

DPS SchoolChoice: How it All Works

For the 2019-2020 school year

Purpose of this Presentation: To give families a more detailed understanding of how the choice system works, including:

- *Historical context*
- *Overview of the choice system*
- *Key inputs to the system*
- *Sample of how the matching works*

Historical Context

Prior to 2011-12, families had to complete different applications for different schools on different timelines. Some students were accepted into 10 schools, other students were not accepted anywhere.

In January 2012, unified SchoolChoice was implemented to simplify the enrollment process for families and ensure equitable access to all schools.

What is the “System”?

- Based on the 2012 Nobel Prize of Economics-winning principles of applied game theory by Dr. Al Roth
- Implemented first in New York City over 10 years ago.
- All public schools in Denver: district, charter, or magnet all participate in the same system. Denver is the only district in the country with all schools participating.
- **1** timeline and **1** application

Philosophy of the System

- Seeks to maximize the number of students getting their most preferred option, subject to space.
- Balances students preferences with a set of admissions priorities for schools, such as:
 - Neighborhood preference / boundary
 - Siblings
 - Other considerations (children of full-time school-site staff members, qualification status, socioeconomic diversity, etc.)

Types of Boundaries

Guarantees

Colorado statute requires that DPS guarantee students a seat at a given school (boundary) or set of schools (enrollment zone) for kinder through 12th grade.

Boundary

A geographic area where the students residing within it are guaranteed enrollment at a school.

Examples include: North HS, Edison ES

Enrollment Zone

Geographic area where the students residing within it are guaranteed a seat at one of several schools, but not at any one particular school within that zone.

Examples include Lake MS Zone, West MS Zone

Types of Schools in Choice

Boundary

A geographic area where the students residing within it are guaranteed enrollment at a school.

Examples include: North HS, Beach Court ES
There are roughly 100 boundary schools in DPS.

Enrollment Zone

A geographic area where the students residing within it are guaranteed a seat at one of several schools, but not guaranteed a seat at any one particular school within that zone.

Examples include West MS Zone, Stapleton ES Zone
There are 11 enrollment zone schools in DPS with over 60 schools.

Non-Boundary Schools

Schools that do not serve either a boundary or a zone. Some of these schools have qualification requirements, like Denver Schools of the Arts. There are roughly 70 non-boundary schools in DPS, of which roughly 20 primarily serve off-track students.

Rounds of Choice

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Round 1

- Transition grades
- Anyone wanting to change schools

Round 2

- Opens after Round 1 results are released
- Families who did not participate in Round 1
- Families who want to change their mind

Timeline of Round 1 Activities

Nov	Dec	Jan	Feb	Mar
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Families

Research schools

Apply
Jan 15 – Feb 15, 4:00
p.m.

Get results by
March 26

DPS

Boundaries / zones
finalized by Board

Schools decide #
of seats per grade

Data clean-
up

Run system

E-
Mail/text
results

Who participates in Choice?

- Majority of applications are for students who are transitioning from one school to another. Often this occurs going into kindergarten, 6th grade, and 9th grade.
- Some schools have different transition grades (for instance, Montessori programs transition after 6th grade)
- DPS has the highest participation rates in the United States.
- In every middle school enrollment zone, participation rates exceed 90% due to high outreach by schools and the Office of Choice & Enrollment.

Key Components of the System

School Capacity: # of seats

- # of students by grade
- Factors in the number of students already at the school in the preceding grade

School Priority Structure

- Boundary
- Enrollment Zone
- Non-boundary

Student Profile

- Age / grade
- Address
- Siblings
- Random lottery number between 1 and 999,999
- Other factors like language, FRL

What determines each component of the System?

School
Capacity:
of seats

- Determined by the school leader in December-January

School
Priority
Structure

- Determined by board policy and principal agreement

Student
Profile

- Determined by information in Infinite Campus and the Choice application

System Components

Capacity: # of seats

- # of students desired by grade
- Factors in the number of students already at the school in the preceding grade

Priority Structure

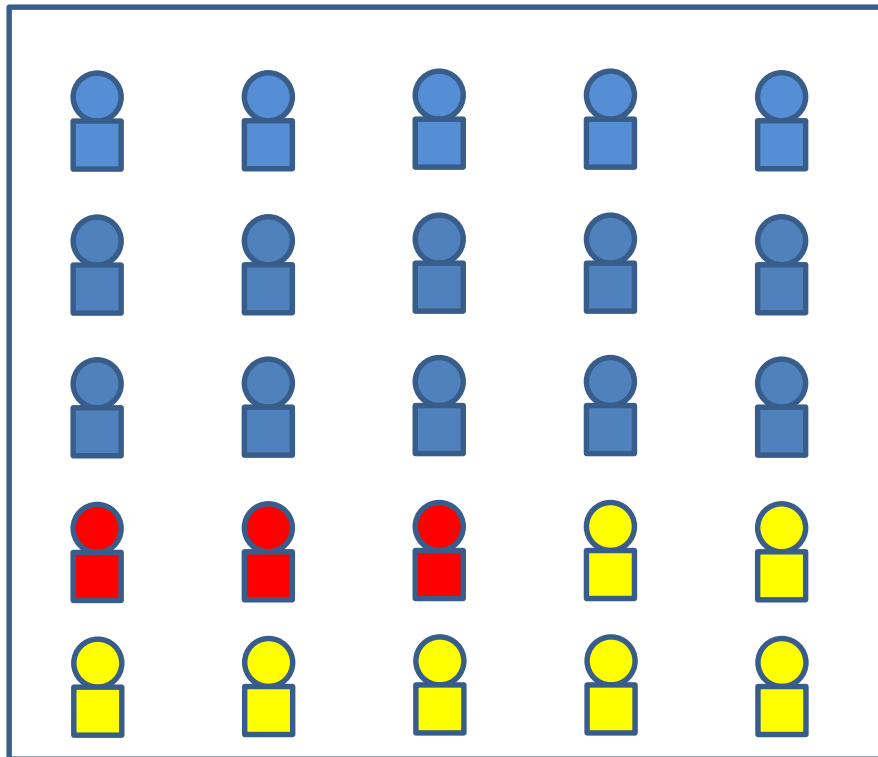
- Boundary
- Enrollment Zone
- Non-boundary

Student Profile

- Age
- Address
- Siblings
- Random lottery number between 1 and 999,999

How is capacity set? Entry Grades

Kindergarten classroom (or 6th or 9th grades)



- School leaders determine based on building and classroom space
- DPS Choice & Enrollment Services uses 3 years of historical data to help inform sizes



Students who reside in the boundary

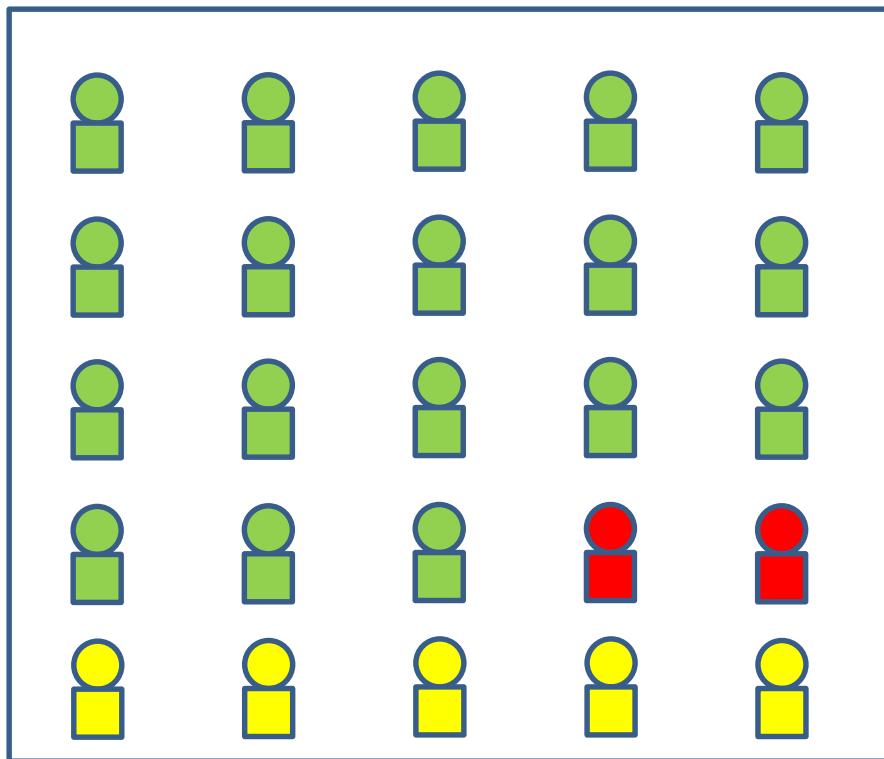


Students who move-in new to the boundary between Feb 16 and Oct 1






Seats entered into the choice system

How is capacity set? Re-enrolling Grades (most grades other than K, 6, 9)



- School leaders determine based on building and classroom space
- DPS Choice & Enrollment Services uses 3 years of historical data to help inform sizes

-  Students already attending the school who will reenroll
-  Students who move-in new to the boundary between Feb 15 and Oct 1
-  Choice seats. Note there are generally much fewer seats offered in returning grades

System Components

Capacity:
of seats

- # of students desired by grade
- Factors in the number of students already at the school in the preceding grade

Priority
Structure

- Boundary
- Enrollment Zone
- Non-boundary

Student
Profile

- Age
- Address
- Siblings
- Random lottery number between 1 and 999,999

How do you decide who gets in?

If there are more students applying to a school than there are seats at a school, the choice system has to **prioritize** students to determine who is assigned.

There are three types of school set-ups for choice, each of which has a standard set of system **priorities**.

1. Boundary schools
2. Shared Enrollment Zone schools
3. Non-boundary schools, including qualification schools

System Priorities: Boundary schools

While some schools have a variation, most boundary schools follow a standard set of priorities.

#1 (Guarantee)	Students residing in the boundary
#2	Students with a sibling currently attending the school
#3	Children of full-time staff members at that school
#4	Denver residents
#5	Non-Denver residents

System Priorities: Enrollment Zone schools

While some schools have a variation, most zone schools follow a standard set of priorities. Note that no students have a guaranteed seat at a particular zone school.

- | | |
|----|--|
| #1 | Children of full-time staff members at that school |
| #2 | Students with a sibling currently attending the school
(reside in zone) |
| #3 | Zone residents |
| #4 | Students with a sibling currently attending the school
(reside in Denver) |
| #4 | Denver residents |
| #5 | Non-Denver residents |

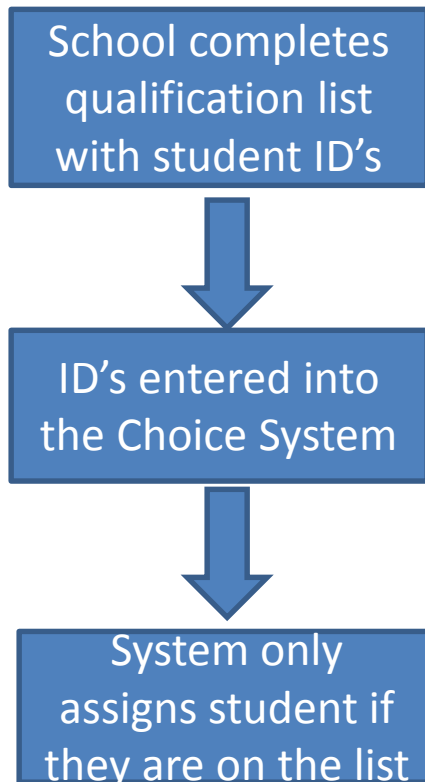
System Priorities: Non-boundary schools

While some schools have a variation, most choice schools follow a standard set of priorities. Note that no students are guaranteed assignment at a non-boundary school.

- | | |
|----|--|
| #1 | Children of full-time staff members at that school |
| #2 | Students with a sibling currently attending the school |
| #3 | Neighborhood preference (if applicable) |
| #4 | Denver residents |
| #5 | Non-Denver residents |

System Priorities: Qualification schools

Denver Public Schools has very few schools where an application / audition is required for enrollment, such as Denver School for the Arts or Polaris. Students must complete this step to be included on a qualification list that is then entered into the system.



Priorities for Students on Qualification List	
#1	Children of full-time staff at the school
#2	Students with a sibling at the school
#3	Neighborhood preference (if applicable)
#4	Denver residents
#5	Non-Denver residents

How do I know what the priorities are for each school?

They are published on the DPS Choice website each January.

School Name	2016-17 Grade Levels	Boundary	Enrollment Zone	Non-boundary
Elementary Schools				
Academy 360	EC-5			Charter
Amesse	EC-5	X		
Archuleta	K-5	X		Advanced Kinder, Gifted Magnet
Asbury	K-5	X		
Ashley	EC-5	X		
Barnum	EC-5	X		
Beach Court	EC-5	X		
Bradley International	EC-5	X		
Bromwell	EC-5	X		
Brown International	EC-5	X		
Carson	EC-5	X		Gifted Magnet
Castro	K-5	X		
Centennial	EC-5	X		
Cheltenham	EC-5	X		
CMS Community	EC-5	X		
Cole Arts & Science Academy	EC-5	X		

<http://schoolchoice.dpsk12.org/school-admission-priorities/>

System Components

Capacity: # of seats

- # of students desired by grade
- Factors in the number of students already at the school in the preceding grade

Priority Structure

- Boundary
- Enrollment Zone
- Choice
- Qualification

Student Profile

- Age
- Address
- Siblings
- Random lottery number between 1 and 999,999

Student Profile

Gathered from the application as well as existing student information in Infinite Campus. Among the data points used for where a student is guaranteed a seat and also where they are prioritized for other schools:

- School Preferences, in order
- Age / Grade
- Primary Address if in a split household
- Current school
- Siblings
- If parent/guardian is FTE
- Random lottery number
- Language preference
- Socioeconomic status
- Qualification status
- Center-based program IEP

Ready for Launch

By February 15, the system is now loaded with the following information

Capacity:
of seats

Priorities

Student
Profile

How Do Students Get Assigned to Schools?

SchoolChoice Assignment Tool Simulation

How Do Students Get Assigned to Schools?

The system is dynamic and is doing two things at once:

1. Filling the available seats at each school according to the priority rules for those seats
2. Maximizing the # of students assigned to their most-preferred school

Part 1: School-Based View of the System



School Profile & Applicant Pool

Scenario:

- Broncos Elementary has 25 kindergarten seats and 50 applicants
- Broncos Elementary serves a boundary

Applicants:

- 15 neighborhood students
- 5 choice-in students with siblings at the school
- 20 Denver residents
- 10 Non-Denver residents



School Priority Structure

Since there are more applicants than there are seats at Broncos Elementary, the choice system has to prioritize students to determine who gets assigned.

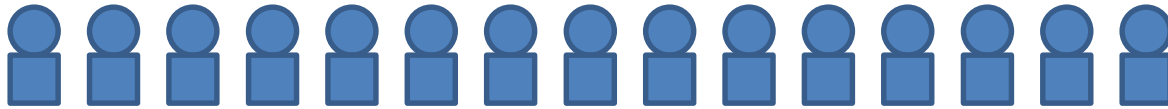
School Priorities in Choice System:

1. Boundary students
2. Siblings of currently attending students
3. Children of full-time school staff
4. Denver residents
5. Non-Denver residents

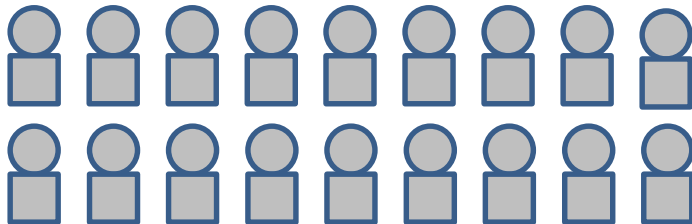


Students are assigned to the highest applicable priority based on their student profile.

Boundary



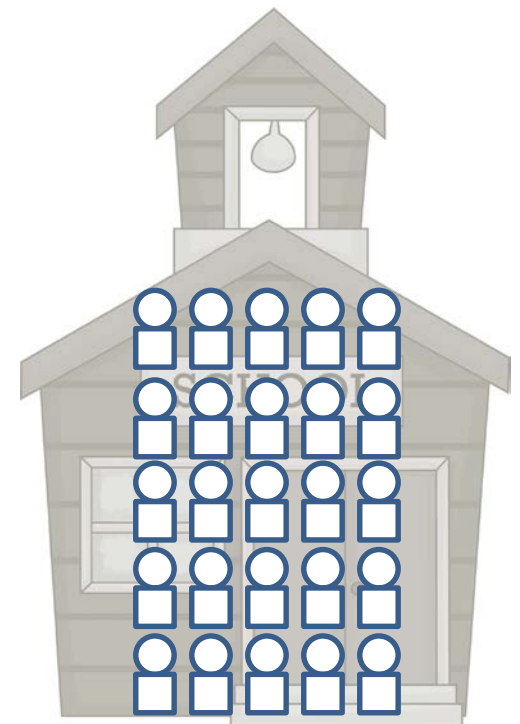
Siblings



Denver
Residents



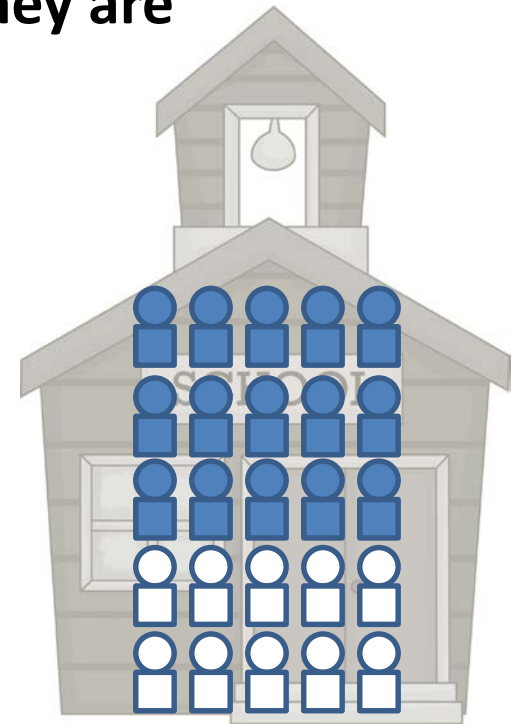
Non-Denver
Residents



25 seats open

System now assigns students based on their priority

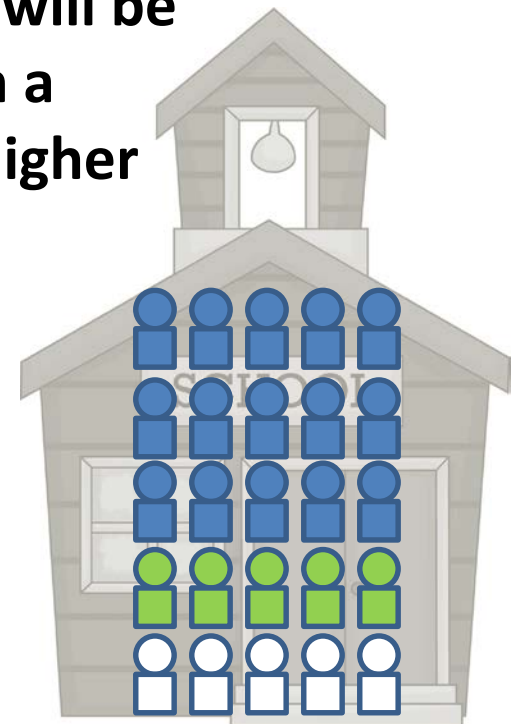
Since the first priority in the system for Broncos Elementary is to assign boundary students, they are each assigned



15 of the 25 kindergarten seats are now full

System now assigns students based on their priority

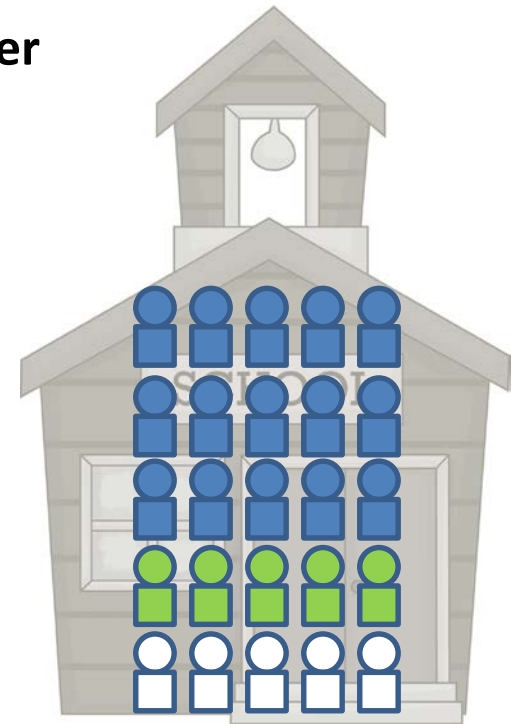
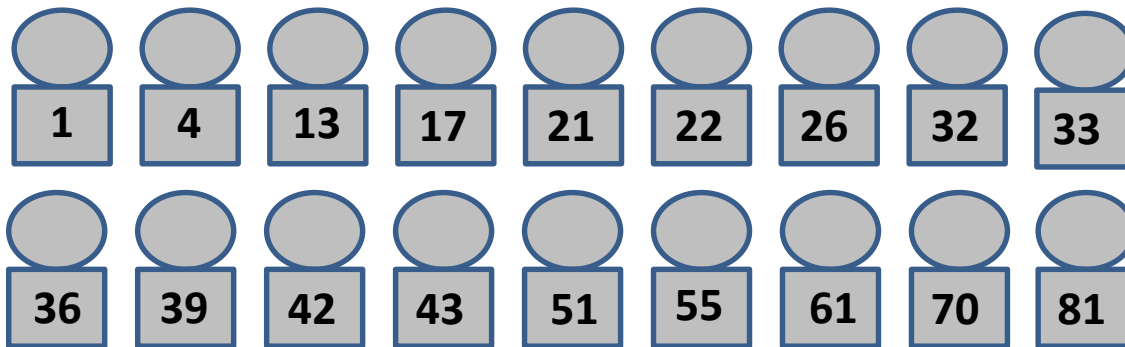
The next priority in the system for Broncos Elementary School is for siblings of current students who will be returning next year. Note that if you are both a boundary student and a sibling, you get the higher priority, which would be a boundary student.



All 5 siblings are assigned and now 20 of the 25 seats are full

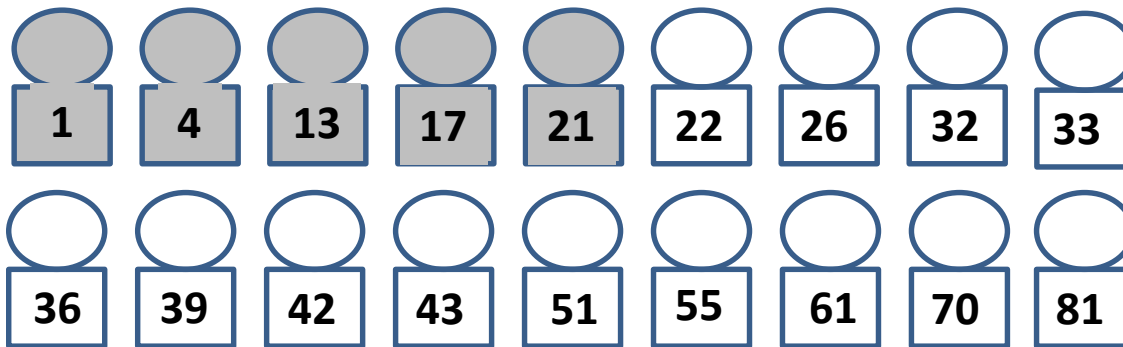
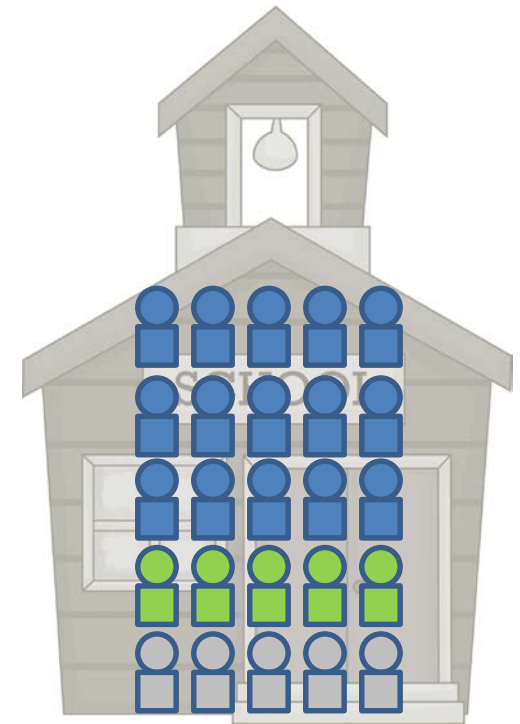
System now assigns students based on their priority

The next system priority is for Denver residents. There are 20 Denver resident applicants, but only 5 seats remaining. The system now looks at the lottery number of each student to determine assignment.



System now assigns students based on their priority

The system continues assigning students within this group starting with the lowest lottery number until all seats are full. The remaining students are then put on the waitlist in the order of their lottery number.



Assigned



Waitlisted

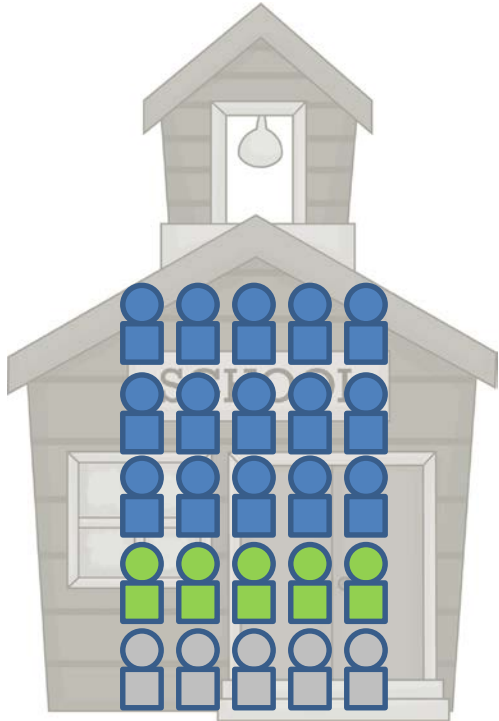
All seats are now full and remaining students are waitlisted

System now assigns students based on their priority

Students from the remaining priority groups are also waitlisted in the order of their lottery number within their waitlist



Non-Denver Residents



Part 2: Student-Based View of the System



Student Profile



Name: Peyton Elway

Submitted application online because he's a cool kid

Currently an 8th grader at Rockies Middle School

Going into 9th grade next year

Lives in the Buchanan High School Boundary

Does not have any siblings

System randomly assigned lottery # 456,789
(remember, numbers are between 1 and 999,999)

Student Choices



1st Choice: Fillmore High

2nd Choice: Van Buren High

3rd Choice: Polk High

4th Choice: Pierce High

5th Choice: Buchanan High

System Priorities are assigned for Each Choice



1st Choice: Fillmore High – Denver resident

2nd Choice: Van Buren High – Denver resident

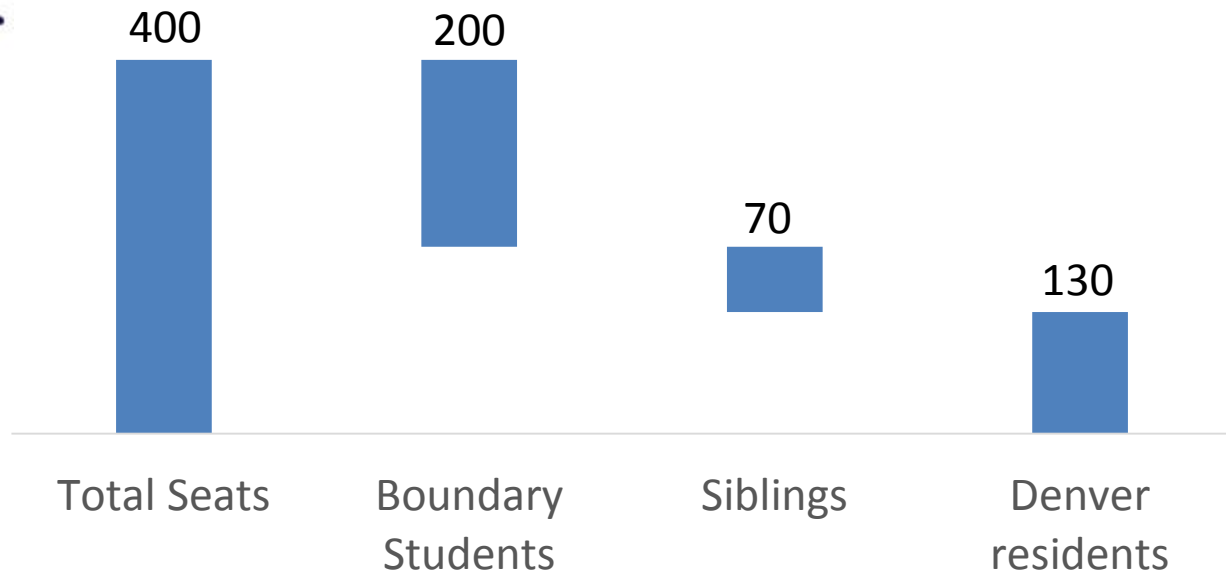
3rd Choice: Polk High – Denver resident

4th Choice: Pierce High – Denver resident

5th Choice: Buchanan High – Boundary resident

Algorithm run: School #1

Fillmore High: Denver resident priority



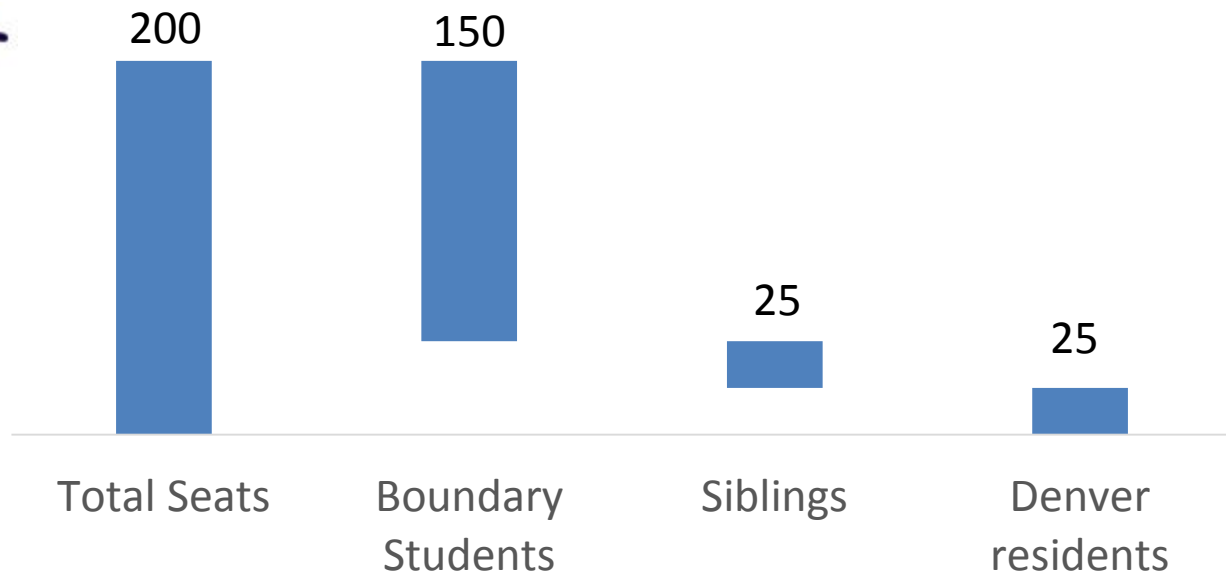
200 Denver residents applied for 130 seats.

Peyton has the 135th best lottery number within this group.

Peyton has been waitlisted at #5 for Fillmore High.

Algorithm run: School #2

Van Buren High: Denver resident priority



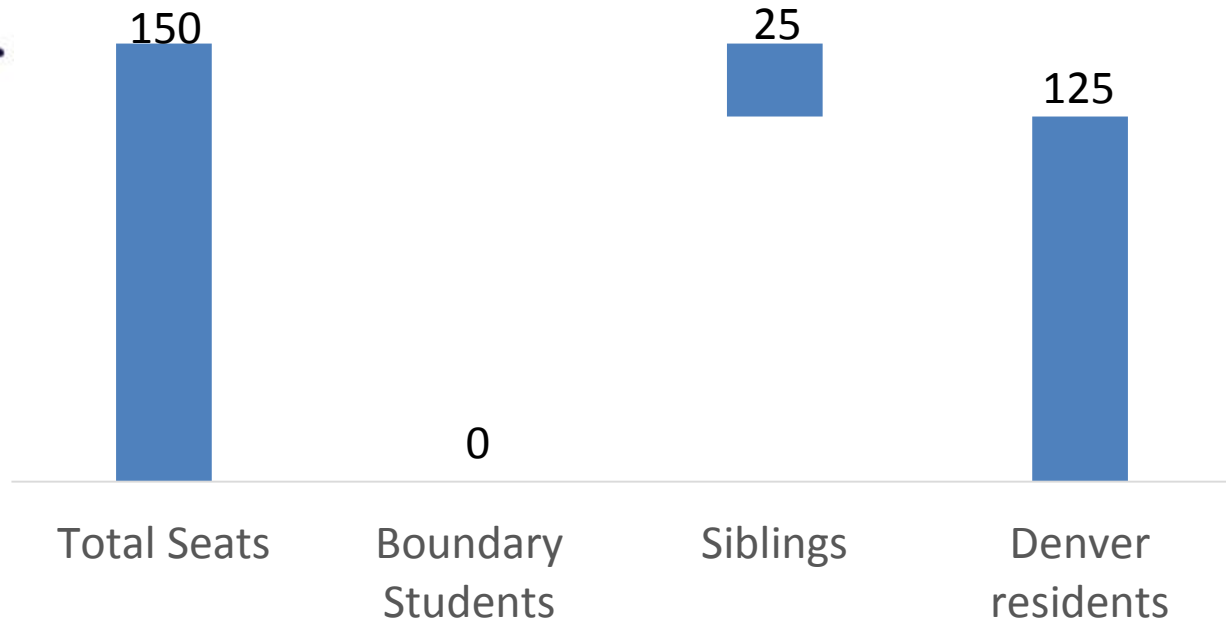
150 Denver residents applied for 25 seats.

Peyton has the 80th best lottery number within this group.

Peyton has been waitlisted at #55 for Van Buren High.

Algorithm run: School #3

Polk High: Denver resident priority



200 Denver residents applied for 125 seats.

Peyton has the 60th best lottery number within this group.

Peyton has been assigned to Polk High!!!

Algorithm run: School #4 and #5 and forfeiting a seat at your boundary school



Since Peyton was assigned to his 3rd choice, his choice records for choices #4 and #5 were inactivated.

Since Peyton was assigned to a higher choice than his boundary high school, he has now forfeited his seat at his boundary school.

If Peyton were to change his mind and want to attend his boundary high school, he would have to submit a round 2 choice form. In round 2, boundary guarantees no longer apply, it is based on priority groups and first-come first-serve.

Summary of Student Choice Outcome



1st Choice: Fillmore High – waitlist #5

2nd Choice: Van Buren High – waitlist #55

3rd Choice: Polk High - ASSIGNED

4th Choice: Pierce High - inactivated

5th Choice: Buchanan High -inactivated

Dynamic Nature of the System



This presentation showed the two major components of the system separately.

When the system is run, it is seeking to balance filling seats according to the priorities of the school while also seeking to maximize the number of students getting their most-preferred option.

Questions?

DPS Office of Choice and Enrollment Services
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