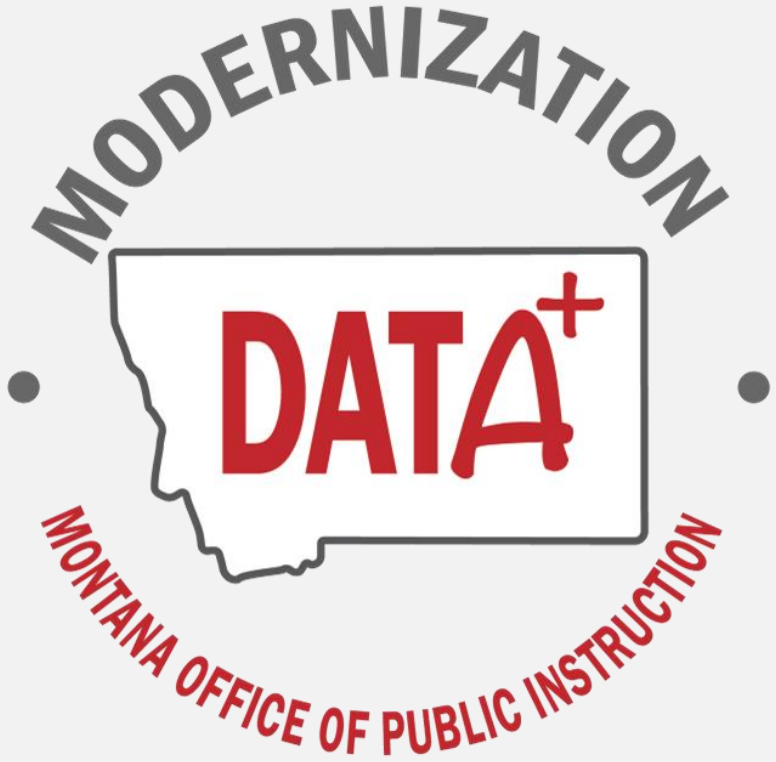


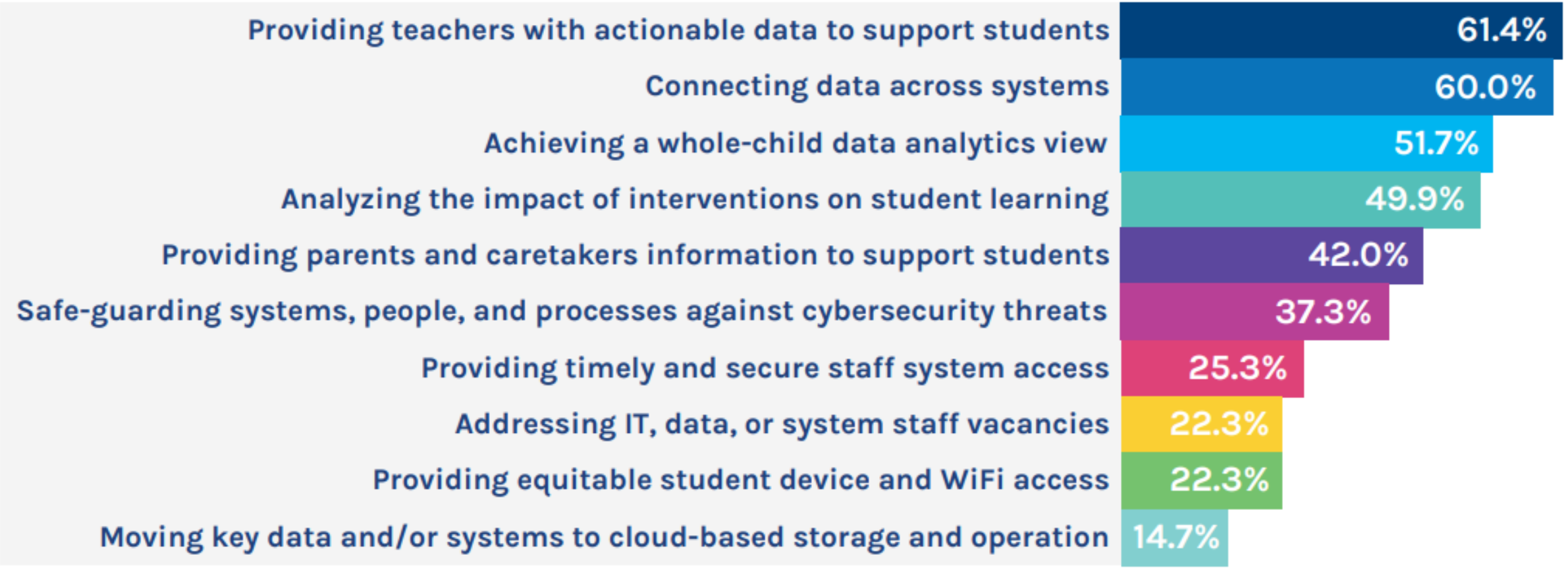
DATA MODERNIZATION PROJECT OVERVIEW

Sarah Singer, PowerSchool
Anna Hoerner, OPI

OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First

Top 2023 District Education Technology Priorities



*Education Focus Report, PowerSchool, 2023

How aware are you of the OPI Data Modernization Project?

1. Huh? What data modernization project?

2. I've heard of it…but I don't know too much about it.

3. I'm up-to-date. I have a good sense of the key details.

Data Modernization – The What

- ❑ The 2021 Legislature appropriated funds for OPI to modernize data systems.
- ❑ One part of the project will eventually replace the GEMS dashboarding tools currently being used.
- ❑ OPI purchased interactive dashboards through PowerSchool to be used by district staff.
- ❑ Some dashboards will be available to the public.

Benefits of Data Modernization

Data Insights to Support Student Success

For educators, policy-makers and families to inform decision making, investments and student success

Time Savings

- Data centralization saves time for technical staff.
- Streamlined processes for some districts when submitting required data to the state

Security

- Modern systems with industry-leading security.
- Sustainable solutions that requires fewer specialized resources to maintain.

Analytics & Insights Platform

Schools, Districts, and States Depend on the platform for:

- Student learning and growth
- Addressing chronic absenteeism
- Providing data to the community
- Early warning and intervention
- College and career readiness
- Talent or HR related analytics
- Supporting reading initiatives

Educators Empowered

State & Territory Partners

350+ District Partners

TRUE OR FALSE

Schools will be required to use a particular Student Information System?

Why Change Now?

Data Security a Stronger Need than Ever
Increasing data breaches nationally; need to replace outdated systems with modern security.

Seek Greater Efficiency
New technology can be leveraged to improve efficiency**.** Older systems increasingly become costlier to maintain with each passing year.

Legacy Systems Difficult to Sustain
Significant number of employees with legacy system knowledge will be eligible for retirement in the next 1-5 years.

Supporting Students
Data access and insights are a key ingredient to supporting student success.

Who Benefits?

Families & Communities

- How can I learn more about my child's school?
- How is my child's classroom, school, district performing?
- What do I need to know to make the best educational decisions for my child?

Districts & Schools

- How are we doing compared to our goals?
- Are our students showing growth over time?
- How can I adjust & personalize instruction for my students?
- Where can we improve?
- What can we celebrate?
- Am I allocating resources effectively?

Policymakers & Influencers

- How do we know if our decisions are making an impact?
- What should we do next?
- Are we setting the right goals and policies to support our students?
- Are we allocating funding and resources to the right initiatives?

OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First

Analytics & Insights – Primary Interface

Core Subjects Summary

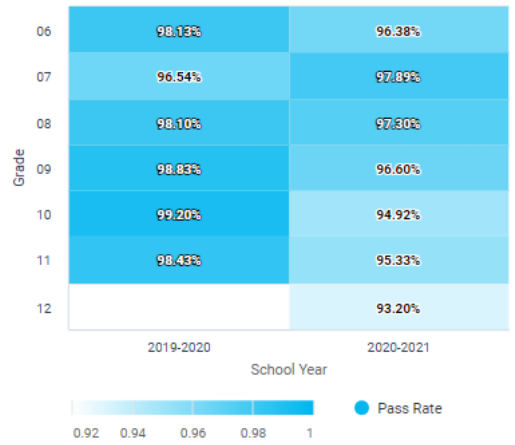
Filter Data | Apple Grove Unified Schools | 2020-2021 | Clear All Filters

Data defaulted to All Grading Periods. Please select specific Grading Period(s) from the filters.

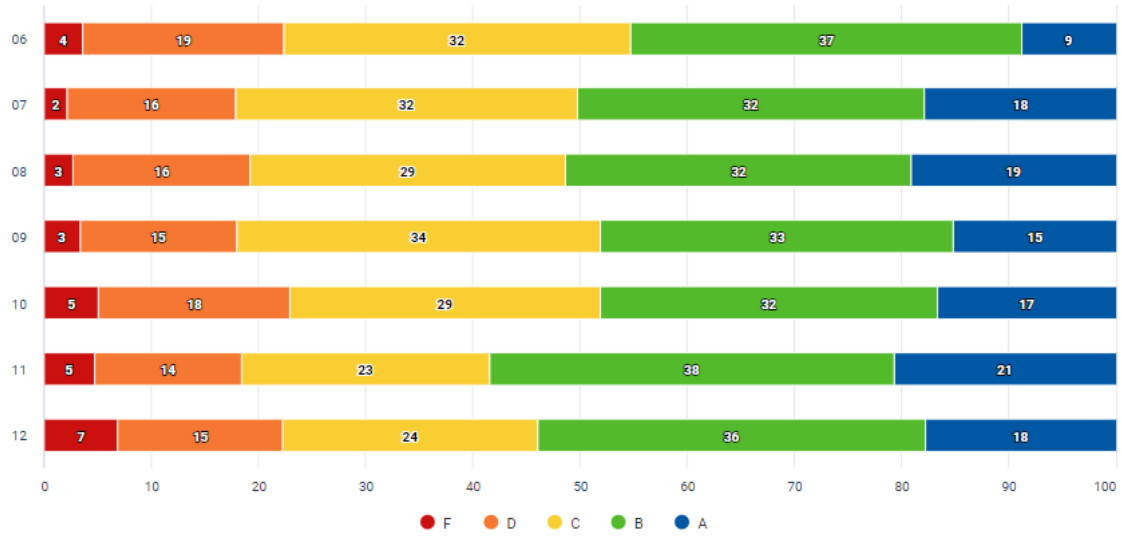
ELA D & F %	Math D and F %	Science D and F %	Social Studies D and F %
20.30%	14.67%	13.98%	18.51%

ELA Pass Rate

This metric is not impacted by updates made to the Year filter. All data is YTD

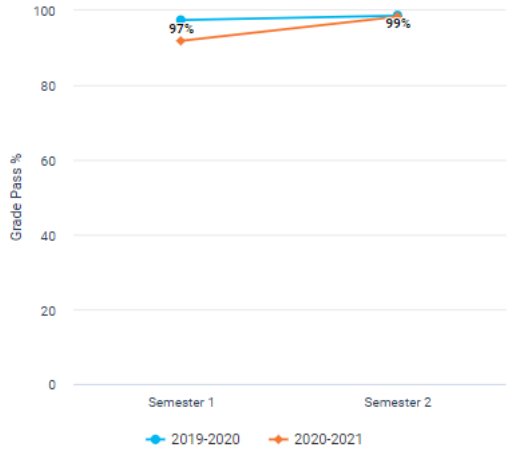


How are ELA grades distributed by grade level?



How have ELA grades changed?

This metric is not impacted by updates made to the Year filter. All data is YTD



Math Pass Rate

This metric is not impacted by updates made to the Year filter. All

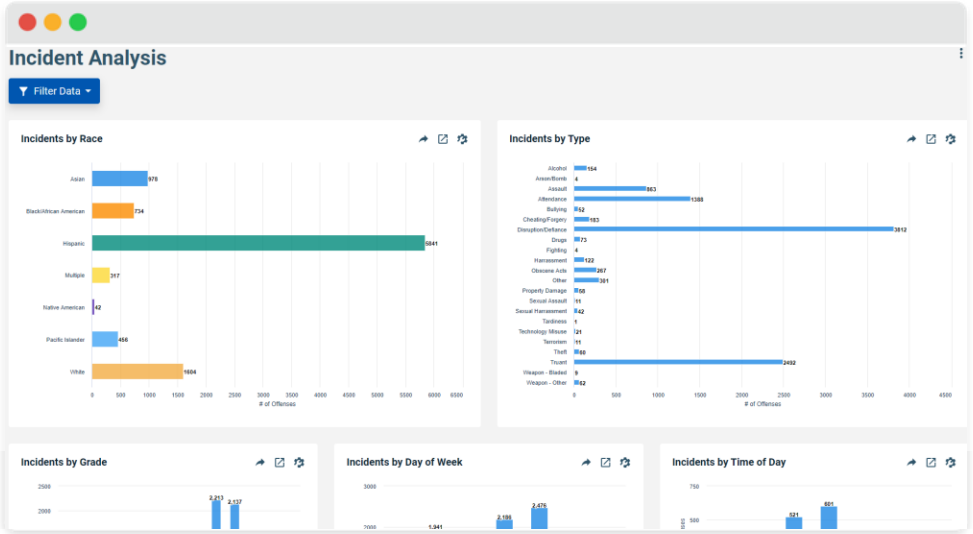
How are math grades distributed by grade level?

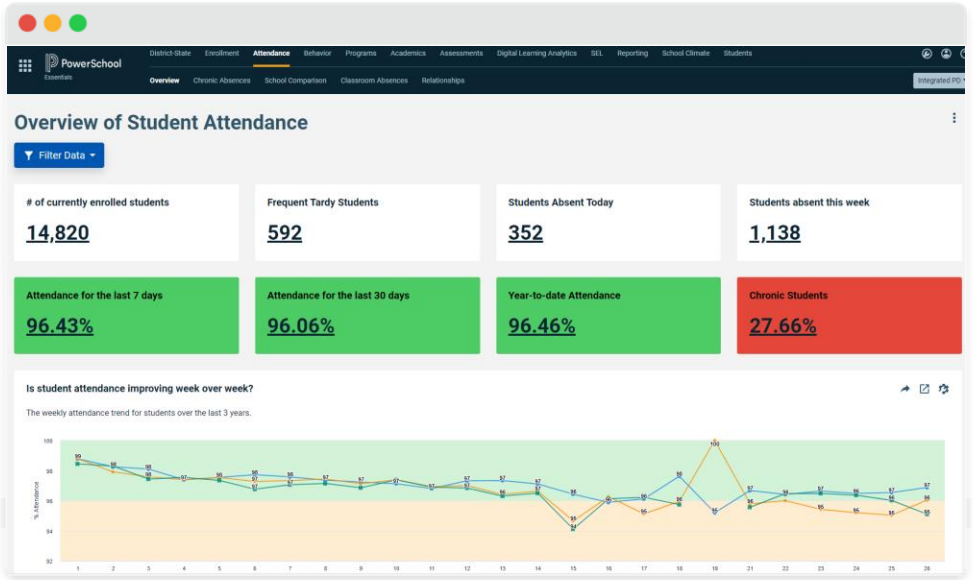
How have math grades changed?

This metric is not impacted by updates made to the Year filter. All

Pre-built Metrics as well as the Ability to Customize

- Large library of pre-built dashboards and metrics are included to get you up and running quickly and efficiently
- From there, districts can create and modify the solution to meet their individualized needs
  - Create your own dashboards/metrics
  - Rearrange navigation
  - Set thresholds
  - Change colors
  - And more





Highly Visual Data Displays

Dashboards

Utility Apps

Developer Tools

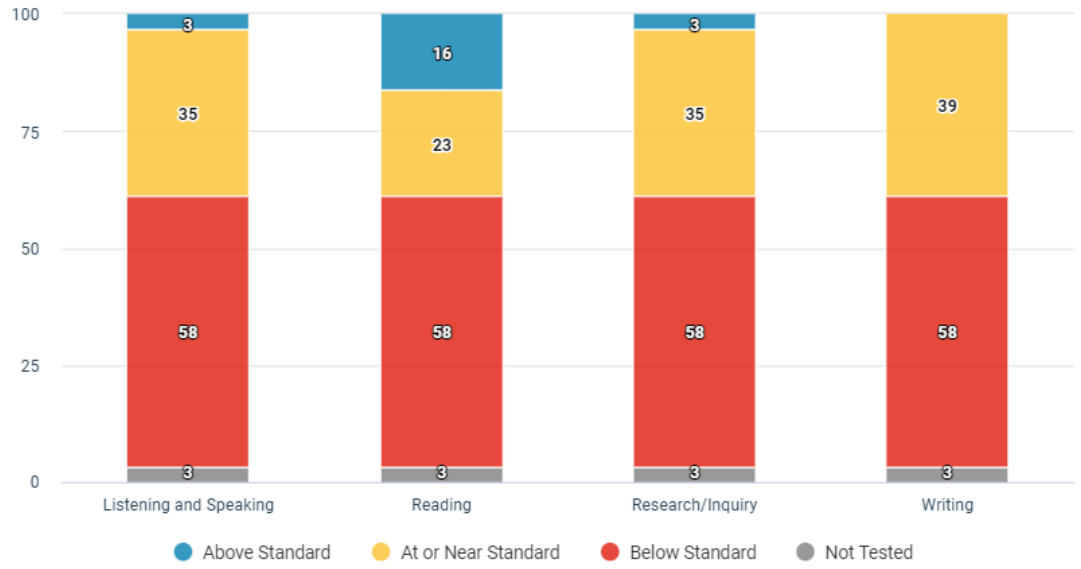
Classroom
My Students

Overview | Class Roster | Student Data Wall | Integrated PD

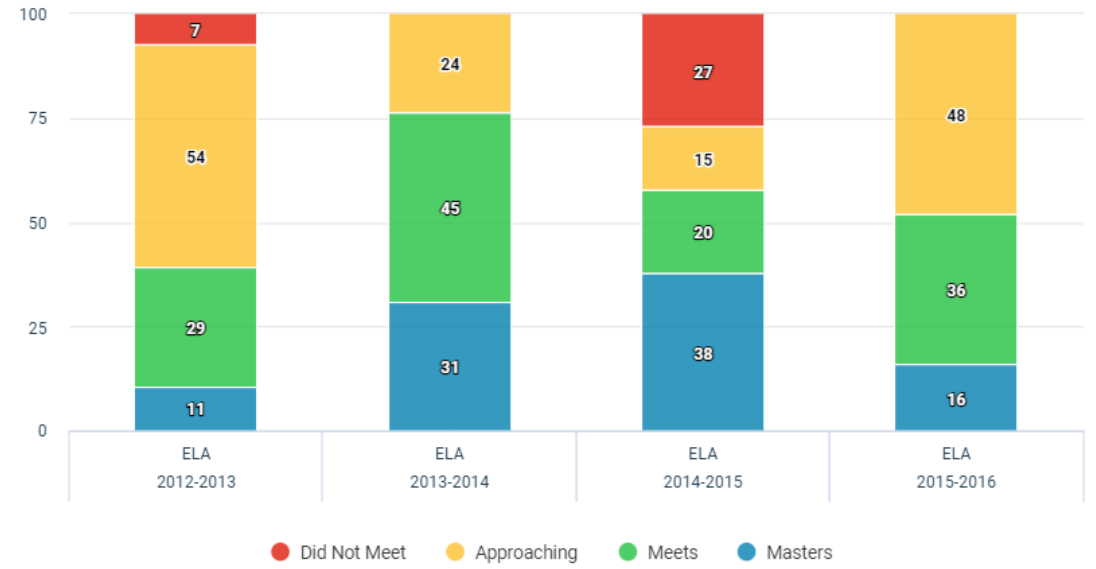
Filter Data

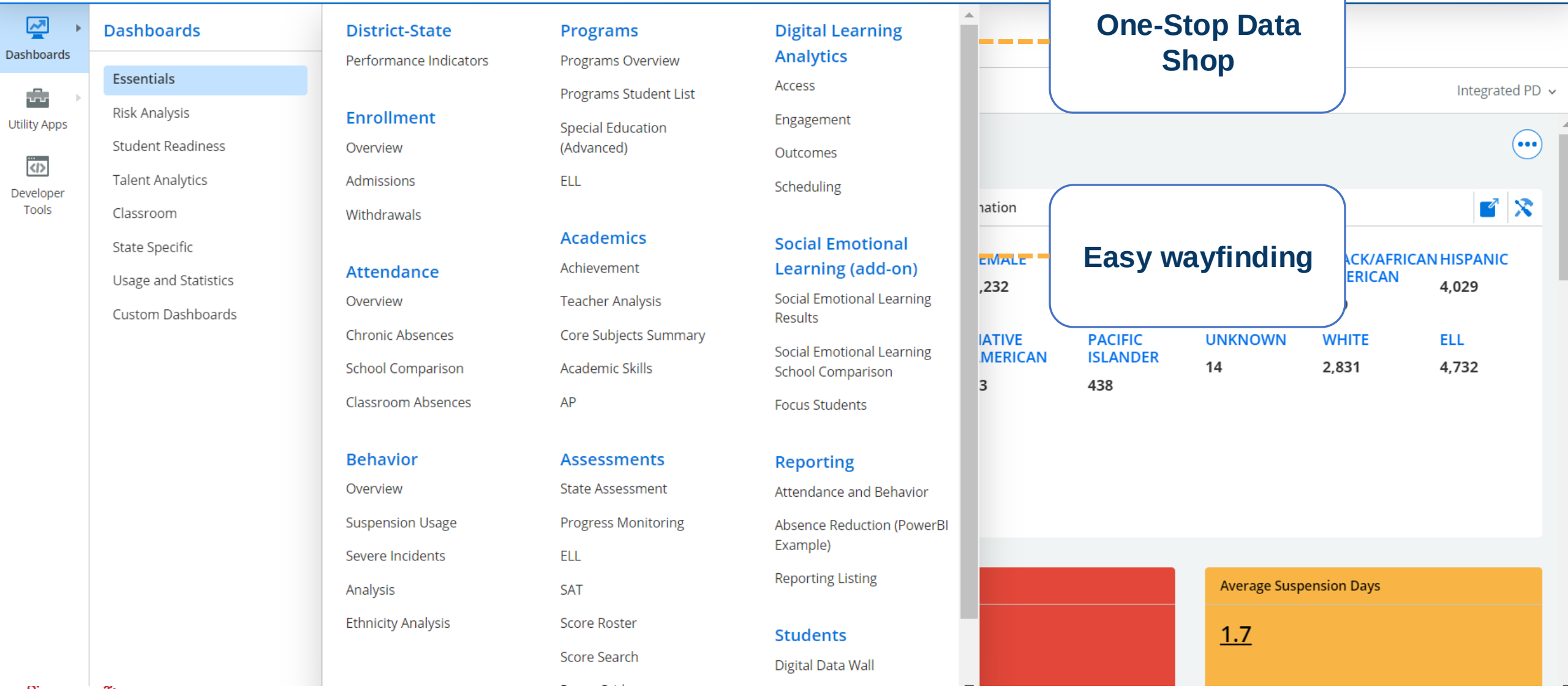
# Freq Tardy	% Chron Absent	Attendance YTD	Attn Last 7 days	In School Suspension	Out of School Suspensions
3	87.76%	91.15%	92.47%	14%	0%

What are the benchmark results for my students?



What are the Summative Assessments Results Over Time for my Students?





OPI.MT.GOV

Putting Montana Students First

Dashboards

Utility Apps

Developer Tools

Essentials

District-State

Report Card | District KPI's | Performance Indicators | Readiness | Gap Analysis | Integrated PD

Easy filtering

Filter Data | Currently Enrolled in this School

- School
- Grade
- Staff
- Ethnicity
- Gender
- SPED
- SPED Type
- ELL
- F&RL
- Staff Group
- Student Group
- Students View

ts located?

Demographic Information

TOTAL	FEMALE	MALE	ASIAN	BLACK/AFRICAN AMERICAN	HISPANIC
12,874	6,232	6,642	4,310	309	4,029

MULTIPLE	NATIVE AMERICAN	PACIFIC ISLANDER	UNKNOWN	WHITE	ELL
910	33	438	14	2,831	4,732

SPED
1,214

Attendance YTD

96.64%

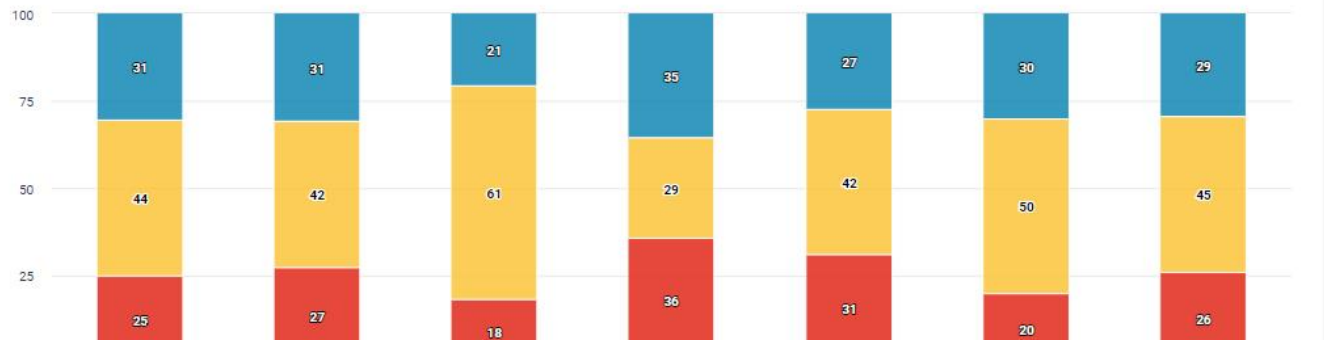
Suspension Rate

13%

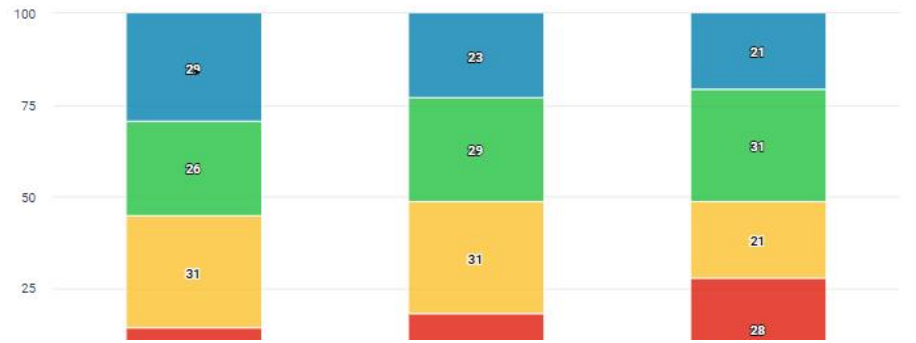
Average Suspension Days

1.7

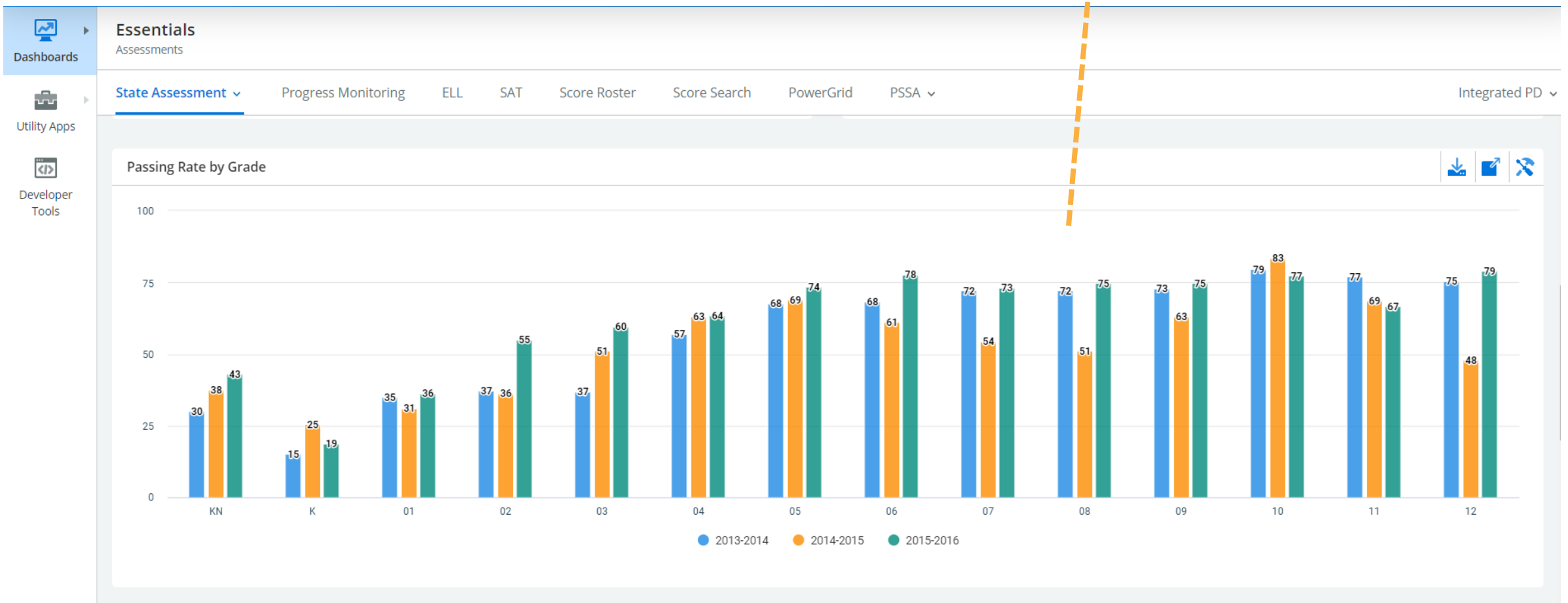
How are students performing on the ELA assessment by content area?



How are students performing on the ELA assessment?

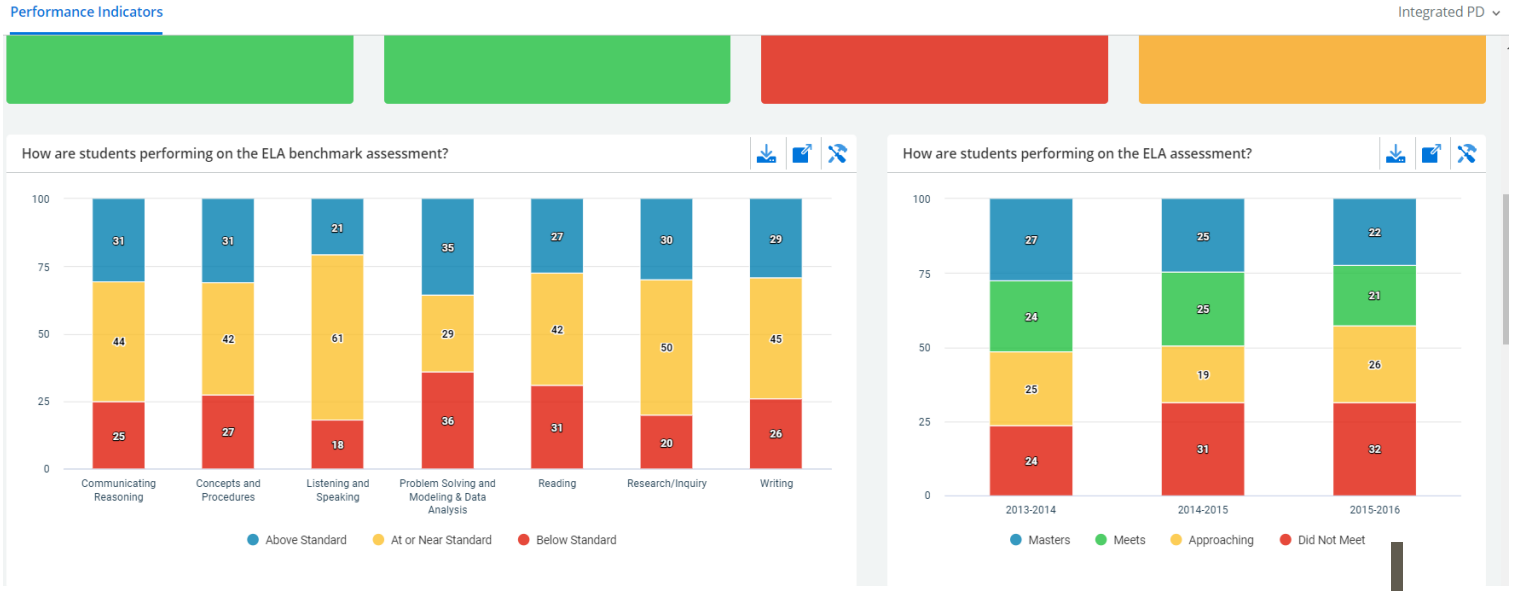


Longitudinal Analysis



OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First



Each visualization is drillable to the student or school level (assuming appropriate permissions)

Actions

Total of 1069 row(s) with a row limit of 5000

PHOTO	STUDENT ID	NAME ↑	GRADE	RACE	GENDER	ELL	FRL	HOMELESS	504	SPED	YEAR	TEST PERFORMANCE
	1587935936	ABELLA, Maurice E.	08	Hispanic	Male	Yes	Paid	No	No	Yes	2015-2016	Did Not Meet
	2056081735	Abonce, Kenya S.	03	Hispanic	Female	Yes	Paid	No	No	No	2015-2016	Did Not Meet
	91497989	Abundiz, Tatiana A.	12	White	Female	Yes	Paid	No	No	No	2015-2016	Did Not Meet
	1881695885	Acuna, Jenna	02	White	Female	Yes	Paid	No	No	No	2015-2016	Did Not Meet
	1583785455	Adan, Rex	07	Hispanic	Male	Yes	Paid	No	No	Yes	2015-2016	Did Not Meet
	398799701	Adkins, Quincy M.	06	Hispanic	Male	Yes	Free	No	No	No	2015-2016	Did Not Meet
	508586109	AGUIAR , Kristina	01	Hispanic	Female	No	Paid	No	No	No	2015-2016	Did Not Meet
	1881906183	Aguilar, Germain B.	02	Hispanic	Male	Yes	Free	No	No	No	2015-2016	Did Not Meet
	1011776363	Aguilar, MARTHA	02	White	Female	Yes	Paid	No	No	No	2015-2016	Did Not Meet

OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First

CURRENT PROJECT STATUS

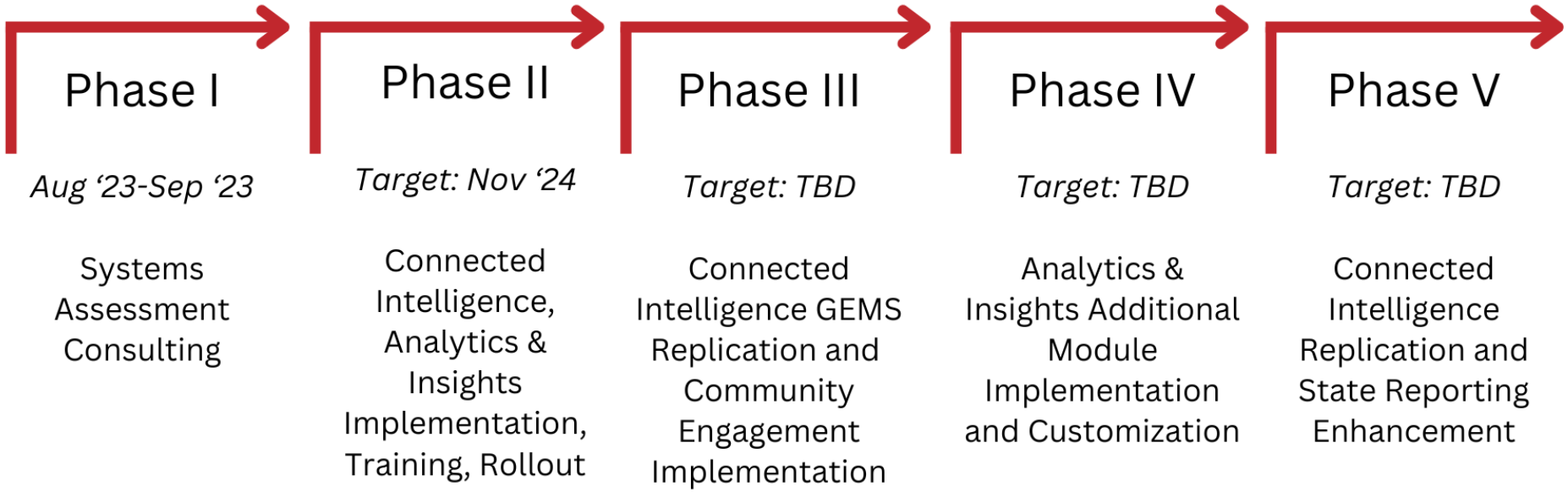
OPI DATA MODERNIZATION PROJECT OVERVIEW

OPI Data Modernization Status and Overview Report

Activities

- Ongoing data replication from Infinite Campus State Edition to PowerSchool's Connected Intelligence.
- OPI staff continue to meet with the steering committee of key district staff and receive valuable feedback on the project and data collections.
- OPI staff presented to the PowerSchool User Group on June 18 to provide updates on the project.
- Identified another data source (GEMS) for replication into Connected Intelligence through a VPN. GEMS replication is being completed.
- OPI is an active participant in the Education and Workforce Data Governing Committee and has been attending the ongoing meetings of the three working groups.
- Analysis is in progress for the additional modules of Analytics & Insights (Student Readiness, Risk Analysis, and Community Engagement).
- OPI provided a demo of the GEMS system to PowerSchool to assess current functionality and how Community Engagement will proceed. OPI also sent out a survey on GEMS to schools on June 28.
- Identifying and testing possible security solutions for school user access to the Analytics & Insights system.

Data Modernization Timeline



PHASE I COMPLETE

Category (Milestone)	Task	Progress Update
Systems Assessment Consulting (1-3)	Delivery of Draft Assessment Output	**Completed**
	Montana Review and Feedback	**Completed**
	Deliverable Updates and Final Approval	**Completed**

Phase I was completed by September 22, 2023. It encompassed elements from project milestones 1-3.

PHASE II & III PROGRESS

Category (Milestone)	Task	Progress Update
Connected Intelligence (4a)	OPI CI Onboarding, including Platform Setup and Configuration	**Completed**
	OPI CI Security and Governance Implementation	**Completed**
	OPI CI Technical Training	**Completed**
Connected Intelligence: Infinite Campus (IC) State Edition Integration (4a)	Finalize and share Data Dictionary/list of approved data elements	**Completed**
	ODBC Setup for IC State Edition	**Completed**
	Initial replication of AIM and AIM Datamart Data	**Completed**
	Ongoing Replication of AIM and AIM Datamart Data	**Completed**
Analytics and Insights (5a)	Complete Custom Connector Analysis	**Completed**
	Build Custom Connector	**In Progress**
	Complete Analytics and Insights Implementation	**In Progress**
	Complete Analytics and Insights Technical Training	Not Started
Customer Education (4/5)	Create Training Plan	**In Progress**
	State-level Analytics and Insights End User Training	Not Started
	District-level Analytics and Insights End User Training	Not Started
	Building-level Analytics and Insights End User Training	Not Started
Phase III (4-5)	Connected Intelligence: Replication of GEMS	**In Progress**
	Analytics and Insights: Community Engagement	**In Progress**

UPCOMING PHASES

Category (Milestone)		Progress Update
Phase IV (5)	Analytics and Insights Risk Analysis Implementation	Not Started
	Analytics and Insights Student Readiness Implementation	Not Started
	Analytics and Insights Customizations	Not Started
Phase V (4)	Replicate up to 5 additional data sources	**In Progress**
	Connected Intelligence: PS SIS Integration Analysis	**Completed**
	Connected Intelligence: PS SIS Custom Connector Build	Not Started/On Hold
	Connected Intelligence: PS SIS Integration Hosted Districts/Replicate Data into CI	Not Started
	Connected Intelligence: Set up VPNs for On-Prem Districts	**In Progress**
	Connected Intelligence: State Reporting Enhancement	Not Started
Final Sign Off (6-7)	Complete Post-Deployment and Final Sign Off	Not Started

The Data Modernization project has a total of seven milestones. To get a more detailed look at the particular steps in each of the milestones, these were further broken down and organized into phases, recognizing that steps from different milestones may be co-occurring in the same phase. These phase items reflect what has been completed and items that are currently in progress or upcoming.

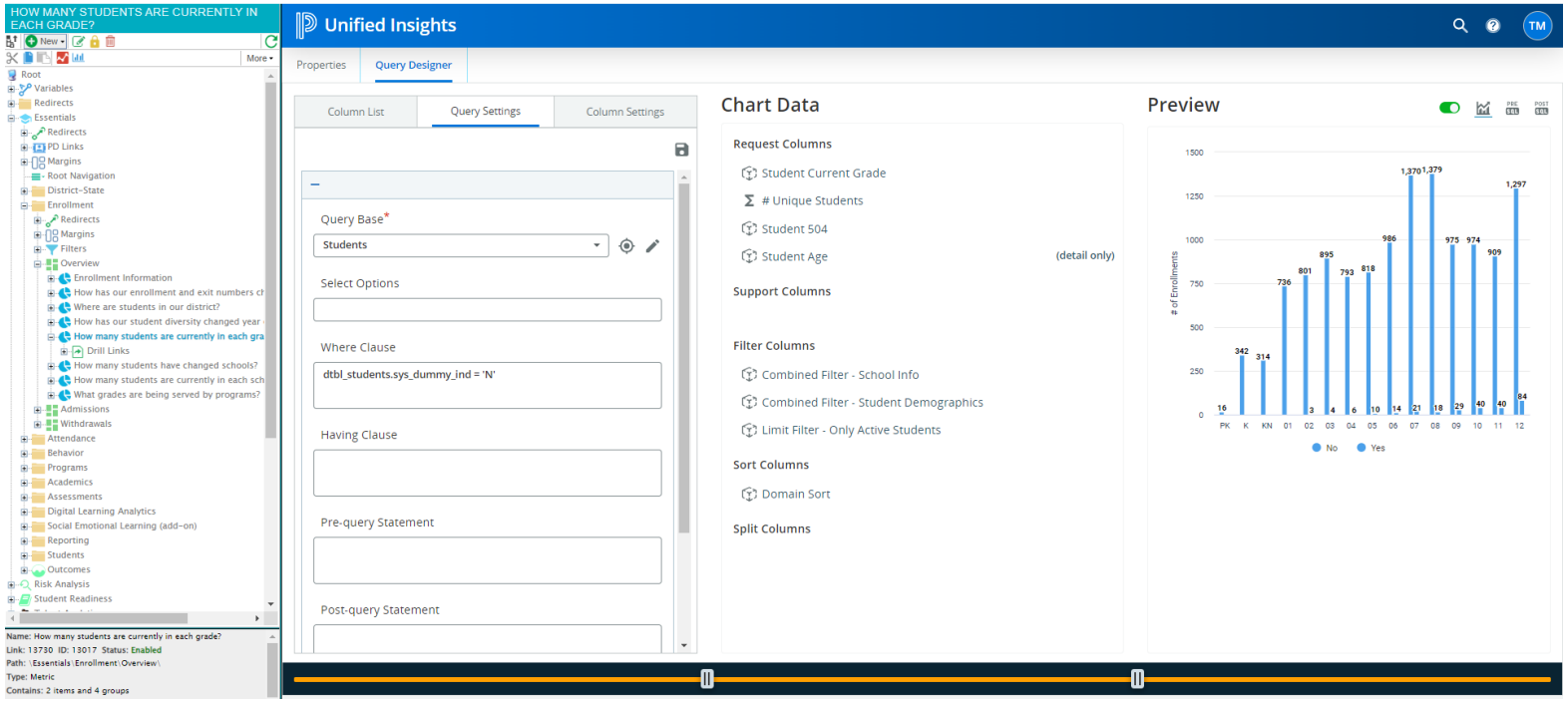
QUESTIONS

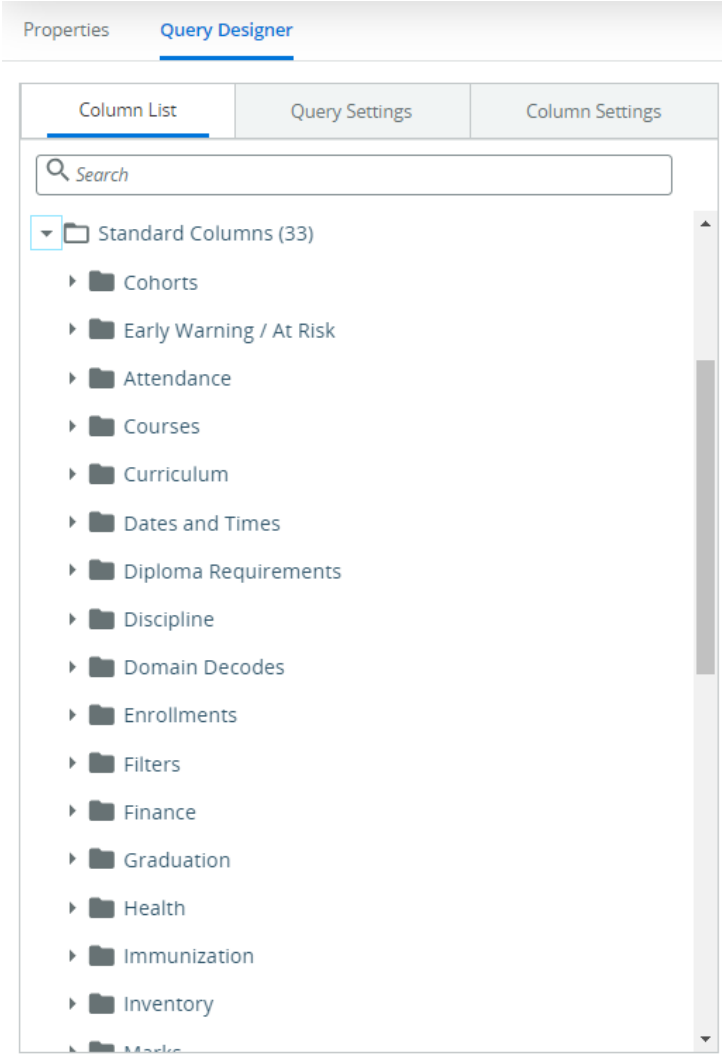
OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First

APPENDIX

Developer Tools to Configure Dashboards to Your Local Needs





OFFICE OF PUBLIC INSTRUCTION
ELSIE ARNTZEN, STATE SUPERINTENDENT
OPI.MT.GOV

Putting Montana Students First

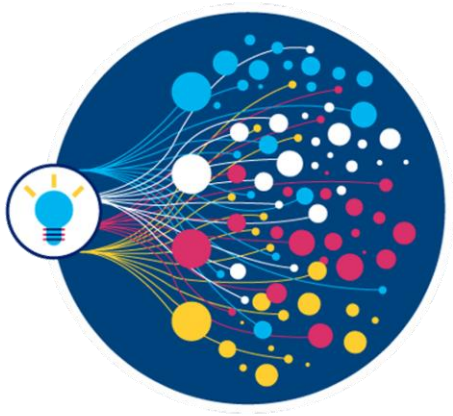
About the Data Modernization Solution

OPI Data Systems

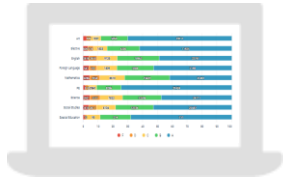
- Infinite Campus SIS
- PowerSchool SIS
- National and State Assessments
- Other data sources as defined

DATA INGESTION

Data Lake → Data Warehouse



Secure and public facing dashboards



Benefits

- **Ready-made for education** and government agencies (i.e. commercially off the shelf solution by PowerSchool)
- **Built to be configurable and adaptable** to meet the needs of Montana
- **Robust security**
- Continuous investment and product innovation to meet **evolving needs**

Note: Connected Intelligence K-12 and Analytics and Insights will enable districts to continue using their current Student Information System, even if it is not provided through PowerSchool.