Deconstructing CPS Space Utilization Formula

Formula currently used by CPS

Total # of Classrooms x 76.9 = Total # of Homerooms
Total # of Classrooms – Total # of Homerooms = Total # of Ancillary Classrooms
Total # of Homerooms x 30 students per homeroom = Ideal Enrollment of Students at School

30 students per homeroom was the ideal or "midpoint" of the range
30 students per homeroom + 20% MORE was the "top" of the efficiency range
30 students per homeroom – 20% was the "bottom" of the efficiency range

After the top of the range was reached? CPS considered a school officially overcrowded.

After enrollment went under the bottom of the range? CPS considered the school officially underutilized.

The problem with this formula was that it set a NEW maximum for the average number of students in the classroom BEFORE CPS considered that classroom (and school) to be overcrowded.

How?

Because 30 + (20% of 30) = 36

(This can also be written as 30 x 120% = 36)

So CPS did not officially consider a school overcrowded in 2011-2012 until it had an average of 36 students in each homeroom.

Total # of Homerooms x Class Size Limit per grade per homeroom = A

Total # of Homerooms x (28 + 28 + 28 + 28 +31 + 31 + 31 + 31 + 31)/9 per homeroom = A

**Total # of Homerooms x ~30 students per homeroom = A**

If the Homeroom Size Limit = maximum class size limits, then A = Maximum Enrollment of students at school.

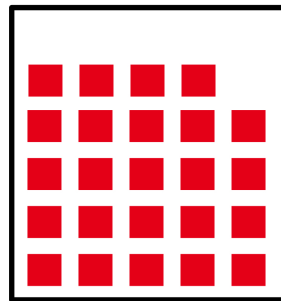**Therefore, Total # of Homerooms X ~30 students per homeroom = Maximum Enrollment of students at school**

Deconstructing CPS Space Utilization Formula: Effect on Homerooms
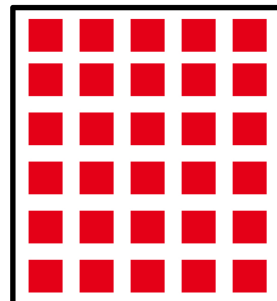
Formula currently used by CPS depicted visually
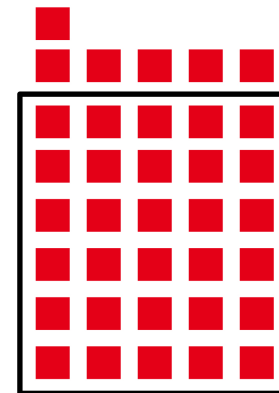
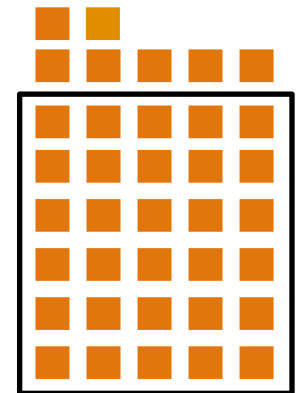**CPS SY2012-13 Space Utilization Formula Assumptions**
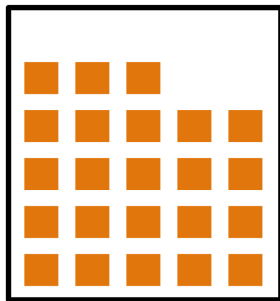
| Under utilized | Efficient | Avg of 30 students per allotted homeroom is ideal and efficient | Efficient | Overcrowded |

Deconstructing CPS Space Utilization Formula: Effect on School

Efficient School Utilization based upon 28-31 as the MIDPOINT class size

Because CPS did not officially consider a school overcrowded in 2011-2012 until it had an average of 36 students in each homeroom, it creates problems for principals in neighborhood schools who then get blamed for crowded classrooms. The CPS Utilization Formula forces a principal has to choose…

Deconstructing CPS Space Utilization Formula: Effect on School
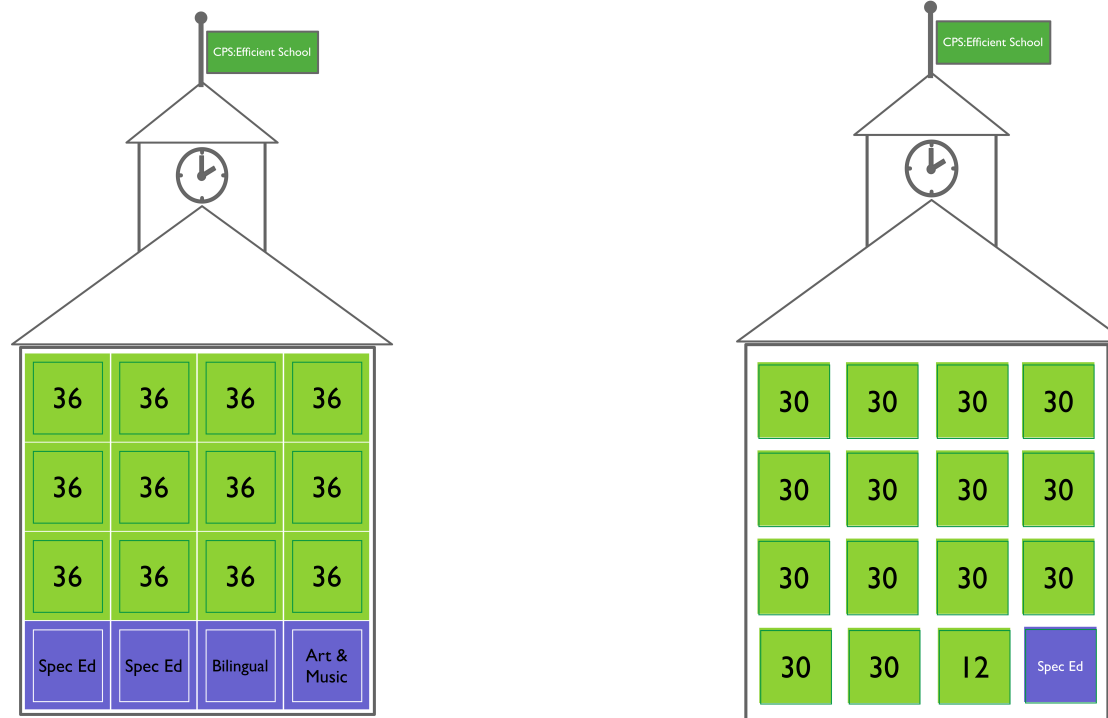
…between allowing homerooms to exceed the maximum limits that CPS Guidelines lay out OR give up ancillary rooms for use as additional homerooms, those taking away rooms from ancillary classes (special education, art, music, tech labs, science labs) so that they are forced to "get creative" to find meeting spaces.

RYH has been made aware that neighborhood schools often have to use the following spaces as "makeshift" ancillary classrooms because of overcrowding: Hallways, closets, projection rooms in auditoriums, repurposed bathrooms, etc. Both of these options are considered "efficient" according to CPS, not overcrowded.

Deconstructing CPS Space Utilization Formula: Effect on District Reports

The 2011-2012 Space Utilization formula skews the maximum number of kids in homerooms UP by 20%.

This means that there has to be an average of 20% more students in an elementary homeroom before it is considered overcrowded.

This also means elementary homerooms are determined as under-utilized when they contain less than 24 students.

Thus, overcrowded schools are UNDER-reported and under-utilized schools are OVER-reported.

Recalibrating the CPS Space Utilization Formula: Apples to Apples

Formula aligned with CPS maximum size limits

Begin at the maximum and calculate backwards to the midpoint (and to the low point where under-utilization is determined.)

Top of Range = Average of 30 students per classroom.

Take the current formula and place 30 as the "top" of the range.

A x 120% = 30

Solve for A.

30/120% = 25

25 is the corrected ideal or midpoint IF 30 is the actual Top of the Enrollment Range before a school is considered to be overcrowded.

Therefore, the corrected formula would be:

(Total # of Classrooms x 76.9) x 25 students per homeroom = Ideal Enrollment

Ideal Enrollment x 120% = Top of the Range
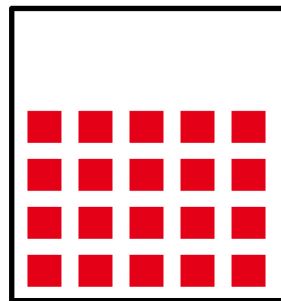
Ideal Enrollment x 80% = Bottom of the Range

Recalibrating CPS Space Utilization Formula: Effect on Homerooms

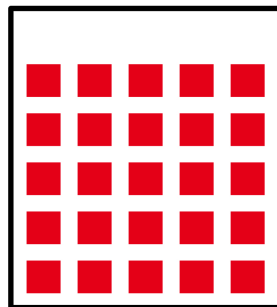## Formula corrected for actual homeroom limit maximum

Apples to Apples Adjusted SY2012-13
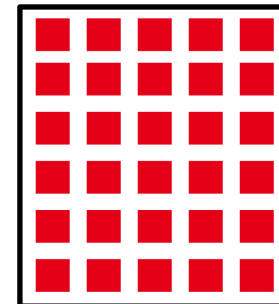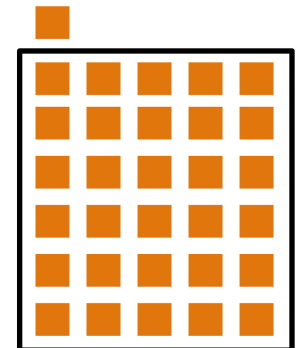**Space Utilization Formula Assumptions**
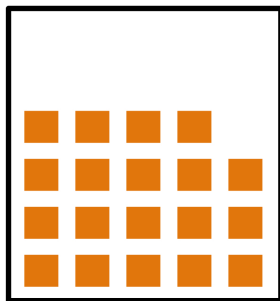
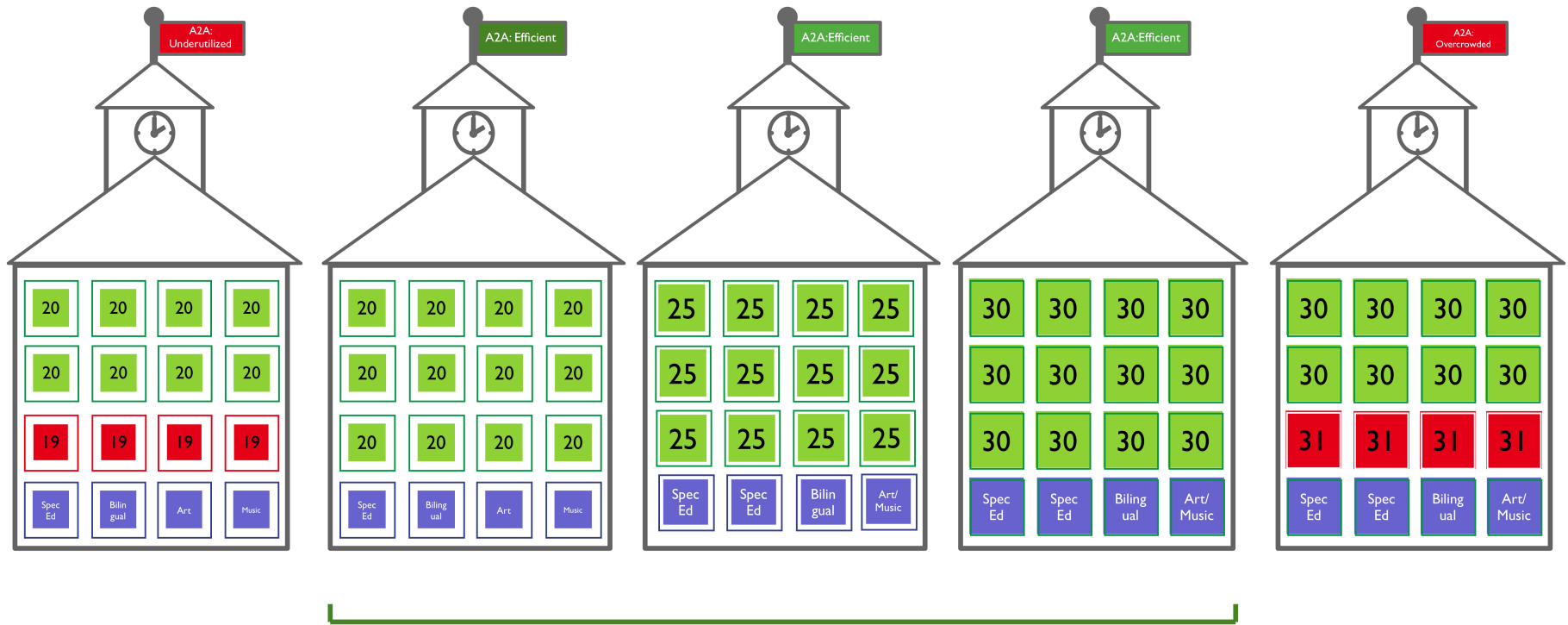Under utilized   Efficient   Efficient   Avg of 30 students per allotted homeroom is maximum   Overcrowded

Recalibrating CPS Space Utilization Formula: Effect on School

Formula corrected for actual homeroom limit maximum

Efficient School Utilization based upon 28-31 as the maximum class size

Recalibrating CPS Space Utilization Formula: Effect on District Reports

Formula corrected for actual homeroom limit maximum

Homeroom limits as agreed upon and communicated to teachers, parents and Chicagoans are honored.

The number of overcrowded schools within Chicago District changes:

~~80~~ **198 overcrowded schools**

The number of efficient schools within Chicago District changes:

~~267~~ **195 efficient schools**

The number of under-utilized schools within Chicago District changes:

~~328~~ **253 under-utilized schools**

Additional Concerns/Questions

The current space utilization approach used by Chicago Public Schools also does not take the following critical variables into consideration when determining utilization:

- **Actual homeroom and ancillary room size (and whether each room provides a minimum amount of square feet per student)**

- **Accounting for the different space needs of different ages and grades of students.**

It is unclear if or how Chicago Public Schools takes the following into consideration when determining total number of classrooms available for use in their current space utilization formula:

- **Self-contained special education rooms**

- **Rooms that are leased to other entities for use (such as community organizations, etc.)**

What course of action to take before considering a school truly "under-utilized"?

- Use the Apples to Apples Adjustment to the Space Utilization Formula in order to avoid discrepancies/misalignment with homeroom size limits in other CPS agreements.

- Audit each school that is potentially on the "closing list" for Self-Contained Special Education rooms and rooms unavailable for homerooms due to third-party agreements. Subtract these rooms from the "Total Classrooms" as recorded by CPS.

- Measure all classrooms to make sure that ALL homerooms are over the 600 sq feet minimum as required by CPS. (This falls short of national best practice of allowing 35-50 sq ft minimum per student. So also consider this.)

- Make sure that all homerooms have sufficient space related to the age/grades of students and use of room.

- Make sure that principals are not having to remove ancillary rooms/ancillary offerings in order to accommodate homerooms.