



# HARINGEY'S AIR QUALITY FINAL EVALUATION REPORT

## **Air Quality Education Programme Overview**

Since May 2014 an Air Quality Education Programme has been developed and implemented across the London borough of Haringey. Haringey's Air Quality Apprentice has been moulding and leading the programme and has been working in conjunction with the Smarter Travel Team to engage primary schools within the borough on Air Quality and Active Travel initiatives. This is the first time that the London Borough of Haringey has engaged primary schools directly regarding air quality issues on such a wide scale, yet this is a topic area which helps to support the Smarter Travel Team's objective of encouraging modal shift, and meets the criteria on the Sustainable Travel Active Responsible Safe (STARs) scheme. Haringey is dedicated to improving local air quality and raising awareness of the issues related. The Smarter Travel Team promotes The Air Quality Education Programme in schools by delivering assemblies and lessons, and any other related projects that supports the curriculum. The Air Quality's Apprentice also supports parents to reduce pollution by giving them information and advice about sustainable travel. The aim of targeting Air Quality engagement in primary schools is to ensure pupils are receptive to environmental issues from an early age because they are more likely to act on these messages throughout their life.

### *Methodology – Presentation*

A presentation was created and implemented in Haringey schools for environmental awareness in our community. The presentation was formed in a way where the pupil's would be engaged and interested about Air Quality therefore, a lot of clipart was involved to catch their eye. Each power point slide consists of what Air Pollution is, the 3 major air pollutant, where they come from, the causes and effects they have environmentally and healthily, and how to prevent it in the future.

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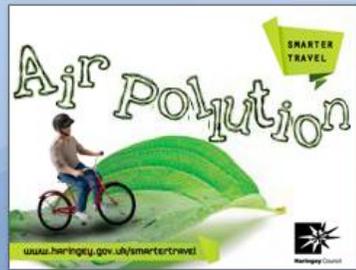
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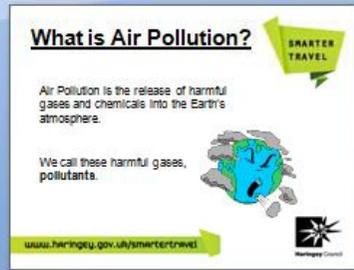
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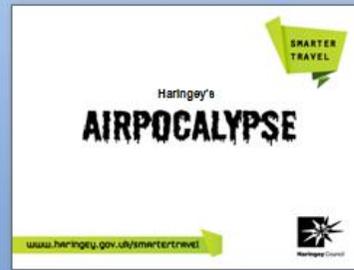
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## *Air monsters*

The Air Monsters were created to emphasise the major dangers to our environment and the 3 air pollutants that cause the most air pollution. These are the Air Monsters which represent air pollutants – Nixy a.k.a Nitrogen Dioxide (NO<sub>2</sub>), Dixy a.k.a Carbon Dioxide (CO<sub>2</sub>), The PM Brothers (Particulate Matter) Phil (PM<sub>10</sub>) and Mitchell (PM 2.5). The animated characters make it easy for the pupil's to differentiate which is which because of how they look, and the pupil's are able to give a brief description of these 3 air pollutants do.



Dixy (CO<sub>2</sub>)



Nixy (NO<sub>2</sub>)



Phil & Mitchell PM  
Brothers (10 & 2.5)

## *Air rangers*

The Air Quality Ranger scheme was an idea entwined with the Air Quality Education Programme and was aimed at employing Air Quality pioneers from each of Haringey's Primary Schools to be Air Quality Rangers. The role of the Air Quality Ranger is to maintain an Air Quality notice board with literature and updates provided by the Smarter Travel Team, also help with Pollutant level data collection.

## *Promotional material*

The promotional material we have for this campaign include, pop-up banners and stickers. It had been taken into consideration looking at other merchandise for this campaign e.g. an oyster wallet, key rings, fridge magnets etc. We will be creating designs for these merchandises that tackle air pollution and making sure it's really useful when mentioning public health issues that are caused by Air Pollution.



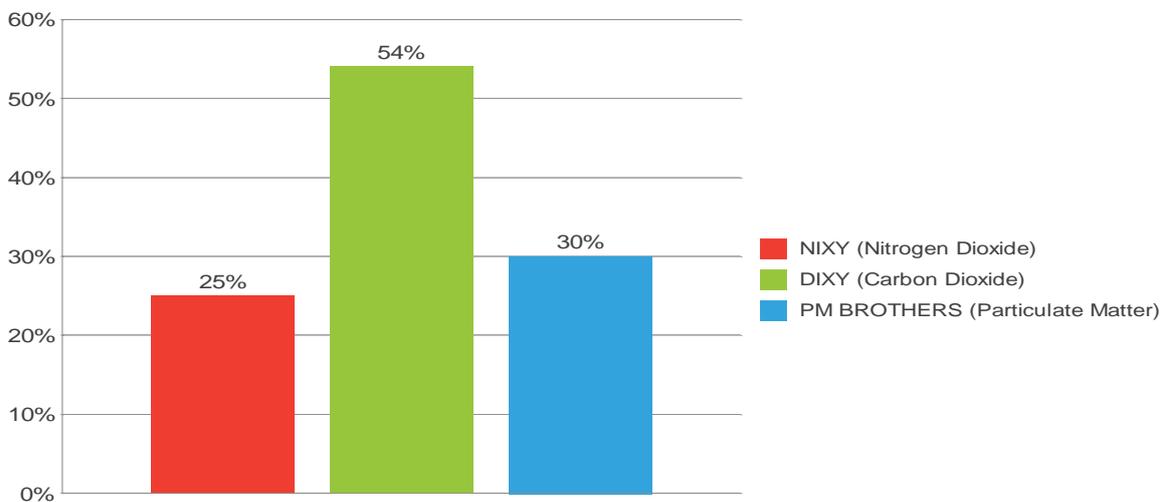
## Air Quality Assemblies

The primary way in which the Air Quality Education Programme has been delivered is through the use of assemblies. The Air Quality Assemblies aim to:

- Educate KS2 pupils on the three air pollutants which are of most concern to Haringey and London (Nitrogen Dioxide, Carbon Dioxide, and Particulate Matter)
- Raise an awareness about the effects pollution can have on their environment and to themselves, with a focus on breathing problems
- Encourage a behaviour change which will help to improve air quality

A short evaluation form was provided to one of Haringey's primary schools where the assembly was first delivered in order to gain an understanding on how effective the assembly have been in achieving Haringey's aims of improving air quality and encouraging active travel.

At first, an evaluation form was filled out by the pupils from one school that had the first assembly about air pollution. We wanted to see what information they had grasped from the presentation.



The results above highlighted that more needed to be done to stress the importance of the other two air pollutants, NO<sub>2</sub> and Particulate Matter. It is not surprising that the majority of young people who completed the evaluation were able to recite the air pollutant Carbon Dioxide rather than Nitrogen Dioxide or Particulate Matter; despite the levels of Nitrogen Dioxide and Particulate Matter being of greater concern for London's air. The reasoning behind this is that due to topical issues such as the increase in CO<sub>2</sub> levels being a fundamental contributory factor to Global Warming, which is visually alarming, it has grasped much of the public's attention. Subsequently, other air pollutants such as Nitrogen Dioxide and Particulate Matter have unfortunately been neglected and therefore young

people are less aware of them. It would be wise to accentuate the importance of both NO<sub>2</sub> and Particulate Matter through further development of the Air Monsters campaign.

Building on the experience gained from the first assembly, evaluation forms were then only given to the teachers of the classes who had received air quality assemblies and relied upon the teachers returning completed forms. The aim of the survey has been to examine:

- Recall of advertising
- Environmental awareness

Key points emerging from the survey:

- Nearly 80% of pupils found the event enjoyable and informative
- 83% of pupils showed some awareness of different air pollutants
- 81% of pupils came up with suggestions for improving air quality, including electric cars, reduced car use, walking, cycling.

**Q1 Did you enjoy the Assembly?**

		Count	%
Did you enjoy the assembly about Air Pollution?	Yes	148	79%
	No	27	14%
	No answer	12	6%
	Total	187	100%

**Q2 Name one Air Monster you can remember, and say something about it.**

		Count	%
Name of Air Monster	Dixy	95	51%
	Nixy	27	14%
	PM Brothers	34	18%
	Cannot recall	31	17%
	Total	187	100%

**Q3. Now you have heard about Air Pollution, what could you do to help improve our air?**

		Count	%
Suggestions for improving air quality	Electric cars	27	14%
	Stop smoking	11	6%
	Walk or cycle	34	18%
	Reduce car use	30	16%
	Posters	5	3%
	Environmental awareness	42	22%
	Public transport	3	2%
	No suggestions	35	19%
	Total	187	100%

#### **Q4 Are you interested in becoming an Air Quality Ranger?**

		Count	%
Interested in becoming an AQR?	Yes	102	55%
	No	85	45%
	Total	187	100%

The numbers above are reassuring and show that pupils are fully aware of the changes they can make to their life in order to help reduce air pollution. With over 50% of pupils saying they will pledge to become an Air Quality Ranger and make improvements to air quality and it's correlation with sustainable travel has been an effective message delivered.

Furthermore, pupils saying that they will reduce their car use are evidence to suggest that pupils have recognised that the greatest issue we face with improving air quality are vehicles and the pollution from car.

Below is a list of the schools and number of pupils engaged with in the first year.

<u>Primary school</u>	<u>Number of pupils</u>	<u>Workshop conducted</u>
Alexandra primary school	150	School assembly
Belmont primary school	240	School assembly
Bounds green primary	235	School assembly
Bruce grove primary	240	School assembly
Campbourne primary school	240	School assembly
Harris (Coleraine park) primary school	240	School assembly
Earlsmead primary school	240	School assembly and 2 Yr5 lessons
Ferry lane primary school	120	School assembly
Highgate Primary School	120	School assembly
Holy trinity primary school	220	School assembly
Islamic Shakhsiyah Foundation	50	School assembly
Lordship lane primary school	400	School assembly
Mulberry primary school	400	School assembly
Noel park primary school	240	School assembly
North Harringay primary school	360	School assembly
Our lady of Muswell catholic school	400	School assembly
Risley primary school	360	School assembly
Rokesly Junior school	360	School assembly
St Francis de sales catholic infants and junior school	270	School assembly
St Gildas catholic school	240	School assembly
ST Ignatius RC primary school	180	School assembly
St Marys CE primary school	240	School assembly
The Federation of St Mary's Priory Catholic Schools	240	School assembly

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Stamford Hill Primary School	120	School assembly
Stroud Green Primary School	120	School assembly
Trinity Primary Academy	230	School assembly
West Green Primary School	180	School assembly
<b><u>Total number of students</u></b>		<b>6495</b>
<b><u>engaged with</u></b>		

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## Smarter travel events



The Smarter Travel Team promotes its key messages (including those of reducing CO2 emissions and improving air quality) by taking part in events across the borough with a branded trailer/marquee, offering those living and working in Haringey information and advice about how to change to more sustainable modes of transport.

The purpose of the road shows are also done to obtain feedback from residents about how they currently travel, what might change their travel choices in the future and whether there are any infrastructure issues in their local area that make it difficult for those walking/cycling. Events will take place in as many wards as possible and will, where possible, link to existing events.

For example, one of the events the air quality apprentice participated in is the Tottenham Green Green Fair where the smarter travel team provided smoothie bikes to demonstrate the power that a bike produces and how they can power things such as a blender to make smoothies, alternative uses are blowing up balloons, powering a laptop via a generator. This is to show people that there are alternative power sources to petrol/diesel engines. Our stand offered visitors the opportunity to find out how their travel choices are important to the air quality of the borough and we promoted the cycle training and even provided some bikes for people to try out.



## *Green Screen Project*

In 2015 we commissioned a Green Screen to be erected on the grounds of Bounds Green primary school. The school being located on Bounds Green Road is exposed to high levels of pollution and was highlighted as a school where pupils and teachers would find a green screen greatly beneficial. It is also one of our diffusion tubes so we will be able to measure the difference that the Green Screen makes to air pollution.

**Here are some pictures of the Green Screen Project. Pupils participated happily in completing this project.**

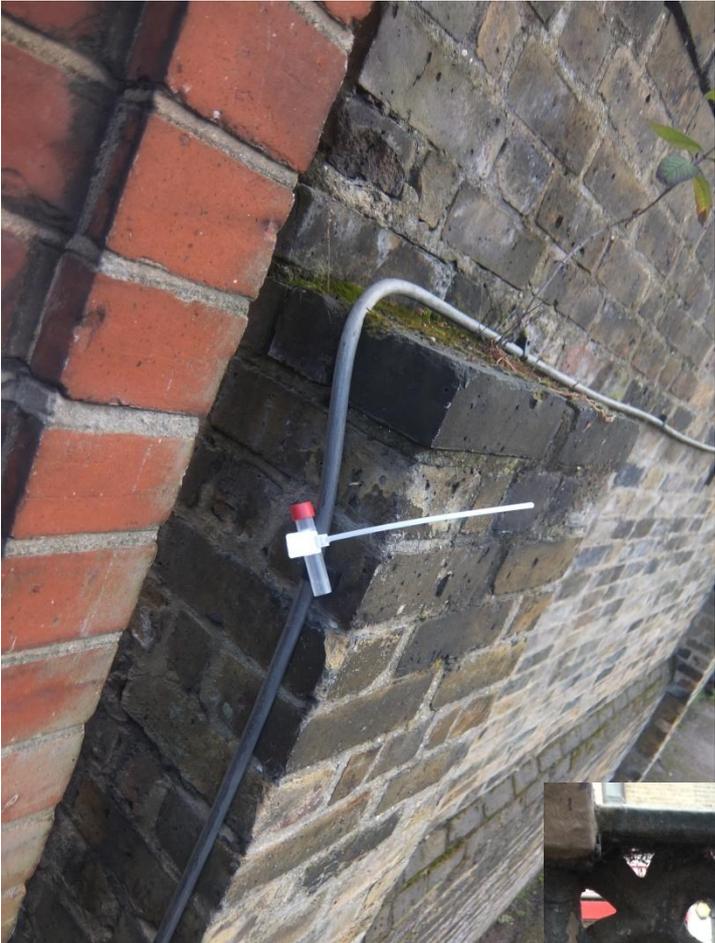


Green screen completed

*Air quality monitoring – diffusion tubes*

At Haringey, we monitor the cleanliness of our air through 13 diffusion tubes which are located in different Air Quality hotspots. Two hotspots in particular which we felt important to be observing are in Muswell Hill and Wood Green area. One diffusion tube is directly exposed to the roadside pollution from the A1 and there are three diffusion tubes less than 0.5 miles away from Wood Green tube station.

Once the data is received from the monthly analysis it is collated into an annual report where we are able to use the quantitative data to see where improvement still needs to be made or where air pollution has been reduced.



## *Forward plan/ongoing plan*

The plan is to continue promoting the air monsters initiative and develop the zero hero scheme. Also, support the school travel plan officer in the Mode Shift Project including supporting events and other initiatives. The air quality apprentice also will support the Pollution Officer with Air Quality activities including Clean Air for Schools project, Diffusion tubes, researching air quality initiatives like Air text and Global Footsteps. In addition, arrange assemblies within schools prioritising those closest to air quality hotspots. Currently 27 schools have had an Air Quality Assembly. Two Air Quality Arts and Craft Lessons have been delivered to 1 school, this will increase in the upcoming year as the pupils enjoyed and learnt a lot from it. Another forward plan we have organised is The Air Quality Animation Project. A company called Urban Outdoors have been contracted by us to run an Air Quality Animation to a KS2 Class, preferably Year 5, and a poster competition to two KS2 Classes. This is a project where one class is delivered 4 half day workshops. The first workshop will consist of an Air Quality lesson where they're introduced to the ideas of Air Pollution, its causes, it's effects etc. The second/third Air Quality lesson will consist of the pupils drawing images for the Air Quality Animation. Urban Outdoors have organised the pictures and they will require for the animation.

Moreover, attending Pan-London, a borough-wide meeting for borough officers and TfL to discuss related active travel issues and upcoming projects would be beneficial for the air quality apprentice as it'll be useful in providing an insight into what other boroughs are doing, but as it is more in depth you can discuss the advantages and disadvantages of each other's projects, also provide figures, and discuss upcoming issues. Lastly, AG Products have been paid a total of £1,600 to provide the items we want use as merchandise. However, we have not confirmed a design yet and therefore have not been able to get them created. This has been planned to get this created before giving out Air Quality assemblies/lessons.

Comments made from pupil's air quality feedback survey

## **Appendix 1**

### **Air Monsters and Comments about them**

Case Summaries

	Name one Air Monster that you can remember and tell me so...
	Dixy
	Dixy - Carbohydrate
	Dixy - came from another planet
	Dixy – Dioxide
	Dixy - Dixy comes from the car exhaust
	Dixy - It is the worse one
	Dixy - Makes the air turn orange
	Dixy - smells like egg
	dixy - smells of rotten eggs
	Dixy - Pollution air
	Dixy- Dixy comes from dixy air
	Dixy - They are air viruses that live in the air get eaten by trees
	Dixy - Dixy is the bad air pollution
	Dixy - Carbon dioxide
	Dixy - Dixy is a car quality monster
	Dixy - Carbon dioxide. Trees eat Dixy
	Dixy - I think he's No.1 wanted
	Dixy - They pollute
	Dixy - Causing gas
	Dixy - Dixy is the monster that is very small monster that can make all of our air unclear

	Dixy - smells like rotten eggs
	Dixy - Most dangerous air politer
	Dixy - They pollute the air
	Dixy - he is the baddest disease
	Dixy - can go and block the sun
	Dixy - Dixy makes the air and purple
	Dixy - Dixy can come inside and can make us sick
	Dixy - Dixy is the most dangerous air monster
	Dixy - Dixy comes from pollution
	Dixy - Dixy does the air for us
	Dixy- Dixy is so small so he could go through small things and he could put more smoke
	Dixy - Dixy is a really bad air pollution
	dixy- smell of rotten eggs
	Dixy- dioxide
	Dixy - Dixy is the most dangerous out of the lot
	Dixy - smells rotten
	Dixy - enter peoples throats
	Dixy - Carbon Dioxide
	Dixy and Nixy. Dixy is what comes out back of a car
	Dixy - he is UKs number 1 monster
	Dixy - It is bad
	Dixy - Dixy goes to jail
	Carbon dioxide - Trees eat carbon dioxide
	Dixy - Dixy makes our ear dirty
	Dixy - She goes into people's bodies

	Dixy - Dixy is the worst air monster in England
	Dixy. Comes from every type of smoke.
	Dixy – Invisible
	Dixy = She produces carbon dioxide and they cut down trees
	Dixy - it gets eaten by trees
	Dixy - dixy makes the air
	Dixy - He is colour
	Dixy - Worst monster
	Dixy - dixy is an air polluter which is for the environment
	Dixy - Dixy is a very dangerous monster they can make you sick
	Dixy - Hard to smell, trees eat her. She goes in their body and affects their lungs
	Dixy - comes out of engines
	Dixy - He is colourless and eaten by trees
	Dixy - dixy is smoke
	Dixy - Comes out car exhaust
	Dixy - dixy is a carbon dioxide which pollutes by engine such as cars
	Dixy- Dioxide/pollution
	Dixy - Dixy is a Dioxide
	dixy - dioxide
	Dixy - carbon dioxide monster
	Dixy - dixy is a mad monster who likes hurting the environment
	Dixy - Spreads pollution
	Dixy - Dixy has no colour. Trees eat her she's so small she can get into body and give you lung problems
	Dixy - Carbon dioxide monster int the morning the air get reddish brown
	Dixy - dixy comes from the car air

	<b>Dixy and Nixy</b>
	<b>Dixy - Dixy comes from smoke</b>
	<b>Dixy - Nitrogen</b>
	<b>Dixy - They stink of egg</b>
	<b>Dixy - it smells like a egg</b>
	<b>Dixy - Worst monster</b>
	<b>Nitrogen - Has a brownish reddish colour</b>
	<b>Nixy - nixy is a dangerous monster</b>
	<b>Nixy - Pollute air</b>
	<b>Nixy - Invisible, Gas, global warming</b>
	<b>Nixy - He gets eaten by trees</b>
	<b>Nixy Dixy</b>
	<b>Nixy - Nixy is the worst air pollution in London</b>
	<b>Nixi - smells like rotten eggs</b>
	<b>Nixy- Smells like rotten egg</b>
	<b>Nixy - smells like rotten eggs and look like brownish red colour</b>
	<b>Dixy, Nixy - Trees breathe it in</b>
	<b>Nixy - smells like rotten eggs</b>
	<b>Nixy - What i know about Nixy is that he makes our air go bad and it goes through peoples lungs and make them get cancer.</b>
	<b>Nixy - Its very hard to smell them</b>
	<b>Mitchell - He's very small and can go into your lungs</b>
	<b>Mitchell - He is green and very small</b>
	<b>Mitchell - Mitchell is the worst air pollution</b>
	<b>Mitchell - he is small and hard to catch</b>
	<b>Mitchell - Number 1 enemy</b>

	<b>Mitchell - He's very small and travel around your body</b>
	<b>Mitchell - Mitchell is the worst ever pollution</b>
	<b>PM brothers - they came from cars</b>
	<b>You can't smell them</b>
	<b>Mitchell- one of the 2 brothers</b>
	<b>Pm brothers</b>
	<b>PM Brothers - Mitchell can go in lungs</b>
	<b>Mitchell (PM brothers) - He is small</b>
	<b>The small one - They are very dark</b>
	<b>Phillip - he is the mouse because he is so small.</b>
	<b>Mitchell - He gives cancer and breathing problems</b>
	<b>Mitchell - Mitchell is one of the brothers</b>
	<b>Phil and Mitchell - PM brothers</b>
	<b>Mitchell - Can give you lung cancer</b>
	<b>Mitchell - Mitchell can go into your throat.</b>
	<b>PM Brothers - Mitchell is small and you can breathe him in</b>
	<b>Mitchell - Mitchell comes from trees</b>
	<b>Mitchell - He is so small he can get in your lungs and give you a disease</b>
	<b>PM Brothers - Mitchell can go down peoples throat</b>
	<b>PM Brothers - Mitchell. He can give people asthma</b>
	<b>Mike - Mike is a monster that made out of car smoke which makes our air unclear</b>
	<b>Mitchell - Mitchell is a very small and he can go to your lungs and make you have asthma</b>
	<b>Mitchell - for trees he adds smoke gas</b>
	<b>Mitchell - Mitchell is so small he can go into your throat and give you lung disease</b>

## Appendix 2

### Comments about Improving Air Pollution (Q3)

#### Case Summaries

	Name of Air Monster	Now you have heard about Air Pollution what could you do ...
	Dixy	an electricity, air freshener, or less driving its shoots out smoke
	Dixy	By getting rid of them
	Dixy	don't cut the trees because the trees help us to not get viruses in our fresh air
	Dixy	I will help by not driving my car
	Dixy	more bikes
	Dixy	Not to smoke a lot
	Dixy	Plant more trees and not eat them only if you need to
	Dixy	Put signs up to so people will know not to make pollution
	Dixy	Ride a scooter-bike
	Dixy	Tell my parents not to park in front
	Dixy	To help the environment i will make posters to tell people to making smoke that will make air unclear to breathe
	Dixy	to use electric car
	Dixy	Try and walk more and encourage more people to walk
	Dixy	Try to tell people they should get electric cars if they are getting one
	Dixy	Try to use less cars and things that use petrol
	Dixy	Walk to school and cycle to school
	Dixy	We can tell people how we know not to use cars and stuff
	Dixy	We can stop the air monsters and we can check if they are coming because we don't like it

	Dixy	We could help improve our air by using less vehicles with motors and gas
	Dixy	We could improve our air by not polluting smoke from our cars
	Dixy	We could improve the air by smelling something nice
	Dixy	We could stop using so much smoke, so the monsters can't bring that much smoke and make our air bad
	Dixy	Stop the smoking
	Dixy	stop cutting down trees. Use electric cars. Cycle and scooter
	Dixy	Car sharing
	Dixy	Plant more trees and plants
	Dixy	Try to get my mum to get an electric car
	Dixy	You could make the air more fresh by making the wind colder
	Dixy	Cycle walk, carpool, electric cars
	Dixy	Make a big pictures to put all around London. You can also have a day where you can only drive cars on 1 day. Plant more plants
	Dixy	Buy an electric car
	Dixy	Not drive all the time
	Dixy	use battery cars
	Dixy	To block them
	Dixy	Using cars and use horses
	Dixy	No smoking and no putting rubbish on the floor
	Dixy	We could improving things by smelling it
	Nixy	Tell people not to drive a lot to places if they can walk and plant more trees
	Nixy	Try to use less cars and trains we shall walk and bike ride
	Nixy	walk, cycle, public transport
	Nixy	I will cycle or walk or scooter and won't use the car as much
	Nixy	Try use less cars and use more bikes

	Nixy	Invent cars that don't pollute gas
	Nixy	go with a public transport
	Nixy	to fight the germ monsters
	Nixy	stop smoking
	Nixy	Car pool, cycle, walk
	Nixy	stop my dad driving as often as he does
	Nixy	You can help by not smoking
	Nixy	cycle or walk
	Nixy	More trees, Electric car, ride bikes or scooters, less factories, take bus not car, share cars with neighbours
	PM Brothers	I could get people to go in cars less and cycle more
	PM Brothers	I would make a poster
	PM Brothers	less cars and factories and more bikes
	PM Brothers	Less petrol. Electric car
	PM Brothers	Stop driving and start to cycle and walk more
	PM Brothers	Tell people to stop using their cars
	PM Brothers	Tell; parents to buy electric cars and taxi drives have the engine on and they are not driving then we have to tell them to turn it off
	PM Brothers	I will encourage people
	PM Brothers	Set up organisation to help the environment
	PM Brothers	I would tell everybody to walk or cycle to job/work
	PM Brothers	Plant more plants to give us more oxygen
	PM Brothers	You can cycle more and plant more that the plant can grow
	PM Brothers	Not stated
	PM Brothers	Stop driving cars
	PM Brothers	Less driving
	PM Brothers	I would ride my bike to school

	<b>Cannot recall</b>	<b>By electric car</b>
	<b>Cannot recall</b>	<b>I would like let people to not smoke or throw away rubbish it will pollute air</b>
	<b>Cannot recall</b>	<b>we can use electric cars</b>
	<b>Cannot recall</b>	<b>WE could come to school by scooting or cycling</b>
	<b>Cannot recall</b>	<b>Walk more</b>
	<b>Cannot recall</b>	<b>Cycle</b>
	<b>Cannot recall</b>	<b>Not to use cars and use public transport</b>