

THERMAL COMFORT WEATHER STATION SURVEY

Thermal comfort is the term used for how warm or cool we feel. Temperatures in urban areas may feel warmer than in rural areas due to presence of more buildings, roads and use of materials like concrete and tarmac. This is known as the Urban Heat Island effect. Tiny Forests can play a role in cooling urban areas, and we investigate this in a variety of ways.

EQUIPMENT PER GROUP:

- 1 x Weather station
- 1 x Tablet/phone/printed field sheet

WHEN TO SURVEY

Any time during the day. If possible, the weather data will be taken at two different times of day (i.e. one in the morning, one in the afternoon)

Best in spring and summer

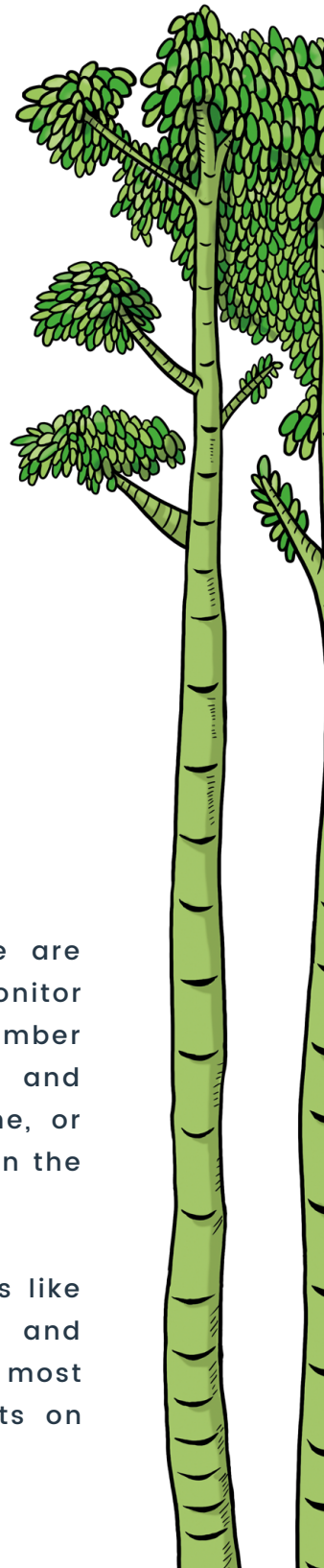


INSTRUCTIONS

STEP 1:

Locate a weather station. These are tripods set up with a small monitor mounted to the top. Check the number labelling the weather station and record it on your tablet or phone, or find the correct column to fill in on the field sheet.

Now consider what the weather is like right now in terms of rain, sun and cloud and wind. Select the most appropriate options from the lists on your tablet, phone or field sheet.



STEP 2:

The following questions refer to you personally and how you find the temperature. There is no right or wrong answer, just select the option from the lists that feel most applicable to you right now. If you are working in a pair or group, answer these questions individually.

STEP 3:

Now we will take some measurements of the actual conditions. Check that the units for each measurement shown on the weather station matches those written here. Find a member of staff to help you if it does not match.

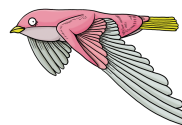
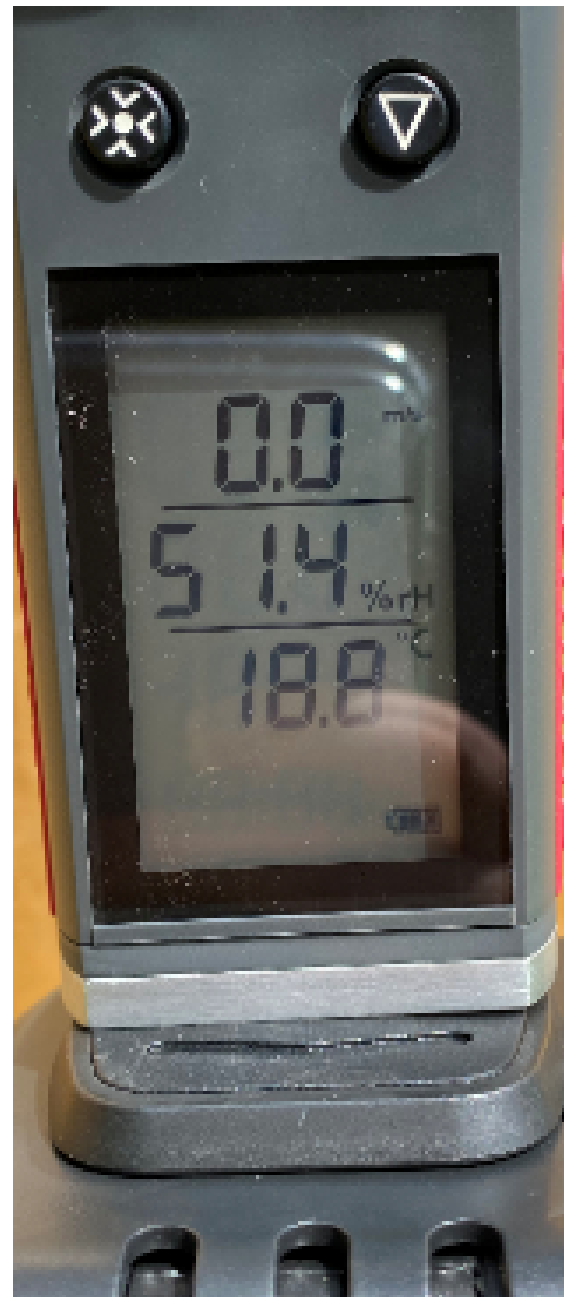
Firstly, record the temperature in degrees Celsius ($^{\circ}\text{C}$). It is the third value from top to bottom on the weather station's display – take a look at the image to see where to read.

Next record the humidity in percent (%). It is the second value from top to bottom on the weather station's display.

Finally record the wind speed in metres per second (m/s). It is the top value on the weather station's display.

Record these measurements on your tablet, phone or field sheet.

You can now repeat steps 1-3 for the remaining weather stations.



DID YOU KNOW?

The Urban Heat Island effect was first described in the 1800's, and has been investigated increasingly as our climate is changing. As more people will move into urban areas, and with climate change, the Urban Heat Island effect will become a bigger challenge for communities and nature.



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