Adaptive Comfort Scoring Report – Riverbank Community High School

Date: Generated from January and June 2025 data

Prepared by: BrainFrame Environmental Intelligence System

# 1. Purpose

This report introduces the Adaptive Comfort Scoring System developed for Riverbank Community High School. It enhances traditional comfort scoring by factoring in seasonal changes, room orientation, and external conditions. The goal is to provide more meaningful, context-aware environmental assessments.

# 2. Methodology

Each classroom was scored based on the number of alerts triggered during Winter (January) and Spring (June) 2025. Scores were adjusted using real-world context including external daylight hours, temperature, and the room’s orientation (which affects solar gain and natural lighting). Scores range from 0 to 100, with higher values indicating better comfort conditions.

# 3. Adaptive Scores by Season

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| --- | --- | --- |
| Classroom | Winter Score | Spring Score |
| Classroom\_1 | 16.42 | 68.44 |
| Classroom\_10 | 15.99 | 68.24 |
| Classroom\_2 | 46.6 | 87.2 |
| Classroom\_3 | 38.57 | 78.03 |
| Classroom\_4 | 37.33 | 77.7 |
| Classroom\_5 | 45.33 | 87.57 |
| Classroom\_6 | 14.79 | 66.47 |
| Classroom\_7 | 38.8 | 76.8 |
| Classroom\_8 | 44.27 | 87.77 |
| Classroom\_9 | 39.4 | 77.03 |

# 4. Key Insights

- Classrooms 1 and 10 show very poor comfort scores in winter but improve significantly in spring.

- Classroom 2 is the most consistently high-performing room year-round.

- Scores provide actionable insight for room scheduling and facilities upgrades.

# 5. Next Steps

- Use adaptive scores to guide seasonal room assignment.

- Display scores via dashboard widgets for staff visibility.

- Incorporate real-time weather data for even more accurate live scores.