Supplementary Materials

Teacher Survey

1. School Name

2. Classroom location

Classroom location as defined in NO2/CO2 sampling campaign.

- ◯ #1 - Nearer Road
- ◯ #2 - Further from road

3. How would you rate the following comfort factors in your classroom over the past week?

Rate on a scale from 1 to 5

	1	2	3	4	5
Temperature (1: Too cold, 5: Too warm)	◯	◯	◯	◯	◯
Humidity (1: Too dry, 5: Too humid)	◯	◯	◯	◯	◯
Air Quality (1: Stuffy, 5: Fresh)	◯	◯	◯	◯	◯
Odour (1: None, 5: Strong)	◯	◯	◯	◯	◯
Air Movement (1: No draft, 5: Too much draft)	◯	◯	◯	◯	◯
External Noise (1: None, 5: Too much noise)	◯	◯	◯	◯	◯

4. How often were your classroom windows open in the last week?

- ◯ Always (100% of the occupied period)
- ◯ Often (approximately 75% of the occupied period)
- ◯ Sometimes (approximately 50% of the occupied period)
- ◯ Rarely (approximately 25% of the occupied period)
- ◯ Never

5. Do you find your classroom draughty when the windows are closed?

- ◯ Yes
- ◯ No

6. Have you ever noticed either of the following on the walls, windows or ceiling of your classroom?

	Never	Rarely	Sometimes	Often	Always
Condensation	◯	◯	◯	◯	◯
Mould	◯	◯	◯	◯	◯

7. Who is responsible for window opening or closing actions in your classroom?

(Select all that apply)

- ☐ Teacher
- ☐ Special needs assistant
- ☐ Pupils

Table S1. Daily range of CO_2 values for each classroom (occupied period).

Classroom	Date	Mean	Median	Max	Min
A1	18/10/2024	1207	1235	1643	613
	21/10/2024	1148	1152	1694	602
	23/10/2024	1088	1068	1704	599
	24/10/2024	852	803	1397	505
A2	18/10/2024	1110	1217	1723	477
	21/10/2024	1770	1866	2587	569
	22/10/2024	1365	1458	2106	467
	23/10/2024	1270	1287	1787	600
	24/10/2024	1554	1558	2409	524
B1	18/10/2024	2735	2807	3850	1082
	21/10/2024	1328	984	2183	769
	22/10/2024	3603	3812	5414	1014
	23/10/2024	2221	2108	4165	715
	24/10/2024	2460	2479	3506	898
B2	18/10/2024	1892	1985	3029	637
	21/10/2024	1952	1957	3057	758
	22/10/2024	2352	2307	3684	842
	23/10/2024	1870	1912	2817	886
	24/10/2024	1418	1333	2699	640
C1	18/10/2024	811	765	1144	496
	21/10/2024	865	876	1401	570
	22/10/2024	917	913	1333	562
	23/10/2024	664	647	902	472
	24/10/2024	731	660	1338	464
C2	18/10/2024	1333	1328	2267	747
	21/10/2024	1679	1573	2521	652
	22/10/2024	2025	2088	2712	841
	23/10/2024	1429	1413	2152	710
	24/10/2024	1225	1220	1857	572
D1	18/10/2024	1857	1904	2200	1426
	21/10/2024	1504	1489	2631	914
	22/10/2024	2131	2095	2874	942
	23/10/2024	1634	1690	2545	663
	24/10/2024	1058	992	1861	648
D2	18/10/2024	1136	1112	1725	587
	21/10/2024	1864	1826	2652	912
	22/10/2024	2472	2493	3276	920
	23/10/2024	2262	2334	3069	944
	24/10/2024	1371	1391	2392	585

Table S2. Daily CO_2 build-up times from the start of class, along with CO_2 accumulation gradients, intercepts, and R^2 values for each classroom.

		minutes to breach		dC/dt rate of build up		
Classroom	**Date**	**1000ppm**	**1400ppm**	**Gradient**	**Intercept**	**R2**
A1	18/10/2024	40	75	0.18	599	0.99
	21/10/2024	30	60	0.23	609	1.00
	23/10/2024	35	75	0.18	621	0.99
	24/10/2024	40	-	0.26	507	0.94
A2	18/10/2024	15	235	0.17	825	0.78
	21/10/2024	40	55	0.55	570	1.00
	22/10/2024	20	30	0.49	570	0.99
	23/10/2024	25	60	0.22	626	0.93
	24/10/2024	20	30	0.42	614	0.99
B1	18/10/2024	5	15	0.42	1226	0.99
	21/10/2024	170	180	0.02	760	0.86
	22/10/2024	5	15	0.40	1048	1.00
	23/10/2024	5	5	0.41	1460	1.00
	24/10/2024	5	20	0.39	1006	0.99
B2	18/10/2024	5	25	0.21	1131	0.95
	21/10/2024	15	30	0.30	859	0.98
	22/10/2024	15	35	0.25	905	0.98
	23/10/2024	10	25	0.29	968	0.99
	24/10/2024	10	35	0.24	950	0.97
C1	18/10/2024	185	-	0.17	-157	0.42
	21/10/2024	160	180	0.11	595	0.59
	22/10/2024	55	-	0.30	591	1.00
	23/10/2024	-	-	0.25	590	1.00
	24/10/2024	260	-	0.07	598	0.95
C2	21/10/2024	20	40	0.26	734	0.98
	22/10/2024	15	30	0.28	851	0.99
	23/10/2024	25	45	0.25	722	0.97
	24/10/2024	20	35	0.36	637	0.96
	25/10/2024	20	35	0.38	641	0.99
D1	21/10/2024	10	25	0.41	837	1.00
	22/10/2024	10	25	0.36	874	1.00
	23/10/2024	5	20	0.38	1064	0.94
	24/10/2024	45	205	0.09	826	0.67
	25/10/2024	5	20	0.34	990	0.95
D2	21/10/2024	10	20	0.36	984	0.97
	22/10/2024	10	25	0.36	909	0.98
	23/10/2024	10	25	0.41	832	1.00
	24/10/2024	10	20	0.35	891	0.99
	25/10/2024	5	45	0.41	887	0.83

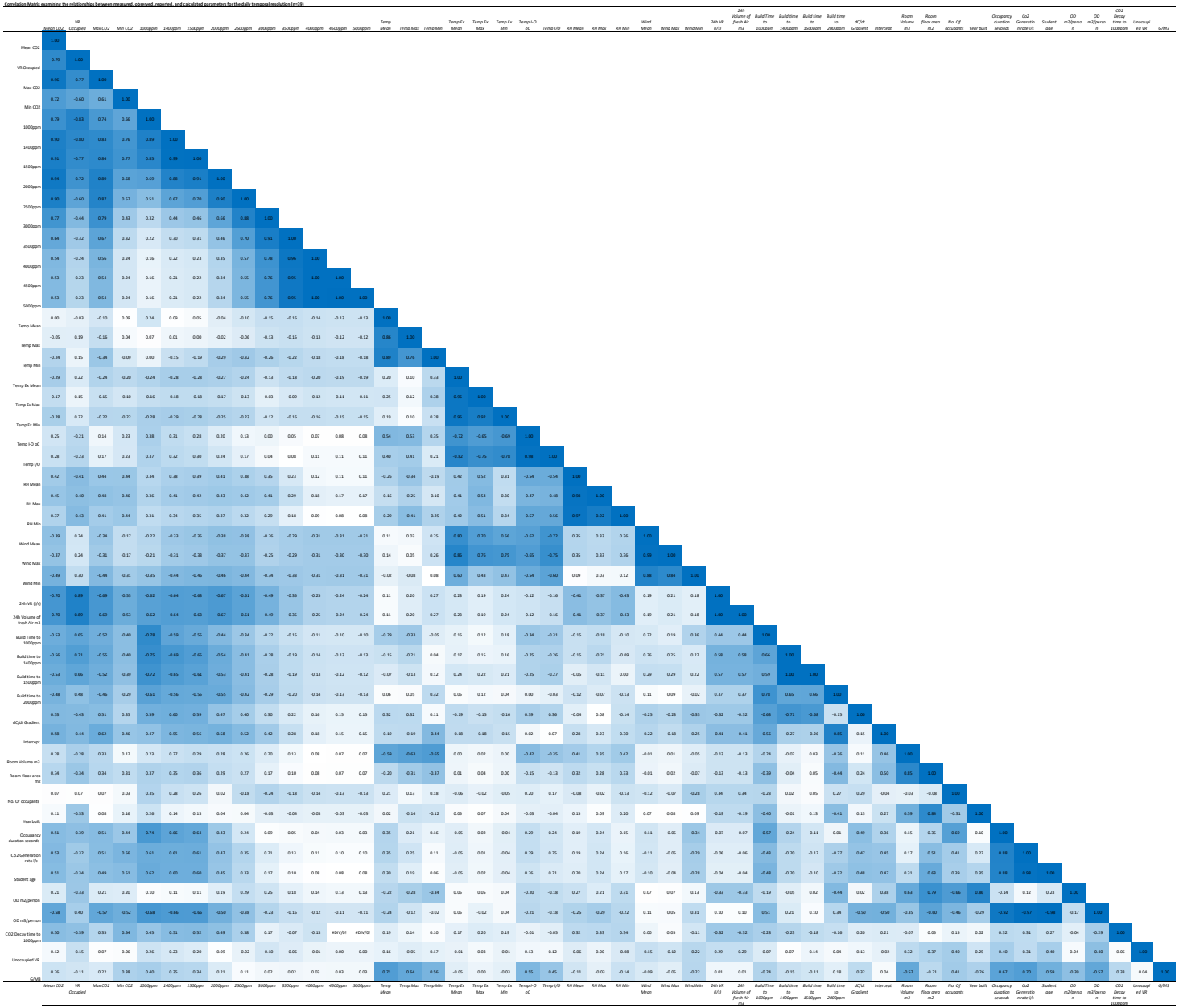
Table S3. $C0_2$ Decay time in minutes from end of class to <1000ppm.

Classroom	Date	Time (Minutes)
A1	18/10/2024	210
	21/10/2024	10
	23/10/2024	5
	24/10/2024	N/A
A2	18/10/2024	76
	21/10/2024	16
	22/10/2024	31
	23/10/2024	16
	24/10/2024	131
B1	18/10/2024	1672
	21/10/2024	72
	22/10/2024	1347
	23/10/2024	N/A
	24/10/2024	457
B2	18/10/2024	37
	21/10/2024	17
	22/10/2024	937
	23/10/2024	332
	24/10/2024	877
C1	18/10/2024	5
	21/10/2024	N/A
	22/10/2024	5
	23/10/2024	N/A
	24/10/2024	20
C2	18/10/2024	693
	21/10/2024	383
	22/10/2024	38
	23/10/2024	18
	24/10/2024	298
D1	18/10/2024	365
	21/10/2024	10
	22/10/2024	480
	23/10/2024	15
	24/10/2024	60
D2	18/10/2024	N/A
	21/10/2024	105
	22/10/2024	592
	23/10/2024	150
	24/10/2024	135

Table S4. Mean daily ventilation rates (l/s) for occupied (VR_{occ}) and unoccupied (VR_{un}) periods.

Classroom	Date	VR_{occ}	VR_{un}
A1	18/10/2024	35.5	4.0
	21/10/2024	38.9	4.6
	23/10/2024	42.6	3.1
	24/10/2024	65.6	3.3
A2	18/10/2024	83.3	10.0
	21/10/2024	44.1	6.4
	22/10/2024	61.7	9.2
	23/10/2024	69.2	10.4
	24/10/2024	51.3	12.8
B1	18/10/2024	20.2	3.3
	21/10/2024	51.8	5.9
	22/10/2024	15.1	5.4
	23/10/2024	27.9	2.6
	24/10/2024	24.4	2.4
B2	18/10/2024	31.7	3.9
	21/10/2024	32.6	0.8
	22/10/2024	24.5	6.2
	23/10/2024	33.6	6.7
	24/10/2024	45.4	6.6
C1	18/10/2024	89.5	5.2
	21/10/2024	84.8	3.1
	22/10/2024	74.7	4.5
	23/10/2024	153.4	-0.5
	24/10/2024	111.6	5.8
C2	18/10/2024	55.3	4.1
	21/10/2024	44.2	4.0
	22/10/2024	34.4	6.1
	23/10/2024	55.7	5.7
	24/10/2024	66.1	1.0
D1	18/10/2024	42.4	7.0
	21/10/2024	59.6	4.5
	22/10/2024	36.4	6.5
	23/10/2024	53.3	3.6
	24/10/2024	97.1	4.7
D2	18/10/2024	83.9	4.5
	21/10/2024	42.6	5.4
	22/10/2024	29.3	8.2
	23/10/2024	33.1	11.0
	24/10/2024	62.3	8.0

Correlation Matrix examinine the relationships between measured, observed, reported, and calculated parameters for the dialls temporal resolution (n=39)



Correlation Matrix examining the relationships between measured, observed, reported, and calculated parameters for the weekly temporal resolution (n=8)

