

Big Pedal 2021

Air quality experiment



Conduct an experiment to test the air quality of two different areas around your school or local area. Get active by walking, cycling, scooting or wheeling between the two locations.

[Watch the video](#) to see the experiment that Bike It Pat did comparing a clean air route with a pollution corridor.

Instructions

Some outdoor metal surfaces can go a very long time with only air touching them. Yet, if we rub a white piece of paper on these surfaces, the piece of paper will get dirty. The metal surface was made dirty by the air.

Choose two areas around your home or school where you want to compare the air quality. A good example would be the school car park versus the school playground.

Within each of these areas select between three and five metal surfaces.

Rub one printed copy of the rubbing sheet against each metal surface that you have chosen. Examples are lamp posts, the bicycle shed, fence poles and gutters.

Be consistent with the rubbing. Use the same pressure and duration for all sites so that you can make a fair comparison. About 30 seconds of gentle rubbing should be enough.

Use the scoring scale to allocate a score for each block on the rubbing sheet. Put the score in the bottom right corner of each block. You can also make your own scoring scale.

Fill in the scores on the results table and then calculate total scores and averages (mean) for each site.

Complete the bar graphs below, with examples on the last page.

Remember to follow local coronavirus guidelines and to wash your hands thoroughly when you get back.



What you'll need:

Printed pages of the rubbing sheet (below).

Pens, pencils, rulers and colours for the bar graphs.

[Watch today's video](#)



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Scoring scale and results tables



Area one (eg school car park):

	Site 1 (eg lamppost)	Site 2 (eg fence post)	Site 3	Site 4	Site 5
Block 1					
Block 2					
Block 3					
Block 4					
Block 5					
Block 6					
Block 7					
Block 8					
Total					
Average					

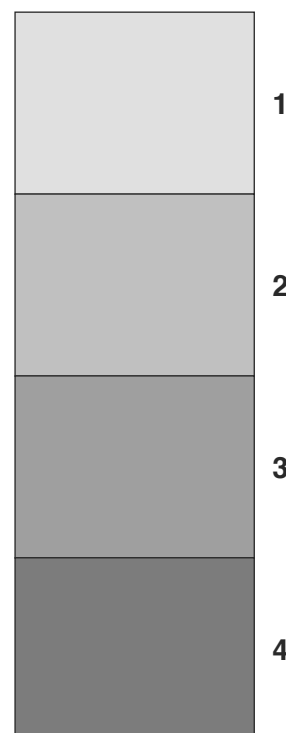
Area two (eg playground):

	Site 1 (eg lamppost)	Site 2 (eg bike shed)	Site 3	Site 4	Site 5
Block 1					
Block 2					
Block 3					
Block 4					
Block 5					
Block 6					
Block 7					
Block 8					
Total					
Average					

Scoring scale

Compare your rubbings on your clean air rubbing sheet to the colours below.

Higher scores mean the paper is dirtier, meaning that there is more air pollution at that site.



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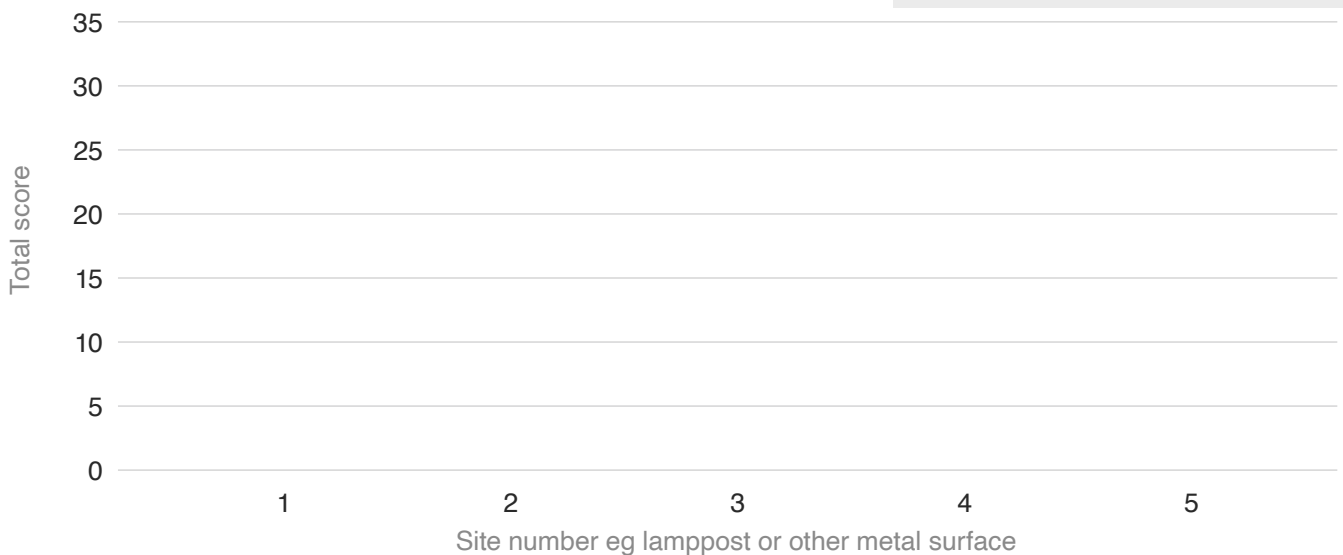
Results bar charts



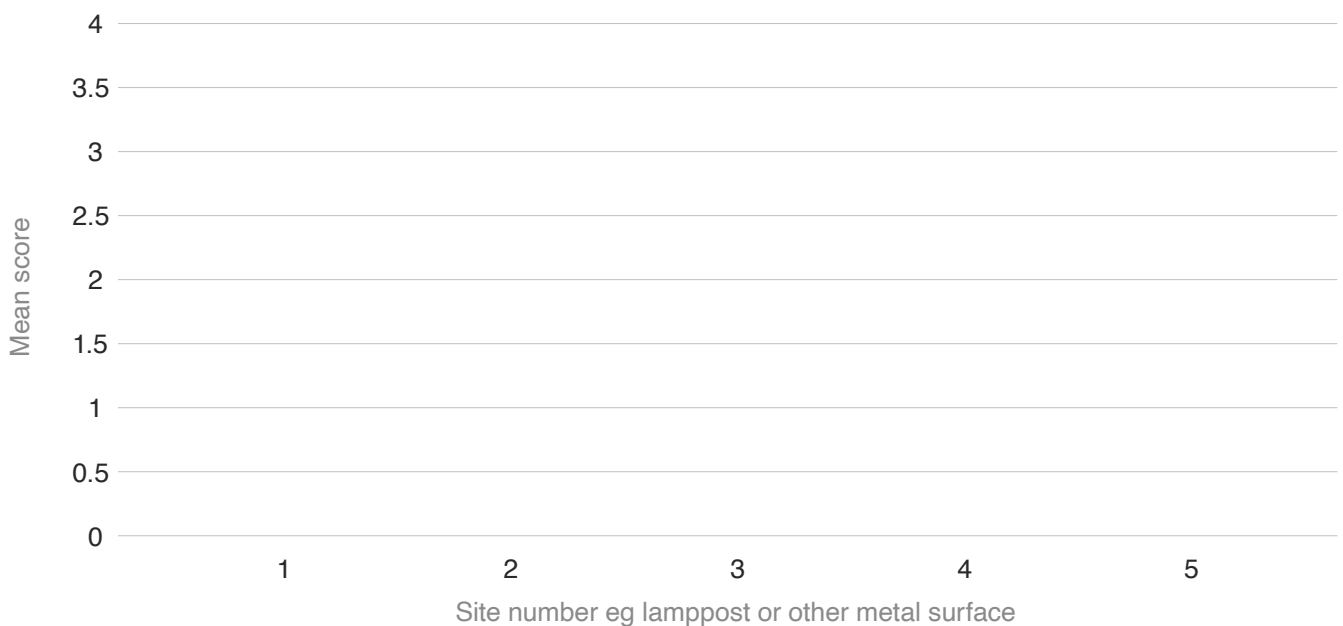
Total score of each site

Key

- Area one (eg school car park)
- Area two (eg playground)



Average score of each site



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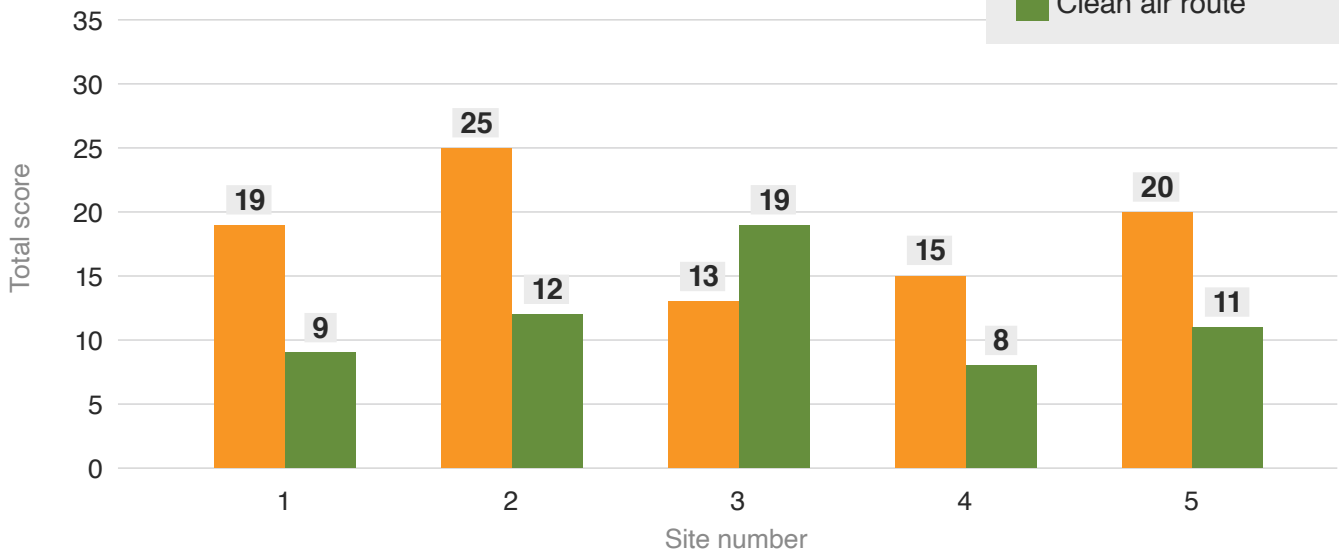
Example bar charts from the video



Total score of each site

Key

- Air pollution corridor
- Clean air route



Average score of each site

