



City Challenge Report Card			
The City Challenge Theme		3 – Urban Regeneration to Connect People in a Healthy Environment	
School/Summer School		Kingswood Community College	Teacher(s) / Disciplines Science
The planning phase	Problem (The What-question)	We decided to investigate traffic-related pollution levels around our school.	
	Relevance (The Why question)	Urban areas are often heavily trafficked and vehicles (cars, buses etc.) emit harmful pollutants such as particulate matter and nitrogen dioxide. We wanted to learn more about air pollution because it has a negative impact on health and the environment particularly in urban areas.	
	Expectation / Hypothesis	We expected that there would be some traffic-related pollution in our area because we are close to two major roads.	
	Methods (The How-question ¹)	<p>Students installed monitoring tubes in 3 locations to measure nitrogen dioxide for a period of 1 month in October.</p> <p>The tubes passively measure NO₂ in the air</p> <p>Students carried out a traffic count car survey to quantify how many vehicles are passing near the school.</p>	
	Participants ² (The Who-question)	24 Students 15-16 years old, 1 Teacher	
The implement	Activity 1 (e.g. literature, book review)	Learn about air pollution using online resources	

¹ Please provide the keywords regarding both, the teaching approach and the research approach

² E.g. the science team members

<p>ation phase³</p>	<p>Activity 2 (e.g. gather data / information)</p>	<p>Draw a map of the school to help choose 3 locations for the tubes. We installed our tubes, one near the road, one near the car park and one in our roof top garden</p> 																		
	<p>Activity 3</p>	<p>We conducted a traffic count outside the school to find out how many vehicles are passing and observed the sky to understand aerosols and weather conditions.</p>																		
	<p>Activity 4</p>	<p>We analyzed our collected data and the results returned from the laboratory. We found that the levels of NO₂ were between 10 and 20 ug/m³ which is approximately 'low to medium'.</p>																		
	<p>...</p>																			
	<p>City Challenge solution</p>	<p>We created posters to educate our school community about the problems of air pollution and encouraged students to use active travel instead of driving.</p>																		
<p>The document ation and reporting phase</p>	<p>Group or class (e.g. reports, posters etc)</p>	<p>We shared the results of our study with our class using posters.</p> <p style="text-align: center;">Nitrogen Dioxide Scale</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>µg/m³</th> <th>Colour Code</th> <th>NO₂ Level Description</th> </tr> </thead> <tbody> <tr> <td>40+</td> <td style="background-color: red;"></td> <td>High</td> </tr> <tr> <td>30-40</td> <td style="background-color: orange;"></td> <td>Medium to High</td> </tr> <tr> <td>20-30</td> <td style="background-color: yellow;"></td> <td>Medium</td> </tr> <tr> <td>10-20</td> <td style="background-color: green;"></td> <td>Low to Medium</td> </tr> <tr> <td>0-10</td> <td style="background-color: blue;"></td> <td>Low</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 100px;"> ← EU Annual (mean) Limit for good health ← WHO Annual (mean) Limit for good health </p>	µg/m ³	Colour Code	NO ₂ Level Description	40+		High	30-40		Medium to High	20-30		Medium	10-20		Low to Medium	0-10		Low
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³ Please provide support if possible through pictures, sketches, charts, student reflection or such

	<p>School (e.g. school web page, school newspaper)</p>	
	<p>Public (e.g. meeting, news media)</p>	<p>We presented our results at a GLOBE Ireland event</p>

Room for additional explanations (some feedback on main problems found and related solutions and on project inclusion in teaching. Other comments are welcome.)
