

**Introduction**

We can't see them, but do inhale them every day: particulate matter, one of the most harmful forms of air pollution. But what are they? Particulates are small particles floating in the air, smaller than the 10 micrometer (PM10). They consist of matter differing in size, origin and chemical composition. Most of them come from exhaust fumes by traffic, cattle farms and (industrial) combustion processes.

In large cities, like Shanghai or New Delhi, dirty air is one of the most common health risks. That is why so many people in these large cities are wearing face masks nowadays, to filter the particulates. Especially people suffering from a heart or lung disease are vulnerable and are affected by this form of air pollution.

How much particulate matter does the air contain? Discover how healthy your neighbourhood is and what you can do to improve conditions. Follow the instructions on the back side to make your own low-tech measuring device.

**Research your environment**

If we know where particulate levels of the air are high, we can make healthier choices. Find out what the most healthy walking or cycling route to work or school is. Put a meter in your garden or balcony to discover where you can enjoy the cleanest outdoor air.

**Tip:** Measure the air at a busy street or crossing and a park to see the differences. Or inside, near your stove to investigate the air quality in the kitchen.

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# DO-IT-TOGETHER SCIENCE BUS



collecting folk remedies  
do it together & find out how things work

## Catch particulate matter in the air

### This is what you need to catch particulate matter:

- Empty milk carton
- Vaseline
- Double-sided tape
- Scissors
- Ruler

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waag society



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# Catch particulate matter in the air

Make your low-tech particulate matter meter with the help of an empty milk carton and discover how healthy your environment really is.

1



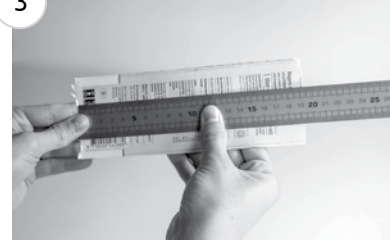
Cut off the top and bottom of the milk carton.

2



Cut the sides at the folds, creating long strokes.

3



Measure each stroke and exactly cut it in half.

4



Paste a piece of double-sided tape at the printed side of the carton sections.

5



Apply a layer of vaseline to the whole surface of the white sides.

6



Now gently peel off the protective layer of the double-sided tape.

7



Put your particulate meter at a place you want to measure the amount of particulate matter and wait a few days.

8



## Reading the results:

Look how many dark dots appear on your meter. The more dots appear, the more particulate matter is floating in the air. Compare the different spots you have measured.



We are curious about the results of your particulates meter! Share them with us by using #sciencebus on Instagram or Twitter. Want to find out more? At [togethersciencebus.eu](http://togethersciencebus.eu) you can find more instructions to measure things yourself.