolkit

A resource for primary schools in Swindon



**DON'T  
DRIVE  
SMALL  
DISTANCES!**

**SAVE  
OUR  
WORLD!!!**

**DON'T  
POLLUTE!**



# Table of Contents

<b>Acknowledgements.....</b>	<b>2</b>	<b>Section 4 – Activities .....</b>	<b>13</b>
<b>About the Clean Air Schools Toolkit.....</b>	<b>3</b>	4.1 Modeshift STARS .....	13
<b>Structure of Clean Air Schools Toolkit... </b>	<b>4</b>	4.2 Healthy Schools.....	16
<b>Section 1 - Introduction.....</b>	<b>5</b>	4.3 Walking to school .....	17
1.1 Air quality: what is it? .....	5	4.4 Bikeability.....	19
1.2 Why is poor air quality harmful? .....	5	4.5 Road Safety.....	19
1.3 What can be done to improve air quality?.....	6	4.6 Scoot-to-School .....	20
1.4 Air quality in Swindon.....	7	4.7 Anti-idling.....	20
1.5 Clean Air Plan in Swindon .....	7	4.8 Guide to indoor plants and planting trees.....	21
<b>Section 2: Lesson Plans and Resources</b>	<b>8</b>	<b>Section 5 – Feedback and evaluation ...</b>	<b>23</b>
21 Foundation/Reception Stage Lesson Plan .....	8		
22 KS1 and KS2 Lesson Plan.....	8		
23 Environmental monitoring .....	8		
24 “Let’s Create an Air Revolution” rap song.....	9		
25 Create clean air posters .....	9		
<b>Section 3: Clean Air Day.....</b>	<b>10</b>		
31 Official Clean Air Day .....	10		
32 Clean Air Day pledges .....	10		
33 Clean Air Day stickers.....	10		
34 Communications.....	10		
35 Clean Air Day Leaflet .....	10		

**Acknowledgements:** We would like to thank B&NES Council and the London Sustainability Exchange for freely sharing the resources they have developed with Swindon Borough Council. Air quality and climate change are issues that cross boundaries, and collaboration between organisations and communities is key to taking action together and reducing the impact of climate change.

For any questions related to this toolkit, please email: [publichealth@swindon.gov.uk](mailto:publichealth@swindon.gov.uk).  
For support around the initiatives described in the toolkit, please email:  
[stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)

# About the Clean Air Schools Toolkit

The Clean Air Schools Toolkit is a free electronic resource for primary schools to use to support when teaching and raising awareness amongst children and their parents/carers about outdoor air pollution, improving air quality and reducing their exposure to outdoor air pollution.

Contents of the toolkit include:

- Foundation, KS1 & KS2 lesson plans and support to deliver them
- Words and music for the 'Let's create an air revolution' rap/song
- Ideas for a poster competition or homework
- Environmental and personal exposure air monitoring guides
- Pledge cards and stickers
- Modeshift STARS resources
- Guide to setting up a walking bus
- Scoot to school information
- Guide to setting up a 5 minute walk zone
- Bikeability information & contact details
- Anti-idling campaign guide
- Guide to planting trees/hedges
- Leaflet for parents/carers
- Surveys – knowledge of children and parents/carers before and after interventions

Within lesson plans we would encourage the following approach with pupils:

1. Explore Air Quality as an issue
2. Experiment with citizen science
3. Take action

Clean Air Day is an annual national event on the third Thursday of June. Schools can use this, or their own Clean Air Day as an opportunity to take a whole school approach to improving air quality, celebrate the work being done in the school, and encourage active travel, using many of the initiatives in this toolkit.

Many of the activities contained in the toolkit are approved initiatives under Modeshift STARS; a national schools award scheme that recognises schools that have demonstrated excellence in supporting sustainable travel<sup>1</sup>. See Section 4 for more information.

Many of the initiatives in this toolkit can also be used in the accreditation process for the Healthy Schools awards, as described in section 4.

*\*Please click on the links referenced at the bottom of each page to find out more.*

<sup>1</sup> [www.modeshiftstars.org](http://www.modeshiftstars.org)



# About the Clean Air Schools Toolkit

## What:

A whole school approach

## Why:

- Improve air quality
- Reduce exposure to air pollution
- Encourage active travel

## How:

Using the Clean Air Schools Toolkit

# Structure of the Clean Air Schools Toolkit

## Section 2:

### Lesson Plans and Resources

- Lesson Plans
- Environmental monitoring
- Rap/Song
- Clean air posters

## Section 3:

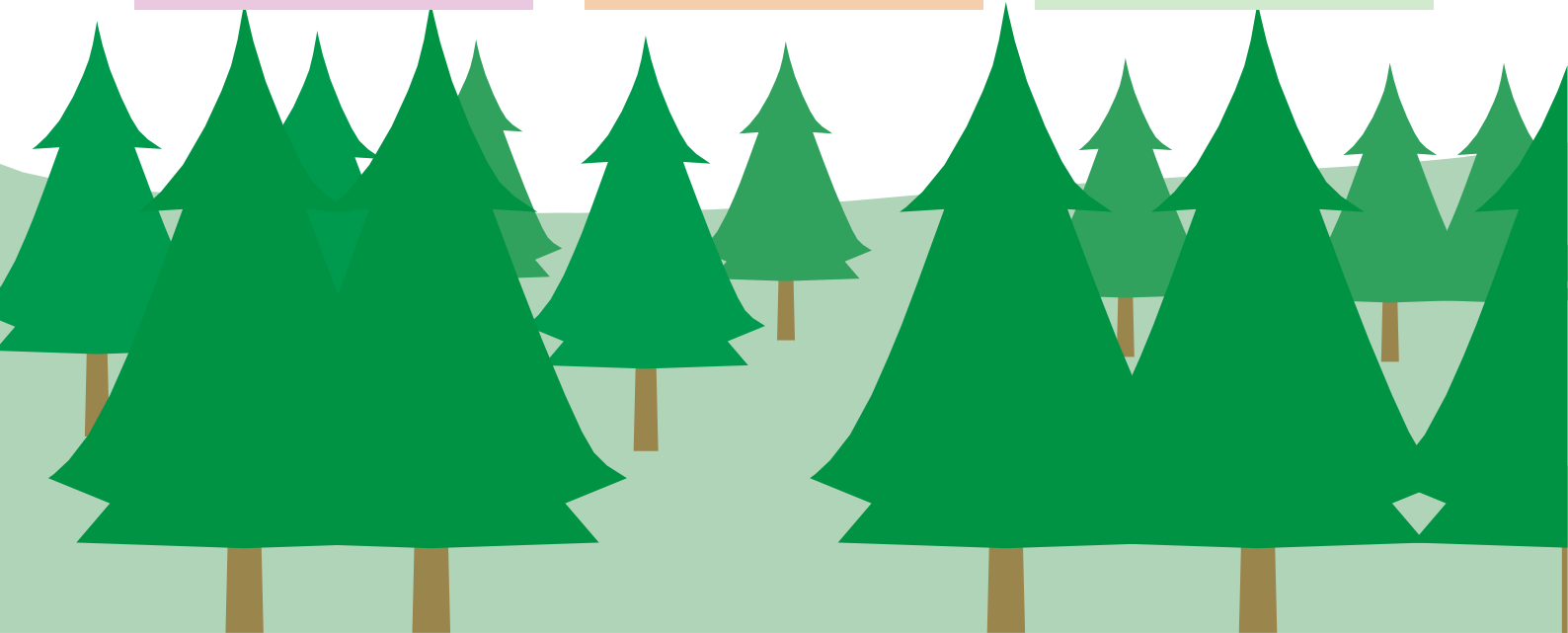
### Clean Air Day

- Clean Air Pledges
- Clean Air Stickers
- Communications
- Clean Air Day Leaflet

## Section 4:

### Activities

- Modeshift STARS
- Healthy schools
- Walking Bus
- Bikeability
- Scoot-to-School
- Anti-idling
- Guide to plants and trees



# Introduction

## 1.1 Air quality: what is it?

The air we breathe can be contaminated by all sorts of everyday activities, such as industrial processes, farming, heating homes, generating energy and driving vehicles. Some examples and sources of pollutants which contaminate the air are described below<sup>2</sup>: There are strong links between air quality and the wider issues of climate change.

In Swindon, nitrogen dioxide (NO<sub>2</sub>) levels are the biggest contributors to poor air quality, and this is largely caused by vehicles. According to The National Travel Survey 2018, as many as 1 in 4 cars on the road during peak hours are involved in the school run<sup>3</sup>.

Pollutant	Nitrogen oxides (NO <sub>x</sub> , including NO <sub>2</sub> )	Particulate matter (PM)	Ozone (O <sub>3</sub> )
Main source	Transport	Domestic combustion	From vehicles, solvents, household chemicals and industry

## 1.2 Why is poor air quality harmful?

Poor air quality is a widely recognised environmental threat to the health and wellbeing of children worldwide<sup>4</sup>. The World Health Organization's Atlas on Children's Health and the Environment reported that in 2015, '26% of the deaths of 5.9 million children who died before their fifth birthday could have been prevented through addressing environmental risks'<sup>1</sup>.

In the UK it is estimated that annually between 28,000 and 36,000 deaths are linked to long-term exposure to air pollution<sup>5</sup>. Evidence suggests that infancy and early childhood are particularly vulnerable times as the young body is growing and developing rapidly, and any harm or damage during this period can have an impact lasting far into the future.

The developing heart, lungs, brain, hormone systems and immunity can all be harmed by air pollution. The damage is both short-term and long-term. For example, when air quality is poor, children are more likely to be admitted to hospital due to their asthma. In Swindon, there were 87 admissions (166 per 100,000) to hospital for children under 18 in 2017/18<sup>5</sup>. Admissions to hospital are a sign of more severe asthma, and cause disruption, including poor school attendance.

Positively, even small improvements in air quality have been shown to halt and reverse these effects<sup>6,7</sup>.



<sup>2</sup> [www.gov.uk/government/publications/state-of-the-environment](http://www.gov.uk/government/publications/state-of-the-environment)

<sup>3</sup> Living Streets (2018) Swap the School run for a School Walk: Our solution for active children, healthy air and safe streets, A Living Streets report

<sup>4</sup> [www.who.int/ceh/publications/inheriting-a-sustainable-world/en](http://www.who.int/ceh/publications/inheriting-a-sustainable-world/en)

<sup>5</sup> <https://fingertips.phe.gov.uk>

<sup>6</sup> <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

<sup>7</sup> [www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution](http://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution)



### 1.3 What can be done to improve air quality?

Air pollution and climate change are local, national, and international problems, which requires collaborative action from everyone, including schools, businesses and local government. There are several things that the public can do to improve air quality and reduce the impact of climate change, both at home and in schools, including:

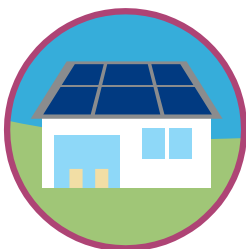
- Active travel – walking, cycling or scooting to school and work. This can be incentivised through cycling schemes, providing facilities such as secure enclosed cycle storage, walking buses etc.
- Choosing lower emission fuels and heating appliances for homes and schools or switch to a clean energy utility provider. Try choosing the most efficient heating appliance available (both biomass or gas/electric). With gas/electric the more efficient the appliance the less energy will be used.

- Moving to lower emission vehicles
- Use public transport - carpool, reduce idling & car club
- Planting (outdoor and indoor)

Action in schools:

The World Health Organization encourages development of health-promoting schools; schools which are “always strengthening their capacity as a healthy setting for living, learning and working”<sup>3</sup>. This is echoed by The Royal College of Paediatrics and Child Health, who recommend schools should promote safe alternatives to the “school run” based on walking, public transport, and cycling instead of cars. Finally, the Clean Air Strategy 2018 also recognises that local leadership in schools can play an important role in improving air quality.<sup>8</sup>

### To tackle air pollution collaboration is needed



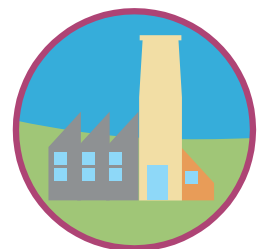
**Housing**  
Lower emission fuels and heating appliances. Construction standards.



**Local Authority**  
Planning and transport policy, air quality management area action plans, sustainability, active travel and public health.



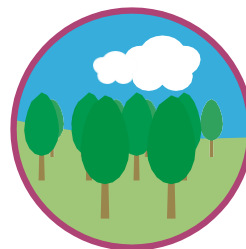
**Health sector**  
Track health impact, protect vulnerable groups.



**Waste management**  
Emission control, bio waste management, reduce, reuse, recycle.



**Outdoor burning**



**Natural sources**



**Indoor sources**  
Cooking, lighting and ventilation.



**Traffic**  
Low emission vehicles, car alternatives.

<sup>8</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/770715/clean-air-strategy-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/770715/clean-air-strategy-2019.pdf)

## 1.4 Air quality in Swindon

All local authorities in the UK are legally required to review air quality and designate Air Quality Management Areas (AQMAs) at locations where national objectives in relation to air quality are not likely to be achieved.

Where an AQMA is designated, an Air Quality Action Plan (AQAP)<sup>8</sup> has to be produced to set out measures to improve air quality and achieve compliance with the National Air Quality Objectives.

There is an Air Quality Management Areas (AQMAs) around Kingshill Road, Swindon where levels of nitrogen dioxide exceed the annual average objective levels. Visit [https://www.swindon.gov.uk/info/20024/health\\_and\\_wellbeing/916/find\\_out\\_about\\_air\\_quality\\_in\\_swindon](https://www.swindon.gov.uk/info/20024/health_and_wellbeing/916/find_out_about_air_quality_in_swindon) for more information.



## 1.5 Clean Air Plan in Swindon

The government has published a Clean Air Strategy<sup>10</sup> which commits to ambitious targets to reduce levels of air pollutants by 2020 and 2030. As part of the response to poor air quality, local authorities are required to identify local air quality problems and take action to tackle them.

To find out more about the air quality in Swindon and the actions to improve air quality visit the link to council documents No. 9 below.



<sup>9</sup><http://ww5.swindon.gov.uk/moderngov/documents>

<sup>10</sup><https://www.gov.uk/government/publications/clean-air-strategy-2019/clean-air-strategy-2019-executive-summary>

# Lesson Plans and Resources

Lesson plans and resources for different stages of primary school are given separately here: <https://www.swindonhealthyschools.org/core-themes/caring-for-our-environment/>. A summary of the approaches are given below. All classes within the school could be involved in a whole school assembly, poster or banner competition, and in lessons which use citizen science to do Environmental Monitoring Experiments with pupils. Further activities are given after the lesson plans which can complement lessons, or be used alongside assemblies or Clean Air Day activities.

## 2.1 Foundation/Reception Stage Lesson Plan

**Resource needed: Story book: “Air is all around you” by Franklyn M Branley**

This can be purchased from various sources, including by clicking [here](#).

1. Introduction to learning about the air
2. Reading the book “Air is all around you”
3. Linking in the book to the pupils’ learning about their bodies and the air around them

## 2.2 KS1 and KS2 Lesson Plans

Please click [here](#), or enter the webpage above to download lesson plans for Key Stage 1 and 2.

A range of options are given for lesson plans for Key Stage 1 and 2 pupils. There are brief and detailed lesson plans. These have been designed with key learning objectives and curricular links in mind. In addition, Air Quality Experiments could be done with any age of pupil.

## 2.3 Environmental monitoring

### Option One Lichen Mapping

Class time required: 15 minutes  
Fieldwork time required: 40 minutes  
Time until results: Immediate  
Cost: none

### Option Two Air Quality Wipes

Time required: 20 minutes  
Time until results: Two weeks  
Cost: Around £5

**Meet the Clean  
Air Mascot –  
Percy Parrot!**



### Resources needed for environmental monitoring:

- Pens or pencils
- Printed copies of worksheets one, two and three
- Whiteboard and marker
- Internet access (for viewing images)
- Laminator, wet wipes and sandwich bags for Experiment Option Two
- Risk assessments for fieldwork

Each experiment takes between one and two lessons of 50 minutes, including work in class and out in the field. Option two takes two weeks to complete and return results. There is an optional stretch activity that will take around 40 minutes



## 2.4 “Let’s Create an Air Revolution” rap/song

Below are the music and lyrics for the “Let’s Create an Air Revolution” rap/song – children can learn the lyrics, and perform using the music.

You can listen to the rap/song here by clicking below to view St Andrews School’s version:  
<https://www.youtube.com/watch?v=16Ku8PdTgUs>

Please download a copy of the lyrics [here](#).

*(Music and Words by Tim Parker on behalf of B&NES Music Service)*

## 2.5 Create clean air posters

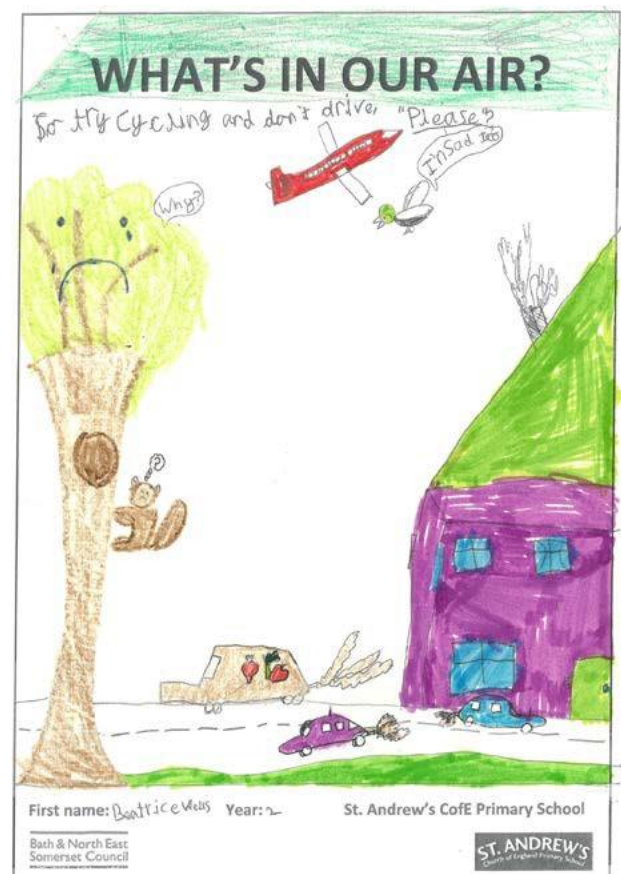
This is an opportunity to encourage children to participate in creating a poster related to clean air. This may be done as a poster competition, given as homework, or created in class. These posters could be used around school or in local community settings to promote the clean air message. They could even be made into banners to place outside of the school.

### Poster instructions:

Please click [here](#) to use the attached templates for children to design their posters on. We suggest these titles for KS1 and KS2 posters:

- KS1: What’s in our air – showing the things that create air pollution
- KS2: How we can clean up our air – showing the things that reduce air pollution

The posters below were designed by pupils at St Andrew’s school, Bath



## Section 3

# Clean Air Day

Your school may like to hold a Clean Air Day where you can raise awareness and run any of the activities or lessons contained in this toolkit. There is a national Clean Air Day, normally in June every year. Alternatively, you could choose to have your own Clean Air Day on a date of your choice or hold a number of activities throughout the year. More ideas are below.

### 3.1 Official Clean Air Day

Click [www.cleanairday.org.uk](http://www.cleanairday.org.uk) to visit the official Clean Air Day website and to find out the date for this year and utilise lots of free resources.

Clean Air Day is an opportunity to share information about air quality by organising awareness-raising events such as a school assembly or running a school-wide poster competition.

### 3.2 Clean Air Day pledges

Clean Air Day pledges can be undertaken by staff, pupils and parents/carers, using the template pledge cards provided [here](#), to encourage everyone to change their mode of transport, travel sustainably, reduce idling etc.

Examples of pledges include:

- I "Walk to school on ...(date)..." OR  
"Walk my children to school on ...(date)..."
- I "Cycle to school on ...(date)..." OR  
"Scoot to school on..."
- I "Use public transport on ...(date)..."
- I "Leave my car at home on ...(date)..." OR  
"Switch off my engine when I can on..."
- I "Share tips to cut air pollution with others on ...(date)..."



### 3.3 Clean Air Day stickers

Stickers of Percy the Parrot can be given to the pupils to wear to show that they have participated in Clean Air Day. Alternatively, they could also be given out as part of the clean air lesson.

Please click [here](#) to download a set of stickers which have been set up to be printed on Avery No. L7161 labels.

### 3.4 Communications

Why not spread the word throughout the school community. See pages 11 & 12 for examples to use on social media or in newsletters.

### 3.5 Clean Air Leaflet

Please click [here](#) to download a clean air leaflet which is an informative resource that can be shared with the wider school community to increase awareness around air quality.



You may wish to inform parents/carers about the school's participation in promoting clean air or to spread the word about your school's Clean Air Day. Please find below examples of how you can share information to demonstrate the school's participation in and commitment to promoting clean air.

### 3 top tips on how everyone can improve air quality:

- | Leave your car at home and walk, cycle or scoot to school.
- | Plan a route to school that avoids walking past main roads.
- | Share car journeys where possible.

These can be shared on any platform.

### School Website and Newsletter:

This can be adapted from the sample letter on page 12 and include the 3 tips found above.

**Text alerts and e-mails** to parents/carers containing the 3 tips and the link to the Clean Air Day website [www.cleanairday.org.uk](http://www.cleanairday.org.uk)

**Send Clean Air Day leaflet** on (link on page 10) to parents/ carers.

### School's Social Media

Why not use Facebook or Twitter to share what your school is doing?

You could also include Clean Air Day social media links, so that your stories can be shared more widely.

### A parents/carers clean air pack could include:

- | Letter
- | Clean Air Day leaflet
- | If running a walking bus, then include the walking bus information sheet and consent form
- | Feedback survey link

This could be delivered by paper, or alternatively, via e-mail.

Please find below a sample letter you may wish to send to parents/carers

**Dear Parents/Carers,**

The quality of the air we breathe is important as it can have a big impact on our health. Air pollution is a serious problem, but the good news is we can all work together to reduce it.

**<INSERT SCHOOL NAME>** are doing our bit to create cleaner air for everyone.

**<EXPLAIN YOUR PLANS AND EVENTS HERE>**

*If holding Clean Air Day:*

We are holding Clean Air Day on **<INSERT DATE>** to raise awareness about air pollution. As part of this, we will be **<LIST ACTIVITIES HERE e.g. running special lessons on air pollution, holding a poster competition, asking teachers, pupils and parents to make a pledge, start a Walking Bus, etc....>**

*If not holding Clean Air Day:*

As part of our commitment to promoting clean air, our school will be **<LIST ACTIVITIES HERE e.g. running special lessons on air pollution, holding a poster competition, asking teachers, pupils and parents to make a pledge, start a Walking Bus, etc....>**

We would love your help **<WHAT YOU'D LIKE PARENTS/GUARDIANS/CARERS TO DO TO HELP e.g. Read the Clean Air Day leaflet, please sign a pledge, volunteer to run the Walking Bus, participate in the anti-idling campaign by turning off your car engines when picking up and dropping off your kids, etc...>** If you would to be part of Clean Air Day or find out how you can get involved in our school's commitment to promoting clean air, please get in touch **<INSERT CONTACT DETAILS HERE>**.



# Activities

## 4.1 Modeshift STARS

Modeshift STARS (Sustainable Travel Accreditation and Recognition Scheme) is the national scheme that supports schools in developing an Online School Travel Plan on the Modeshift STARS Portal. Travel Plans are accredited by Modeshift STARS with Bronze, Silver and Gold levels available. All schools in Swindon are registered with Modeshift Stars, ready to identify a Travel Plan champion and start developing a plan.

Schools can move towards accreditation by completing Modeshift STARS approved initiatives contained within the Clean Air Schools Toolkit and updating their Plan accordingly. Modeshift Stars also recognises schools that have shown excellence in supporting cycling, walking and other forms of sustainable travel. There are regional and national awards available.

*More information on the benefits of using Modeshift STARS be found by visiting [www.modeshiftstars.org](http://www.modeshiftstars.org).*

### 4.1.1 How sustainable travel engages with air quality

Engaging with school travel provides ways for reducing air pollution and reducing exposure to air pollution. Road transport can be responsible for around 80% of air pollution in areas that exceed legal limits<sup>11</sup>. The 'Anti-Idling Campaign' supported by the Clean Air Schools Toolkit will improve air quality around the school by reducing the amount of traffic immediately outside the school gates.

According to The National Travel Survey 2018, 'as many as 1 in 4 cars on the road during peak hours are involved in the school run'<sup>12</sup>. By encouraging walking and other forms of sustainable travel your school will have a positive effect on air quality outside the school gates and also in the wider area.

Walking, scooting or cycling can utilise alternative routes to school that avoid the worst hotspots for pollution and its associated health risks. For example, a Walking Bus can be planned to take advantage of the cleaner air offered by parks and pedestrian walk ways which reduces exposure to air pollution. It also provides a facility that encourages more walking to school.

### 4.1.2 Achieving Bronze Accreditation through Modeshift STARS

Accreditation on Modeshift STARS requires hands-up survey travel data, targets for modal shift, and completed initiatives as part of your consultation and action plan. It is likely that your school has already completed a number of initiatives that are approved under Modeshift STARS. These can count towards your accreditation if they were completed within the last three years. Review the Modeshift STARS Initiative Guide to see what other initiatives your school has already completed.

<sup>11</sup> [Department for Environment, Food and Rural Affairs \(2015\) Improving air quality in the UK: tackling nitrogen dioxide in our towns and cities, UK Overview Document, December 2015](#)

<sup>12</sup> [Living Streets \(2018\) Swap the School run for a School Walk: Our solution for active children, healthy air and safe streets, A Living Streets report](#)



### 4.13 Modeshift STARS approved initiatives contained in this toolkit

To achieve bronze accreditation on Modeshift STARS you need to have completed 10 'travel initiatives, 5 'supporting initiatives' and 2 'consultation initiatives'.

Activities contained within the Clean Air Schools Toolkit which engage with travel-related issues will each count towards at least 1 initiative on Modeshift STARS. By carrying out the activities you are likely to complete other initiatives, for example, to set up a Walking Bus your school might publicise it beforehand in a newsletter, which counts as 1 supporting initiative.

See below for examples of Modeshift STARS approved initiatives covered within the Clean Air Schools Toolkit, using the code in the right hand column when referring to the Initiatives Guide. This is not an exhaustive list so use it alongside the Modeshift STARS Initiatives Guide to make sure you are reporting on all the actions which count towards your accreditation.

*The Modeshift STARS Initiatives Guide highlighting initiatives which are supported by the Clean Air Schools Toolkit can be found [here](#) (does not include consultation initiatives).*

Clean Air Schools Toolkit supported activities	Modeshift STARS approved initiatives
KS1 & KS2 lesson plans	CU3 'School teaches environmental benefits of active travel' PR 8 'Competitions run & promoted within school' / CU11 'Other curriculum work'
Bikeability training	R1 'Cycle training for pupils (E.g. Bikeability)'
Walking Bus	W10 'Walking Bus in place' (not one-off event)
Scoot to school information 'Let's create an air revolution' rap/song Leaflet for parents/carers Pupil & Parent Surveys	W13 'Scooter Club' CU10 'Other curriculum initiatives' AQ10 'Other smarter driving initiatives' CU8 Pupils use school travel survey data from STARS in lessons
Anti-idling campaign	AQ 13 'Anti-idling initiative'
Support to look at safer routes to school	P1 'School works with Police/ Safer Neighborhood Team/ PCSO to promote safe and sustainable travel'

### 4.1.4 Case Study

Haydonleigh Primary School used the online School Travel Planning to achieve a modal shift towards walking, cycling and scooting. Since signing up for Stars in 2012, the percentage of pupils traveling to school by car has reduced to just 36%.

The school have done multiple activities around air quality, including:

- Campaigning to prevent parents parking and idling close to the school.
- A Travel Ambassador Team of Year 5 and 6 pupils. These Ambassadors play a very important role within the school, initiating, planning and delivering activities, assemblies and sharing experiences with other schools in the area.
- A successful weekly walking bus (now into its 5th year) with over 50 pupils walking one mile to school from a local supermarket, escorted by staff, parent volunteers and the Travel Ambassadors.
- Training for Balance biking, scooting, and pedestrians
- Bike and helmet maintenance, policy security marking and bike washing sessions
- Poster competitions
- Creating walk to school maps
- Scooter clubs at lunchtimes

The school never misses any opportunity to participate in National events such as the Big Pedal, the Brake Giant Walk and Beat the Street (a recent local initiative) often finishing in the top 5. As a result, the school achieved Modeshift STARS Gold accreditation, and won the South West regional travel plan award twice. This meant trips to London to compete in the national awards. You can see more about this on [Youtube](#).

### 4.1.5 Support for Modeshift STARS

To sign up to Modeshift STARS, please visit [www.modeshiftstars.org](http://www.modeshiftstars.org), scroll down the homepage and click register.

Free support is available from Swindon Borough Council for schools around the Modeshift STARS accreditation application process.

**The P.E and Sports Premium** is an opportunity to access funding to support active travel to your school. This funding can be used to pay for staff time to administer the Modeshift STARS Portal. A guidance document on how to use the premium to support active travel is available at: <https://www.gov.uk/guidance/pe-and-sport-premium-for-primary-schools> |

*If Modeshift Stars is of interest, or for more information please contact the Road Safety Officer by emailing [stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)*



## 4.2 Healthy Schools

In Swindon, 85% of schools are actively engaged in the Healthy Schools programme. The programme provides health-related education, promotes good health choices and recommends resources to enhance the PSHE programme.

Core themes are:

- Personal, Social and Health Education
- Emotional Health and Wellbeing
- Healthy Weight

The links between climate change and risk to health are now clear. Our reliance on cars is a contributing factor to climate change and poor air quality. Active travel can help combat both climate change and poor air quality. It also has benefits for health, as physical activity improves mental wellbeing and contributes to maintaining a healthy weight.

Our Healthy Schools programme supports children to become more active, as well as considering the wellbeing of the whole school community. It considers sustainability, and work to improve air quality sits well alongside work to improve the health of all in our schools.

Healthy School awards take a tiered approach, (Bronze, Silver and Gold), and at each level recognise the work schools are doing. Examples of how your school could link the air quality work to the Bronze level Healthy Schools programme award are shown below:



<b>Healthy Schools Bronze Award criteria</b>	<b>Examples of activities contributing to the criteria</b>
<b>Can the school access data or background information about the health needs of the school community?</b>	Using the Active Travel survey and undertaking additional surveys to assess methods of travel to school
<b>Does the physical environment contribute to wellbeing?</b>	Setting up a walking bus Anti-idling campaign 5 minute walk zone
<b>Is Healthy schools a whole school project, involving all staff and students?</b>	Clean Air Day Clean Air assemblies Whole school poster and banner competitions
<b>Is maintaining a healthy lifestyle included in the PSHE SOW?</b>	Lesson plans including links between air quality and active travel
<b>Is Road safety included in the PSHE SOW?</b>	Bikeability Setting up a walking bus Links to resources such as Children's Traffic Club
<b>Are children encouraged to travel actively to school?</b>	Lesson plans Bikeability Setting up a walking bus 5 minute walk zone Clean Air Day
<b>Is there an up to date school travel plan?</b>	Develop a travel plan and consider air quality in the plan
<b>Does the school celebrate pupils' successes?</b>	Clean Air Day activities Whole school poster and banner competitions Air quality assemblies with examples of work done in class

*If you would like to get involved in Healthy Schools, or learn more about the links between sustainability and air quality work and Healthy Schools, please visit*

[www.swindonhealthyschools.org](http://www.swindonhealthyschools.org) or email [swindonhealthyschools@swindon.gov.uk](mailto:swindonhealthyschools@swindon.gov.uk)



## 4.3 Walking to school

Walking to school has so many benefits. Living Streets is a free resource with many great ideas, including the initiatives described below. Click [here](#) to access Living Streets.

### 4.3.1 Walking Bus

#### What is a Walking Bus?

A Walking Bus is where a group of children are escorted to school by adult volunteers. Children and adults walk in a group wearing hi-vis tabards along an approved route and stopping at set points to collect additional 'passengers'.

A Walking Bus can improve air quality in the local area by reducing the number of cars being used in the school run and parking near the school. A Walking Bus can reduce exposure to air pollution by directing the route away from pollution hotspots like busy roads and junctions.

#### Other benefits of a walking bus

- | Sociable and fun
- | Healthy exercise for adults and children
- | Saves time and helps parents get to work on time
- | Develops children's road safety awareness
- | Reduces congestion around the school gate
- | Makes the journey to school safer
- | Gives children the chance to learn more about their local environment
- | Parents share the task of taking their children to school
- | Improves attendance and engagement with school activities for some children
- | Contributes to Modeshift STARS and Healthy Schools accreditation.

#### Initial requirements for a Walking Bus

- | Adult volunteers (guidance on ratios are 1:4 infants, 1:8 juniors)
- | Risk Assessment of proposed route
- | DBS Checks for adult volunteers
- | Tabards for adult volunteers and children (these are provided by the Council)

#### Things to consider

- | Volunteer management - This might be as simple as selecting a Walking Bus Co-ordinator, or the school may want to manage the rota. Getting enough adult volunteers is one of the key challenges.
- | Volunteer training - Schools have good knowledge of managing groups of children in their training of adult volunteers.
- | Insurance - Schools that are academies will have their own insurance policy and will need to speak to their insurance provider and/or multi-academy trust.
- | Risk assessment (RA) – A RA must be carried out for any proposed route for the Walking Bus. The Swindon Road Safety Officer can provide feedback on a RA carried out by the school.

#### Further information

*If you are interested in setting up a Walking Bus, Swindon Borough Council can provide support with this. Please email [stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)*







### 4.3.2 5-minute walk zones

Air pollution can vary over very short distances; in general the closer you are to sources such as traffic, the more you breathe in. We can improve the air quality around schools by encouraging parents who need to drive to park at least 5 minutes' walk from the school.

The children can be involved in this activity, in mapping out where you can walk to in 5 minutes from the school gates. This will help to create healthier and more environmentally friendly ways for children to walk, cycle or scoot short distances to school. It is also an excellent opportunity to engage the whole school community, and make the local school environment safer for children and staff.

The process of mapping out a 5-minute walk zone is straightforward, and can be supported by the council. Many schools in Swindon are adopting this idea, and using it to communicate with parents.

Click on the link for a Swindon toolkit for developing a 5-minute walk zone: <http://www.swindontravelchoices.co.uk/schools/road-safety/>

*If this is something you are interested in and wish to find out more, please contact the Road Safety Officer by emailing [stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)*



### 4.3.3 Park and Stride

For some families walking all the way to school just isn't possible. 'Park and Stride' is a scheme designed to encourage parents/carers to park away from the school entrance and walk the last 10 minutes of the journey. It is similar to a 5 Minute Walk Zone scheme, but it usually involves a specific car park being identified as a suitable place to park. This could be a pub car park, a community centre car park or a nearby supermarket car park. Once this location has been identified, permission needs to be granted by the owner of the land. Commercial organisations are often very happy to work with schools on this.

Park and stride can also work as a point to start a walking bus.

*Why not visit [Living Streets](#) for information on all these initiatives and more, or contact our Road Safety Officer for support with specific initiatives by emailing [stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)*



## 4.4 Bikeability

Reducing air pollution and improving air quality in Swindon will lead to a transport mode shift for many local residents. To help support this shift, Swindon Borough Council provides training through LifeCycle UK to those who wish to swap 4 wheels for 2 through Bikeability cycle training.

Bikeability is the most popular cycle training programme in schools today. It's about gaining practical skills and understanding how to cycle on today's roads. Bikeability gives everyone the skills and confidence for all kinds of cycling.

There are three core Bikeability levels, each designed to improve cycling skills, no matter what is known already. Levels 1, 2 and 3 take trainees from the basics of balance and control, all the way to planning and making an independent journey on busier roads.



- Level 1** new riders learn to control and master their bikes in a space away from traffic such as a playground or closed car park. Trainees will usually be trained in a group of 3-15, though this often depends on the age of trainees.
- Level 2** takes place on local roads, giving trainees a real cycling experience. Trainees learn how to deal with traffic on short journeys such as cycling to school or the local shops. Trainees are usually trained in small groups – up to 6 trainees per instructor – though individual training may also be available.

- Level 3** equips trainees with skills for more challenging roads and traffic situations – busier streets, queuing traffic, complex junctions and roundabouts. It also includes planning routes for safe cycling. Level 3 training is delivered in groups of up to 3 so can be tailored to a trainee's individual needs, such as a route to school.

To access Bikeability training please email [chrissie@lifecycleuk.org.uk](mailto:chrissie@lifecycleuk.org.uk) or visit <https://www.lifecycleuk.org.uk/contact>.

For more information please visit the contact Swindon Travel Choice website: <http://www.swindontravelchoices.co.uk/schools/road-safety/>. You can also access information about cycling and cycle routes at [www.sustrans.org.uk](http://www.sustrans.org.uk).

## 4.5 Road safety

An important part of increasing active travel in the community, is giving parents and pupils the confidence and skills to walk, bike or scoot to school safely.

Swindon Borough Council also offer a wide range of road safety training and education programmes. Local free programmes and free national resources available include:

- Bikeability
- Think! Road safety education resources for age 3-16 years: <https://www.think.gov.uk/education-resources/>
- The Children's Traffic Club for EYFS: <https://www.childrenstrafficclub.com/free-activities/>

For more information please visit the contact Swindon Travel Choice website: <http://www.swindontravelchoices.co.uk/schools/road-safety/> or email the Road Safety Officer: [stars@swindon.gov.uk](mailto:stars@swindon.gov.uk)

## 4.6 Scoot-to-School

Scooting is another great way to travel to and from school, especially for those who are not yet able to cycle. It is a fun way to travel and also has many positive benefits, including

- | Contributing towards exercising and keeping fit
- | Reducing the number of cars on the school run
- | Subsequently reducing congestion on the roads and cutting down on air pollution

If interested in scooting to school, visit [www.scootfit.co.uk](http://www.scootfit.co.uk). ScootFit is a sporting activity using push scooters to improve health and fitness in nurseries, schools and workplace settings. They offer training as one-off sessions or on a more permanent basis for schools.

## 4.7 Anti-idling

### What is idling?

Idling is when a vehicle's engine is left running for more than 30 seconds while the car is not moving. This releases exhaust emission containing harmful substances, such as PM<sub>2.5</sub> and NO<sub>x</sub>, into the atmosphere<sup>13</sup>. These substances are linked to several health issues, including lung and heart diseases; young children are particularly vulnerable to their effects. Idling also contributes to air pollution and unnecessary noise, increases carbon footprint, and wastes fuel and money.

### Running your own anti-idling campaign

You may wish to run your own anti-idling campaign. This is an opportunity to not only raise awareness about the importance of air quality, but also the impacts of idling among staff, pupils, parents and members' of the public. This campaign could also be promoted on the school's social media.

As part of the campaign, your school could set up a No-Idling Zone – a designated area where all vehicles engines must be switched off whilst waiting (e.g. pick-up and drop-off points).

Activities during the campaign could include:

- | A banner to inform the public about the impact of idling. The banner could be in white to show the discoloration over time due to pollution. The Brent Council's No-Idling logo<sup>13</sup> (below) is a good example. Pupils could also design banners or posters.
- | Give out pledge cards to parents. See page 10 and [here](#).
- | Measure Impact: Ask pupils to count number of idling vehicles before putting up banner/no-idling zone, and count again few weeks after – at morning drop off or afternoon pick up. Compare and discuss the differences, highlighting the impact on the environment.



<sup>13</sup> [www.westminster.gov.uk/dont-be-idle](http://www.westminster.gov.uk/dont-be-idle)

<sup>14</sup> \*No Idling Logo from Brent Council: Used with permission from Brent Council. [www.brent.gov.uk/media/16408859/7855-no-idling-toolkit.pdf](http://www.brent.gov.uk/media/16408859/7855-no-idling-toolkit.pdf)

## 4.8 Guide to indoor plants and planting trees

You may wish to consider planting more indoor and outdoor trees to improve air quality within and around the school, or trying something different like a green wall.

### Outdoor plants:

King's College London highlighted the significant benefits of learning in the natural environment, including:

- | better educational attainment;
- | development of natural sciences skills and environmental awareness;
- | improved health, social cohesion and attitudes to other children;
- | better school staff morale<sup>15</sup>.



Studies show indoor and outdoor planting reduces air pollutants. NASA's Clean Air Study (1989) demonstrated the effectiveness of indoor plants in absorbing CO<sub>2</sub>, benzene, formaldehyde, and trichloroethylene.

The most effective plants include spider plant, peace lily, english ivy, chrysanthemum, and areca palm. High levels of planting surrounding schools and within school boundaries showed reductions in traffic related air pollution inside the schools<sup>16</sup>. A NO<sub>2</sub> removal rate of 14-25% in January (high concentration period), and 35-59% in July (low concentration period) with an evergreen vegetation barrier has been observed.<sup>17</sup>

Vegetation barriers should be low, close to pollution source, hairy with a high leaf index, and high porosity<sup>16</sup> Hawthorne hedge is particularly effective in particulates collection, showing a 34% reduction in PM10 for a 1.6m wide, 2.2m high hedge.

Other links to papers on this subject are listed below.<sup>18,19</sup>

<sup>15</sup> <http://publications.naturalengland.org.uk/publication/4524600415223808>

<sup>16</sup> Tremper (2018) The impact of a green screen on concentrations of nitrogen dioxide at Bowes Primary School, Enfield.

<sup>17</sup> Janhall, S. (2015). Review on urban vegetation and particle air pollution Deposition and dispersion. Atmospheric Environment.

<sup>18</sup> Jeanjean (2017) Ranking current and prospective NO<sub>2</sub> pollution mitigation strategies: An environmental and economic modelling investigation in Oxford Street, London.

<sup>19</sup> Janhall (2015) Review on urban vegetation and particle air pollution – Deposition and dispersion

Woodland cover in England is low at only 10%, and 84% of the UK public agree with the statement “a lot more trees should be planted” in response to the threat from climate change.<sup>20</sup>

The Department for Environment, Food and Rural Affairs is working in partnership with The Woodland Trust to give free trees to school, on top of an existing Government commitment to plant 11 million trees by 2020.<sup>21</sup> The Woodland Trust gives away trees to schools and community groups across the UK every March and November (to coincide with tree-planting season). It will not only benefit the local environment, but will also support the national curriculum to ensure children can identify iconic native trees and help them understand the benefits of a healthy environment.

**Click on the following links to find out more:**

**I The Woodland Trust:**

[www.woodlandtrust.org.uk/get-involved/schools/trees-for-schools](http://www.woodlandtrust.org.uk/get-involved/schools/trees-for-schools)

**I Royal Horticulture Society Campaign for School Gardening:**

<https://schoolgardening.rhs.org.uk/home>

**Indoor plants:**

Friends of the Earth provide a list of indoor plants that can be used in classrooms. Please visit this link for the list: <https://friendsoftheearth.uk/sites/default/files/downloads/winchester-foe-air-pollution-cleaning-plants-102236.pdf> (Used with permission from Friends of the Earth).



<sup>20</sup> [www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics](http://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics)

<sup>21</sup> [www.gov.uk/government/news/first-saplings-planted-in-push-for-a-million-trees-for-schools](http://www.gov.uk/government/news/first-saplings-planted-in-push-for-a-million-trees-for-schools)



# Feedback and evaluation

Feedback provides an invaluable opportunity to evaluate the effectiveness and impact of this Clean Air Schools Toolkit. The information gathered will enable us to not only examine the toolkit itself, but also the impact it has had on the children and their parents/carers. Swindon Borough Council will be evaluating the toolkit using the annual travel survey for schools to look at any changes in travel behaviour in schools taking part.

We are also interested in more general feedback and learning from schools' experiences.

## Feedback from teachers:

This toolkit is aimed at teachers in primary schools, and therefore feedback on the toolkit from teachers will be invaluable. We would love to hear your comments or any feedback that you may have. Please e-mail [publichealth@swindon.gov.uk](mailto:publichealth@swindon.gov.uk) with your comments and feedback. If you could spare some time to talk to us about the toolkit, this would also be useful in evaluating its use, and developing it further. You may be contacted by public health to arrange this.

## Feedback from parents/carers:

We are keen to gather feedback from parents/carers and we can discuss working with you to design a survey. This survey will explore the parents' thoughts around air quality and the activities your school may be undertaking. There may be variations in the activities that different schools choose to implement, for example, some schools might implement all activities while others choose to only implement some. This survey can be sent out at any point during your school's engagement with promoting clean air: after the lessons, prior to initiating any of the activities outlined in this toolkit, with the walking bus information or on Clean Air Day.

*If interested, please contact*  
[publichealth@swindon.gov.uk](mailto:publichealth@swindon.gov.uk)

## Feedback from pupils:

Please click [here](#) to download a questionnaire to evaluate whether there is a change in the children's knowledge of air quality before the lessons in section 2 of this toolkit are delivered, compared with after. Depending on the age of the pupils, it may be necessary to read out the questions and explain it to them. This questionnaire should be printed out and given prior to the lesson, either on the day or in the days proceeding. Then, the same questionnaire should be printed out again and given right after the lesson is completed. Results can be collated by yourselves and e-mailed through to us on [publichealth@swindon.gov.uk](mailto:publichealth@swindon.gov.uk)

If you would like to do a travel survey within your school or class, this can be done fairly simply with a hands up survey in class or assembly, or could include a written survey. The Assembly Plan and Key Stage 2 Lesson Plans stored [here](#) contain template surveys. This could help children engage with the work, and also give more evidence to show how your school is making a difference.

