

Magnificent Moss – Using moss and particulates to measure pollution

How polluted is the air in your community? There are different ways to find out including use air pollution monitors, but these can be quite expensive. If you want a cheap way to monitor air pollution and collect data over time, then you could use tape as well as moss to help you!

Our methodology is based on research linked to moss as well as this great sheet produced by opal:

<https://schools.leicester.gov.uk/media/5336/investigating-air-pollution-with-sticky-tape-peels-opal.pdf>

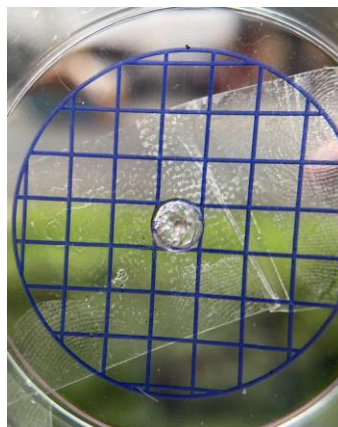
Step 1: select the areas you would like to sample. We looked at 2m from a busy road and compared our data to our orchard which is more than 50m away from a road.

Step 2: Cut a 10cm piece of tape and place it on a wall/tree close to the road. Leave the tape on the surface for 10 seconds then remove the tape. If there is moss close by collect a small 2x2cm sample using tweezers and add this to either a bug viewer or small sandwich bag.

Step 3: Add your take to the bottom of a bug viewer, or if you have access to a microscope follow the method from opal. Select 5 small squares at random and carefully count any black particulates you find. Record this in a results table.

Step 4: Repeat this for the second site and compare your results.

Step 5: If you were able to collect a moss sample place this under a microscope for closer viewing at 50x magnification – note any discoloration or try to capture a photo if possible. Yellowing of the leaves can indicate pollution from compounds containing sulfur or nitrogen.



Sample position	Quadrat number	Particulate number
Average particulate number		

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Average particulate number		