



# Maintaining effective ventilation and air quality in education settings

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Core Cities Director  
Acivico Group

T: 0121 2743465



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# What we'll cover

This workshop is to provide advice and guidance for ventilating buildings and ways to maintain good air quality.

- Natural & mechanical ventilation
- Co2 monitors and air quality assessments
- Cleaning & hygiene
- Handy hints



## Know the facts

Ensure you know the guidance.

There are many links available through the Government website

[www.gov.uk/coronavirus](https://www.gov.uk/coronavirus)

[Guidance for schools: coronavirus \(COVID-19\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/coronavirus-covid-19)



# HSE Ventilation



# Air Conditioning & Ventilation

## Mechanical & Natural Ventilation (CIBSE/REHVA)

- Use natural ventilation as much as possible – Open windows & doors wherever safe to do so. Consider security issues. Do not prop open fire doors
- **Air Handling Units (AHU)** should be set to 100% fresh air and should be left running before and after the building is used
- Check & clean all areas for ventilation – Toilet fans, door grills
- Keep toilet ventilation 24/7 in operation



# Air Conditioning & Ventilation

## Mechanical Air Conditioning & Comfort Cooling

- Where possible and safe, open windows and doors to increase natural ventilation.
- Where Air Con units work as a single unit and do not recirculate air from other rooms, these can be used but should be serviced and filters cleaned/ replaced as per service scope.
- Where Air Con is on a single system throughout a building and recirculates, it is advised that Air Con units are disabled.
- If there is no obvious ventilation strategy in a room/zone, then building users should be discouraged from using these spaces. If the rooms need to be used, Co2 monitoring is advised.





# Winter Tips

- During the colder months, the natural forces that drive air through these openings (wind and indoor/outdoor temperature difference) are greater and therefore the openings do not need to be opened as wide.
- Opening windows can result in draughts that can cause occupant discomfort. Where possible discomfort should be mitigated by ensuring building users are not located directly in a draught for long periods, for example moving desks/room furniture.
- Relaxing dress codes so that warmer fleeces can be worn is advisable
- Opening of just high level vents, rather than low and high level vents, can enable more mixing of the outdoor air with indoor air before reaching the occupied zone – this can help enable more fresh air to be introduced to the space
- If natural ventilation openings are the only mechanism for delivering outdoor air into a space it is important not to completely close them when the spaces are occupied as this can result in very low ventilation rates
- During cooler weather, it may be necessary to have the room heating on longer (or higher) than normal. This will incur energy penalties; however, these are deemed acceptable as the increased ventilation will help remove any airborne virus particles from the building



## How to effectively use ventilation

- Open windows and ventilations' grids as much as possible during school hours. In rooms with a mechanical air supply this is usually not necessary, but extra ventilation is positive and does not disrupt the ventilation system.
- Ensure regular airing with windows during breaks (also in mechanically ventilated buildings).
- Make sure that ventilation inlets or outlets are not obstructed or blocked by curtains or furniture.
- Keep an eye on any installed CO2 monitors (ask pupils to assist). Be aware that more aerosols (PPM's) are released during activities such as singing or sport.

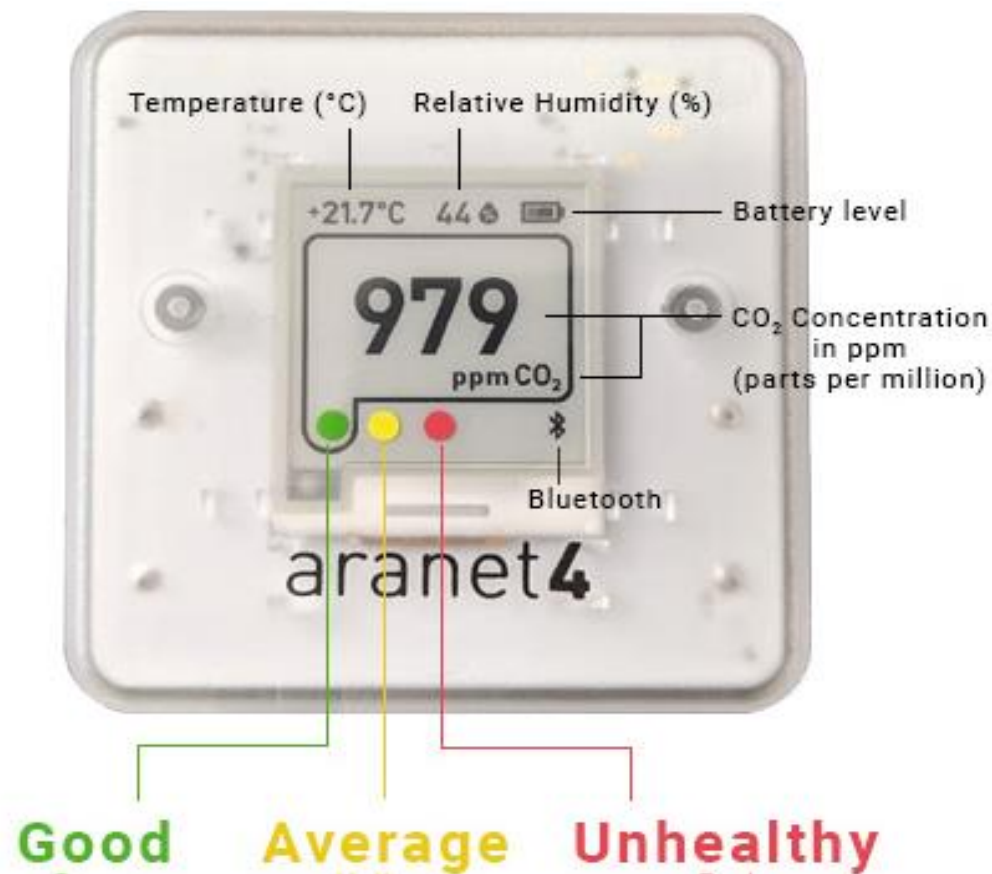


## How to effectively use ventilation continued

- Ensure vents and outlets are cleaned regularly to maintain optimal efficiency
- Ensure mechanical ventilation is maintained as per manufactures guidance and statutory compliance
- Do not prop open fire doors – These will have a “fire door” sign on.
- Do not prop open external doors if it causes security breaches



# Co2 Sensors – Hand Held Monitor



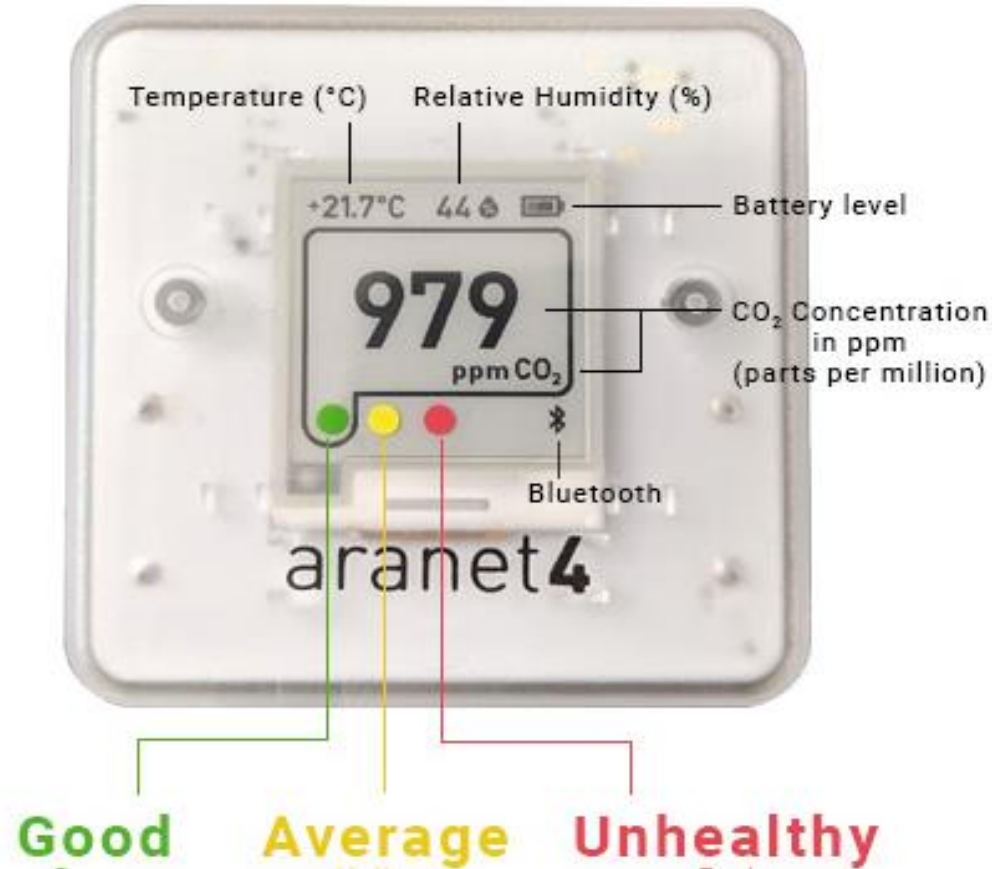
CO2 monitors will be provided this term to state-funded education settings, including early years, schools and further education providers, backed by £25 million in government funding.

The first deliveries to state-funded special schools will start this week. Special schools, alternative provision and residential schools have been prioritised to receive their monitors first, given their higher-than-average numbers of vulnerable pupils.

The delivery schedule for these schools, across weeks commencing Monday 6, 13 and 20 September



# Co2 Sensors – Hand Held Monitor



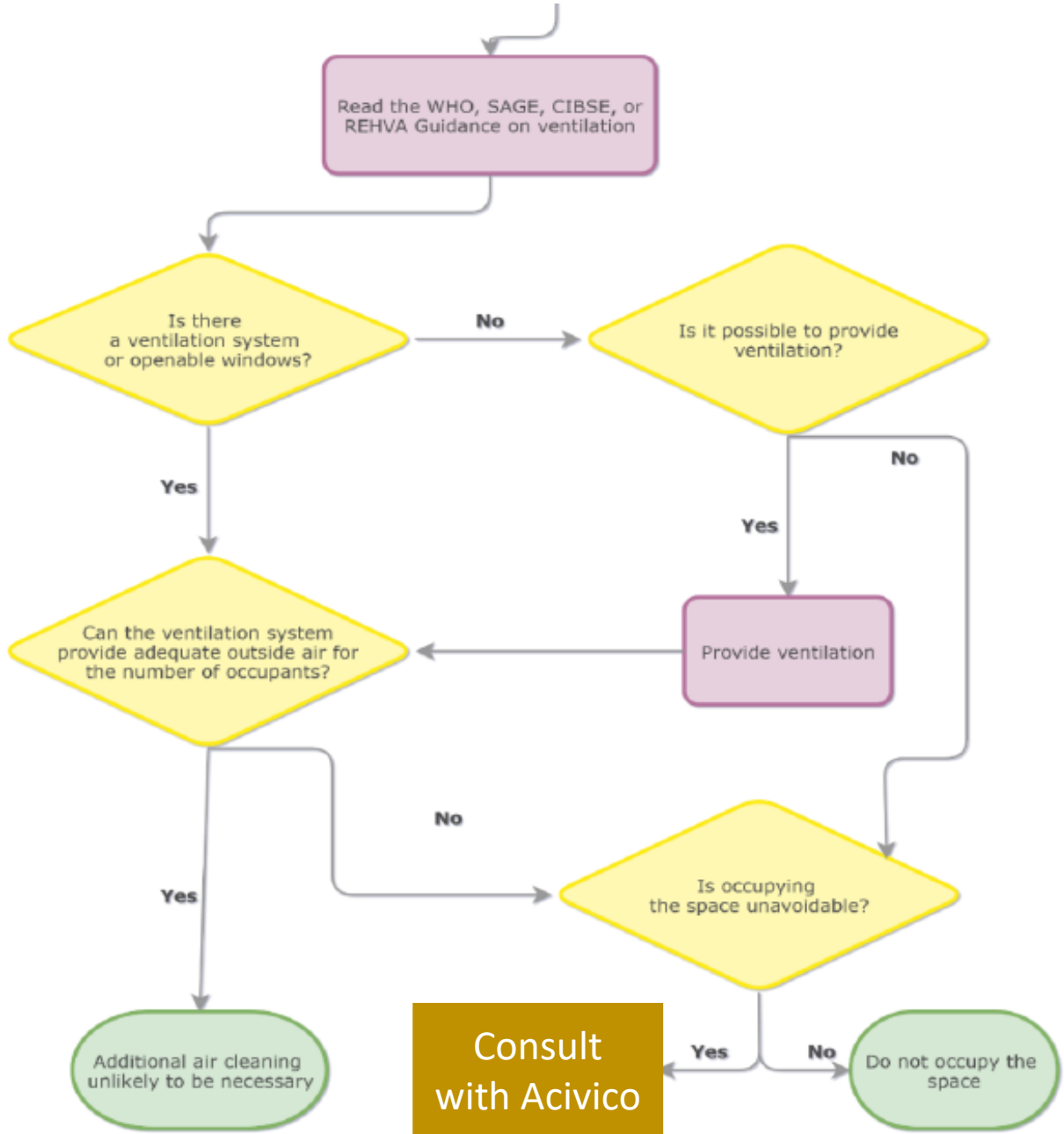
## CO<sup>2</sup> LEVELS

- 420 ppm - Fresh outdoor air
- 420-800 - Optimal air quality indoors
- Good normal level (below 1000 ppm)
- Average level (1000 to 1400 ppm) brain cognitive functions decrease by 15%
- Unhealthy high level (above 1400 ppm) brain cognitive functions decrease by 50%





# Ventilation



# COVID-19 Control Measures

Things to consider



**We must keep on  
protecting each other.**



**HANDS**



**FACE**



**SPACE**

**STAY ALERT ▶ CONTROL THE VIRUS ▶ SAVE LIVES**



## Lets Face Facts

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- COVID-19 is not over – know the statistics for your local area and apply the correct control measures
- Its going to be chilly! Dress appropriately
- Your fuel bills will be high again
- Prepare for all eventualities
- You will need to consult with parents, pupils, staff and governors etc.



# Things to think about

## **Cleaning**

Maintain additional cleaning regimes – Especially touchpoints and high traffic areas.

Supply anti bacterial wipes for staff to use on shared items or areas such as printers or kitchens.

## **Anti-Covid Cleans**

Acivico offer Anti-COVID cleans through our specialist contractor. Including fogging buildings/ rooms.

## **Continue to use hand sanitiser**

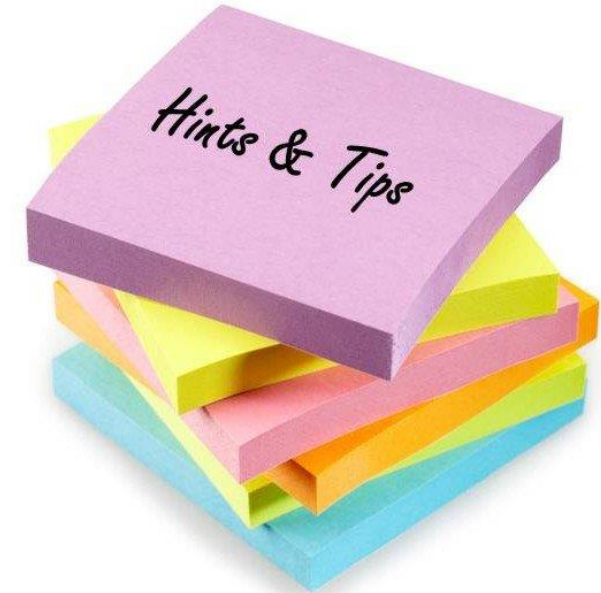
Continue to offer hand sanitiser and promote the use of it.

Regularly check soap and sanitiser dispensers to ensure they don't run out.



# Handy hints

- Ensure your Outbreak Management Plan is up to date and reviewed when there are changes (staff or guidance) or any outbreaks
- Keep control measures simple but effective
- Be consistent
- Hygiene & hand washing should be promoted
- Read & understand the guidelines
- Communicate and consult with your staff & pupils and parents/ carers
- Know your emergency plan – Monitor confirmed cases and changes in guidance





# Questions & Answers

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Email: [enquiries@acivicogroup.co.uk](mailto:enquiries@acivicogroup.co.uk)  
Tel: 0121 2743464