

Summer

The building is naturally vented and therefore supplied by fresh air from outside, however if you are:

Feeling too cold:

Close windows (electric) and/or ventilation panels

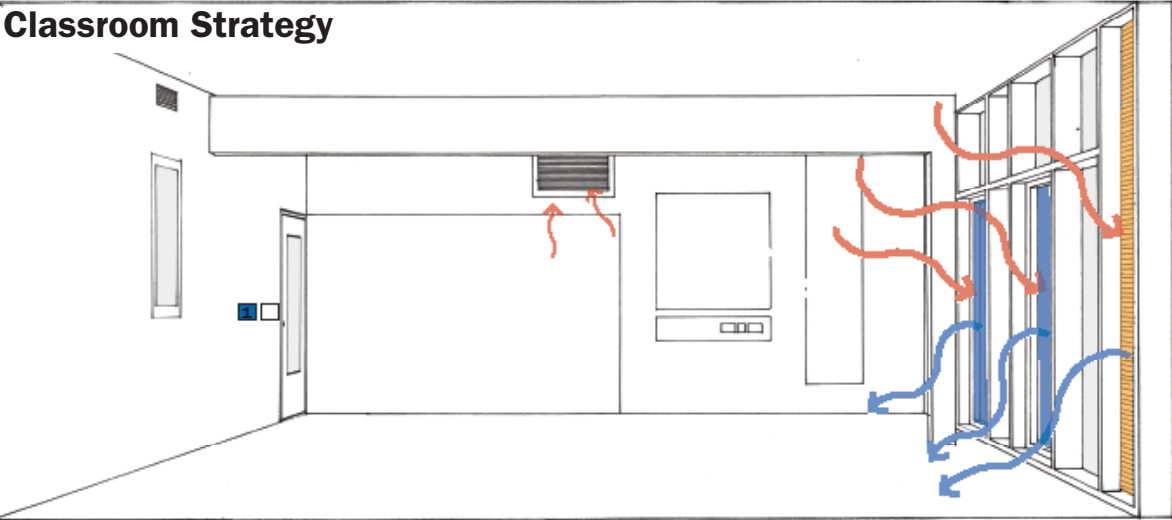
Feeling too hot:

Open windows (electric) and/or ventilation panels

The building needs to cool down at night therefore the secure ventilation panels should be left open at night, allowing the cool night air to reduce the internal building temperature in preparation for the following next day.

All occupants using the building will have different perceptions of temperatures but if everybody is feeling too hot or too cold then please contact your caretaker who will be able to organise overall adjustments to the building services.

Classroom Strategy

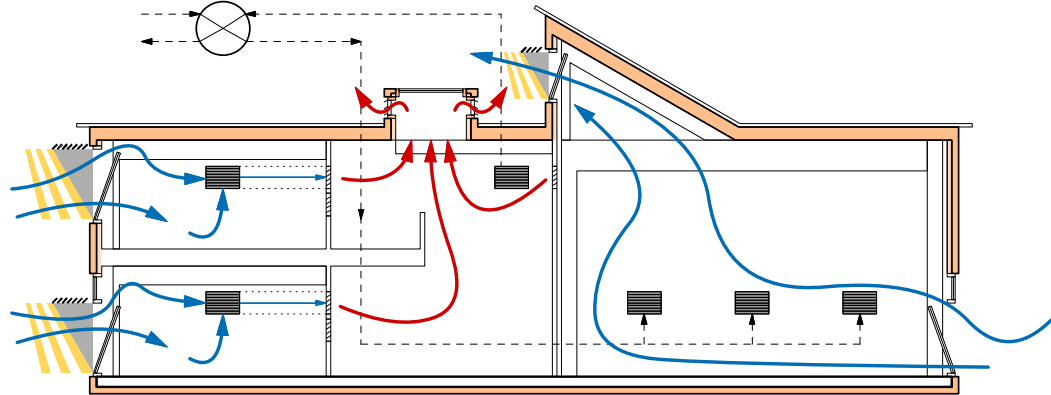


**Day** Electrically operated windows hot air out cool air in

**Night** Ventilation panel (opened at any time. opened automatically at night)

**Night 1** Push button operated window panel control

Passivhaus Strategy



Heating:

The highly insulated building fabric keeps the building cooler during the summer. Solar heat gain is controlled by the brise soleil.

Ventilation:

Summer cross ventilation is controlled by opening windows and ventilation panels. Air from outside enters the classroom and passes through them into the hub space. Air leaves the building through high level vents in the hub space.

Heat exchanger Air transfer duct Locally controlled radiator Ducted air Cooling air flow

Winter

The classrooms are supplied with a constant flow of pre-heated fresh air, which will help keep the building at a fairly constant temperature, however if you are:

Feeling too Cold:

Turn the radiator valve (adjacent to radiator) to a higher figure

Feeling too hot:

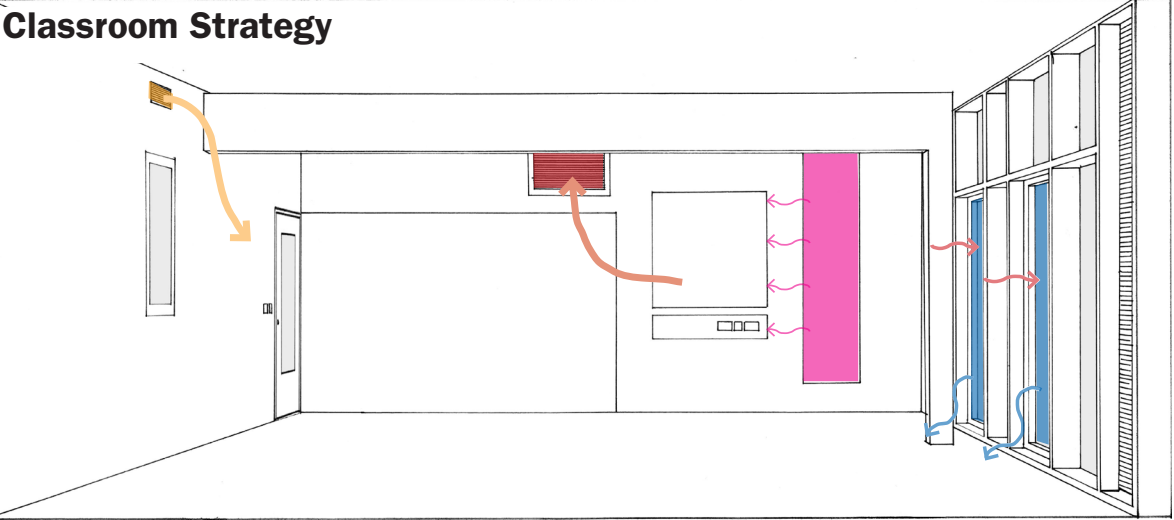
Turn the radiator valve (adjacent to the radiator) to a lower figure

Still feeling too hot:

Windows (electric) or ventilation panels can be opened (must be closed at end of day), remember heat/energy will be lost

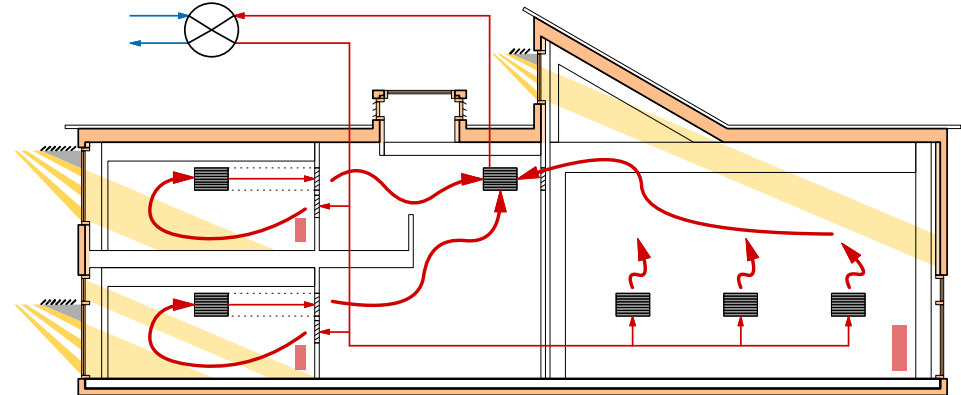
All occupants using the building will have different perceptions of temperatures but if everybody is feeling too hot or too cold then please contact your caretaker who will be able to organise overall adjustments to the building services.

Classroom Strategy



**Fresh supply air** **Radiator** **Exhaust air** **Window can be opened (when open heat will be lost)**

Passivhaus Strategy



Heating:

Heat is contained within the building by the highly insulated airtight walls, and triple glazed windows. The building is heated by solar gains and radiators that can be individually controlled.

Ventilation:

A central heat recovery system supplies fresh air to classrooms via supply grilles, air is then extracted through grilles from classrooms to hub spaces. Windows and ventilation panels can be opened to supply air direct from outside, however heat will be lost.

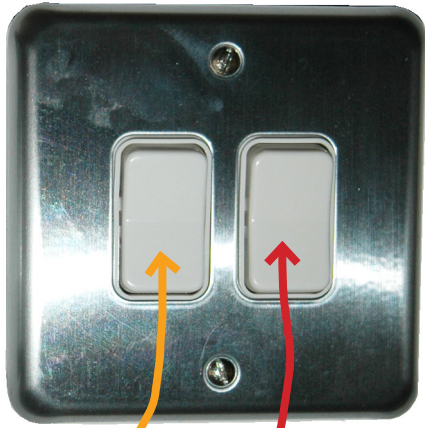
Warming air flow Solar gains excluded Beneficial solar gains Sun angle



## Lighting & Ventilation Control

### Light Switches:

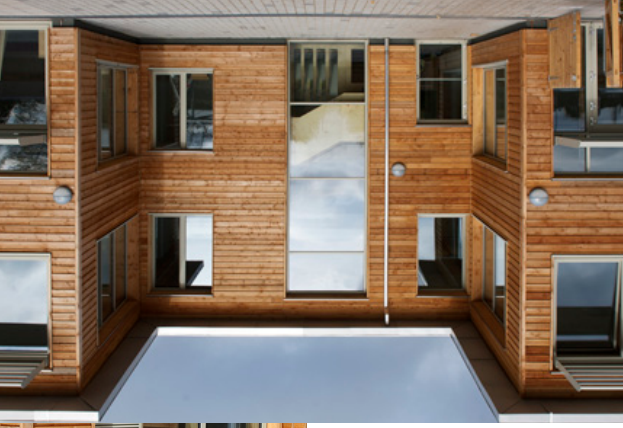
- Each classroom has two light switches, one close to the entrance of the room, and the other nearer the whiteboard.
- The lights closest to the whiteboard can be controlled independently from the other lights. To dim the lights press the switch until the desired level is reached. To switch the lights on: hold the switch down until the lighting reaches the required level, then release. Repeat to increase the lighting level.
- On leaving the room switch off the lights. If they are left on for 5 minutes with no movement in the room an absence detector will switch the lights automatically.
- If the daylight inside the classroom is of a sufficient level a sensor will automatically dim or switch the lights off.
- The blinds over external windows/doors can also be used to control the lighting levels within the classrooms.



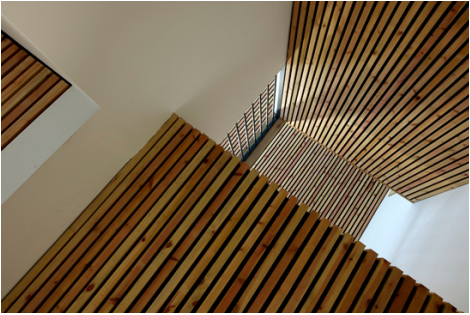
Lights ON

Lights OFF

Example:  
Lights close to Whiteboard  
Main room lights



Oak Meadow Primary School



Passivhaus classroom user guide



### Ventilation:

- Ventilation panels/doors are controlled manually by turning the handle and opening to the desired position.
- Ventilation panels can be left open at night.
- Windows are electrically opened and closed using the switches located close to the classroom door.
- The switches for the windows are designed for single click pushes and must not be held continuously.
- One push to the top part of the switch, window opens to 1/3 position.
- Two pushes, to 2/3 position,
- Three pushes, to fully open position,
- To close repeat as above, but pushing the bottom part of the switch.
- Remember windows and ventilation panels can be opened at any time during the school day, only vents can remain open during the night.
- The windows will automatically close after 60 minutes or at the end of the day.
- If it is very cold outside, the opening of the high level ventilation panels will reduce automatically.



Window open / close switch

Temperature sensor connected to the Building Management System