HILLSBOROUGH COUNTY PUBLIC SCHOOLS

Using Power BI to Address Disproportionate Discipline

June 30, 2021

Hillsborough County
PUBLIC SCHOOLS
Preparing Students for Life

HILLSBOROUGH COUNTY PUBLIC SCHOOLS

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CCEIS Overview

Disproportionality and Comprehensive Coordinated Early Intervening Services (CCEIS)

What is Disproportionality?

- Defined – "over-representation" or "under-representation" of a particular population or demographic group
- Complex issue that impacts
  - Racial/ethnic groups
  - ELL
  - Gender
  - SES – Socio Economic status
  - LRE – Least Restrictive Environment
  - Discipline

Comprehensive Coordinated Early Intervening Services (CCEIS)
Hillsborough School District
Discipline - Out-of-School Suspensions more than 10 Days
Risk Ratios, 2017-18 and 2019-20

LEA is identified as having significant disproportionality for Out-of-School Suspensions more than 10 days by:
Having a risk ratio greater than 3.0 for for past three years and not meeting reasonable progress.

Hillsborough

Out-of-School Suspensions more than 10 days		Hispanic/ Latino	American Indian or Alaska Native	Asian	Black or African American	Native Hawaiian or Other Pacific Islander	White	Two or More Races	Risk (Black/African American)*	Comparison Risk (All Other Races)**	Risk ÷ Comparison Risk = Risk Ratio***
2017-18	Out-of-School Suspensions more than 10 days	70	1	1	182	0	48	9	182/10750)* 100 =	129/30684*100 =	4.03
	Membership	16189	69	720	10750	42	12061	1603	1.693023256	0.420414548	
2018-19	Out-of-School Suspensions more than 10 days	53	0	2	158	0	35	5	158/11056*100=	95/31572*100=	4.75
	Membership	16782	64	756	11056	41	12155	1774	1.429088278	0.300899531	
2019-20	Out-of-School Suspensions more than 10 days	30	0	0	58	0	12	2	58/7921*100=	44/25107*100=	4.18
	Membership	13409	39	624	7921	33	9614	1388	0.732230779	0.17524993	

* Risk = Number of discipline incidents by Black/African American students divided by total number of Black/African American SWD X 100 (no rounding).
** Comparison Risk = Number of discipline incidents by all other races combined divided by total number of all other races SWD X 100 (no rounding).
*** Risk Ratio = Risk divided by Comparison Risk (rounded to two decimal places).

Comprehensive Coordinated Early Intervening Services (CCEIS)- Discipline

Black SWD are disproportionately suspended for > 10 days (data from 6/5/21)

- 3.46 times more likely than other SWD (CCEIS)
- 4.93 times more likely than all other students (Indicator 4B)

Required Comprehensive Coordinating Early Intervening Services (CCEIS)

Mandatory 15% Set Aside of IDEA Grant (about 6.8 Million)

- Funds must be used to root out the factors that lead to disproportionality
- Used only to address relevant flaws in policies, practices, or procedures
- Identify and address disproportionality
- Must have a correlation between what lead to disproportionality and funds used to address it

Data? Calculations?

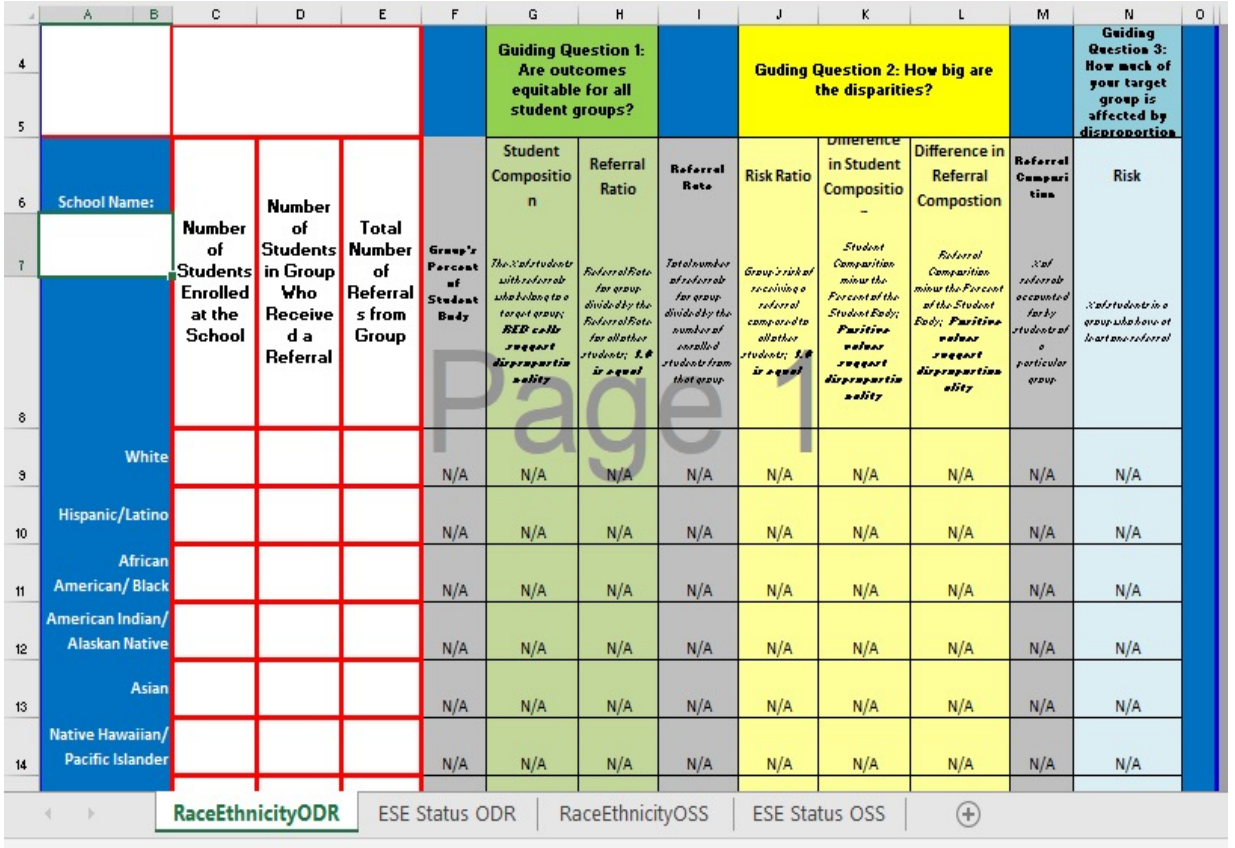
We knew we had a problem with disproportionate discipline outcomes, but we didn't know exactly:

- what specific data were used
- how the calculations were made
- how to get ahold of and monitor the data during the year instead of after it was over

Equity Profile

Cohort schools went through the four-step problem solving with USF/PBIS. The Equity profile is the basis of the work.

- Schools had to complete it by hand
- Time Consuming
- Data was in many different places



						Guiding Question 1: Are outcomes equitable for all student groups?			Guding Question 2: How big are the disparities?				Guiding Question 3: How much of your target group is affected by disproportion	
School Name:		Number of Students Enrolled at the School	Number of Students in Group Who Received a Referral	Total Number of Referrals from Group	Group's Percent of Student Body	Student Composition	Referral Ratio	Referral Rate	Risk Ratio	Difference in Student Composition	Difference in Referral Compostion	Referral Comparison	Risk	
						The % of students with referrals who belong to a target group; SEB calls support disproportionality	Referral Rate for group divided by the Referral Rate for all other students; 1.0 is equal	Total number of referrals for group divided by the number of enrolled students from that group	Group's risk of receiving a referral compared to all other students; 1.0 is equal	Student Composition minus the Percent of the Student Body; Positive values suggest disproportionality	Referral Composition minus the Percent of the Student Body; Positive values suggest disproportionality	% of referrals accounted for by students of a particular group	% of students in a group who have at least one referral	
	White				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Hispanic/Latino				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	African American/ Black				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	American Indian/ Alaskan Native				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Asian				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Native Hawaiian/ Pacific Islander				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

RaceEthnicityODR | ESE Status ODR | RaceEthnicityOSS | ESE Status OSS

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Data For Root Cause Analysis

Problem Identification – Specific Definition of Patterns-*Select the one pattern you want to focus on (i.e. problem behavior, location, etc.)* **Date of Data Pull: 05/01/2020**

	4. What are the most common discipline patterns for your target group? *(Guiding Question 4; Problem Definition Template, "Target Group Input" tab)*	**4b. Is this pattern common to 50% or more of the target group's referrals and/or students who have referrals?** *(Guiding Question 4b; Problem Definition Template, "Target Group Input" tab)*	**5. Is this pattern UNIQUE to your target group, or is it the same as the discipline pattern for all other students?** *(Guiding Question 5; Problem Definition Template, "Pattern Comparison" tab)*
Problem Behavior	Skipping	Yes	Unique
Location	Cla	Yes	Unique
Time	tween 5th and 6th period	Yes	Unique
Admin Decision	Detention	Yes	Unique
Grade	10	No	Same
Motivation	Avoid Task	Yes	Unique

We Needed More

We attempted:

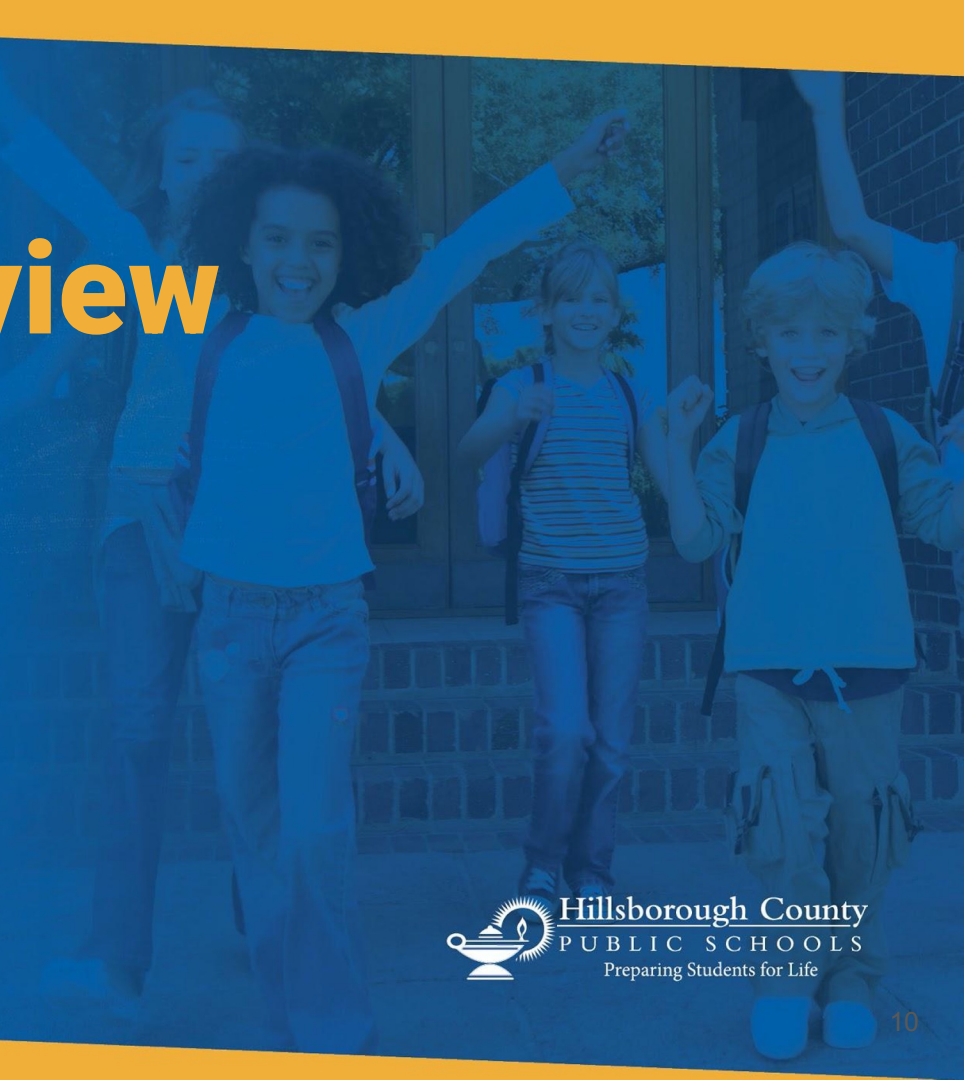
- To match calculations
- To request/generate various reports
- To disaggregate data by subgroup/school

However,

- we could never exactly replicate it
- the process was very cumbersome/manual
- the data were cold too quickly
- we wanted to slice and dice the data in too many ways for a report or even set of reports

Solution Overview

Power BI Dashboards



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Power BI Solution Goals

- Wanted a solution that projected CCEIS ratios based on the FLDOE calculations for current school year
- Wanted to use FLDOE file submissions to show YOY trends for district use
- Needed to provide visibility to each school in the district with timely data
- Needed views on who was receiving discipline, who was referring, and who was assigning discipline responses

Power BI Solution

- Utilized Power BI desktop files (.pbix) to develop district and school dashboards
- Used Powershell script to generate school dashboards off a single master workbook and refresh with current data each week
- Shared with schools and district staff via Sharepoint with object level security by school

Initial Design

- Designed a District Dashboard that can see trends by grade level, school type, individual schools and standard student cohort groups
- Refreshed weekly to address timeliness of data
- Rolled out pilot for schools in cohorts and then district-wide

Data Governance

- Needed a trusted source of data used by district staff to prevent dueling data sources
- Partnered with IT to get access to data extracts for student enrollment and historical discipline information for Power BI
- Pulled information weekly and refreshed solution
- Partnered with technical liaison and IT to resolve any data quality issues

Data Liaison Between Programmatic and Technical

- Helped translate educationese and technical lingo
- Communicated ESE's vision and needs to technical folks (even though they know education)
- Assisted in obtaining the necessary data
- Made sure everyone understood the data elements and was on the same page

Side Benefit – Cleaner Data!

As the dashboards were built and tested, we came across many different types of issues

- We worked with IT to clean the source data
  - Add labels to new variables/values
  - Edit outdated labels
  - Recode miscoded ESE determinations
  - Multiple actions for single incident not showing
  - Multiple incidents on a single day not showing
  - Include teacher writing referral and administrator assigning discipline

Side Benefit – Cleaner Data!

As the dashboards were built and tested, we came across many different types of issues

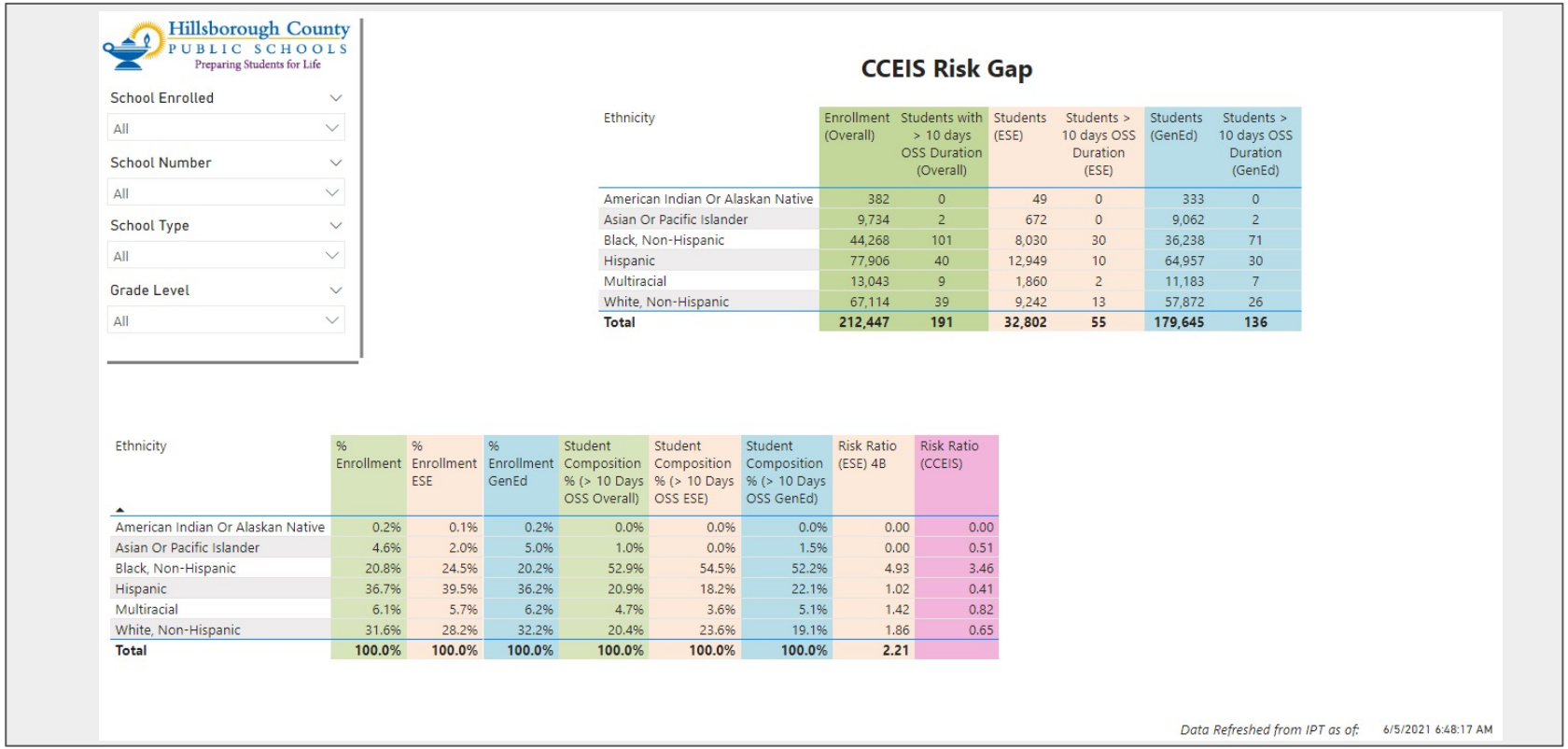
- We worked with schools to clean the data they were inputting
  - Open referrals not processed
  - Multiple records of same incident
  - Students not attending ISS automatically flipped to OSS
- Transparency held schools accountable - could no longer discount their data

Side Benefit – Cleaner Data!

As the dashboards were built and tested, we came across many different types of issues

- We worked with FLDOE to understand the intricate details of how the ratios were calculated for CCEIS
  - When was ESE status determined?
  - Do summer incidents count?

Solution Overview



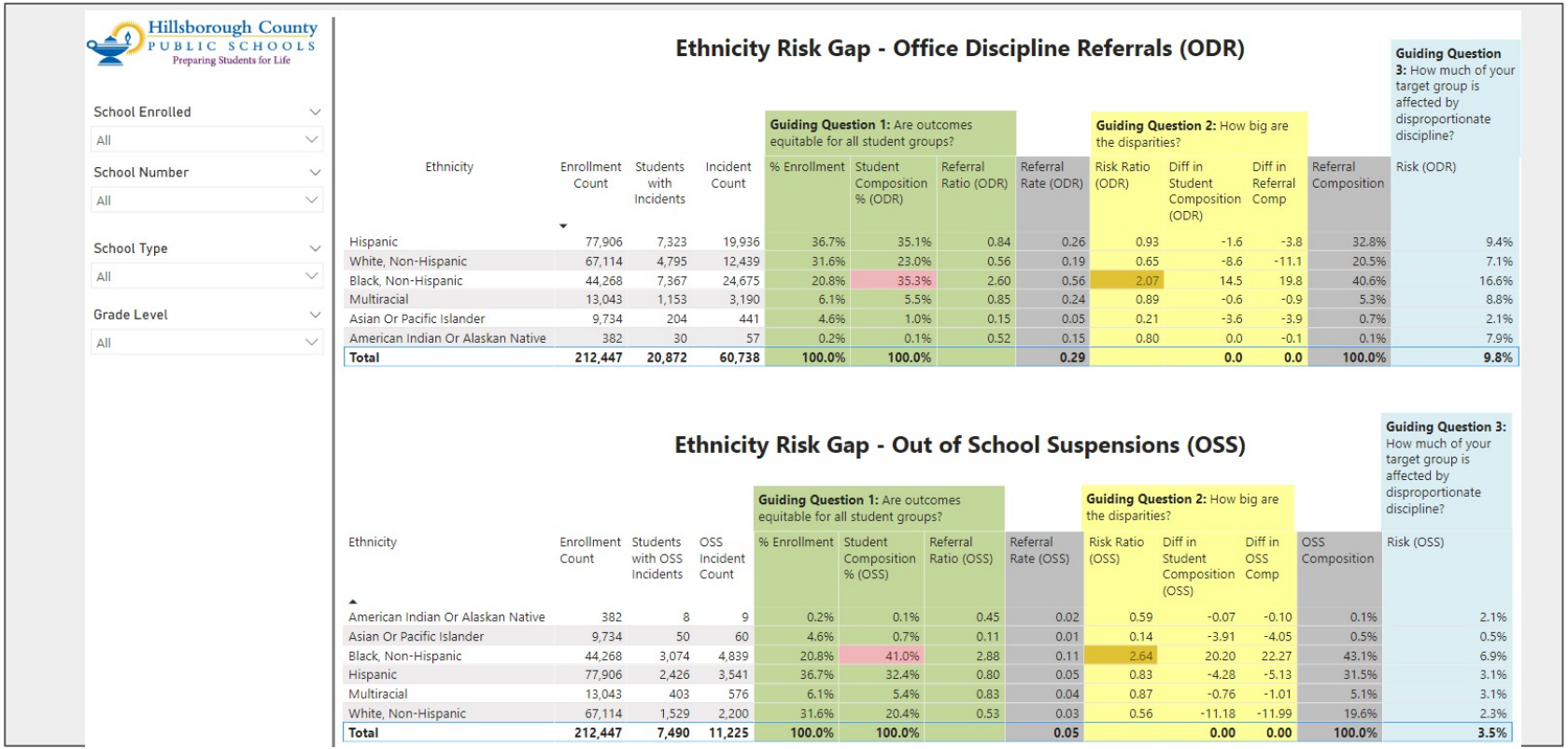
CCEIS Risk Gap

Ethnicity	Enrollment (Overall)	Students with > 10 days OSS Duration (Overall)	Students (ESE)	Students > 10 days OSS Duration (ESE)	Students (GenEd)	Students > 10 days OSS Duration (GenEd)
American Indian Or Alaskan Native	382	0	49	0	333	0
Asian Or Pacific Islander	9,734	2	672	0	9,062	2
Black, Non-Hispanic	44,268	101	8,030	30	36,238	71
Hispanic	77,906	40	12,949	10	64,957	30
Multiracial	13,043	9	1,860	2	11,183	7
White, Non-Hispanic	67,114	39	9,242	13	57,872	26
Total	**212,447**	**191**	**32,802**	**55**	**179,645**	**136**

Ethnicity	% Enrollment	% Enrollment ESE	% Enrollment GenEd	Student Composition % (> 10 Days OSS Overall)	Student Composition % (> 10 Days OSS ESE)	Student Composition % (> 10 Days OSS GenEd)	Risk Ratio (ESE) 4B	Risk Ratio (CCEIS)
American Indian Or Alaskan Native	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.00	0.00
Asian Or Pacific Islander	4.6%	2.0%	5.0%	1.0%	0.0%	1.5%	0.00	0.51
Black, Non-Hispanic	20.8%	24.5%	20.2%	52.9%	54.5%	52.2%	4.93	3.46
Hispanic	36.7%	39.5%	36.2%	20.9%	18.2%	22.1%	1.02	0.41
Multiracial	6.1%	5.7%	6.2%	4.7%	3.6%	5.1%	1.42	0.82
White, Non-Hispanic	31.6%	28.2%	32.2%	20.4%	23.6%	19.1%	1.86	0.65
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**2.21**	

Data Refreshed from IPT as of: 6/5/2021 6:48:17 AM

Solution Overview



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School Enrolled
All

School Number
All

School Type
All

Grade Level
All

Ethnicity Risk Gap - Office Discipline Referrals (ODR)

Guiding Question 3: How much of your target group is affected by disproportionate discipline?

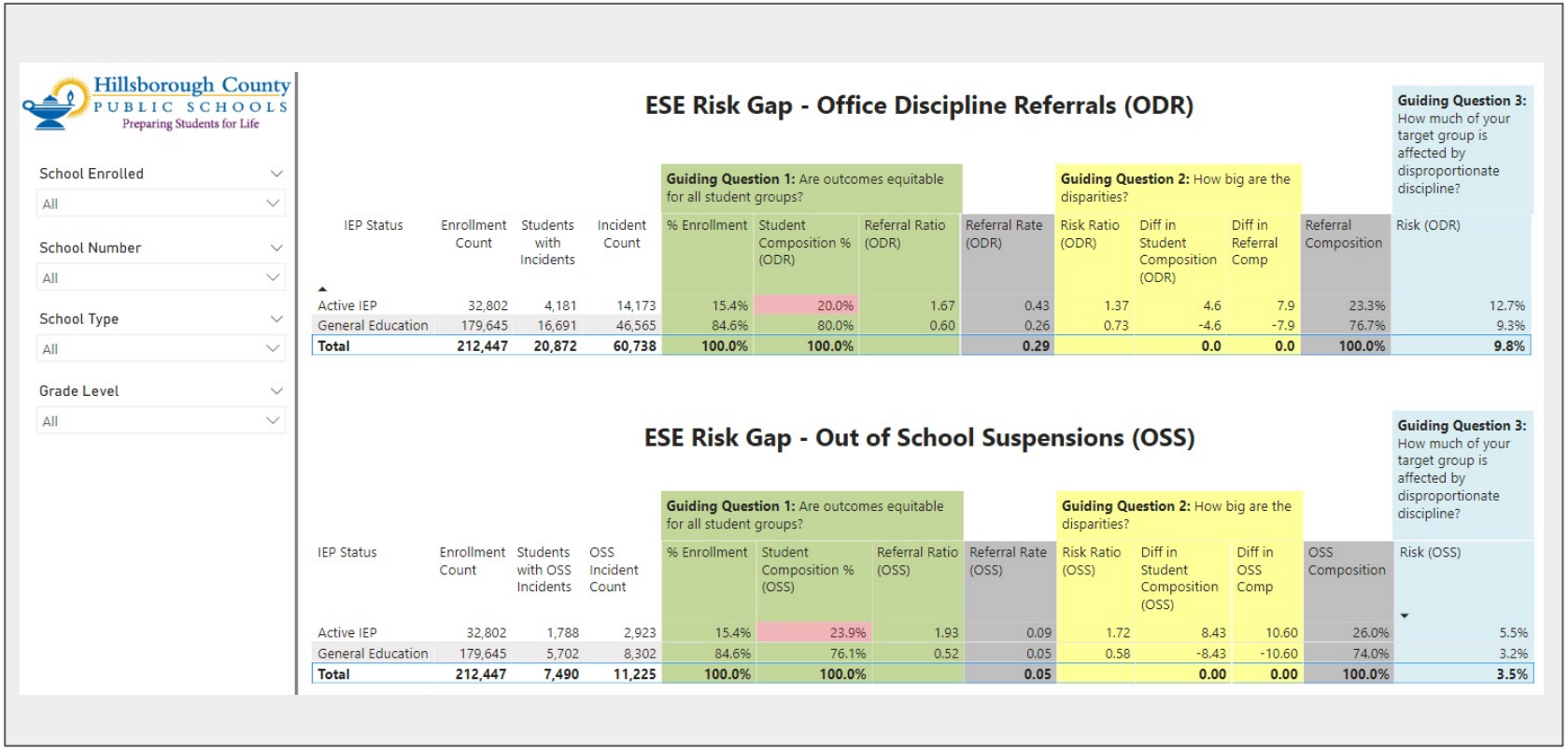
Ethnicity	Enrollment Count	Students with Incidents	Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (ODR)	Referral Ratio (ODR)	Referral Rate (ODR)	**Guiding Question 2:** How big are the disparities? Risk Ratio (ODR)	Diff in Student Composition (ODR)	Diff in Referral Comp	Referral Composition	Risk (ODR)
Hispanic	77,906	7,323	19,936	36.7%	35.1%	0.84	0.26	0.93	-1.6	-3.8	32.8%	9.4%
White, Non-Hispanic	67,114	4,795	12,439	31.6%	23.0%	0.56	0.19	0.65	-8.6	-11.1	20.5%	7.1%
Black, Non-Hispanic	44,268	7,367	24,675	20.8%	35.3%	2.60	0.56	2.07	14.5	19.8	40.6%	16.6%
Multiracial	13,043	1,153	3,190	6.1%	5.5%	0.85	0.24	0.89	-0.6	-0.9	5.3%	8.8%
Asian Or Pacific Islander	9,734	204	441	4.6%	1.0%	0.15	0.05	0.21	-3.6	-3.9	0.7%	2.1%
American Indian Or Alaskan Native	382	30	57	0.2%	0.1%	0.52	0.15	0.80	0.0	-0.1	0.1%	7.9%
Total	**212,447**	**20,872**	**60,738**	**100.0%**	**100.0%**		**0.29**		**0.0**	**0.0**	**100.0%**	**9.8%**

Ethnicity Risk Gap - Out of School Suspensions (OSS)

Guiding Question 3: How much of your target group is affected by disproportionate discipline?

Ethnicity	Enrollment Count	Students with OSS Incidents	OSS Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (OSS)	Referral Ratio (OSS)	Referral Rate (OSS)	**Guiding Question 2:** How big are the disparities? Risk Ratio (OSS)	Diff in Student Composition (OSS)	Diff in OSS Comp	OSS Composition	Risk (OSS)
American Indian Or Alaskan Native	382	8	9	0.2%	0.1%	0.45	0.02	0.59	-0.07	-0.10	0.1%	2.1%
Asian Or Pacific Islander	9,734	50	60	4.6%	0.7%	0.11	0.01	0.14	-3.91	-4.05	0.5%	0.5%
Black, Non-Hispanic	44,268	3,074	4,839	20.8%	41.0%	2.88	0.11	2.64	20.20	22.27	43.1%	6.9%
Hispanic	77,906	2,426	3,541	36.7%	32.4%	0.80	0.05	0.83	-4.28	-5.13	31.5%	3.1%
Multiracial	13,043	403	576	6.1%	5.4%	0.83	0.04	0.87	-0.76	-1.01	5.1%	3.1%
White, Non-Hispanic	67,114	1,529	2,200	31.6%	20.4%	0.53	0.03	0.56	-11.18	-11.99	19.6%	2.3%
Total	**212,447**	**7,490**	**11,225**	**100.0%**	**100.0%**		**0.05**		**0.00**	**0.00**	**100.0%**	**3.5%**

Solution Overview



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School Enrolled: All

School Number: All

School Type: All

Grade Level: All

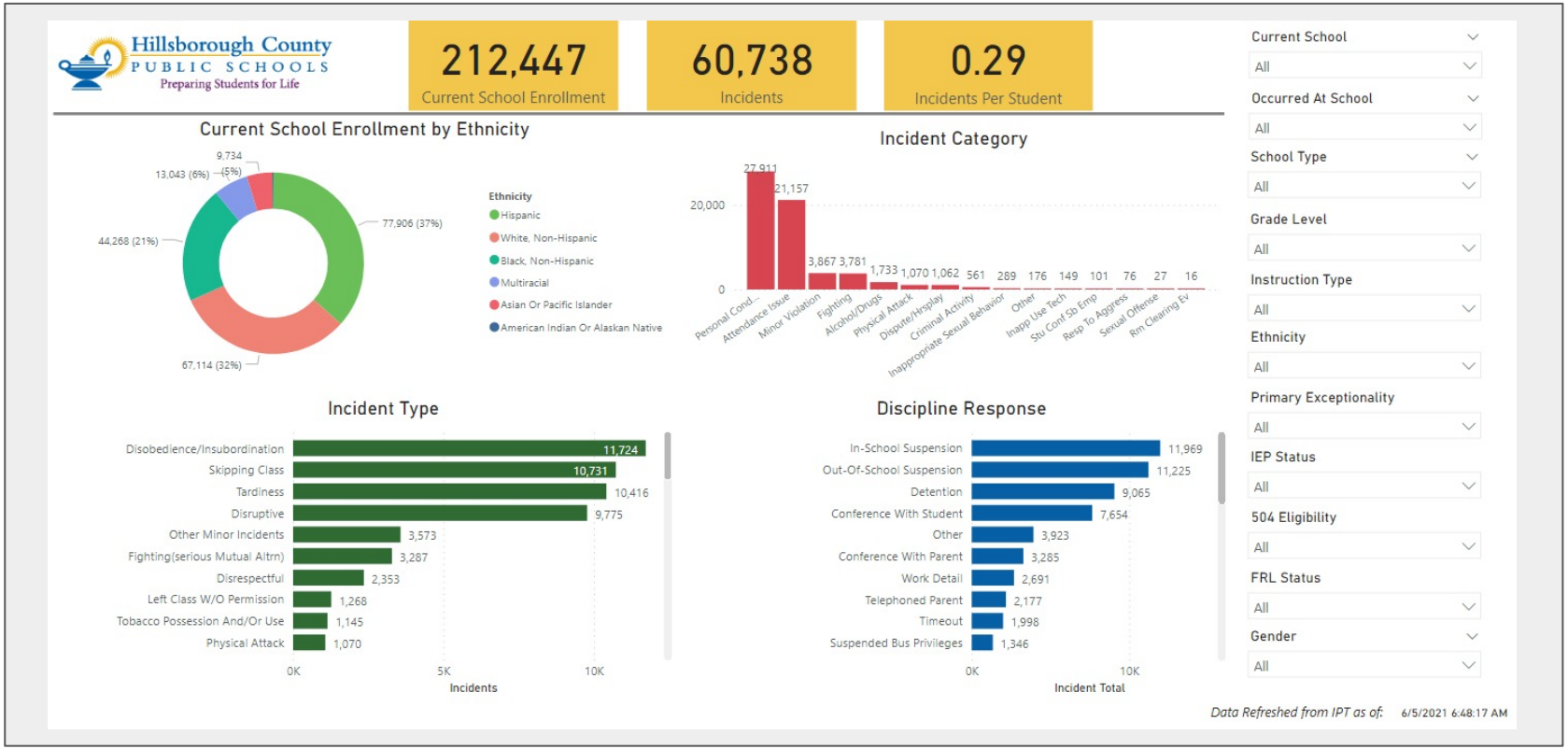
ESE Risk Gap - Office Discipline Referrals (ODR)

IEP Status	Enrollment Count	Students with Incidents	Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (ODR)	Referral Ratio (ODR)	Referral Rate (ODR)	**Guiding Question 2:** How big are the disparities? Risk Ratio (ODR)	Diff in Student Composition (ODR)	Diff in Referral Comp	Referral Composition	**Guiding Question 3:** How much of your target group is affected by disproportionate discipline? Risk (ODR)
Active IEP	32,802	4,181	14,173	15.4%	20.0%	1.67	0.43	1.37	4.6	7.9	23.3%	12.7%
General Education	179,645	16,691	46,565	84.6%	80.0%	0.60	0.26	0.73	-4.6	-7.9	76.7%	9.3%
Total	**212,447**	**20,872**	**60,738**	**100.0%**	**100.0%**		**0.29**		**0.0**	**0.0**	**100.0%**	**9.8%**

ESE Risk Gap - Out of School Suspensions (OSS)

IEP Status	Enrollment Count	Students with OSS Incidents	OSS Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (OSS)	Referral Ratio (OSS)	Referral Rate (OSS)	**Guiding Question 2:** How big are the disparities? Risk Ratio (OSS)	Diff in Student Composition (OSS)	Diff in OSS Comp	OSS Composition	**Guiding Question 3:** How much of your target group is affected by disproportionate discipline? Risk (OSS)
Active IEP	32,802	1,788	2,923	15.4%	23.9%	1.93	0.09	1.72	8.43	10.60	26.0%	5.5%
General Education	179,645	5,702	8,302	84.6%	76.1%	0.52	0.05	0.58	-8.43	-10.60	74.0%	3.2%
Total	**212,447**	**7,490**	**11,225**	**100.0%**	**100.0%**		**0.05**		**0.00**	**0.00**	**100.0%**	**3.5%**

Solution Overview



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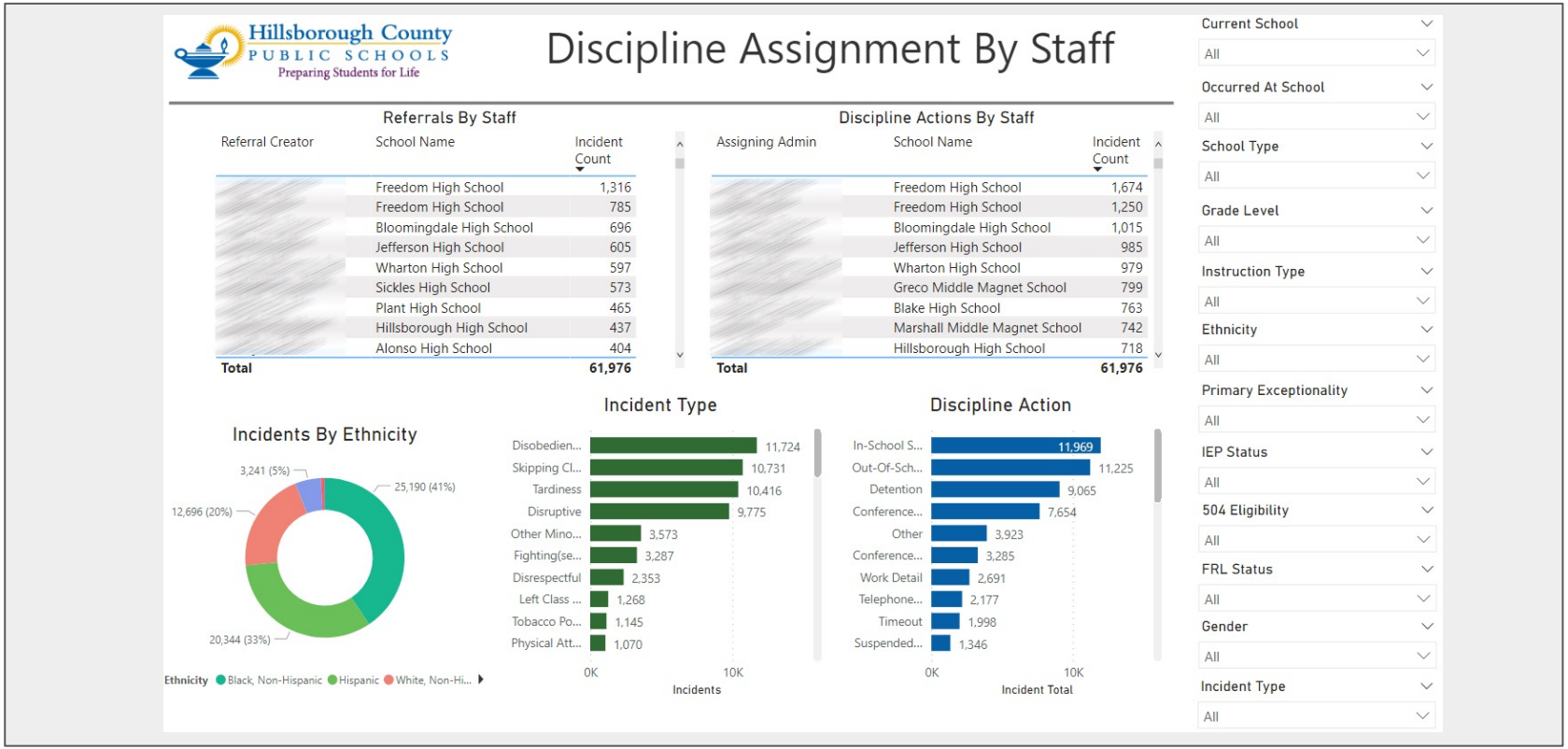

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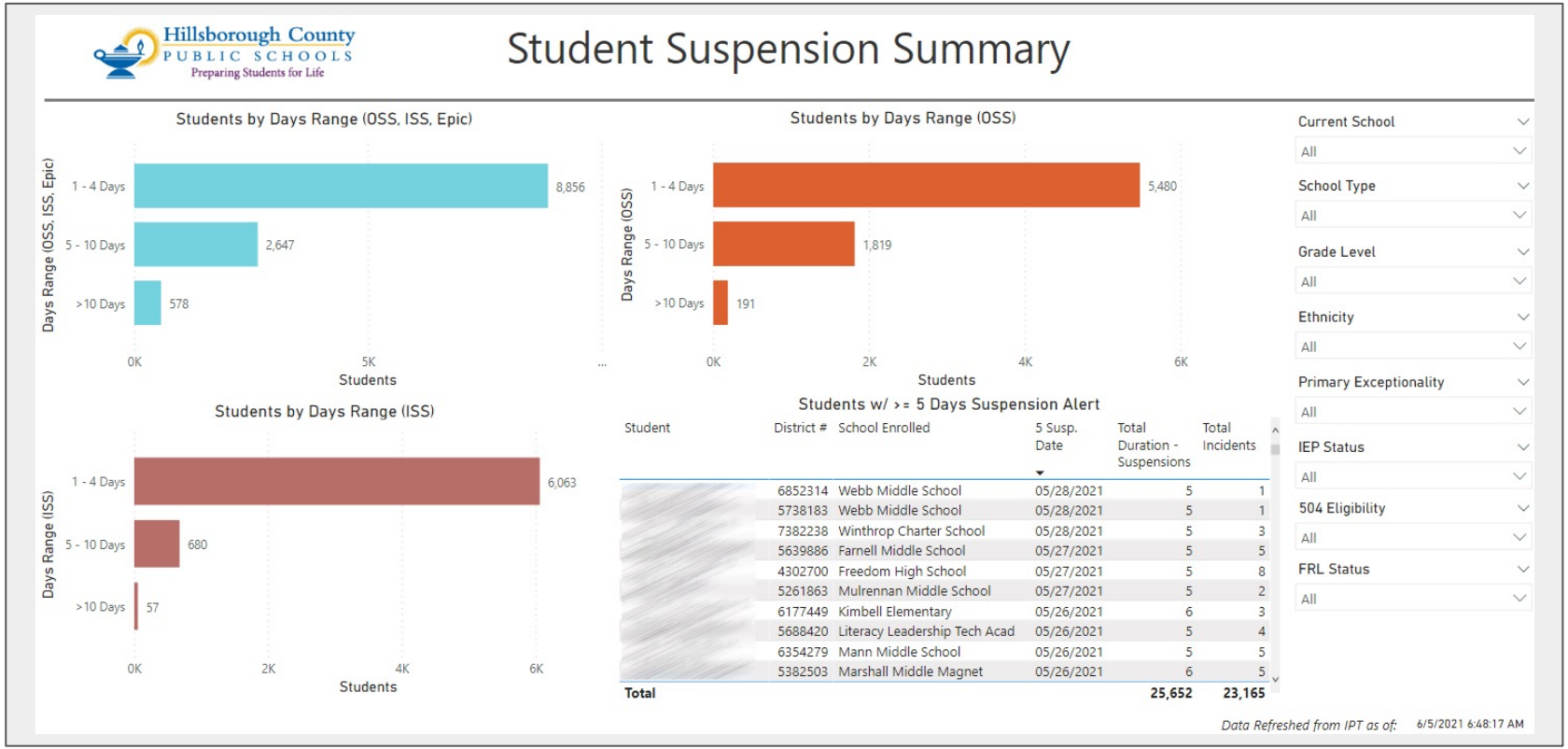

Power BI Tips & Tricks

How did we make these dashboard screens work so well together?

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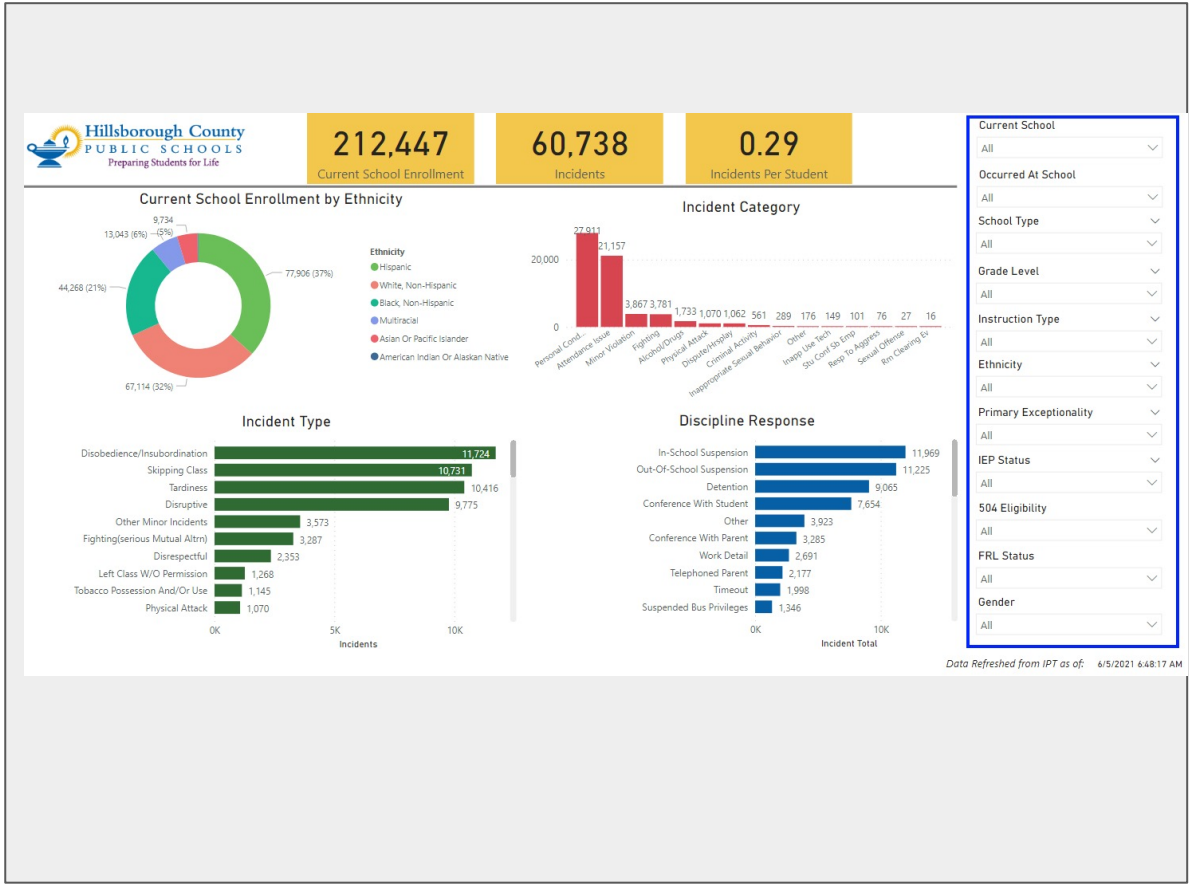
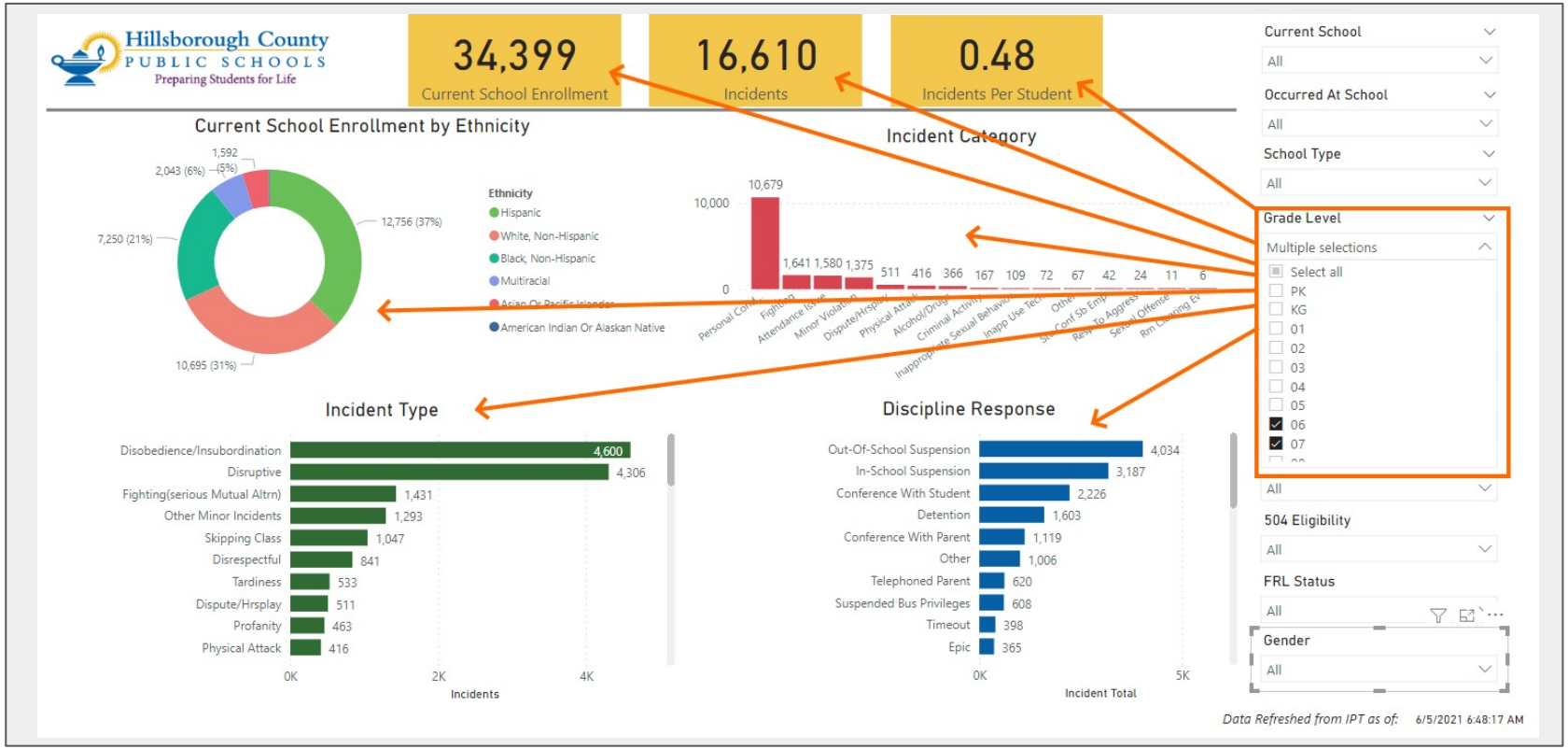
Optional Prompts

- Allow users to slice and dice data in their preferred way
- Does not have to be a field that is showing in a visualization to use as a filter



Optional Prompts

Optional Prompts

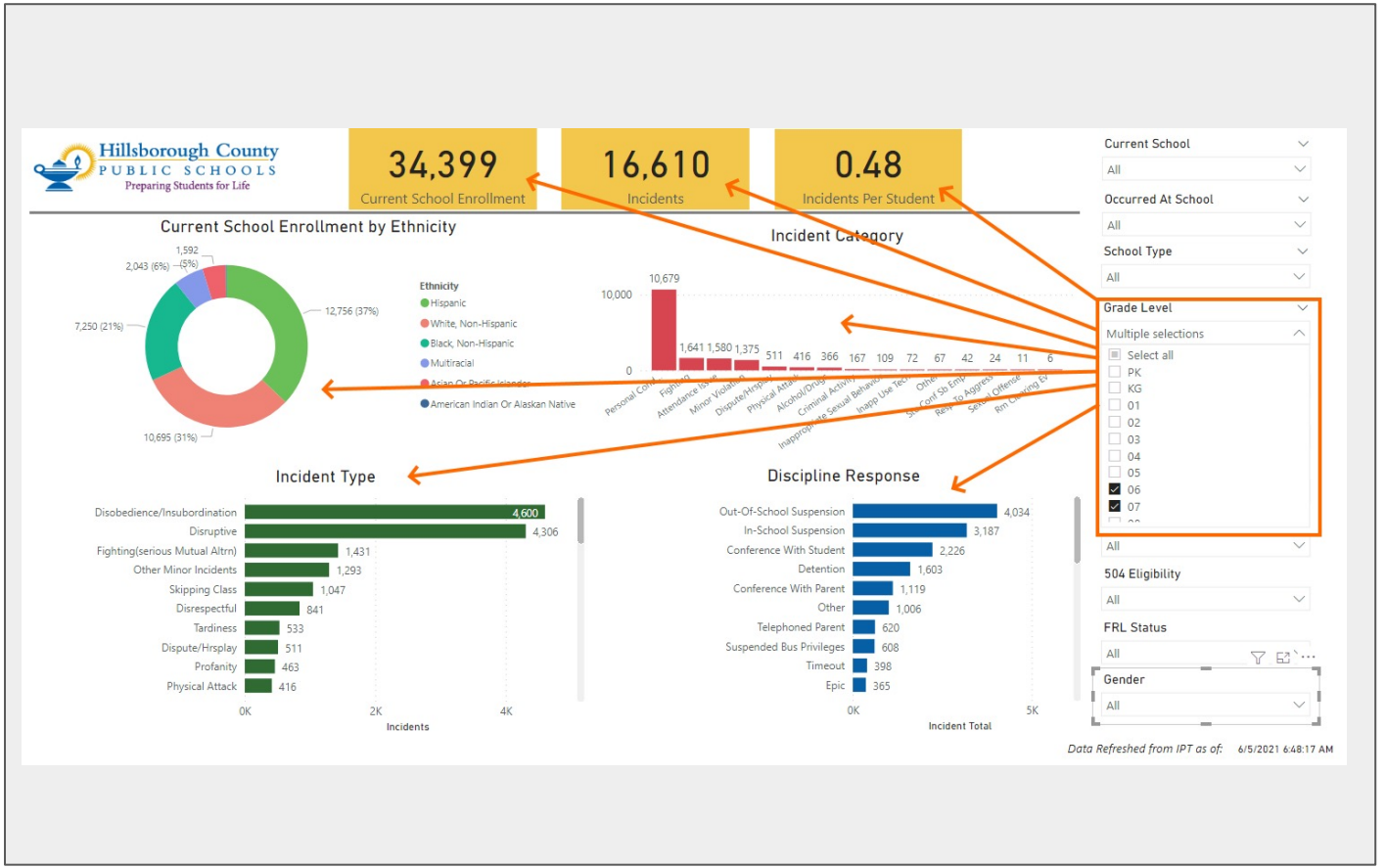


Visual Interactions

- Power BI sets every visual on a single report page to interact with each other by default
- Using a visualization to filter other visualizations is an intuitive and powerful way to uncover potential correlations

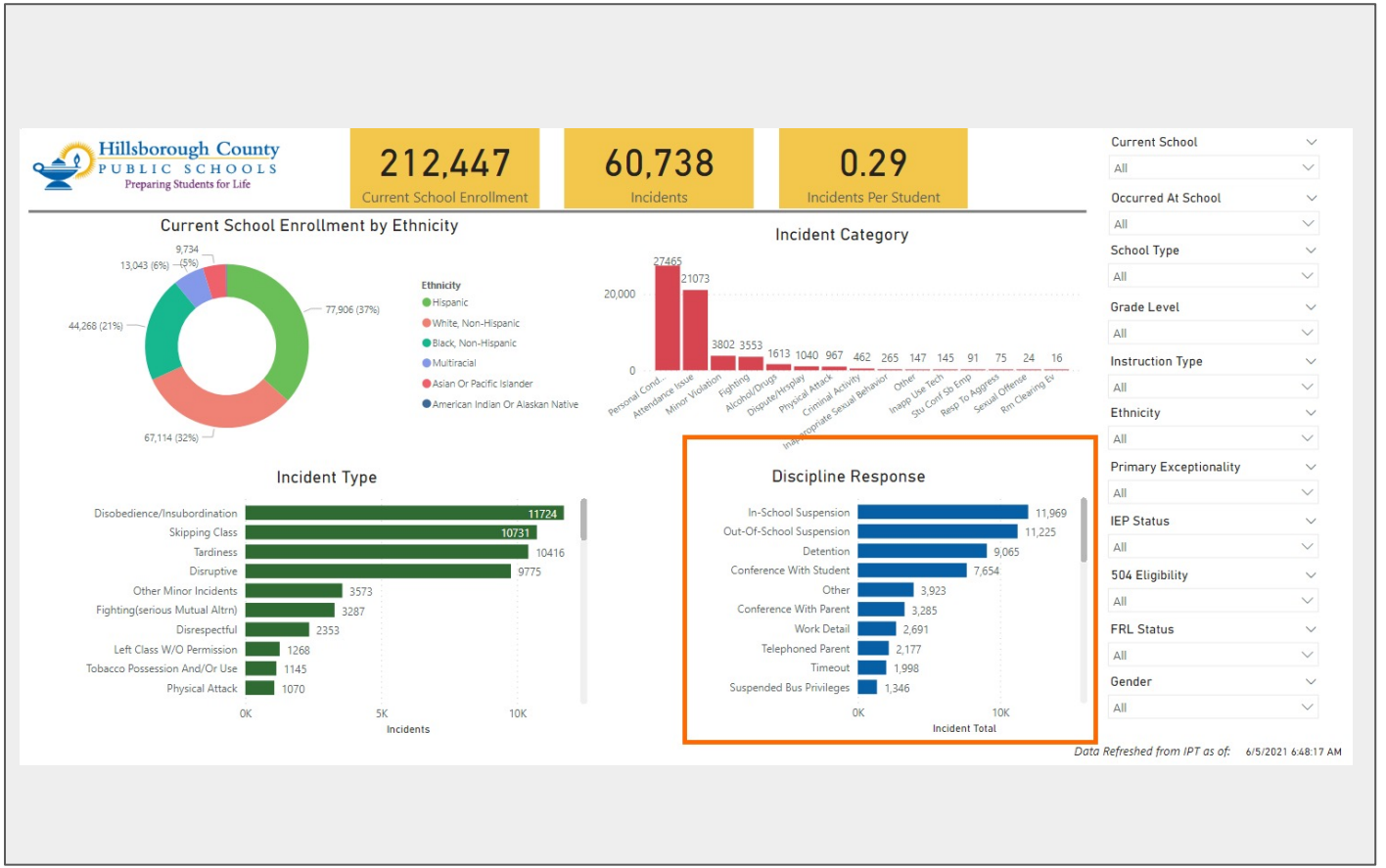
Visual Interactions

- Example of an optional prompt affecting all the other objects on the page



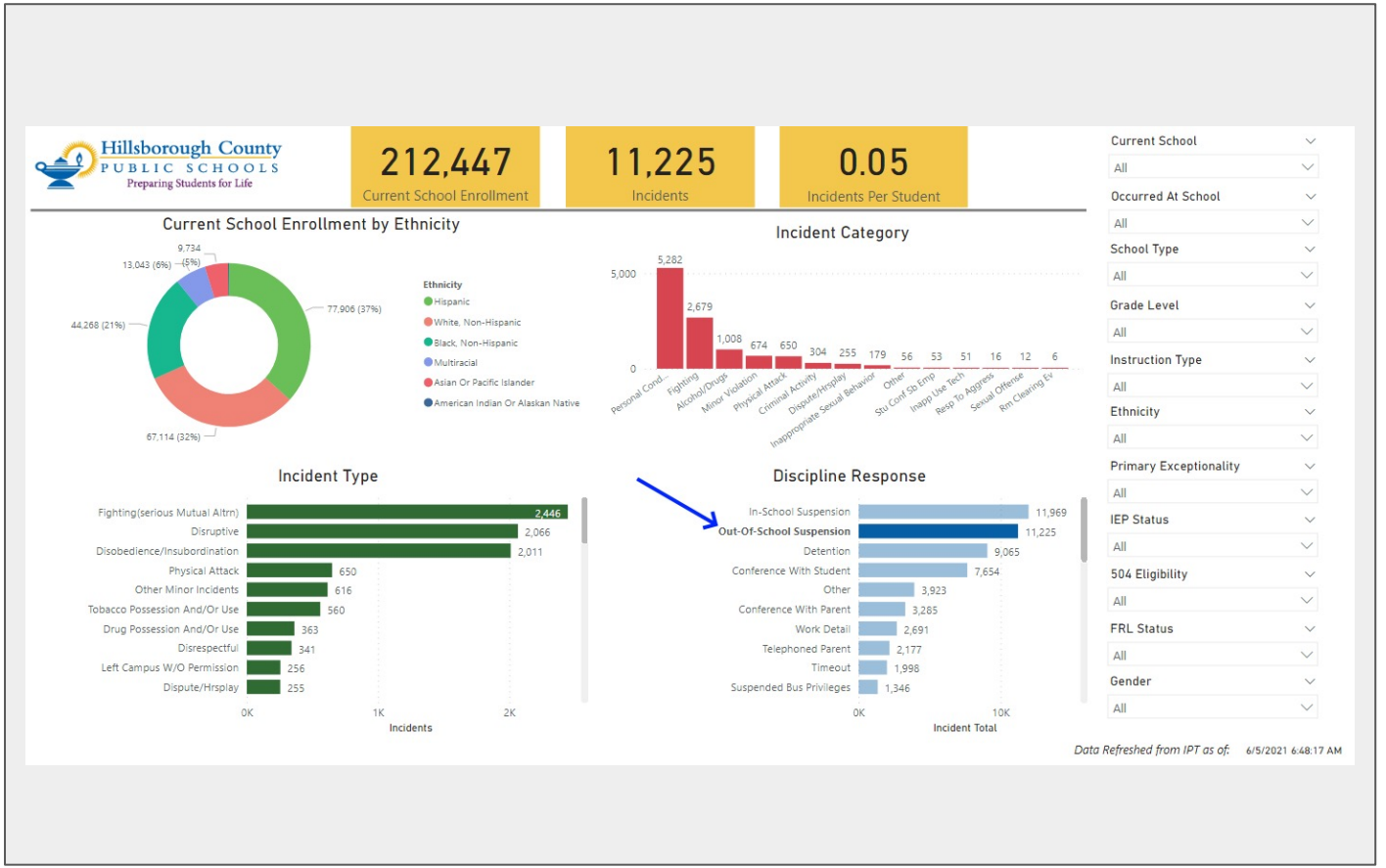
Visual Interactions

- Example where one chart affects some of the other objects, but not everything



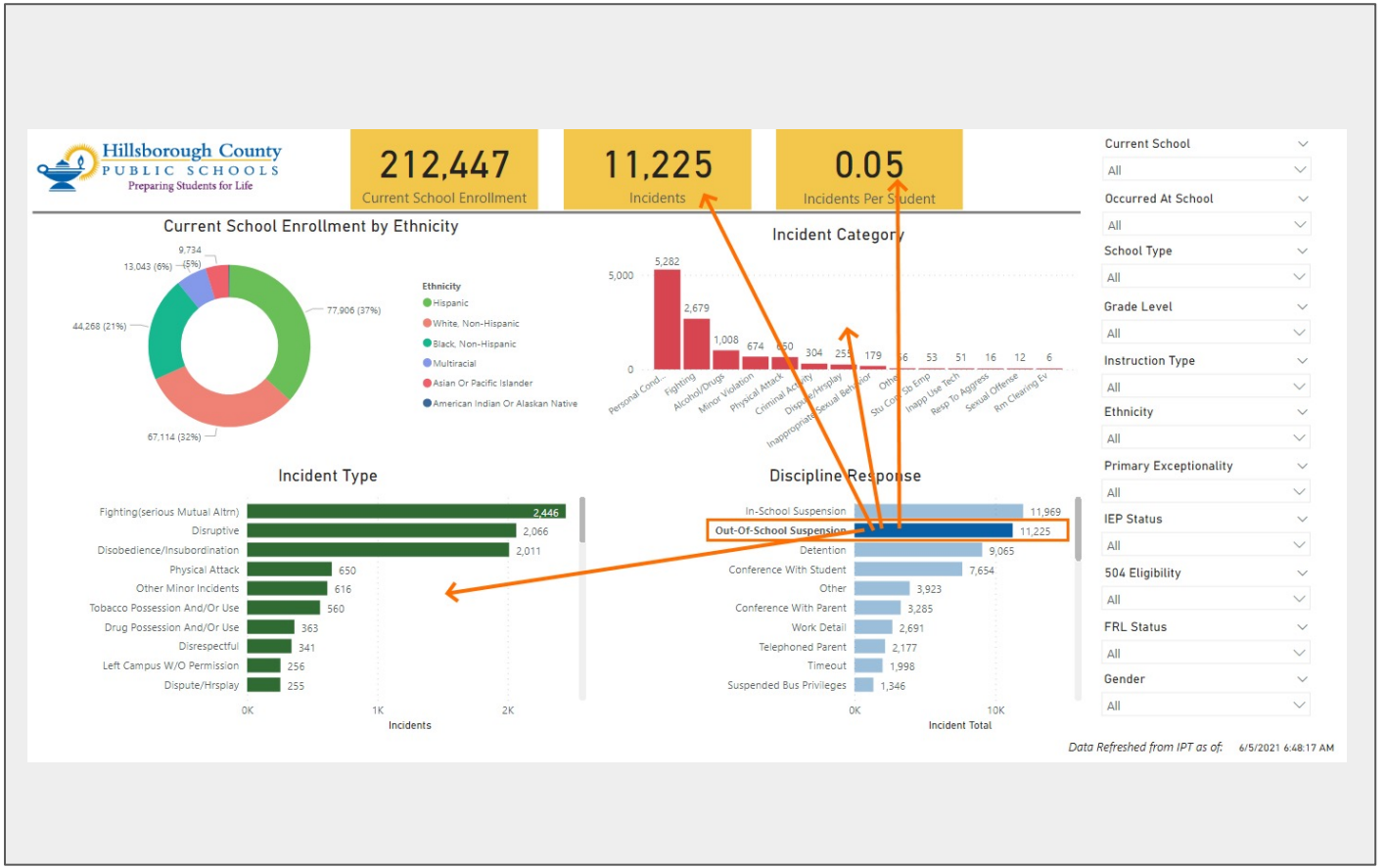
Visual Interactions

- Example where one chart affects some of the other objects, but not everything



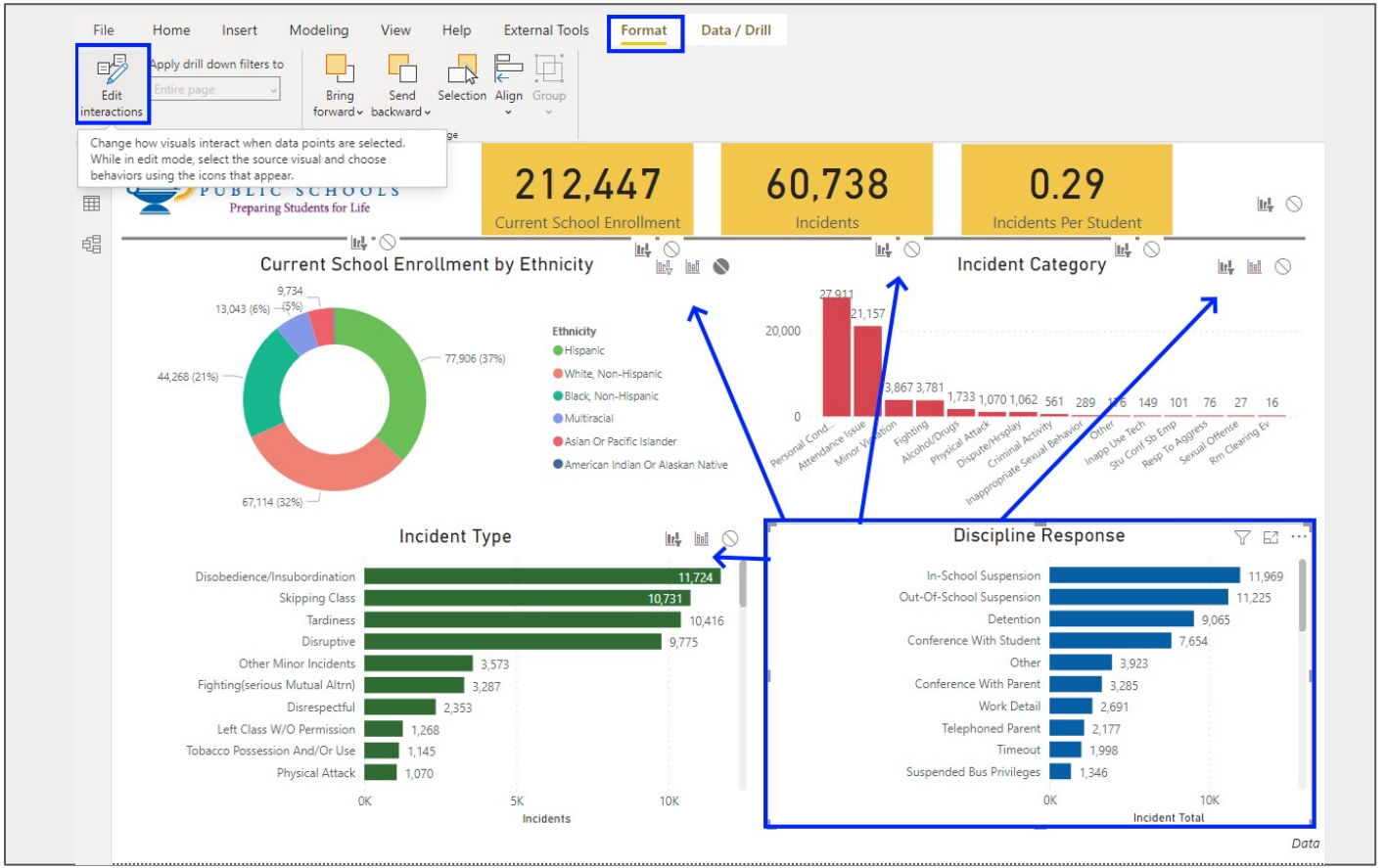
Visual Interactions

- Example where one chart affects some of the other objects, but not everything



Visual Interactions

- Edit interactions button is under the Format menu
- Shows how the selected object (Bottom right chart) will affect each visual

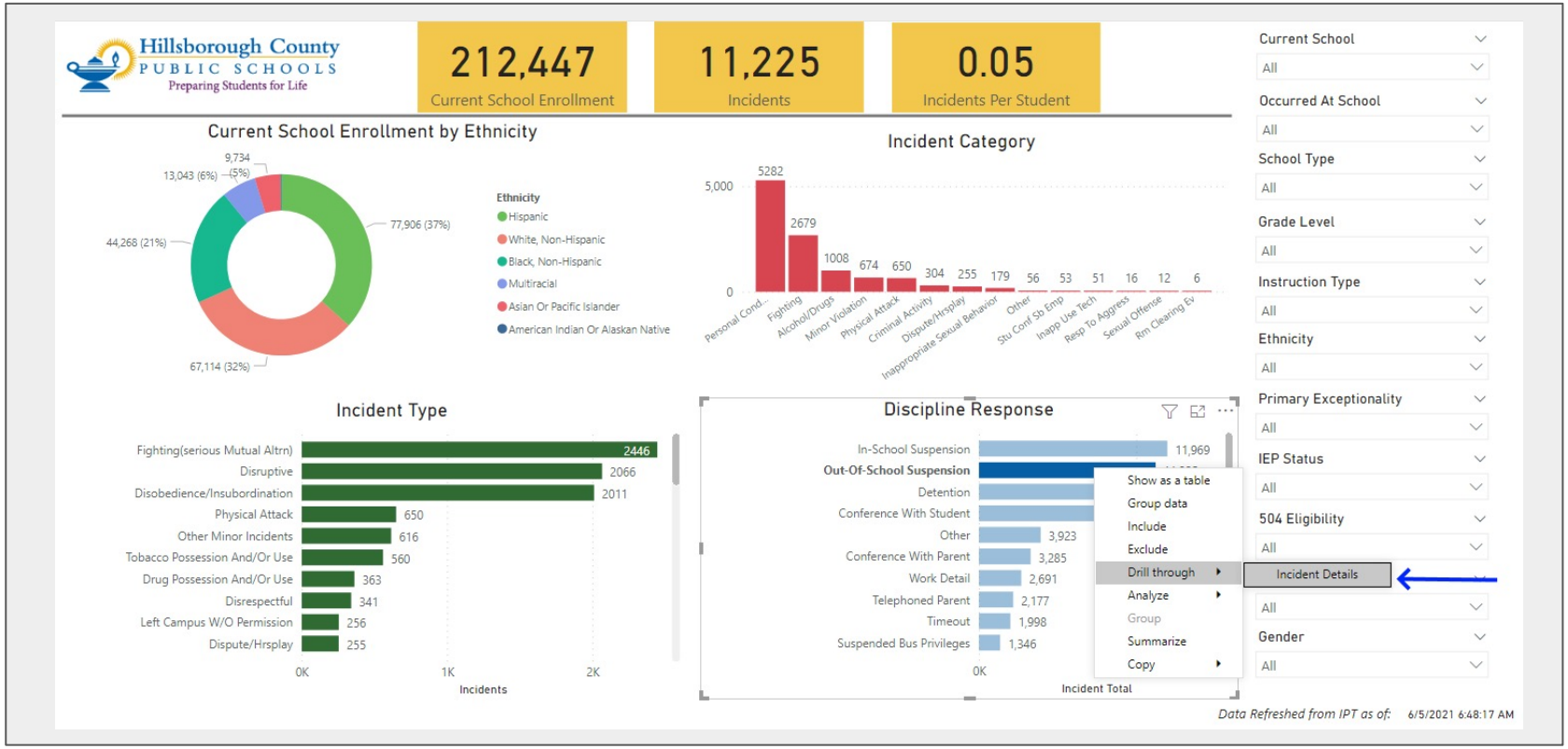


Drill Through Capabilities

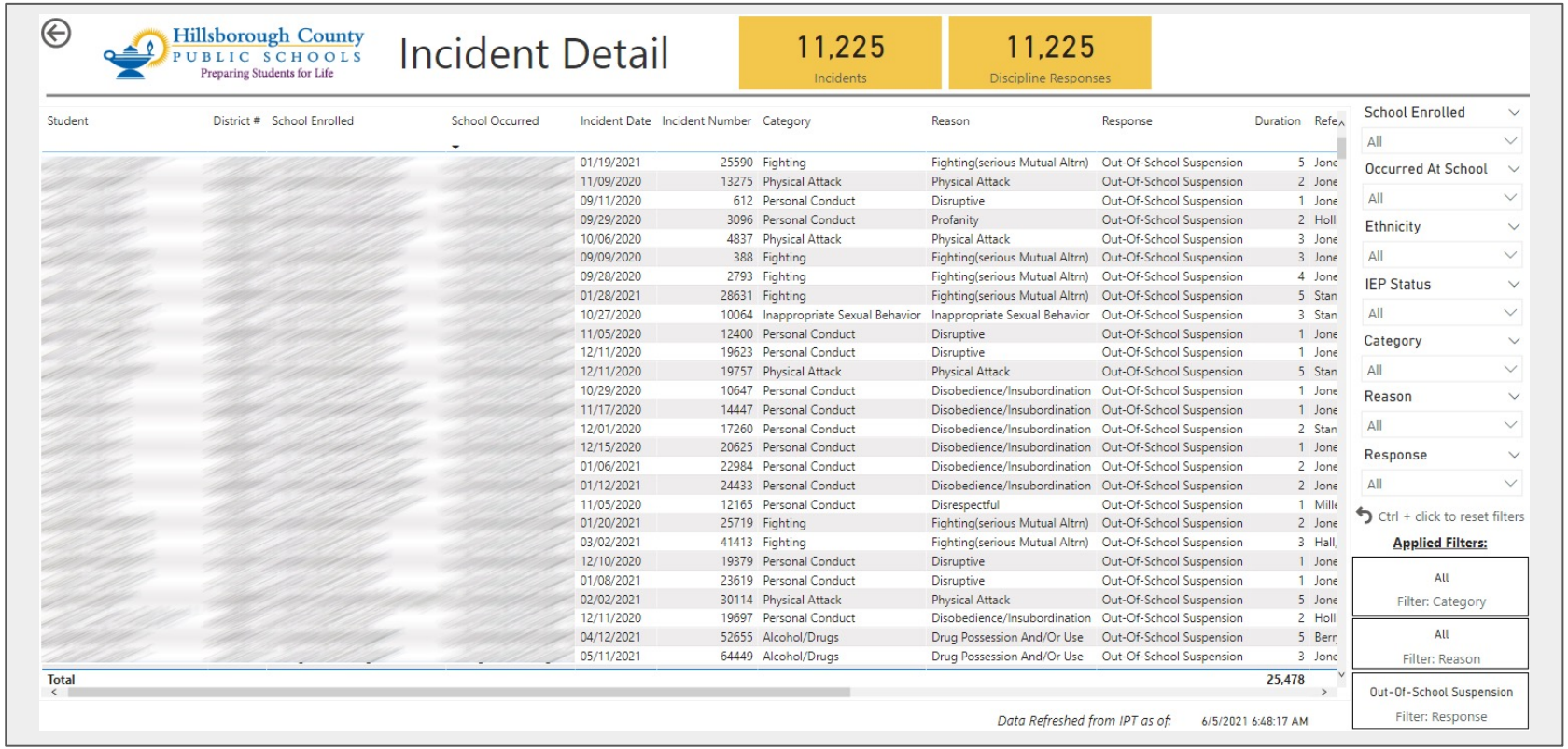
- Drill through: a visualization that allows the user to navigate to another report page to see additional details

- Allowing for drill through activity empowers end user to answer their next question about the data
  - Who are the 10 students behind this bar in the chart?
  - The chart shows ISS as the most common response, but I'd like to see the details behind the chart and look for patterns.

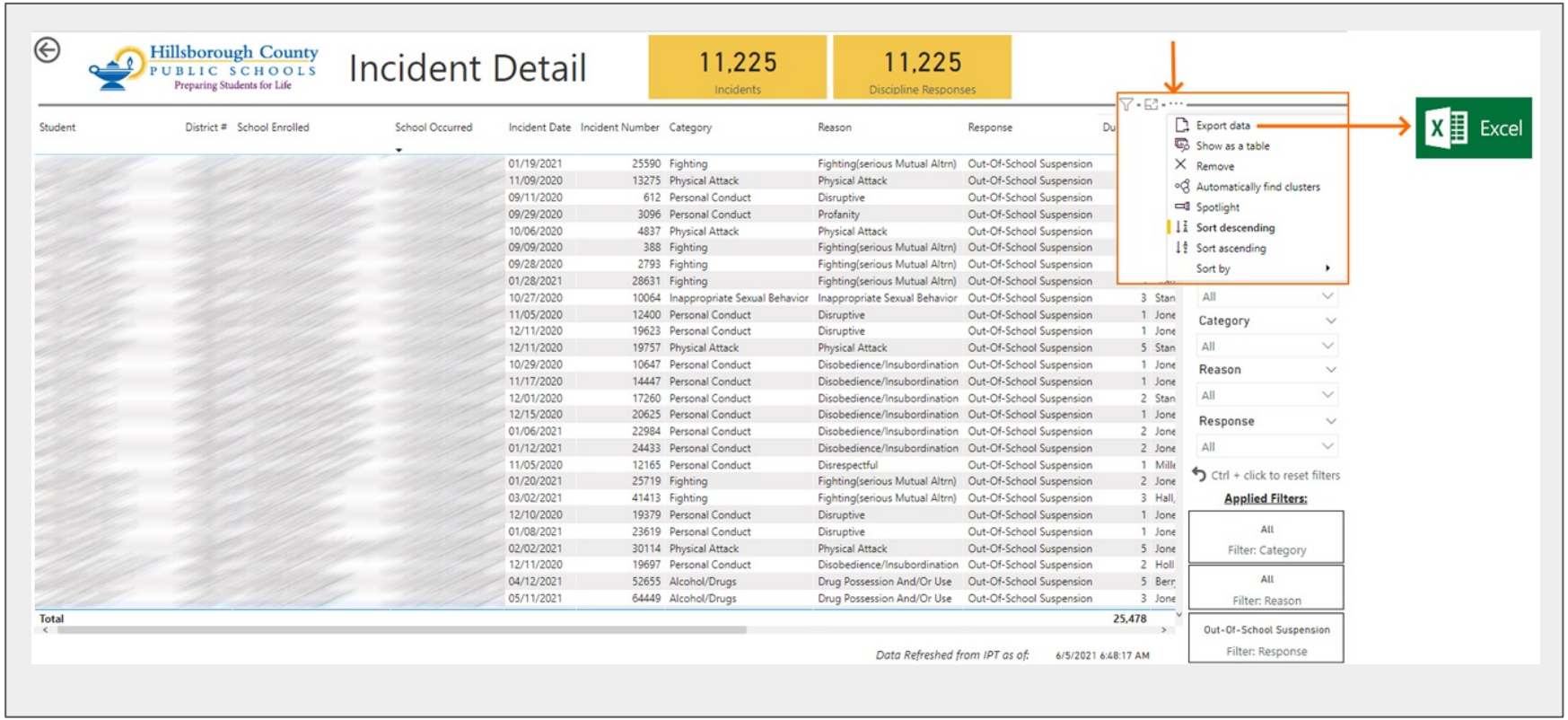
Drill Through Capabilities



Drill Through Capabilities

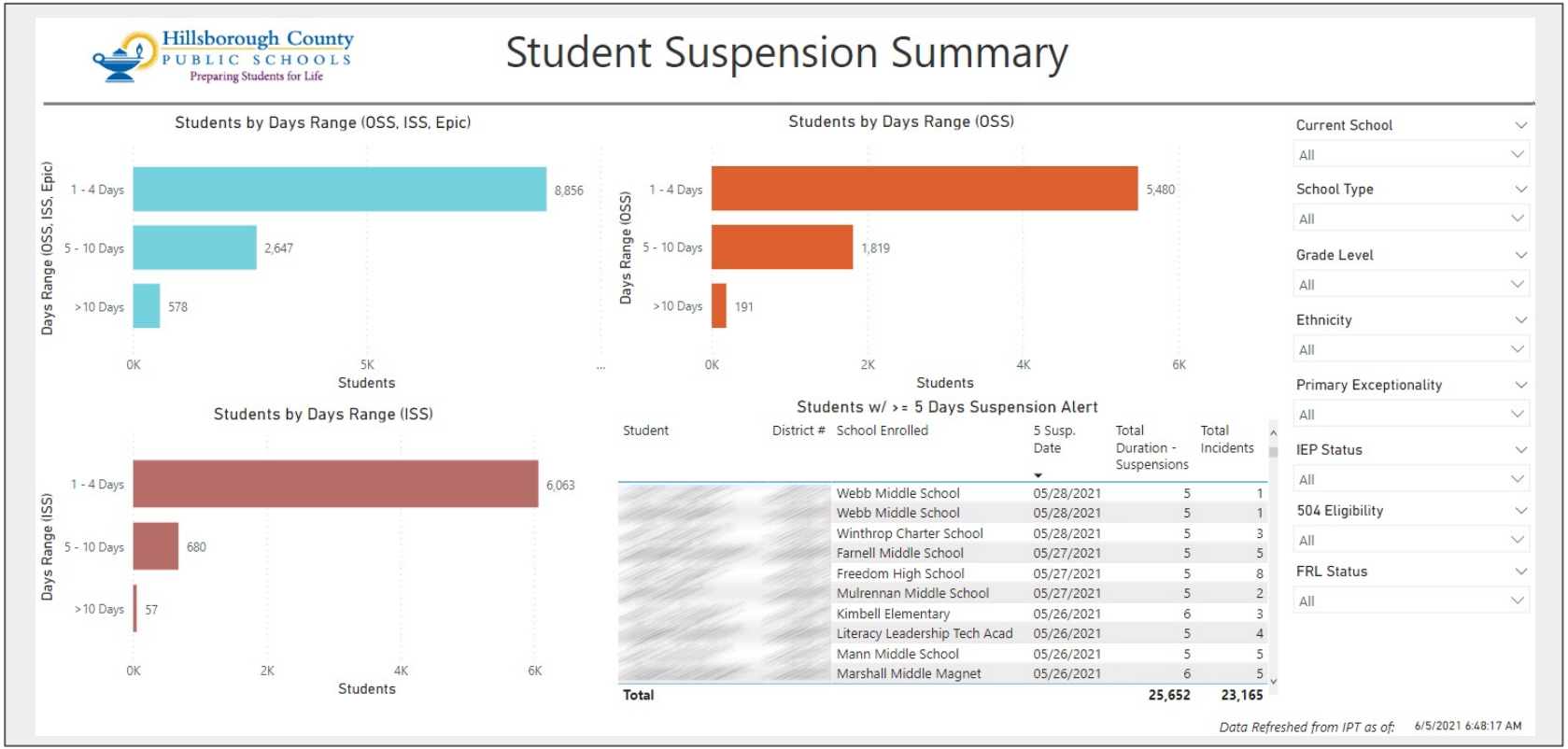


Drill Through Capabilities – Export Details

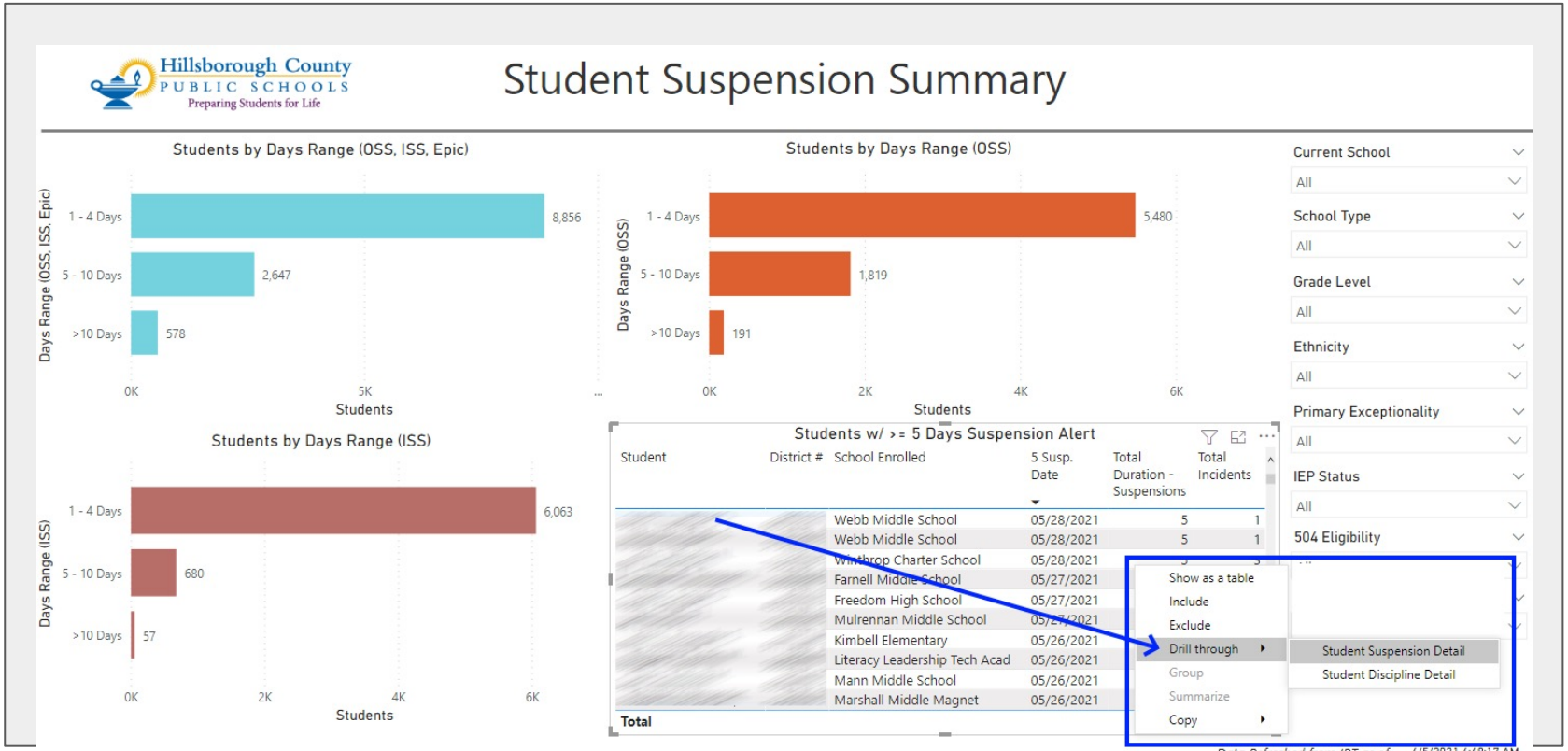


Student	District #	School Enrolled	School Occurred	Incident Date	Incident Number	Category	Reason	Response	Du	
				01/19/2021	25590	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension		
				11/09/2020	13275	Physical Attack	Physical Attack	Out-Of-School Suspension		
				09/11/2020	612	Personal Conduct	Disruptive	Out-Of-School Suspension		
				09/29/2020	3096	Personal Conduct	Profanity	Out-Of-School Suspension		
				10/06/2020	4837	Physical Attack	Physical Attack	Out-Of-School Suspension		
				09/09/2020	388	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension		
				09/28/2020	2793	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension		
				01/28/2021	28631	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension		
				10/27/2020	10064	Inappropriate Sexual Behavior	Inappropriate Sexual Behavior	Out-Of-School Suspension	3	Stan
				11/05/2020	12400	Personal Conduct	Disruptive	Out-Of-School Suspension	1	Jone
				12/11/2020	19623	Personal Conduct	Disruptive	Out-Of-School Suspension	1	Jone
				12/11/2020	19757	Physical Attack	Physical Attack	Out-Of-School Suspension	5	Stan
				10/29/2020	10647	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	1	Jone
				11/17/2020	14447	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	1	Jone
				12/01/2020	17260	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	2	Stan
				12/15/2020	20625	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	1	Jone
				01/06/2021	22984	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	2	Jone
				01/12/2021	24433	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	2	Jone
				11/05/2020	12165	Personal Conduct	Disrespectful	Out-Of-School Suspension	1	Mille
				01/20/2021	25719	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension	2	Jone
				03/02/2021	41413	Fighting	Fighting(serious Mutual Altrn)	Out-Of-School Suspension	3	Hall,
				12/10/2020	19379	Personal Conduct	Disruptive	Out-Of-School Suspension	1	Jone
				01/08/2021	23619	Personal Conduct	Disruptive	Out-Of-School Suspension	1	Jone
				02/02/2021	30114	Physical Attack	Physical Attack	Out-Of-School Suspension	5	Jone
				12/11/2020	19697	Personal Conduct	Disobedience/Insubordination	Out-Of-School Suspension	2	Holl
				04/12/2021	52655	Alcohol/Drugs	Drug Possession And/Or Use	Out-Of-School Suspension	5	Berr
				05/11/2021	64449	Alcohol/Drugs	Drug Possession And/Or Use	Out-Of-School Suspension	3	Jone

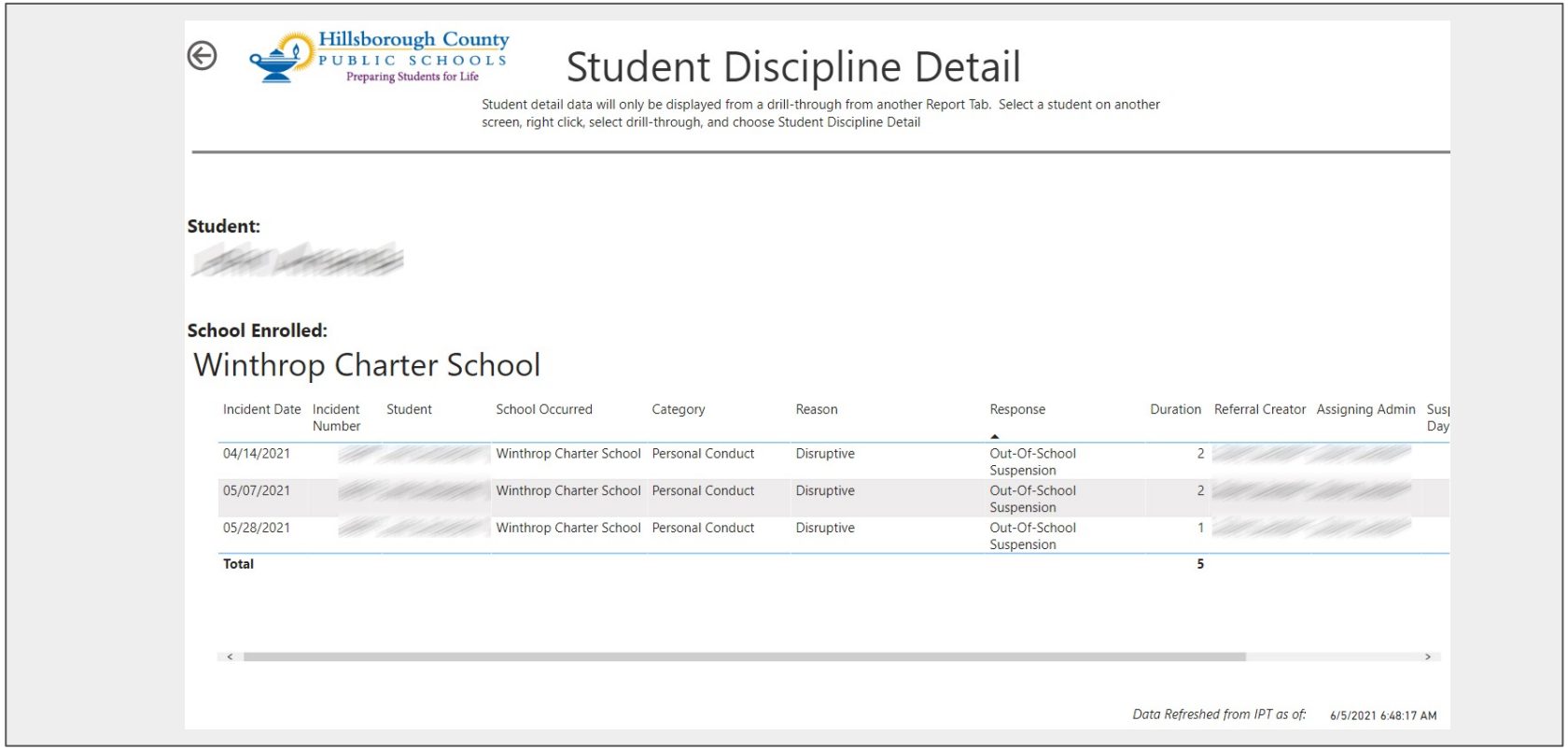
Drill Through Capabilities



Drill Through Capabilities – Multiple Target Options



Drill Through Capabilities



Hillsborough County PUBLIC SCHOOLS
Preparing Students for Life

Student Discipline Detail

Student detail data will only be displayed from a drill-through from another Report Tab. Select a student on another screen, right click, select drill-through, and choose Student Discipline Detail

Student:

School Enrolled:

Winthrop Charter School

Incident Date	Incident Number	Student	School Occurred	Category	Reason	Response	Duration	Referral Creator	Assigning Admin	Susp Days
04/14/2021			Winthrop Charter School	Personal Conduct	Disruptive	Out-Of-School Suspension	2			
05/07/2021			Winthrop Charter School	Personal Conduct	Disruptive	Out-Of-School Suspension	2			
05/28/2021			Winthrop Charter School	Personal Conduct	Disruptive	Out-Of-School Suspension	1			
Total							**5**			

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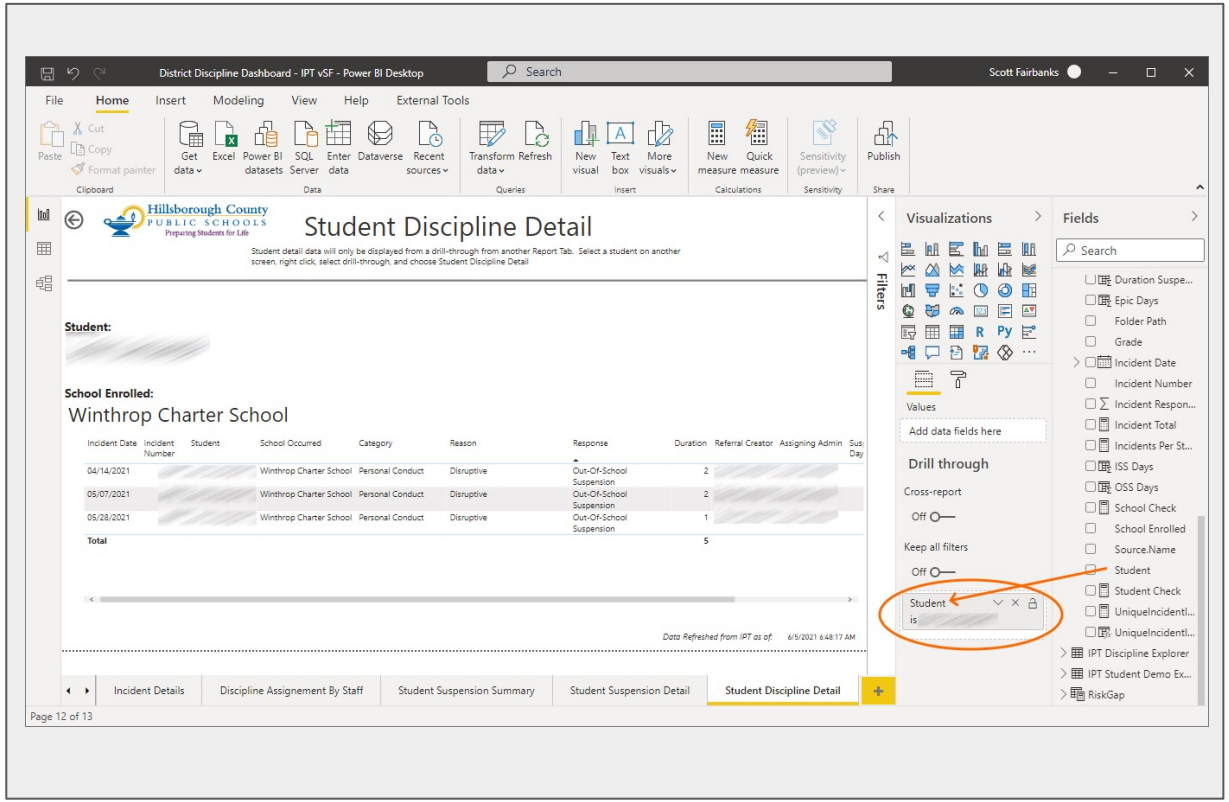
Drill Through Capabilities

- Include the field to use as the drill through item in the visualization pane on the target report
- Use that field in a visualization on a different report page, right click on the visualization to see the drill through choices
- Report pages that are drill through enabled are seen here (use good naming conventions)



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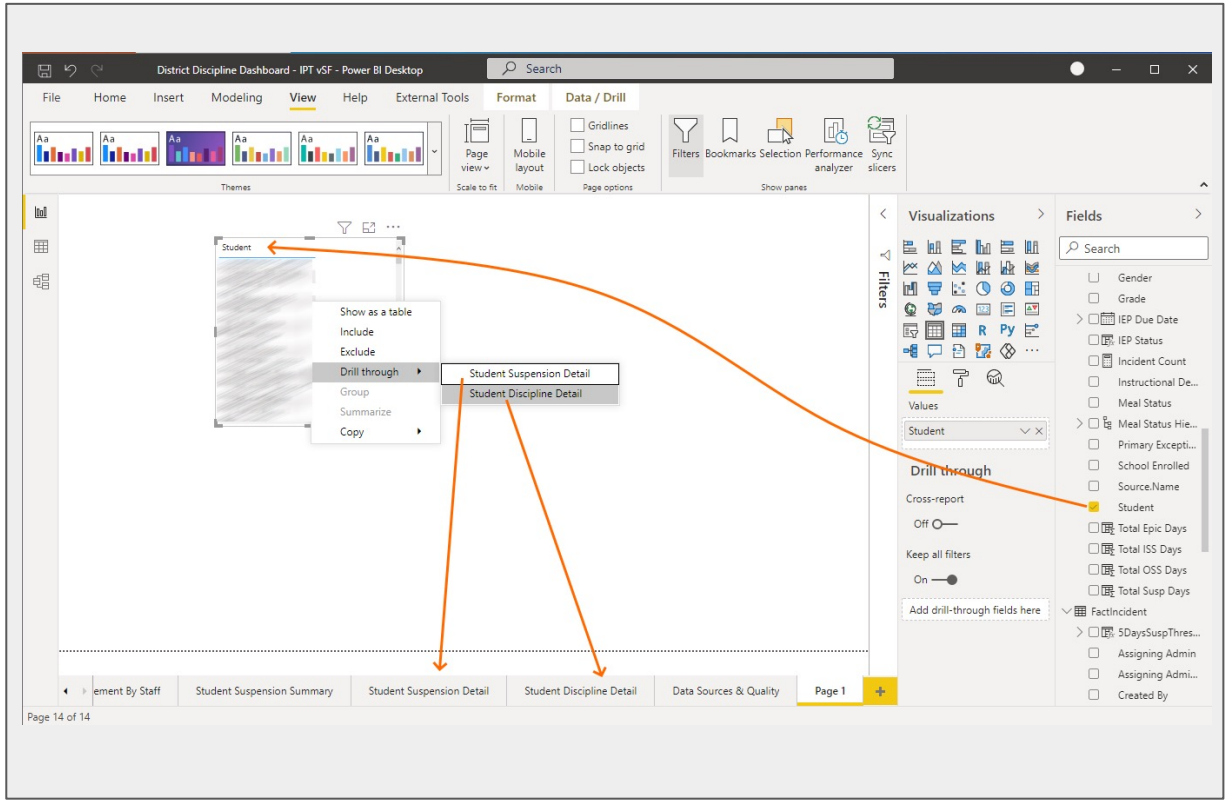

Drill Through Capabilities

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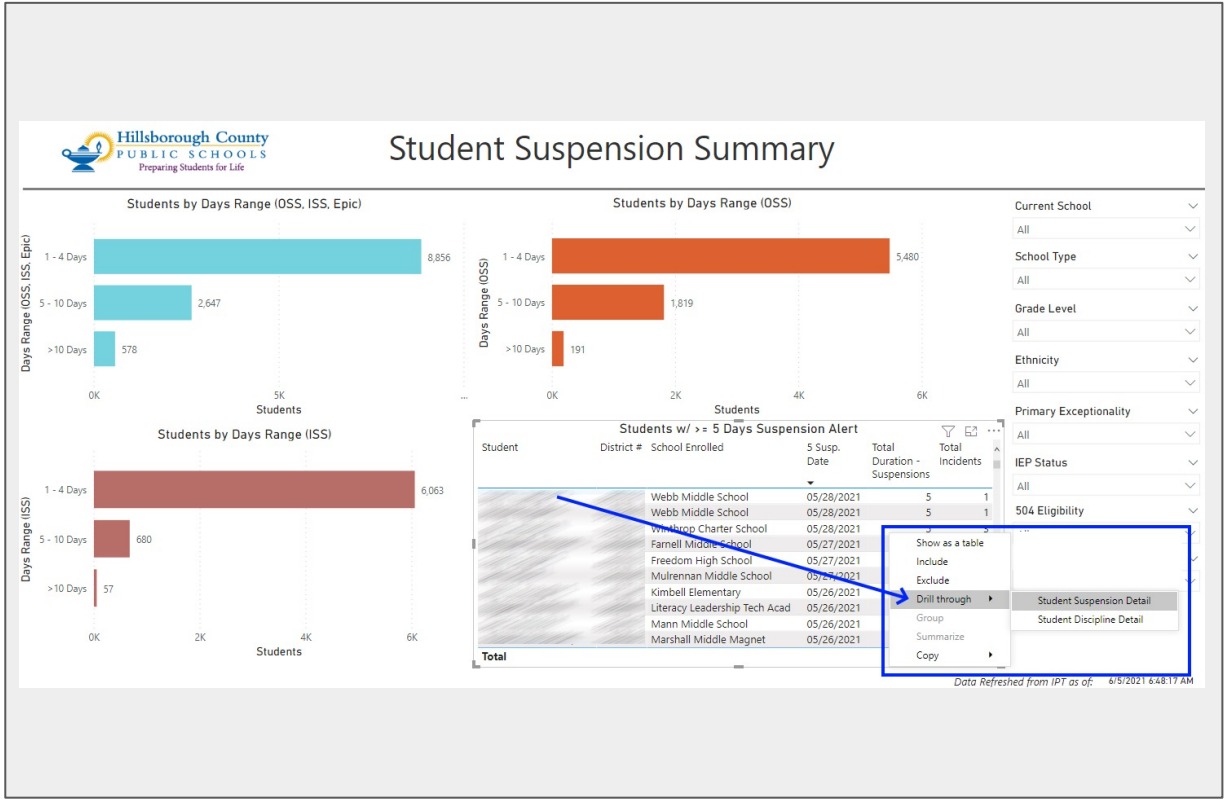
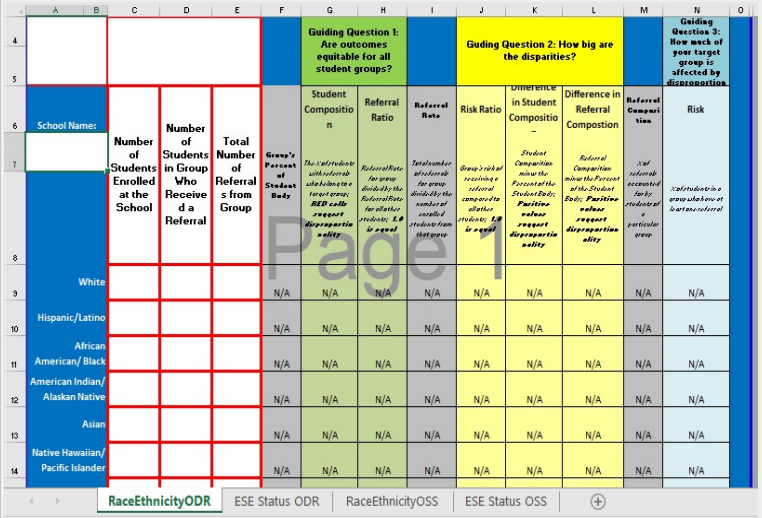


Using Colors to Focus Attention

- Power BI makes it easy to set background colors to help group data together
- Conditional formatting to highlight specific scenarios is a helpful way to monitor performance
    - E.g. when Risk Ratio >= 3, red background

Using Colors to Focus Attention

Old version (PDF)



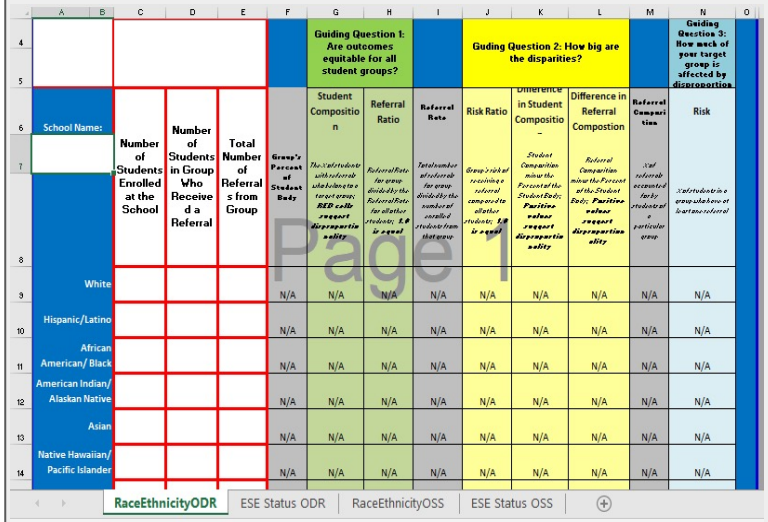
						Guiding Question 1: Are outcomes equitable for all student groups?			Guding Question 2: How big are the disparities?					Guiding Question 3: How much of your target group is affected by disproportion
School Name:	Number of Students Enrolled at the School	Number of Students in Group Who Received a Referral	Total Number of Referrals from Group	Group's Percent of Student Body	Student Composition	Referral Ratio	Referral Rate	Risk Ratio	Difference in Student Composition	Difference in Referral Compostion	Referral Comparision	Risk	
White				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Hispanic/Latino				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
African American/ Black				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
American Indian/ Alaskan Native				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Asian				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Native Hawaiian/ Pacific Islander				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

RaceEthnicityODR | ESE Status ODR | RaceEthnicityOSS | ESE Status OSS

Page 1

Using Colors to Focus Attention

Old version (PDF)

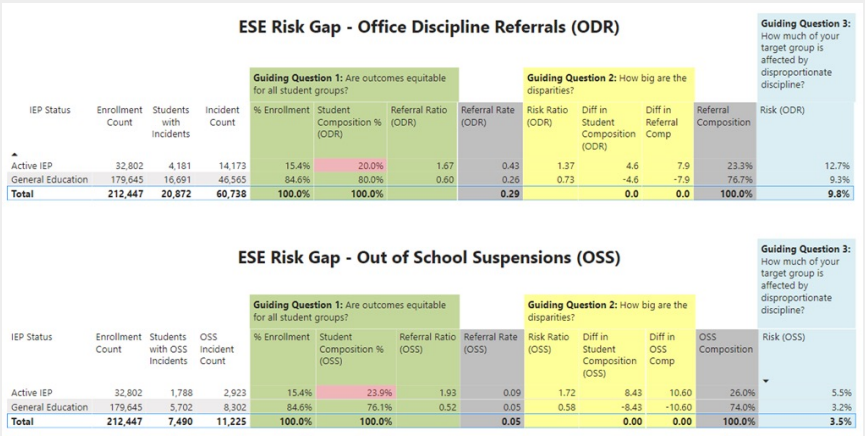


		Guiding Question 1: Are outcomes equitable for all student groups?			Guiding Question 2: How big are the disparities?			Guiding Question 3: How much of your target group is affected by disproportiona
School Name:	Number of Students Enrolled at the School	Number of Students in Group Who Received a Referral	Total Number of Referrals from Group	Group's Percent of Student Body	Student Composition	Referral Ratio	Referral Rate	Risk Ratio	Difference in Student Composition	Difference in Referral Compostion	Referral Comparison	Risk
White				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hispanic/Latino				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
African American/ Black				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
American Indian/ Alaskan Native				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asian				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Native Hawaiian/ Pacific Islander				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RaceEthnicityODR | ESE Status ODR | RaceEthnicityOSS | ESE Status OSS

Page 1

New version (Power BI)



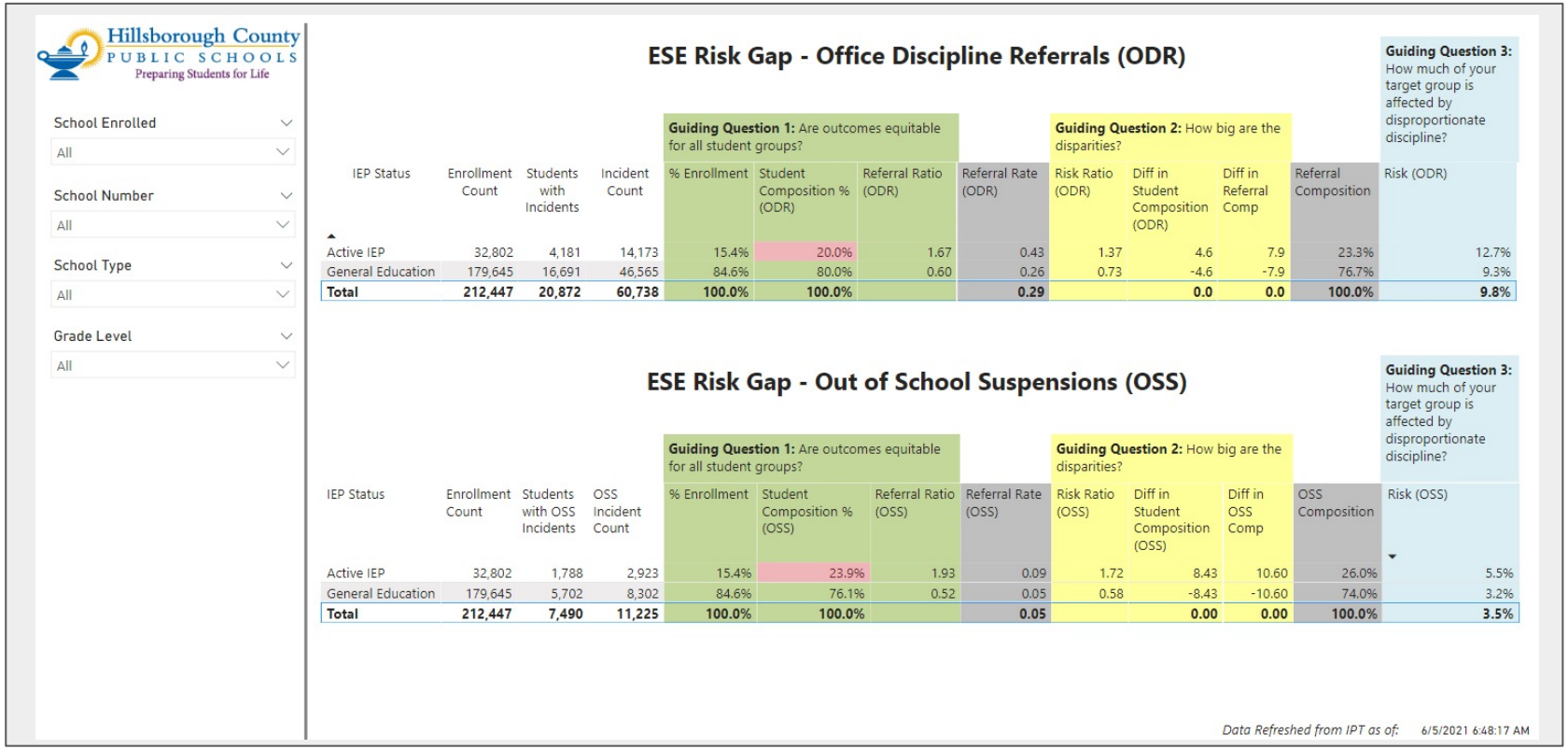
ESE Risk Gap - Office Discipline Referrals (ODR)

IEP Status	Enrollment Count	Students with Incidents	Incident Count	Guiding Question 1: % Enrollment	Guiding Question 1: Student Composition % (ODR)	Guiding Question 1: Referral Ratio (ODR)	Guiding Question 1: Referral Rate (ODR)	Guiding Question 2: Risk Ratio (ODR)	Guiding Question 2: Diff in Student Composition (ODR)	Guiding Question 2: Diff in Referral Comp	Referral Composition	Guiding Question 3: Risk (ODR)
Active IEP	32,802	4,181	14,173	15.4%	20.0%	1.67	0.43	1.37	4.6	7.9	23.3%	12.7%
General Education	179,645	16,691	46,565	84.6%	80.0%	0.60	0.26	0.73	-4.6	-7.9	76.7%	9.3%
Total	**212,447**	**20,872**	**60,738**	**100.0%**	**100.0%**		**0.29**		**0.0**	**0.0**	**100.0%**	**9.8%**

ESE Risk Gap - Out of School Suspensions (OSS)

IEP Status	Enrollment Count	Students with OSS Incidents	OSS Incident Count	Guiding Question 1: % Enrollment	Guiding Question 1: Student Composition % (OSS)	Guiding Question 1: Referral Ratio (OSS)	Guiding Question 1: Referral Rate (OSS)	Guiding Question 2: Risk Ratio (OSS)	Guiding Question 2: Diff in Student Composition (OSS)	Guiding Question 2: Diff in OSS Comp	OSS Composition	Guiding Question 3: Risk (OSS)
Active IEP	32,802	1,788	2,923	15.4%	23.9%	1.93	0.09	1.72	8.43	10.60	26.0%	5.5%
General Education	179,645	5,702	8,302	84.6%	76.1%	0.52	0.05	0.58	-8.43	-10.60	74.0%	3.2%
Total	**212,447**	**7,490**	**11,225**	**100.0%**	**100.0%**		**0.05**		**0.00**	**0.00**	**100.0%**	**3.5%**

Using Colors to Focus Attention



Hillsborough County PUBLIC SCHOOLS
Preparing Students for Life

School Enrolled: All
School Number: All
School Type: All
Grade Level: All

ESE Risk Gap - Office Discipline Referrals (ODR)

Guiding Question 1: Are outcomes equitable for all student groups?
Guiding Question 2: How big are the disparities?
Guiding Question 3: How much of your target group is affected by disproportionate discipline?

IEP Status	Enrollment Count	Students with Incidents	Incident Count	% Enrollment	Student Composition % (ODR)	Referral Ratio (ODR)	Referral Rate (ODR)	Risk Ratio (ODR)	Diff in Student Composition (ODR)	Diff in Referral Comp	Referral Composition	Risk (ODR)
Active IEP	32,802	4,181	14,173	15.4%	20.0%	1.67	0.43	1.37	4.6	7.9	23.3%	12.7%
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ESE Risk Gap - Out of School Suspensions (OSS)

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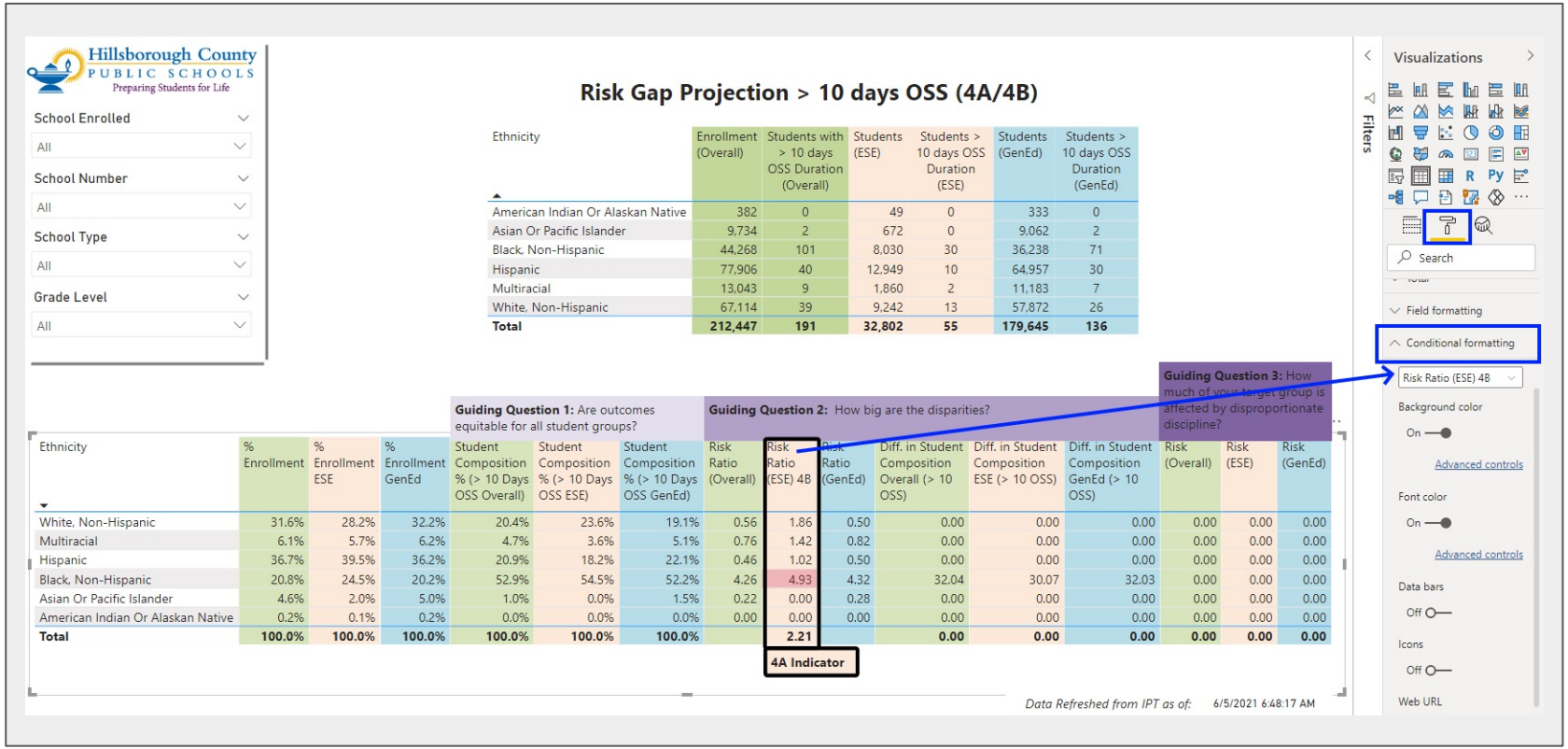
General Education	179,645	5,702	8,302	84.6%	76.1%	0.52	0.05	0.58	-8.43	-10.60	74.0%	3.2%
Total	**212,447**	**7,490**	**11,225**	**100.0%**	**100.0%**		**0.05**		**0.00**	**0.00**	**100.0%**	**3.5%**

Data Refreshed from IPT as of: 6/5/2021 6:48:17 AM

Using Colors to Focus Attention



Hillsborough County PUBLIC SCHOOLS
Preparing Students for Life

School Enrolled: All
School Number: All
School Type: All
Grade Level: All

Risk Gap Projection > 10 days OSS (4A/4B)

Ethnicity	Enrollment (Overall)	Students with > 10 days OSS Duration (Overall)	Students (ESE)	Students > 10 days OSS Duration (ESE)	Students (GenEd)	Students > 10 days OSS Duration (GenEd)
American Indian Or Alaskan Native	382	0	49	0	333	0
Asian Or Pacific Islander	9,734	2	672	0	9,062	2
Black, Non-Hispanic	44,268	101	8,030	30	36,238	71
Hispanic	77,906	40	12,949	10	64,957	30
Multiracial	13,043	9	1,860	2	11,183	7
White, Non-Hispanic	67,114	39	9,242	13	57,872	26
Total	**212,447**	**191**	**32,802**	**55**	**179,645**	**136**

Guiding Question 1: Are outcomes equitable for all student groups?
Guiding Question 2: How big are the disparities?
Guiding Question 3: How much of your target group is affected by disproportionate discipline?

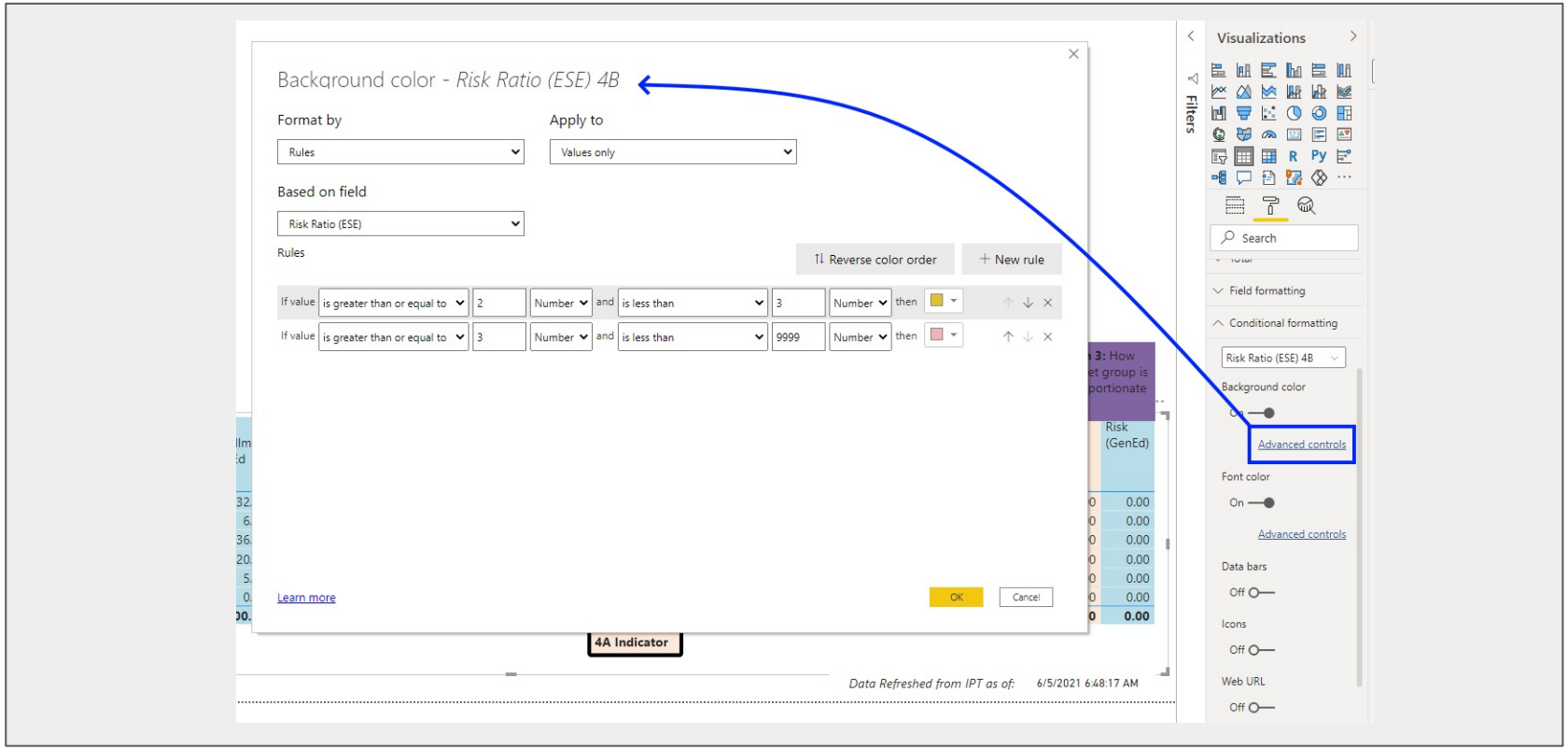
Ethnicity	% Enrollment	% Enrollment ESE	% Enrollment GenEd	Student Composition % (> 10 Days OSS Overall)	Student Composition % (> 10 Days OSS ESE)	Student Composition % (> 10 Days OSS GenEd)	Risk Ratio (Overall)	Risk Ratio (ESE) 4B	Risk Ratio (GenEd)	Diff. in Student Composition Overall (> 10 OSS)	Diff. in Student Composition ESE (> 10 OSS)	Diff. in Student Composition GenEd (> 10 OSS)	Risk (Overall)	Risk (ESE)	Risk (GenEd)
White, Non-Hispanic	31.6%	28.2%	32.2%	20.4%	23.6%	19.1%	0.56	1.86	0.50	0.00	0.00	0.00	0.00	0.00	0.00
Multiracial	6.1%	5.7%	6.2%	4.7%	3.6%	5.1%	0.76	1.42	0.82	0.00	0.00	0.00	0.00	0.00	0.00
Hispanic	36.7%	39.5%	36.2%	20.9%	18.2%	22.1%	0.46	1.02	0.50	0.00	0.00	0.00	0.00	0.00	0.00
Black, Non-Hispanic	20.8%	24.5%	20.2%	52.9%	54.5%	52.2%	4.26	4.93	4.32	32.04	30.07	32.03	0.00	0.00	0.00
Asian Or Pacific Islander	4.6%	2.0%	5.0%	1.0%	0.0%	1.5%	0.22	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
American Indian Or Alaskan Native	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**		**2.21**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4A Indicator

Data Refreshed from IPT as of: 6/5/2021 6:48:17 AM

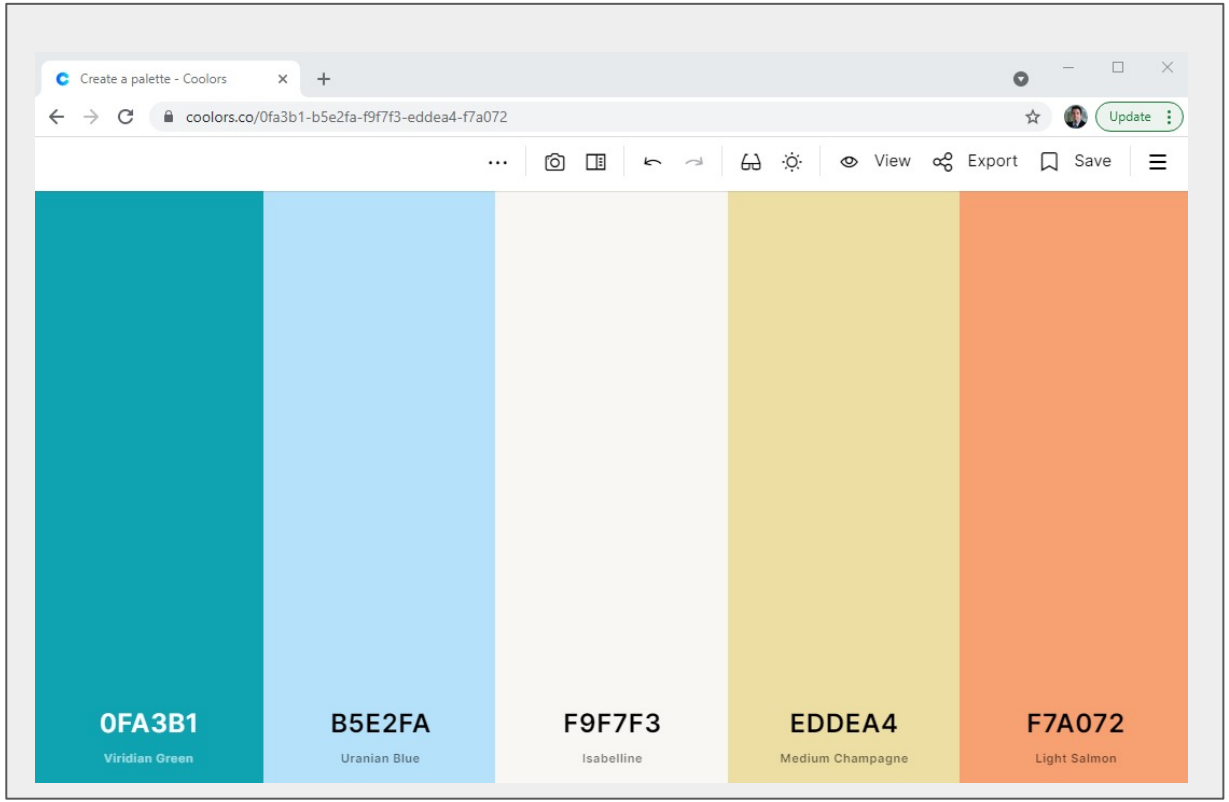
Visualizations
Filters
Search
Field formatting
Conditional formatting
Risk Ratio (ESE) 4B
Background color
On
Advanced controls
Font color
On
Advanced controls
Data bars
Off
Icons
Off
Web URL

Using Colors to Focus Attention



Color Palette Picking Pro-Tip

- https://coolors.co
- Generates various types of complimentary colors to help fill out your palette
- Possible to use a logo or other image to choose colors



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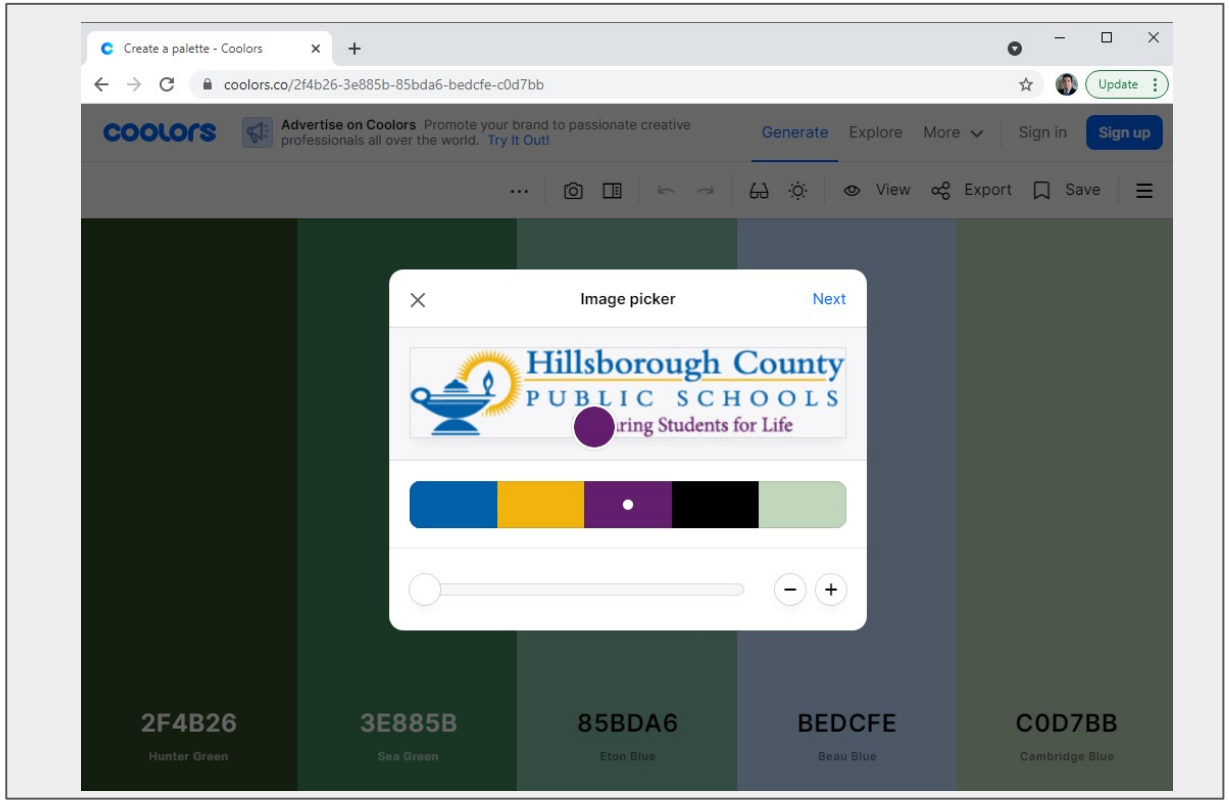

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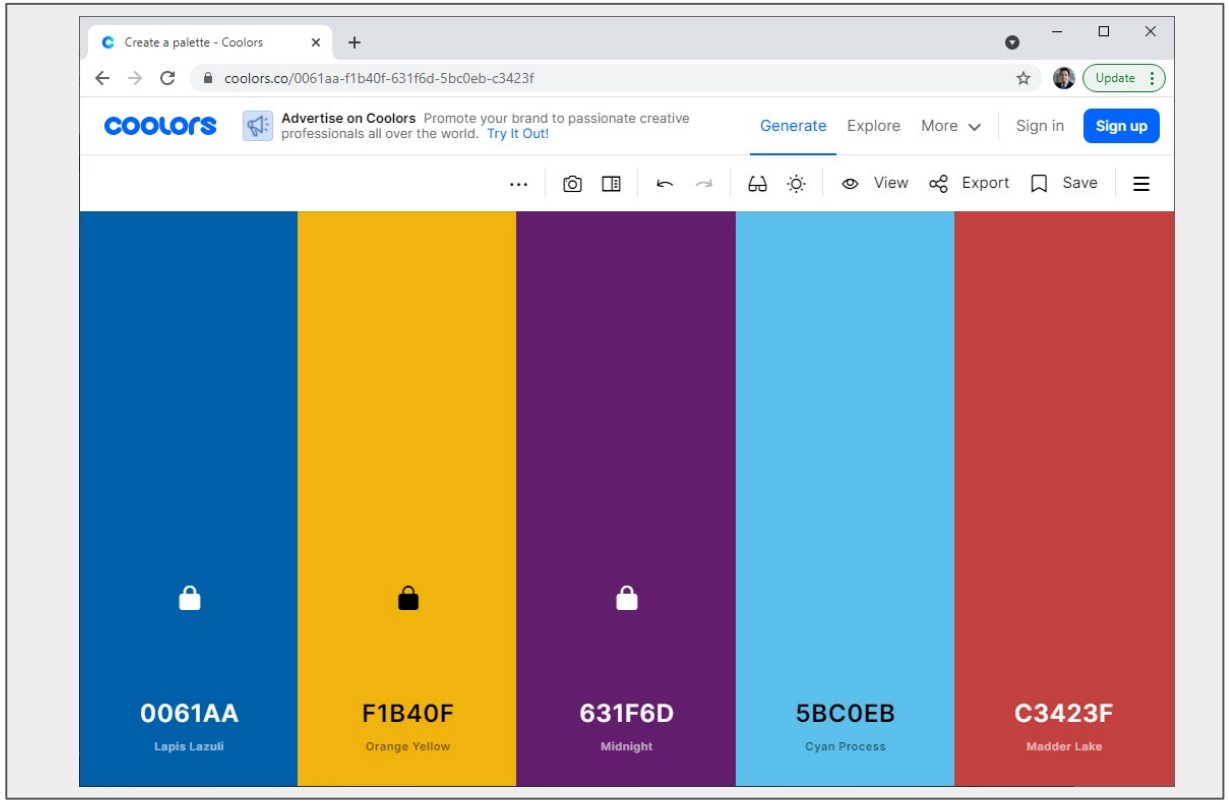

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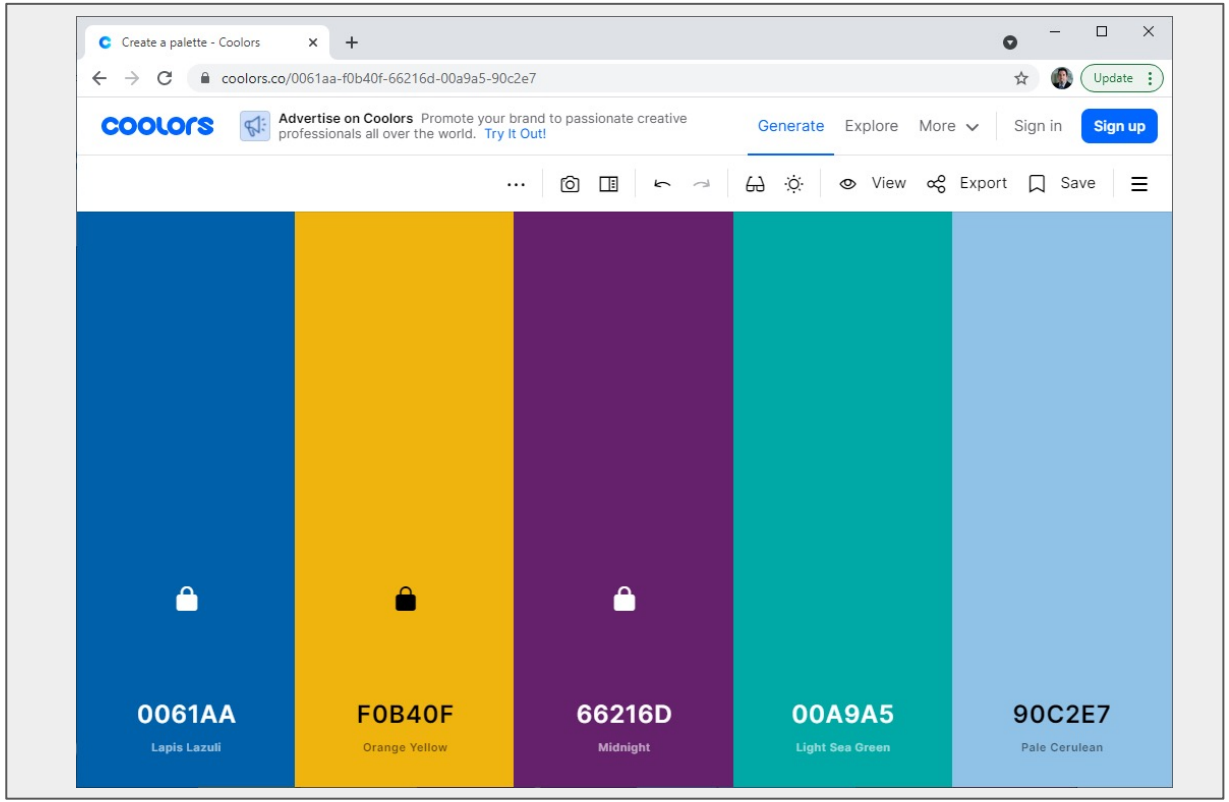

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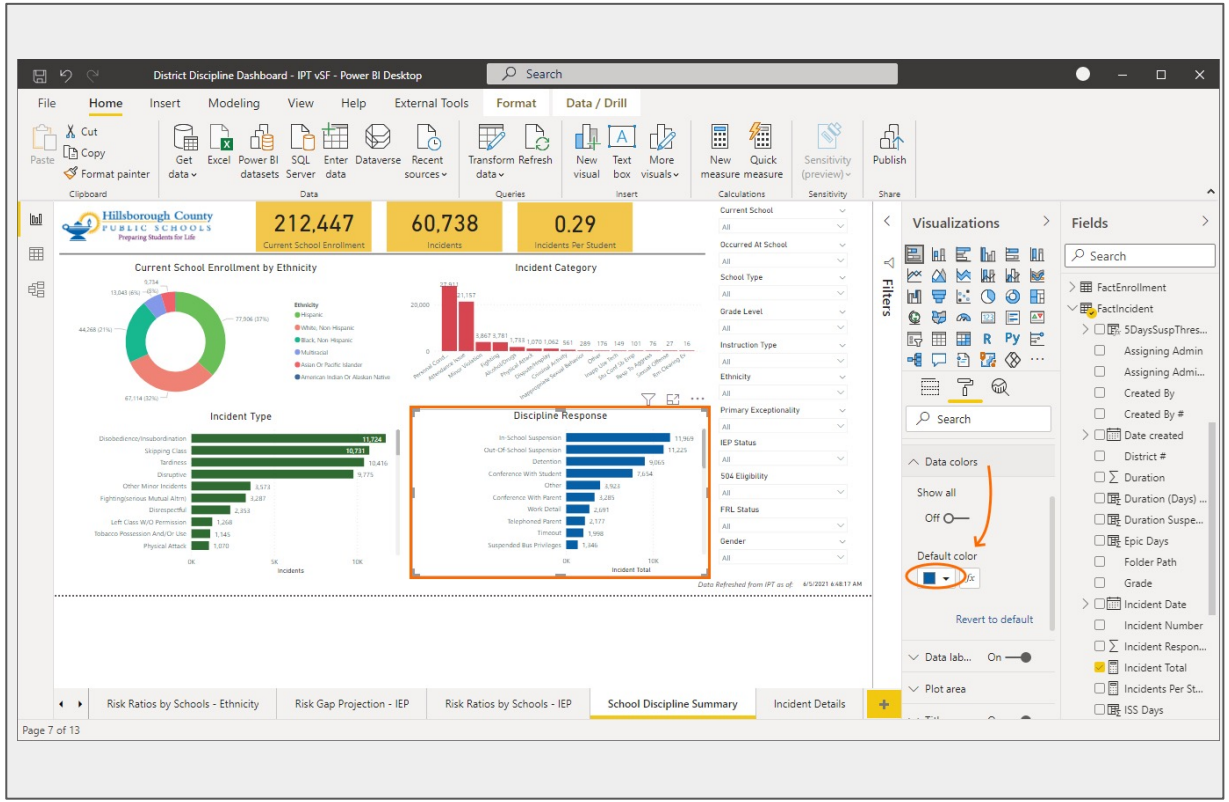

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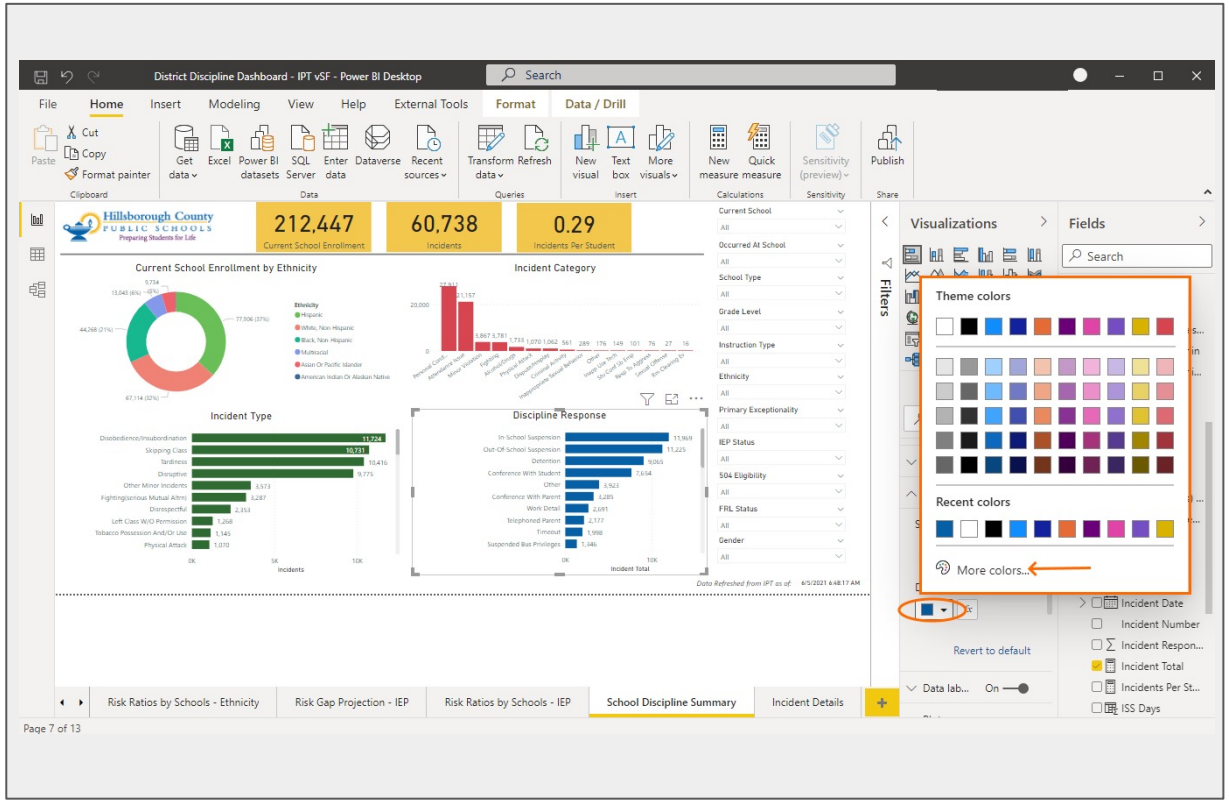

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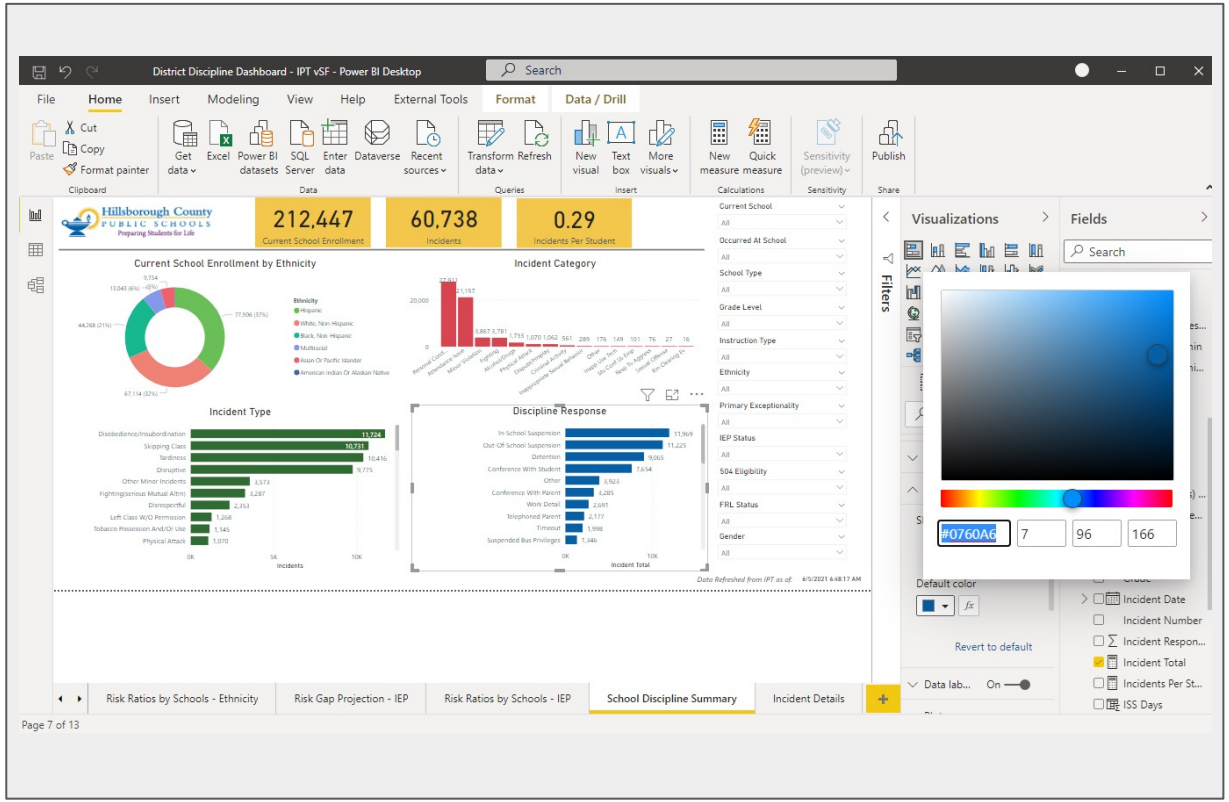

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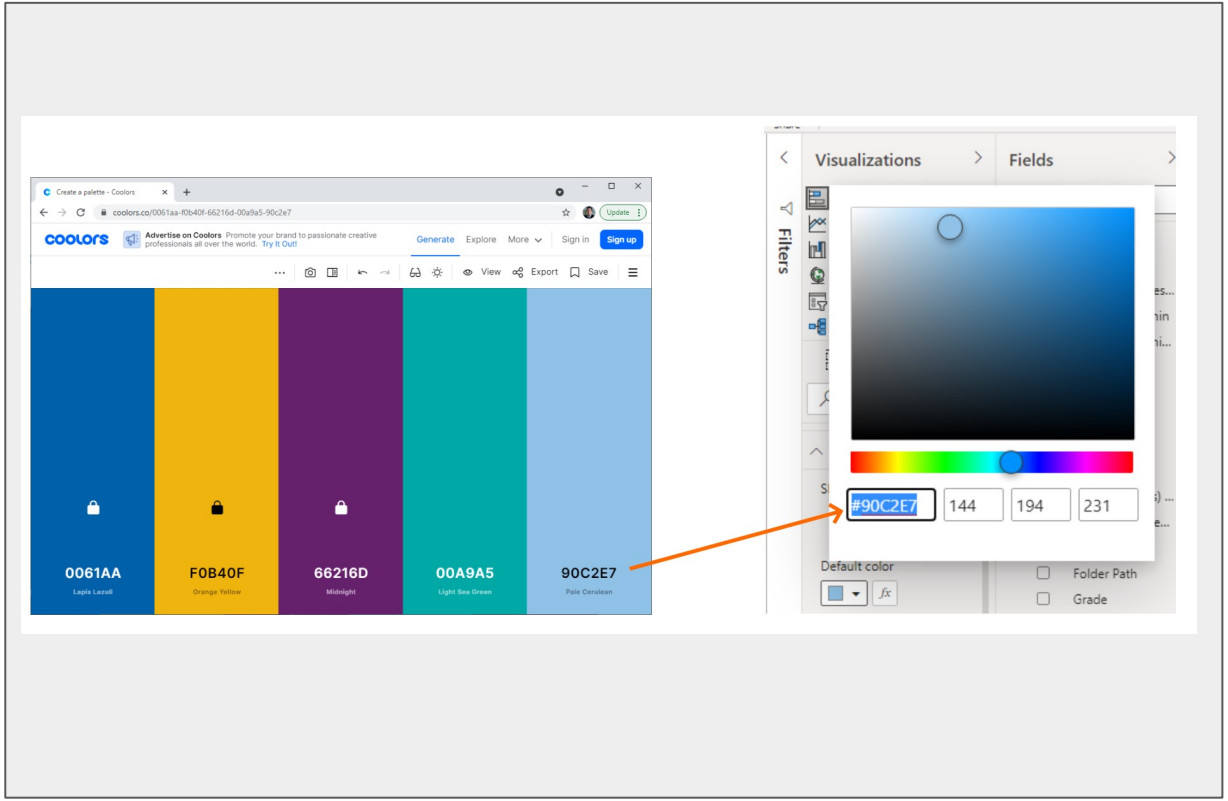


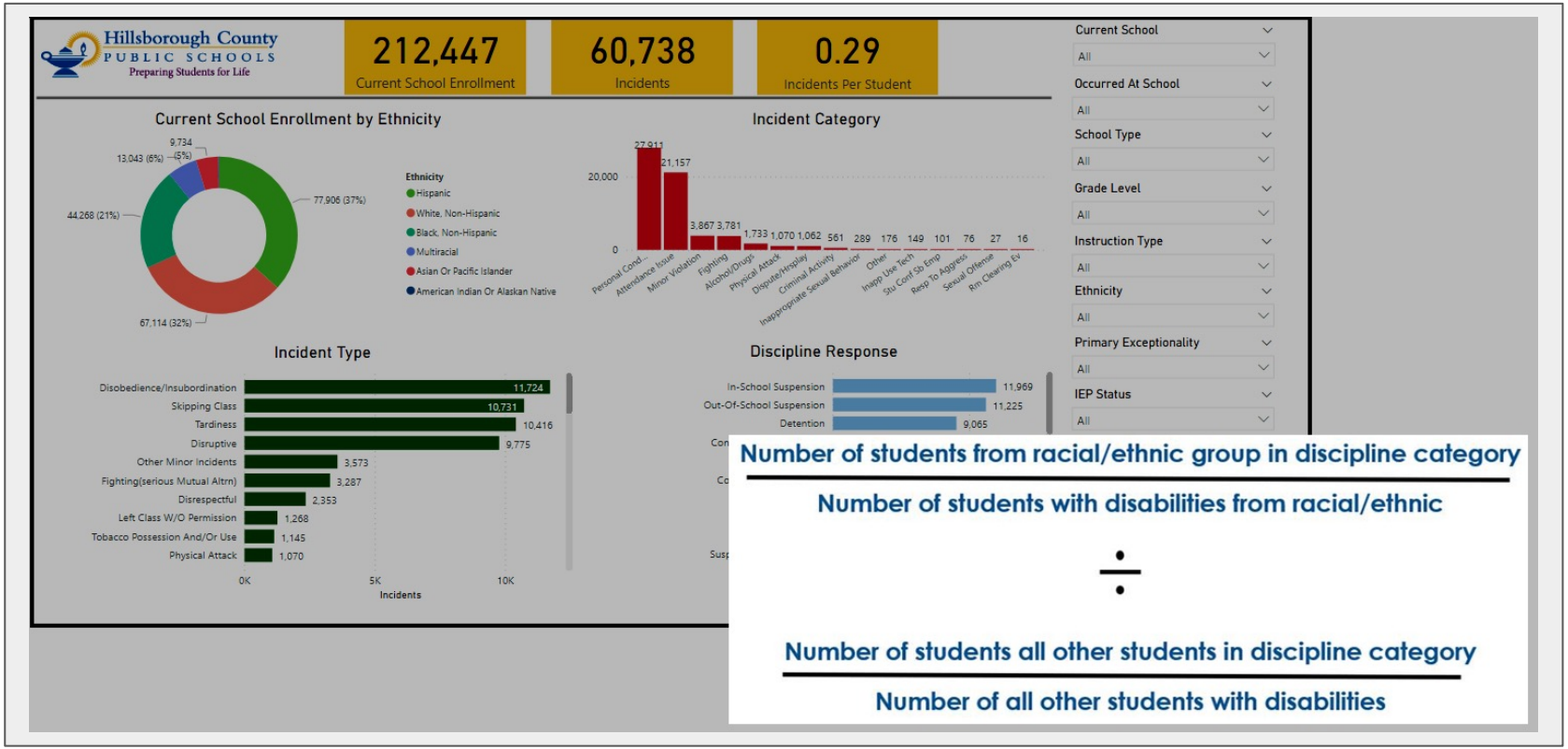
Calculation Walkthrough

- Power BI leverages DAX query language to allow for powerful and complex calculations
- Note: this approach assumes the data has already been organized and modelled in a usable way

- Risk Ratio (CCEIS) Calculation

$$\frac{\text{Number of students from racial/ethnic group in discipline category}}{\text{Number of students with disabilities from racial/ethnic}} \div \frac{\text{Number of students all other students in discipline category}}{\text{Number of all other students with disabilities}}$$

Calculation Walkthrough



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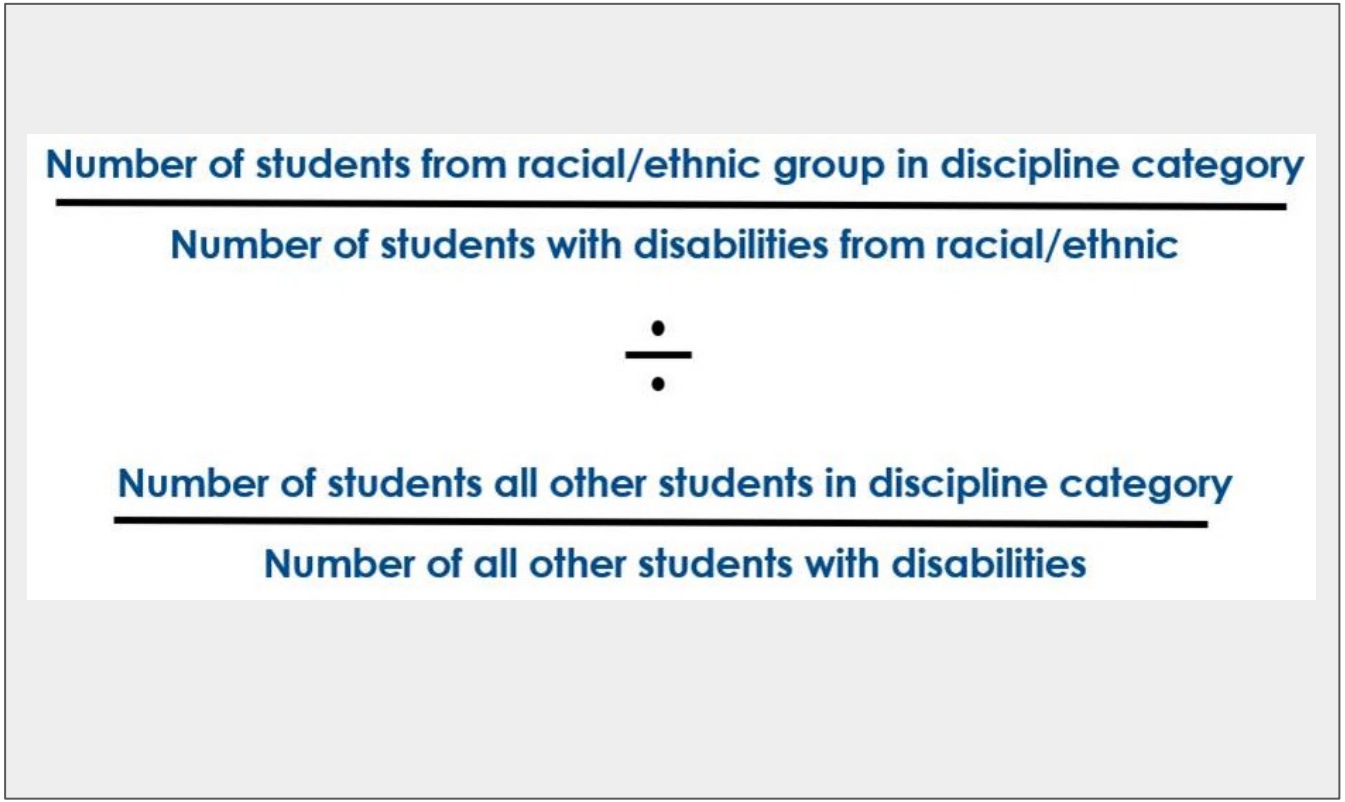
Calculation Walkthrough

- Create new measures for each building block of calculation
- Be careful with context of measure: where you place it matters
- This approach helps with traceability and testing
- Use good naming conventions



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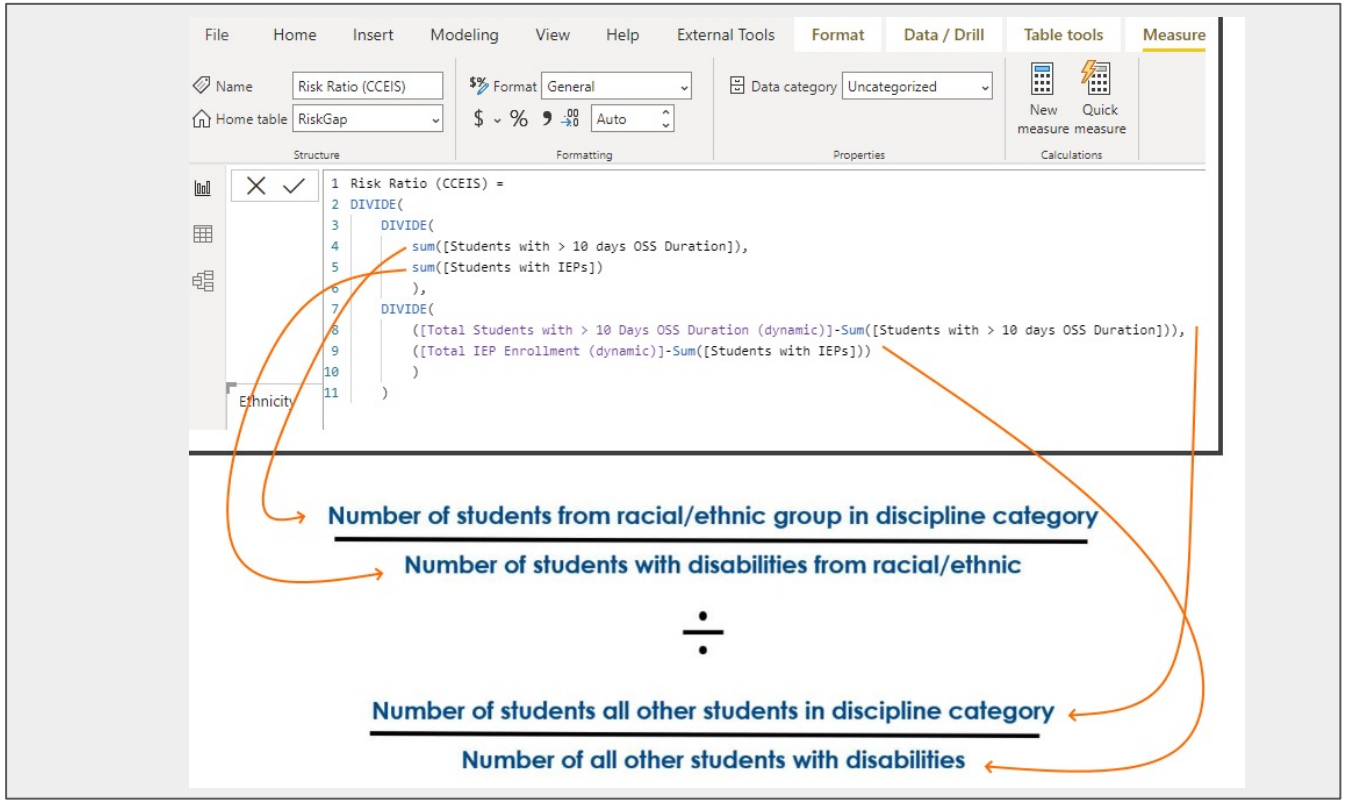

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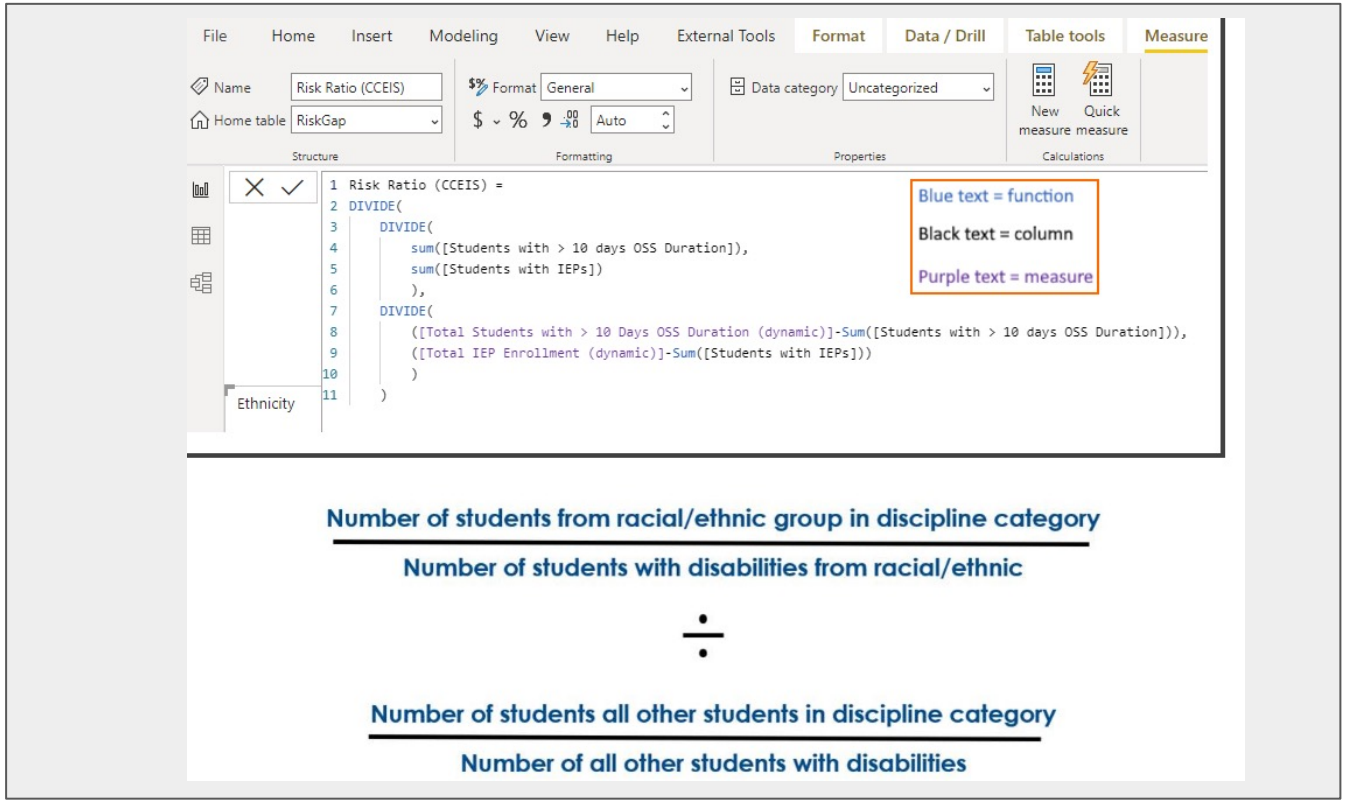

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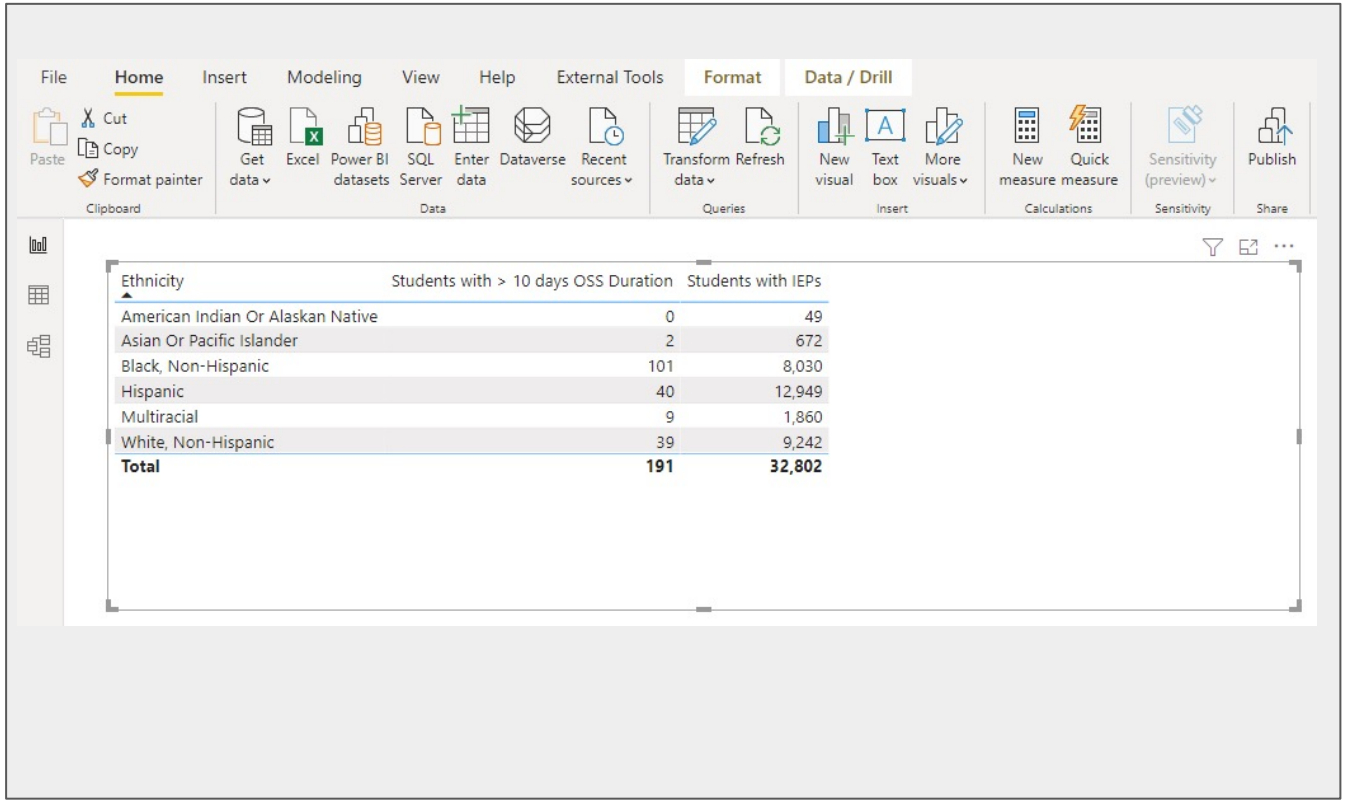

Ethnicity	Students with > 10 days OSS Duration	Students with IEPs
American Indian Or Alaskan Native	0	49
Asian Or Pacific Islander	2	672
Black, Non-Hispanic	101	8,030
Hispanic	40	12,949
Multiracial	9	1,860
White, Non-Hispanic	39	9,242
Total	**191**	**32,802**

Calculation Walkthrough

- Create new measures for each building block of calculation
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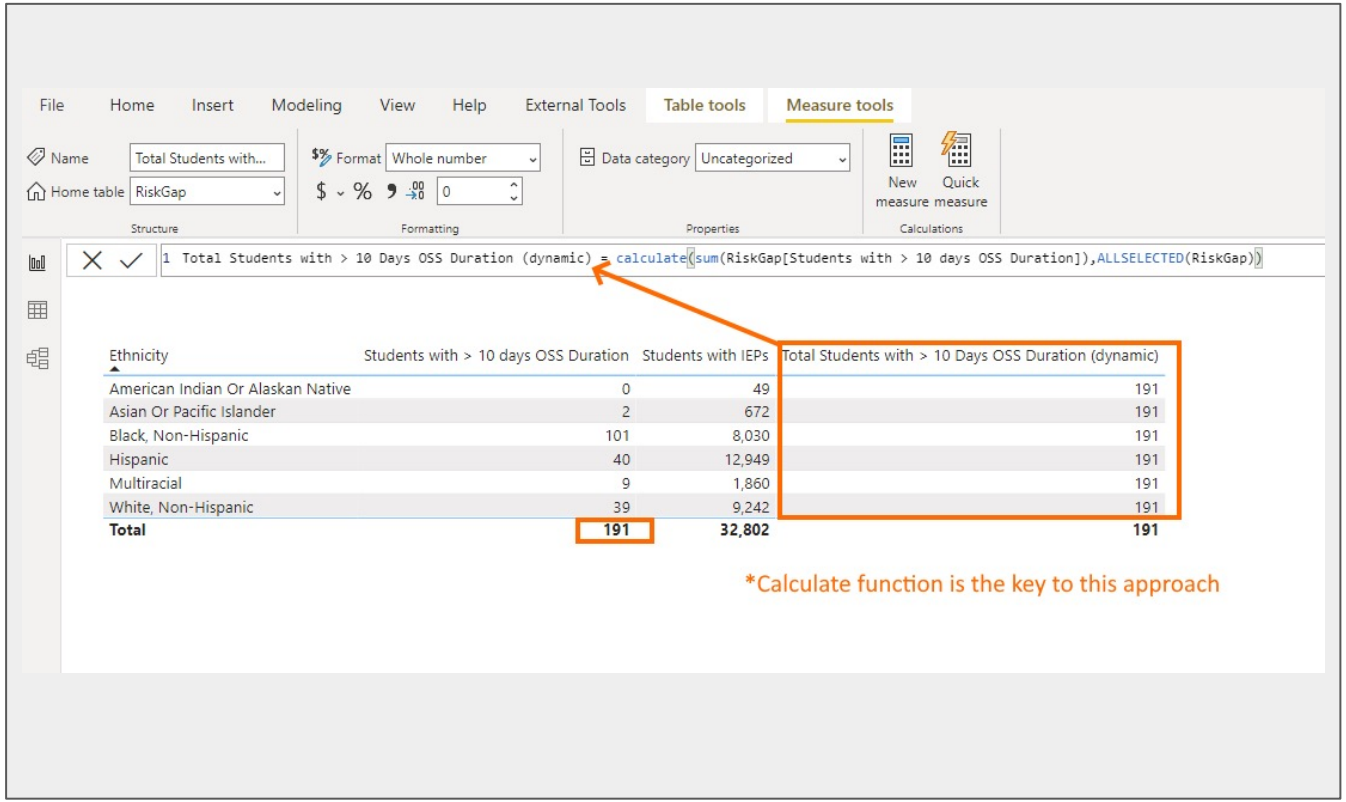

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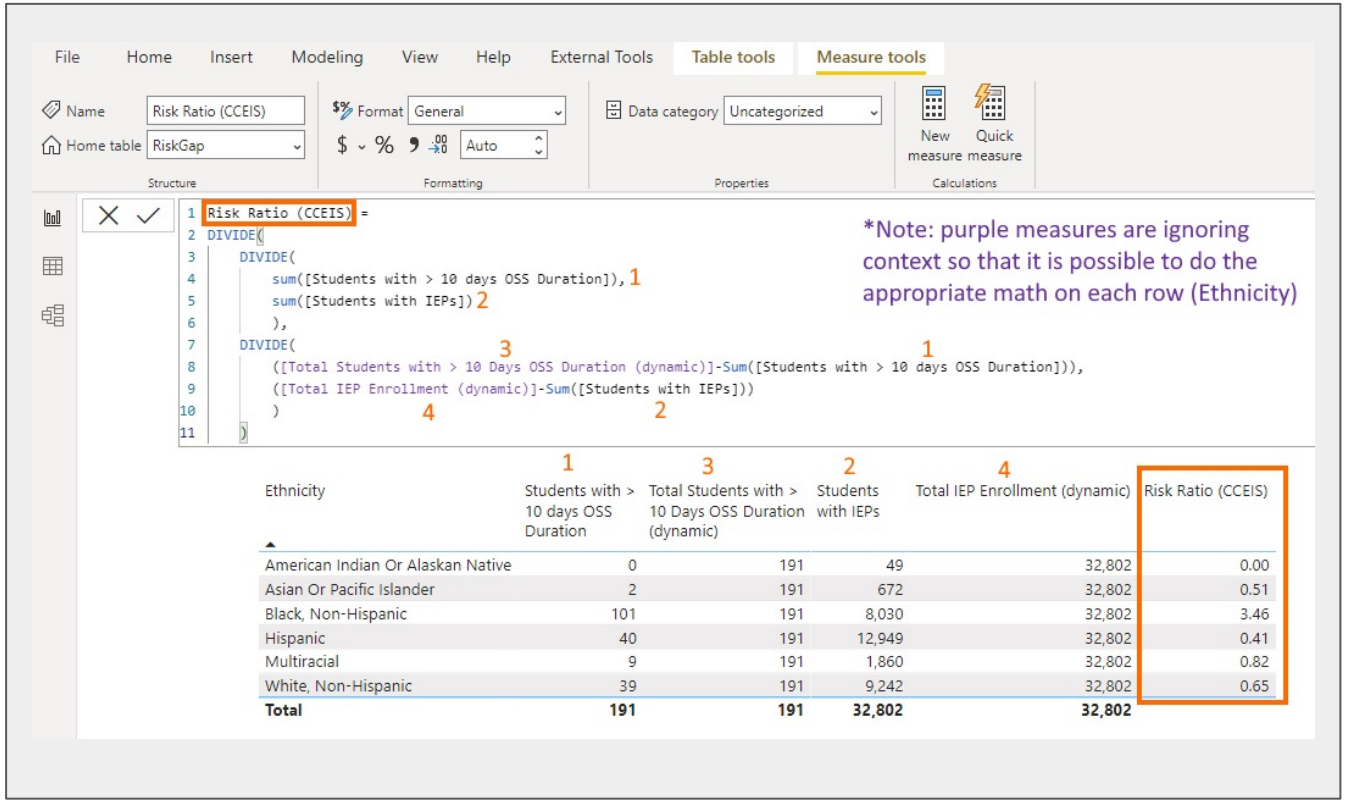

Ethnicity	1 Students with > 10 days OSS Duration	3 Total Students with > 10 Days OSS Duration (dynamic)	2 Students with IEPs	4 Total IEP Enrollment (dynamic)	Risk Ratio (CCEIS)
American Indian Or Alaskan Native	0	191	49	32,802	0.00
Asian Or Pacific Islander	2	191	672	32,802	0.51
Black, Non-Hispanic	101	191	8,030	32,802	3.46
Hispanic	40	191	12,949	32,802	0.41
Multiracial	9	191	1,860	32,802	0.82
White, Non-Hispanic	39	191	9,242	32,802	0.65
Total	**191**	**191**	**32,802**	**32,802**	

Calculation Walkthrough

- Create new measures for each building block of calculation
- Be careful with context of measure: where you place it matters
- This approach helps with traceability and testing
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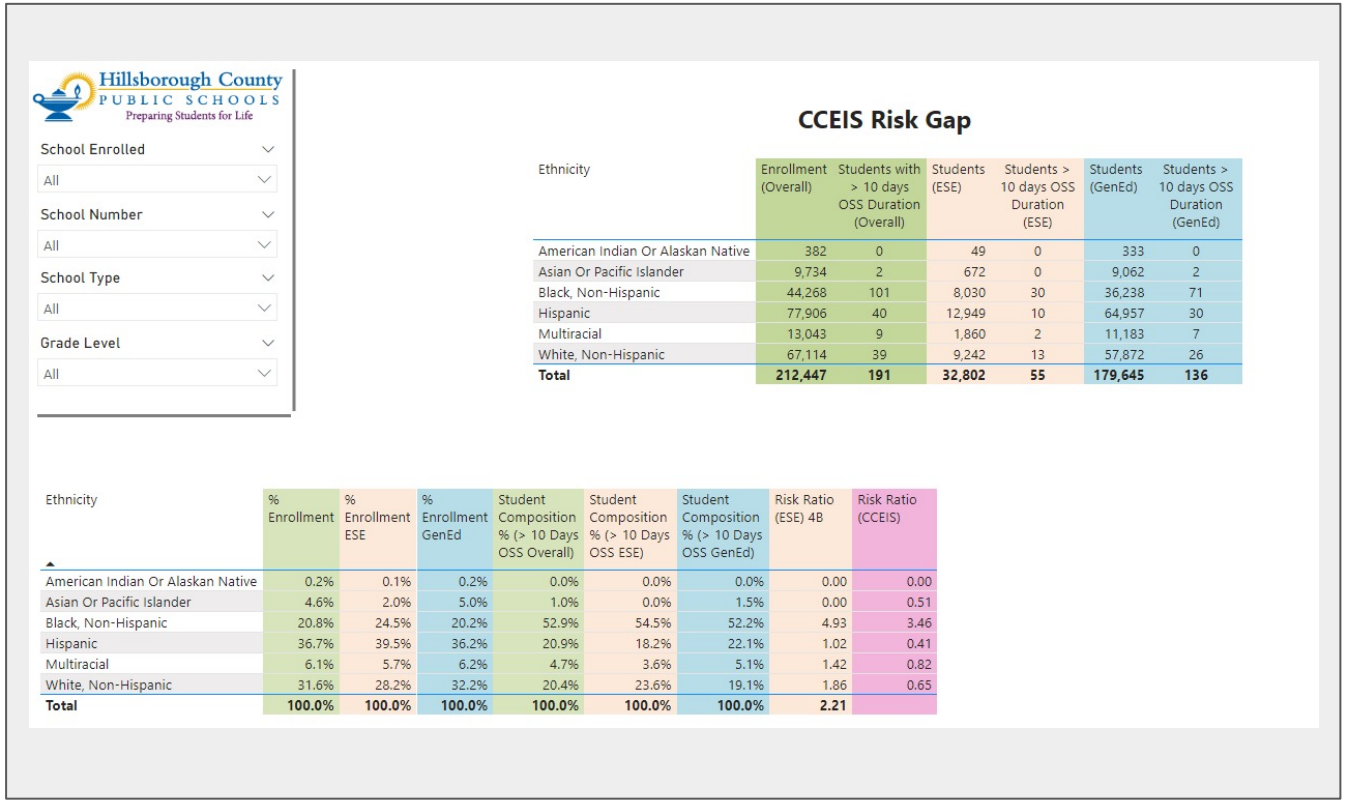


CCEIS Risk Gap

Ethnicity	Enrollment (Overall)	Students with > 10 days OSS Duration (Overall)	Students (ESE)	Students > 10 days OSS Duration (ESE)	Students (GenEd)	Students > 10 days OSS Duration (GenEd)
American Indian Or Alaskan Native	382	0	49	0	333	0
Asian Or Pacific Islander	9,734	2	672	0	9,062	2
Black, Non-Hispanic	44,268	101	8,030	30	36,238	71
Hispanic	77,906	40	12,949	10	64,957	30
Multiracial	13,043	9	1,860	2	11,183	7
White, Non-Hispanic	67,114	39	9,242	13	57,872	26
Total	**212,447**	**191**	**32,802**	**55**	**179,645**	**136**

Ethnicity	% Enrollment	% Enrollment ESE	% Enrollment GenEd	Student Composition % (> 10 Days OSS Overall)	Student Composition % (> 10 Days OSS ESE)	Student Composition % (> 10 Days OSS GenEd)	Risk Ratio (ESE) 4B	Risk Ratio (CCEIS)
American Indian Or Alaskan Native	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.00	0.00
Asian Or Pacific Islander	4.6%	2.0%	5.0%	1.0%	0.0%	1.5%	0.00	0.51
Black, Non-Hispanic	20.8%	24.5%	20.2%	52.9%	54.5%	52.2%	4.93	3.46
Hispanic	36.7%	39.5%	36.2%	20.9%	18.2%	22.1%	1.02	0.41
Multiracial	6.1%	5.7%	6.2%	4.7%	3.6%	5.1%	1.42	0.82
White, Non-Hispanic	31.6%	28.2%	32.2%	20.4%	23.6%	19.1%	1.86	0.65
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**2.21**	

Roll Out

CCEIS District Committee: Cross Divisional Team

ESE District Leadership

Cohort Schools: 15 schools

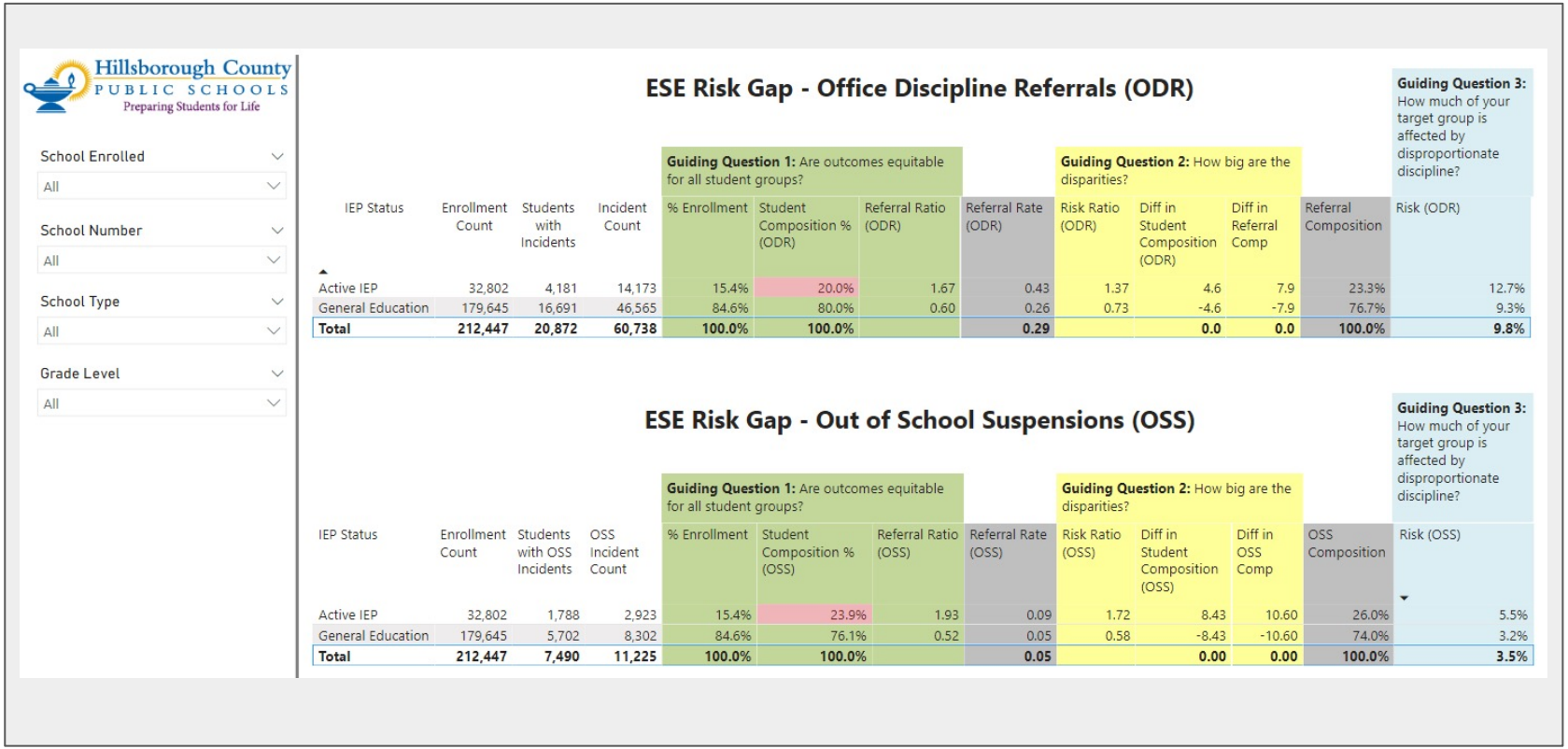
Elementary Principals

Middle School Principals

High School Principals

ESE Specialists

Updated Equity Profile



Hillsborough County PUBLIC SCHOOLS
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School Enrolled: All

School Number: All

School Type: All

Grade Level: All

ESE Risk Gap - Office Discipline Referrals (ODR)

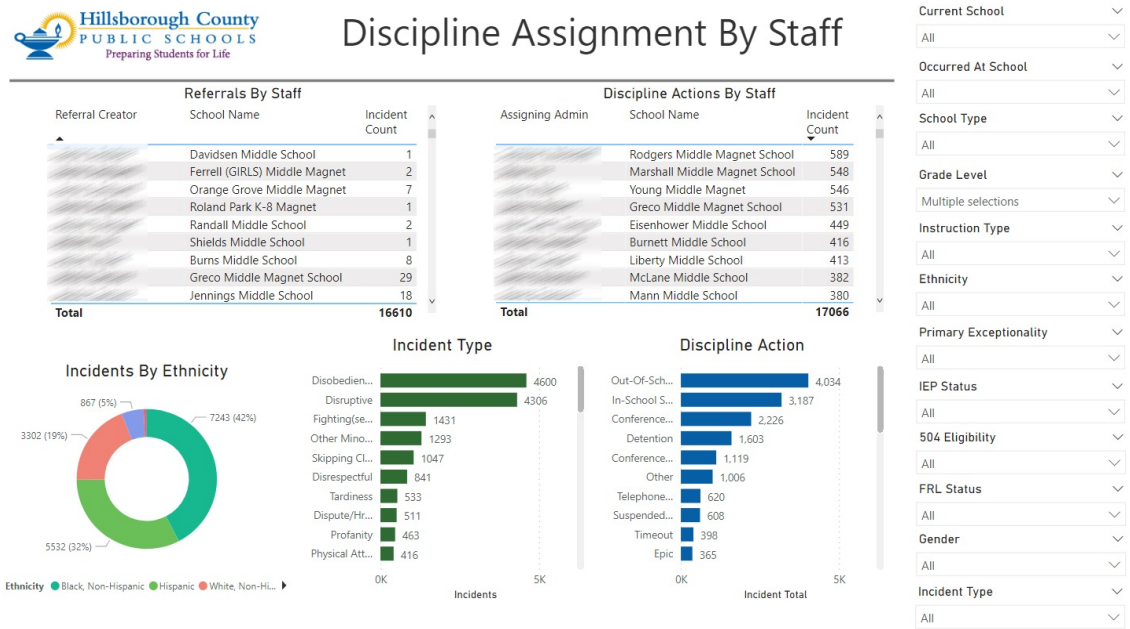
IEP Status	Enrollment Count	Students with Incidents	Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (ODR)	Referral Ratio (ODR)	Referral Rate (ODR)	**Guiding Question 2:** How big are the disparities? Risk Ratio (ODR)	Diff in Student Composition (ODR)	Diff in Referral Comp	Referral Composition	**Guiding Question 3:** How much of your target group is affected by disproportionate discipline? Risk (ODR)
Active IEP	32,802	4,181	14,173	15.4%	20.0%	1.67	0.43	1.37	4.6	7.9	23.3%	12.7%
General Education	179,645	16,691	46,565	84.6%	80.0%	0.60	0.26	0.73	-4.6	-7.9	76.7%	9.3%
Total	**212,447**	**20,872**	**60,738**	**100.0%**	**100.0%**		**0.29**		**0.0**	**0.0**	**100.0%**	**9.8%**

ESE Risk Gap - Out of School Suspensions (OSS)

IEP Status	Enrollment Count	Students with OSS Incidents	OSS Incident Count	**Guiding Question 1:** Are outcomes equitable for all student groups? % Enrollment	Student Composition % (OSS)	Referral Ratio (OSS)	Referral Rate (OSS)	**Guiding Question 2:** How big are the disparities? Risk Ratio (OSS)	Diff in Student Composition (OSS)	Diff in OSS Comp	OSS Composition	**Guiding Question 3:** How much of your target group is affected by disproportionate discipline? Risk (OSS)
Active IEP	32,802	1,788	2,923	15.4%	23.9%	1.93	0.09	1.72	8.43	10.60	26.0%	5.5%
General Education	179,645	5,702	8,302	84.6%	76.1%	0.52	0.05	0.58	-8.43	-10.60	74.0%	3.2%
Total	**212,447**	**7,490**	**11,225**	**100.0%**	**100.0%**		**0.05**		**0.00**	**0.00**	**100.0%**	**3.5%**

Building Data Based On Root Cause Analysis

- What data do we need to address the root cause as a district?
- What data do schools need to address their root cause?
- What data do schools need to impact student outcomes?



Equity Profile Data

Cohort 1: Equity Profile for ODR's for SWD's

Year	HS 1	MS 1	MS 2	HS 2
End of quarter 3 2020	2.32	1.63	1.51	1.47
End of quarter 3 2021	1.42	.87	1.28	1.49
End of school year 2021	1.35	.81	1.11	1.41

Hillsborough County PUBLIC SCHOOLS
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Equity Profile Data

Cohort 1: Equity Profile for OSS's for SWD's

Year	HS 1	MS1	MS2	H2S
End of quarter 3 2020	3.09	2.35	2.16	1.46
End of quarter 3 2021	1.40	.88	1.42	2.27
End of school year 2021	1.25	.69	1.22	1.69

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Questions

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