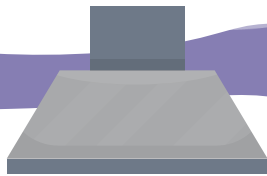


# HOME AIR SCAVENGER HUNT

Indoor environments are complicated and contain a lot of things that can improve the indoor air or make it worse. Most people don't notice all of these things, and maybe don't know how to use them effectively, so we have created a scavenger hunt of things for you to find around your home. Remember, every home is different so you won't find all of these things in your home!

Tick the items you find and use the notes page to record any answers you have to the investigative questions, or to record what you observe when you conduct the experiment.



## Cooker hood

Each cooker hood will have their own care instructions. It is important the filters are cleaned, or replaced, as per manufacturer's instructions to ensure the ventilation works effectively so that pollutants are sucked up and vented outside the home.

### Investigative questions

- How high is the cooker hood above the stove?
- How does it turn on?
- Is it very loud?
- Touch the grease filter (the bit with holes in it on the bottom), does it feel clean?  
*(you must wash your hands straight after touching the filter, even if it does feel clean!)*
- Can you find any information from the company about how this should be cleaned?

In the UK Cooker hoods should be 65–75 cm above the stove, unless the manufacturer states otherwise. If the cooker hood is higher, more pollutants from cooking will mix with room air instead of being sucked outside through the cooker hood.



## Extractor fan (look in the kitchen or bathroom)

Extractor fans are important for ventilating the kitchen/bathroom, helping to remove damp or polluted air arising from domestic activities such as cooking and bathing.

### Investigative questions

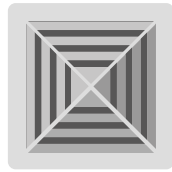
- Can you turn it on?
- When it's on, with an adult's help if you can't reach, put your hand in front of it, what do you feel?
- Where's the switch? Does it switch on with the light or is it a separate switch?

### Experiments

Take 1 square of toilet paper and put it flat over the fan with the fan on, what happens? What if you turn the fan off?

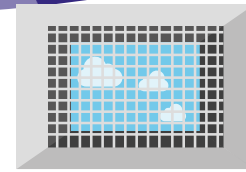


# HOME AIR SCAVENGER HUNT



## Mechanical air vents

Some buildings use fans and ducts to move air around a building.

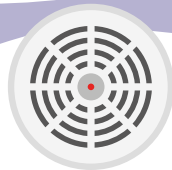


## Air vents

You might find a vent like this in your kitchen, especially in older buildings.

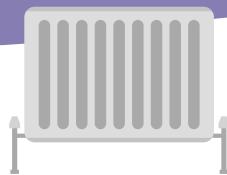
### Investigative questions

- Can you see the sky through it like in the illustration?
- What do you think that means?



## Smoke alarm

Smoke alarms do not protect against dirty indoor air, but some sources **of indoor air pollution** that cause smoke might set them off.



## Radiators or other heaters

Keeping the building warm in winter helps to prevent damp and mould.

### Investigative questions

- Ask an adult, how is your home heated?



## Trickle vent

These are normally at the top of the window frame and let a small amount of air in and out without opening the window. Trickle vents are mainly found in new buildings.

### Investigative questions

- How does it open or close?

### Experiments

With it open, put your hand in front, what do you feel?

Air vents in the wall help to provide background ventilation and outside air when any windows are closed and extractor fans are switched off. Sometimes you can see the sky or light from outside through the vent, this means the vent is open and air can get through.

If you can't see the outside, it might mean:

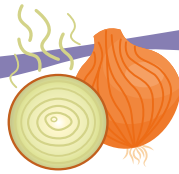
- the vent is blocked
- the vent is closed (look to see if there is an option to slide it open)
- there is a cover on the outside (try to find it on the outside of the building to see if this is the reason)

Sometimes these vents can be spotted outside the building, especially older buildings, at the level beneath a floor. The ventilation they provide reduces build up of condensation in the colder months.

Many people don't like the drafts and wish to save energy. One way to do this is to leave the vents in place and seal any gaps in the floor joists, so the draft remains under the floor.

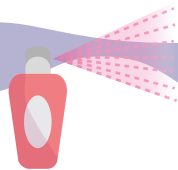


# HOME AIR SCAVENGER HUNT



## Something with a strong smell

Be careful not to smell any household products. Always ask your guardian if unsure.



## Spray bottle such as hairspray or deodorant

### Investigative questions

- Make a tally chart of how many you find.
- **Choose one** and check the label on the back. Does it say use in well ventilated spaces?

YES / NO



## Candles, incense or a fireplace

### Investigative questions

- Make a tally chart of how many you find.

Candles Incense Fireplace



## Cooking smells

### Experiment

When someone is cooking walk around your home and see how far the smell spreads. Are there any smells that spread further than others?



## Condensation on a mirror or window in the bathroom

### Experiment

Try timing how long it takes to clear after someone has a bath or shower? Is there anything you think would help it to clear faster?

**Condensation on a mirror will disappear quicker if the room is well ventilated.**  
Try opening a window or turning on a dehumidifier if you have one.



## Nail varnish or remover

### Investigative questions

- Check the label on the back. Does it say use in well ventilated spaces?

YES / NO

- Are there any ingredients listed on the label? Can you find any of these pollutants in the ingredients list?

Toluene Styrene Formaldehyde

You might want to look back at worksheet 4 *What is in dirty air?* which lists other sources of pollutants in homes.

## Gaps under doors

### Experiments

Using a ruler, measure how big the gap is.

The gap should be 1 cm to let air move between rooms. Sometimes carpets or flooring make this gap smaller.

# HOME AIR SCAVENGER HUNT



## Windows

Not all buildings use windows that open, some use mechanical ventilation instead.

### Investigative questions

- How many windows do you have that can open?



**Use this box to make notes and record any data from your experiments.**

## Dust in the air in a sun beam

Indoor air pollutants can build up in indoor dust. When you move about or do things at home, such as cleaning, that dust can be disturbed. Once disturbed it can become suspended in the air. Sometimes you can see the suspended dust when a beam of light shines through and the rest of the room is in comparative darkness.

Household dust has been found to contain all sorts of pollutants from:

- shampoos and plastics
- paints and cleaning products
- some building materials, furniture, fabrics, carpets and electronics, especially those with flame retardants
- fragrances
- some fabrics and non-stick coatings
- house dust mites and other pests, pet allergens, mould and fungi
- pesticides

For more information on sources of household pollutants, take a look at Annex 8 p68 of RCPCH RCP (2020) *The inside story: Health effects of indoor air quality on children and young people*.

**About this worksheet:** In the RCPCH RCP 2020 publication *The Inside Story: Health effects of indoor air quality on children and young people*, on page 15, #TeamCleanAir&Us said: "Children and young people want clear, factual and accessible information about what the potential harm is from poor indoor air quality and what we (children, young people, parents and carers) can do to avoid or reduce indoor air pollutants". Many of the Indoor Air Quality Working Party members were contributing authors to this publication and have produced these worksheets as a first step towards addressing this request from children and young people.

