Data Analysis Version 2.0

Tools Packet

Data Analysis Version 2.0 Toolkit Index

Additional Materials to Support Data Analysis (not in this toolkit):

- UIP Handbook
- UIP Templates (for 2012)
- 2 Examples of SPF reports with different magnitudes of performance challenges

Norms of Participation

The following statements describe agreements for participation in learning experiences provided by CTLT and are intended to allow all participants to make the most of their time.

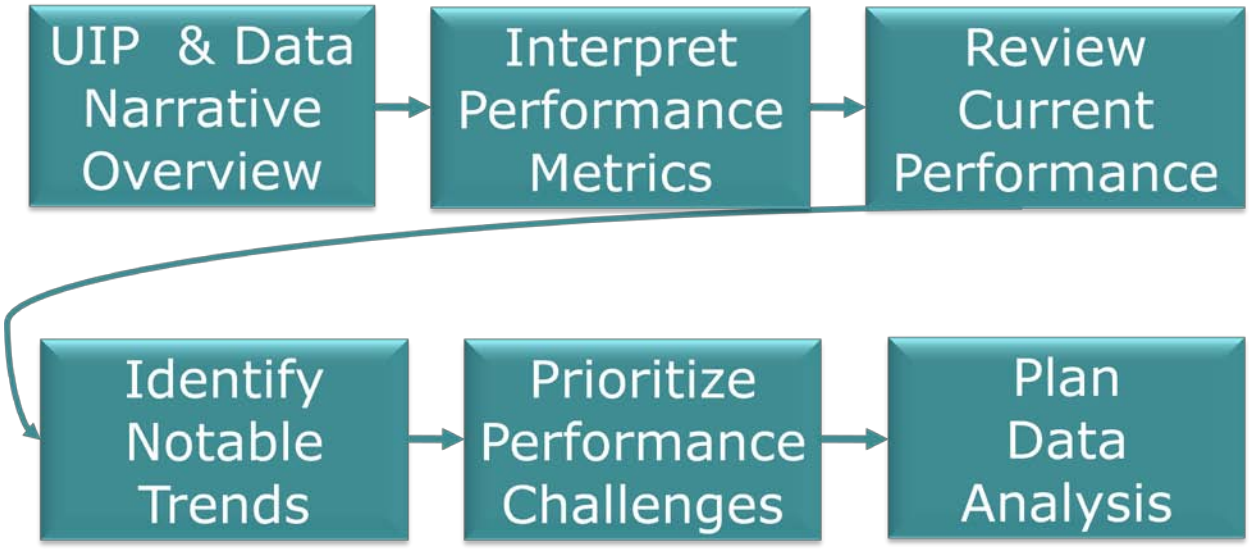
- Be present, participate, and engage fully.
- Listen to learn, limit side conversations.
- Monitor personal technology (turn cell phones off or on vibrate, close laptops during group activities).
- Pay attention to signals to rejoin the whole group – hand-raising.
- Move and engage as a key learning strategy.
- Practice and self-organize table groups; name a facilitator, recorder, reporter and time keeper.
- Use effective communication and exploratory language: paraphrase, clarify, summarize, question, and invite thinking.
- Suspend judgment, live in curiosity.
- Reflect continuously, complete evaluations and reflection logs.
- Provide feedback and post questions on the “Parking Lot.”
- Pay attention to what has meaning for you.
- Commit to follow-through.

Session Overview: Data Analysis 2.0

Learning Targets:

- Explain how unified improvement planning (UIP) will improve student learning and system effectiveness.
- Identify the data analysis process included in UIP and how the results will be captured in the Data Narrative.
- Determine what data reports/views will be used.
- Interpret required performance measures and metrics.
- Review current performance.
- Describe notable performance trends (over at least 3 years).
- Determine which performance challenges will focus school/district improvement activity for the coming year.
- Apply the UIP Quality Criteria in evaluating trend statements and priority performance challenges.
- Document the process used to identify trends and prioritize performance challenges for the Data Narrative.
- Develop a plan for completing the data analysis for the schools' UIP.

Agenda



June/July

- ✓ Brush up on UIP changes, tools, processes.
- ✓ Build local capacity for planning.

August

- ✓ Districts receive state performance data from CDE.
- ✓ Predict results prior to receiving data.
- ✓ Meet with teachers, School Accountability Committee (SAC), parents and other relevant stakeholders to begin Data Analysis process to revise/update Unified Improvement Plan (keeping notes for Data Narrative).
- ✓ Use "Back-to-School" events to share current performance data (SPF, School Growth Summary Report) with local stakeholders.
- ✓ Share individual student growth reports and student achievement data from prior year with students and parents.

September

- ✓ Districts/Schools receive preliminary pre-populated UIP templates.
- ✓ Complete Data Analysis including Root Cause Analysis (keeping notes for Data Narrative).
- ✓ Write Data Narrative.
- ✓ Complete revisions to the UIP Action Plan.

October

- ✓ Seek feedback about UIP from peers or district staff.
- ✓ Schools submit UIPs for Board approval (depending on local schedules).
- ✓ Conduct Progress Monitoring Check (school staff and SAC) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.

November

- ✓ Districts and Schools receive final pre-populated UIP templates.
- ✓ Make revisions to UIPs based on local board feedback and the final pre-populated template.

December

- ✓ Conduct Progress Monitoring Check (school staff) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.

January

- ✓ Conduct Quarterly Progress Monitoring Check (school staff and SAC) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.

- ✓ Priority Improvement and Turnaround Schools and Districts submit UIP that reflects current and next school year to CDE by January 15th.

February

- ✓ Conduct Progress Monitoring Check (school staff) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.

March

- ✓ Conduct Quarterly Progress Monitoring Check (school staff and SAC) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.
- ✓ Schools with Turnaround and Priority Improvement Plan type assignments make revisions to UIP based on CDE staff and state review panel feedback (March 30th).

April

- ✓ Conduct Progress Monitoring Check (school staff) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.
- ✓ Improvement and Performance Schools and Districts submit UIP that reflects current and next school year to CDE for posting on Schoolview.org by April 15th.

May

- ✓ Conduct Quarterly Progress Monitoring Check (school staff and SAC) using Interim Measures to evaluate progress towards annual performance targets and Implementation Benchmark Data to evaluate progress towards implementing Major Improvement Strategies, and update UIP as appropriate.

Sources of Revision to Data Analysis

The sources of revision to the data analyses processes for unified improvement planning include: ESEA Waiver Implications, Lessons Learned from UIP Reviews, and the UIP Needs Assessment Survey. Each is described below.

ESEA Waiver Implications for UIP

Data Analysis

- ***Disaggregated graduation rates*** added to SPF/DPF and UIP Template.
- ***CELApro growth*** including median growth percentiles and median adequate growth percentiles added to SPF/DPF and UIP Template.
- ***Adequate Yearly Progress*** (AYP) is no longer a part of school or district accountability; metrics removed from UIP.

Lessons Learned from UIP Reviews

Data Narrative

CDE reviews of unified improvement plans revealed the following patterns of weakness in the data narrative of plans:

- Reporting of data analysis was limited to previous targets only and didn't provide information about what contributed to the progress, or lack thereof, toward those targets.
- All required elements were not included.
- Trends were described and priority performance challenges were identified, but no root causes were determined.
- Little or no information provided about the process by which planning occurred and which stakeholders were involved, for example:
    - "…the staff determined the priority needs and root causes…"
    - "Additionally, we concluded that there was a great need to build awareness and understanding of how to effectively teach toward greater English language acquisition."
- In describing prior year's targets and current performance, no reference was made to the impact of improvements to date. What changes have been made as a result? Are improvement efforts a continuation? Does the data support it?

- No or little information about why the school selected to address some priority performance challenges over others.

Trend Statements

CDE reviews of unified improvement plans revealed the following patterns of weakness in trend statements within the data narrative:

- Required information about current performance – indicator areas in which the school/district did not at least meet expectations (Does Not Meet and Approaching) – was not included.
- Some trends that were critical to describing their performance were not identified.
- The reporting about the data analysis was limited and often did not meet basic federal program requirements.
- Local student performance data was seldom included in identifying trends.
- Trends for Growth Gaps were mistakenly described as gaps between the disaggregated group and not the disaggregated group rather than the difference between median growth percentiles and adequate growth percentiles for the disaggregated group.
- Data was provided in lists or tables, but trends were not described.

Prioritized Performance Challenges

CDE reviews of unified improvement plans revealed the following patterns of weakness in priority performance challenges within the data narrative:

- The performance challenges that were prioritized were not consistent with the magnitude of the overall performance challenge (e.g. schools with significant performance challenges overall that prioritized a small group of students within the school).
- Identification of priority performance challenges often did not include the most substantial challenges faced by the school or district.
- Achievement and growth were identified as separate priority performance challenges even when the metrics were focused on the same grade level and content area (separate challenges for 5th grade writing growth and 5th grade writing achievement).
- Priority Performance Challenges articulated what needed to be done, rather than the prioritized problem in student performance. For example, in order to meet state targets for a level increase to MEETS, reading Median Growth Percentile (MGP) must increase from 45 to 55 MGP.

- Little or no information about the process of how the team prioritized their performance challenges, or of why certain performance challenges were prioritized over others.
- It was unclear as to why some performance challenges were selected over others; this includes the following: too many (8-22) prioritized performance challenges, or the relationship between the priorities and the trends is unclear.

Root Cause Analysis

CDE reviews of unified improvement plans revealed the following patterns of weakness in root causes identified within the data narrative:

- The identified root cause(s) were frequently not appropriate given the performance challenges facing the school.
- Not framed as adult actions.
- Not within the control of the school and/or included student attributes. For example: "Students with disabilities, while receiving intensive and targeted instruction in reading, continue to underperform due to lack of instructional time and level of significant impairments."
- The root causes identified were inconsistent with the magnitude of the performance challenge.
- Little or no information provided about how root causes were verified, or no mention of what additional data was used.
- Did not identify data sources and results that were used to verify root causes. For example:
  - "We feel this is due to low expectations…"
  - "Ineffective planning of units and lessons has led to ineffective instruction because the intended outcomes are not the main focus."
  - "Leadership discussions with the teaching and non-teaching staff confirmed the lack of analysis and use of data to inform management, classroom, and instructional practices."
- Many schools listed the same Root Cause for each Priority Performance Challenge.
- Some plans included examples of verification of Root Cause with data from sources outside the school, such as citing quantitative research (e.g. coaching and teacher evaluations archives or instructional research of professional development).

UIP Needs Assessment Survey

Interpreting Colorado Growth Model Data

The percent of respondents who indicated that for School-Level staff it was somewhat challenging or their staff had a lot of trouble…

Topic	Percent
Interpreting median student growth percentiles	38%
Interpreting adequate growth percentiles	44%
Interpreting catch-up, keep-up and move-up growth	53%
Identifying trends in growth	37%
Setting performance targets for growth	51%

Engaging in Unified Improvement Planning Processes

The percent of respondents who indicated that for School-Level staff it was somewhat challenging or their staff had a lot of trouble . . .

Topic	Percent
Analyzing data and identifying performance trends	33%
Prioritizing performance challenges	49%
Determining root causes of performance challenges	64%
Developing a data narrative	47%

Priorities for additional support

The percent of respondents who indicated that the following UIP topics were a medium or high priority for additional support. . .

Topic	Percent
Analyzing, interpreting, and using growth model data	45%
Understanding the district and school performance framework report	40%
Developing a data narrative	49%
Analyzing data to identify performance trends (over at least 3 years)	35%
Prioritizing performance challenges	61%
Identifying root causes of performance challenges	68%

Data Narrative Outline

Data Narrative Elements	
Description of School and Process for Data Analysis: • **A brief description of the school to set the context.** • **The general process for developing the UIP.** • **A description of who participated in the analysis of the school's performance data.**	
Review of Current Performance: • **The school accountability status (plan type assignment).** • **Indicators and sub-indicators where school performance did not meet state and federal expectations.** • **Indicators and sub-indicators where school performance did not meet local expectations.**	

Data Narrative Elements

Review of Current Performance (continued)

- **The magnitude of school performance challenges over-all.**

- **Reflection on how current performance compares to the targets established in the prior year's plan and why (also captured in the Progress Monitoring of Prior Year's Performance Targets worksheet).**

Data Narrative Elements

Trend Analysis:

- **Description of the data that was considered (including local data sources, metrics and measures) in identifying performance trends.**

- **Notable performance trends (also captured in the Data Analysis Worksheet).**

- **How the team determined which trends were notable (e.g. To what were each of the trends in school performance compared?).**

Data Narrative Elements

Priority Performance Challenges:

- **The process that was used to prioritize the performance challenges.**

- **The performance challenges that are the highest priority to address immediately.**

- **For each priority, what makes it important to address immediately.**

Data Narrative Elements

Root Cause Analysis:

- **Root cause(s) associated with each priority performance challenge (also captured in the Data Analysis Worksheet).**

- **How the root causes were identified.**

- **The additional data that was reviewed to validate the root causes.**

Inventory of Performance Data Sources (and demographic data)

CONTENT AREA

ASSESSMENT	LEVEL(S)	WHEN AVAILABLE	WHICH STUDENTS	GRADE LEVEL(S)	CONTENT FOCUS	METRICS	QUESTIONS

LEGEND

CONTENT AREA	Math, Reading, Writing, Social Studies, Science, other academic, English Language Acquisition
ASSESSMENT	Name of instrument used to collect performance data
LEVEL(S)	Level administered (district, school, or classroom)
WHEN AVAILABLE	When (what date) will the results be available
WHICH STUDENTS	Description of the students for which the performance data is being collected (e.g. all, students in IEP, ELL, etc.)
GRADE LEVEL(S)	Which grade levels the performance is collected in
CONTENT FOCUS	Within the content area, the specific content focus (e.g. number sense)
METRICS	The statistics that will be reported (e.g. scale score, % correct, growth score, etc.)
QUESTIONS	What questions this data will help team members to answer (e.g. How fluently do students read level 3 texts?)

Adequate Growth Basics (TCAP/CSAP)

Adequate growth percentiles are based on catch-up and keep-up growth. This document provides some basic information about catch-up and keep-up growth and how adequate growth percentiles and median adequate growth percentiles are calculated.

Catch-Up Growth

To be eligible to make catch-up growth:

- The student scores below proficient (unsatisfactory or partially proficient) in the previous year.

To make catch-up growth:

- The student demonstrates growth adequate to reach proficient performance within the next three years or by tenth grade, whichever comes first.

Adequate Growth Percentile for Catch-up

- For students eligible to make catch-up growth (those who scored unsatisfactory or partially proficient in the previous year).
- Adequate Growth Percentile = the minimum growth percentile he/she would have needed to make catch-up growth.

Percent Making Catch-up Growth

- Numerator: The number of students who made catch-up growth (i.e. demonstrated enough growth to reach proficient performance within the next three years or by tenth grade, whichever comes first).
- Denominator: The number of students who scored below proficient (unsatisfactory or partially proficient) in the previous year (i.e. students eligible for catch-up growth).
- Performance is improving if:
  - The denominator is getting smaller (approaching zero)
  - The numerator is increasing (approaching 100)

Catch-Up in different contexts:

- School or District Growth Summary Reports:
  - The percent of students in the school/district making catch-up growth
  - Number of students making catch-up growth/ the number of students eligible to make catch-up growth
- SPF or DPF
  - For students eligible to make catch-up growth
  - Median Growth Percentile
  - Median Adequate Growth Percentile

Keep-Up Growth

To be eligible to make keep-up growth:

- The student scores at the proficient or advanced level in the previous year.

To make keep-up growth:

- The student demonstrates growth adequate to maintain proficiency for the next three years or until tenth grade, whichever comes first.

Adequate Growth Percentile for Keep-Up

- For students eligible to make keep-up growth (those who scored proficient or advanced in the previous year).
- Adequate Growth Percentile = the maximum of the growth percentiles needed for each of the next three years (or until 10^{th} grade) he/she needed to score at least proficient for the next three years (or through 10^{th} grade).

Percent Making Keep-Up Growth

- Numerator: The number of students who made keep-up growth (i.e. demonstrated enough growth to maintain proficiency for the next three years or until tenth grade, whichever comes first).
- Denominator: The number of students who scored proficient or advanced in the previous year (i.e. students eligible to make keep-up growth).
- Performance is improving if the numerator is increasing (approaching 100).

Median Adequate Growth Percentile

The growth (student growth percentile) sufficient for the median student in a district, school, or other group of interest to reach an achievement level of proficient or advanced, in a subject area (reading, writing or math), within three years or by 10th grade, whichever comes first. Each student in a school has an adequate growth percentile that would either allow them to make catch-up or keep-up growth. If you take the median of all these numbers, you get the growth level that would enable the typical student at the school to be either catching up or keeping up, whichever they need to do.

Interpreting the School Growth Summary Report (and SPF)

To complete this activity, participants will need a School Growth Summary Report and School Performance Framework report from the same school.

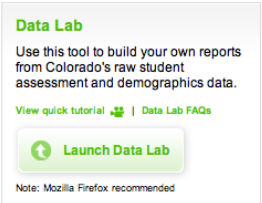
1. What is the ***median growth percentile*** for students in the school for 2011 in Reading? In Math? In Writing?	Reading: Math: Writing:
2. Has the median growth percentile increased, decreased, remained stable, or been inconsistent over the last three years?	Reading: Math: Writing:
3. In which grade level(s) did students make more growth in Reading? In Math? In Writing?	Reading: Math: Writing:
4. Is there a difference in median growth percentile and the median adequate growth percentile for students who qualify for free/reduced lunch? How does the median growth percentile compare to minimum state expectations for this disaggregated group?	MGP AGP Meets Reading: Math: Writing:
5. For learners on an Individual Education Plan, what is the difference between their Median Growth Percentile and their Adequate Growth Percentile?	MGP AGP Reading: Math: Writing:

6. What percentage of students *demonstrated* enough growth to be on track to ***catch-up*** to proficient within three years or by 10th grade, whichever comes first, in Reading? In Math? In Writing?	Reading: Math: Writing:
7. What percentage of students *did not demonstrate* enough growth to be on track to ***catch-up*** to proficient within three years or by 10th grade, whichever comes first, in Reading? In Math? In Writing?	Reading: Math: Writing:
8. What percentage of students *demonstrated* enough growth to ***keep-up*** (on track to remain at or above Proficient) for the next three years or by 10th grade in Reading? In Math? In Writing?	Reading: Math: Writing:
9. What percentage of students *did not demonstrate* enough growth to ***keep-up*** (on track to remain at or above Proficient) for the next three years or by 10th grade in Reading? In Math? In Writing?	Reading: Math: Writing:
10. What percentage of students *demonstrated* enough growth to ***move-up*** (on track to move to Advanced from Proficient) within the next three years or by 10th grade, whichever comes first, in Reading? In Math? In Writing?	Reading: Math: Writing:

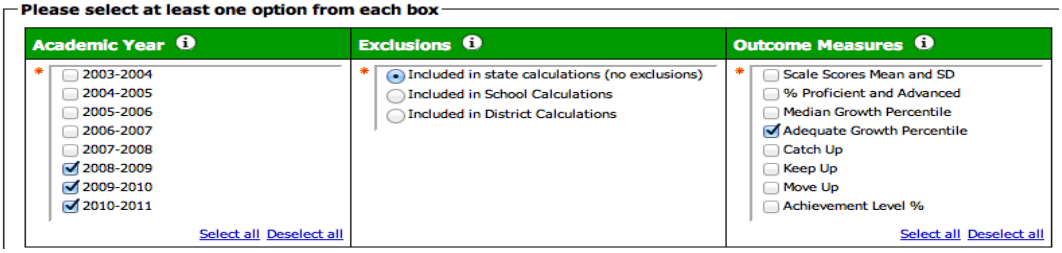
1. Go to Schoolview.org.

2. Enter School Performance.

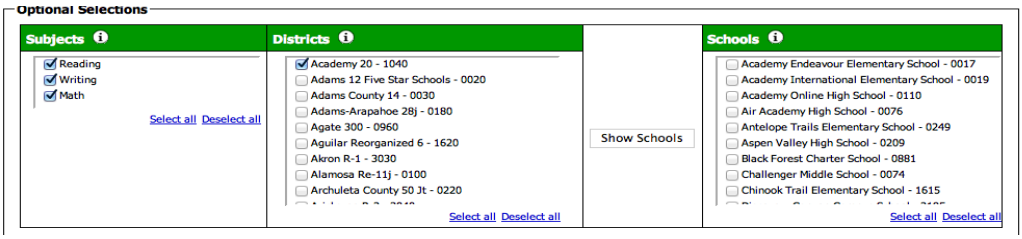
3. Enter the Data Lab. Click Launch Data Lab.



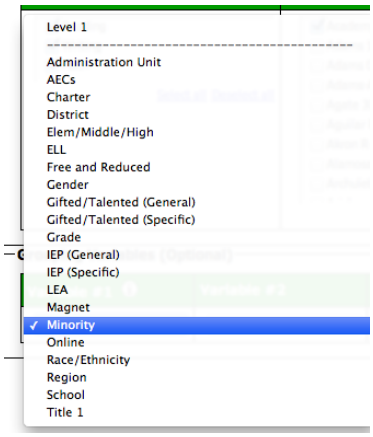
4. Choose the Academic Years and Adequate Growth Percentile as the Outcome Measure.



5. Choose Optional Selections – Subject(s), District and School.

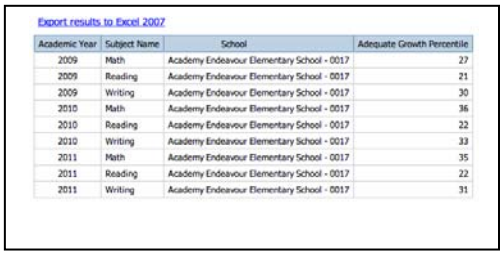


6. **Choose Grouping Variables – run separately for School, Minority, FRL, IEP, ELL and Gender.**



7. **Click Finish to get Data Lab Report.** SCHOOLview® Data Lab Report

8. **Data can be exported to manipulate the data (this step may need an upgrade to the internet browser used).**



Academic Year	Subject Name	School	Adequate Growth Percentile
2009	Math	Academy Endeavour Elementary School - 0017	27
2009	Reading	Academy Endeavour Elementary School - 0017	21
2009	Writing	Academy Endeavour Elementary School - 0017	30
2010	Math	Academy Endeavour Elementary School - 0017	36
2010	Reading	Academy Endeavour Elementary School - 0017	22
2010	Writing	Academy Endeavour Elementary School - 0017	33
2011	Math	Academy Endeavour Elementary School - 0017	35
2011	Reading	Academy Endeavour Elementary School - 0017	22
2011	Writing	Academy Endeavour Elementary School - 0017	31

CELApro and TCAP/CSAP Growth Metric Comparison

	CSAP/TCAP	CELApro
Construct	Academic content knowledge	English language development
Content Areas / Language Domains for which median growth percentiles are provided	Reading, Writing, Math	Overall (an aggregate of: Listening, Speaking, Reading, Writing)
Time of Testing	February-April	December-January
Grades Tested	3-10	K-12
Test Structure	By grade	By grade span: K-1, 2, 3-5, 6-8, 9-12
Students Tested	All students	English Learners (NEP and LEP)
Disaggregated Group Results	FRL, ELL, IEP, Minority, Students needing to catch-up	CELApro performance levels
Vertically scaled?	Yes	Yes
Performance Levels	1= Unsatisfactory 2= Partially Proficient 3= Proficient 4= Advanced	1= CELA Level 1 2= CELA Level 2 3= CELA Level 3 4= CELA Level 4 5= CELA Level 5
Grade-specific cut-scores?	Yes	Yes
What is the proficiency standard?	Proficient	The next CELA level up from the student's current level
Adequate Growth	The growth percentile sufficient for a student to reach a performance level of proficient or advanced, in a given subject area, within three years or by 10th grade; whichever comes first.	The growth percentile sufficient for a student to attain a given level of English proficiency within a specified amount of time.
How long to reach this proficiency level?	3 years or by 10th grade	1 or 2 years depending on the performance level. (See CELApro Performance Level Timeline.)

CELApro Performance Level Timeline

Current Performance Level	Desired Performance Level	Timeline
1	2	1 year
2	3	1 year
3	4	2 years
4	5	2 years

School Performance Framework Scoring Guides & Reference Data

Scoring Guide for Performance Indicators on the School Performance Framework Report

Performance Indicator	Scoring Guide	Rating	Point Value	Total Possible	Framework Points
Academic Achievement	*The school's percentage of students scoring proficient or advanced was:*			16 (4 for each subject area)	15
	• at or above the 90th percentile of all schools (using 2009-10 baseline).	Exceeds	4		
	• below the 90th percentile but at or above the 50th percentile of all schools (using 2009-10 baseline).	Meets	3		
	• below the 50th percentile but at or above the 15th percentile of all schools (using 2009-10 baseline).	Approaching	2		
	• below the 15th percentile of all schools (using 2009-10 baseline).	Does Not Meet	1		
Academic Growth	*If the school meets the median adequate student growth percentile and its median student growth percentile was:*			14 (4 for each content area and 2 for English language proficiency)	35
	• at or above 60.	Exceeds	4		
	• below 60 but at or above 45.	Meets	3		
	• below 45 but at or above 30.	Approaching	2		
	• below 30.	Does Not Meet	1		
	If the school does not meet the median adequate student growth percentile and its median student growth percentile was:				
	• at or above 70.	Exceeds	4		
	• below 70 but at or above 55.	Meets	3		
	• below 55 but at or above 40.	Approaching	2		
	• below 40.	Does Not Meet	1		
Academic Growth Gaps	*If the student subgroup meets the median adequate student growth percentile and its median student growth percentile was:*			60 (5 for each subgroup in 3 subject areas)	15
	• at or above 60.	Exceeds	4		
	• below 60 but at or above 45.	Meets	3		
	• below 45 but at or above 30.	Approaching	2		
	• below 30.	Does Not Meet	1		
	If the student subgroup does not meet the median adequate student growth percentile and its median student growth percentile was:				
	• at or above 70.	Exceeds	4		
	• below 70 but at or above 55.	Meets	3		
	• below 55 but at or above 40.	Approaching	2		
	• below 40.	Does Not Meet	1		
Postsecondary and Workforce Readiness	*Graduation Rate and Disaggregated Graduation Rate: The school's graduation rate/ aggregated student subgroup's graduation rate was:*			16 (4 for each sub-indicator)	35
	• at or above 90%.	Exceeds	4		
	• above 80% but below 90%.	Meets	3		
	• at or above 65% but below 80%.	Approaching	2		
	• below 65%.	Does Not Meet	1		
	Dropout Rate: The school's dropout rate was:				
	• at or below 1%.	Exceeds	4		
	• at or below the state average but above 1% (using 2009-10 baseline).	Meets	3		
	• at or below 10% but above the state average (using 2009-10 baseline).	Approaching	2		
	• at or above 10%.	Does Not Meet	1		
	Average Colorado ACT Composite: The school's average Colorado ACT composite score was:				
	• at or above 22.	Exceeds	4		
	• at or above the state average but below 22 (using 2009-10 baseline).	Meets	3		
	• at or above 17 but below the state average (using 2009-10 baseline).	Approaching	2		
	• at or below 17.	Does Not Meet	1		

Cut-Points for each performance indicator

	Cut-Point: The school earned … of the points eligible on this indicator.	
Achievement; Growth; Gaps; Postsecondary	• at or above 87.5%	Exceeds
	• at or above 62.5% - below 87.5%	Meets
	• at or above 37.5% - below 62.5%	Approaching
	• below 37.5%	Does Not Meet

Cut-Points for plan type assignment

	Cut-Point: The school earned … of the total framework points eligible.	
Total Framework Points	• at or above 60%	Performance
	• at or above 47% - below 60%	Improvement
	• at or above 33% - below 47%	Priority Improvement
	• below 33%	Turnaround

School plan type assignments

	Plan description	
Performance Plan	The school is required to adopt and implement a Performance Plan.	A school may not implement a Priority Improvement and/or Turnaround Plan for longer than a combined total of five consecutive years before the District or Institute is required to restructure or close the school. The five consecutive school years commences on July 1 during the summer immediately following the fall in which the school is notified that it is required to implement a Priority Improvement or Turnaround Plan.
Improvement Plan	The school is required to adopt and implement an Improvement Plan.	
Priority Improvement Plan	The school is required to adopt and implement a Priority Improvement Plan.	
Turnaround Plan	The school is required to adopt and implement a Turnaround Plan.	

Reference Data for Key Performance Indicators

Academic Achievement

The Achievement Indicator reflects a school's proficiency rate: the percentage of students proficient or advanced on Colorado's standardized assessments. This includes results from CSAP/TCAP and CSAPA/TCAPA in reading, writing, math and science, results from Lectura and Escritura.

Percent of Students Proficient or Advanced by Percentile Cut-Points - 1-year (2009-10 baseline)

	Reading			Math			Writing			Science		
	Elem	Middle	High	Elem	Middle	High	Elem	Middle	High	Elem	Middle	High
N of Schools	1008	479	327	1007	480	327	1007	480	327	912	407	286
15th percentile	49.2	50.4	54.9	48.6	29.7	16	32.5	35	31	19.7	23.8	27.5
50th percentile	71.6	71.4	73.3	70.9	52.5	33.5	53.5	57.8	50	47.5	48	50
90th percentile	89.1	88.2	87.2	89.3	75	54.8	76.8	79.7	72.2	76	75.1	72.4

All achievement data is compared to baselines from the first year the performance framework reports were released (2009-10 for 1-year reports and 2008-10 for 3-year reports).

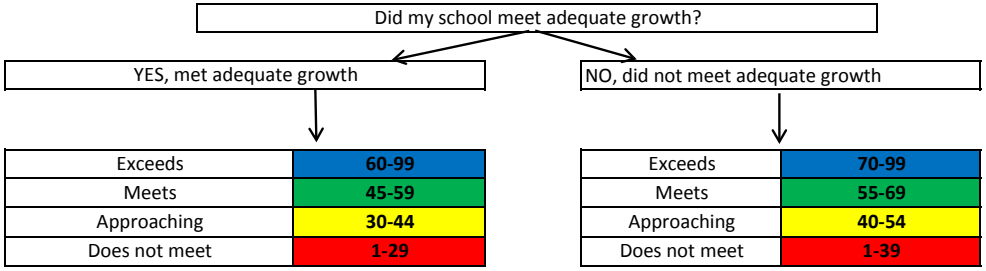
Percent of Students Proficient or Advanced by Percentile Cut-Points - 3-year aggregate (2008-10 baseline)

	Reading			Math			Writing			Science		
	Elem	Middle	High	Elem	Middle	High	Elem	Middle	High	Elem	Middle	High
N of Schools	1032	507	362	1032	507	361	1032	507	362	972	469	347
15th percentile	50	50.6	53.3	48.7	29.7	13.5	32.6	36.8	30	20.5	25	27.9
50th percentile	72	71.4	72.2	70.1	51.6	30.5	54.8	58.3	49.6	45.4	48.7	50
90th percentile	88.2	87.4	86.2	87.5	74.4	52.2	76.5	79.2	71	72.6	71.3	71.5

Academic Growth and Academic Growth Gaps

The Growth Indicator measures academic progress using the Colorado Growth Model. This Indicator reflects 1) normative growth: how the academic progress of the students in this school compared to that of other students statewide with a similar CSAP/TCAP score history in that content area, and 2) adequate growth: whether this level of growth was sufficient for the typical (median) student in this school to reach an achievement level of proficient or advanced on the CSAP/TCAP within three years or by 10th grade, whichever comes first. The same measures are also applied to CELAPro, Colorado's English language proficiency assessment, to determine language proficiency progress for English learners.

The Gaps Indicator measures the academic progress of historically disadvantaged student subgroups and students needing to catch up. It disaggregates the Growth Indicator into student subgroups, and reflects their normative and adequate growth. The subgroups include students eligible for Free/Reduced Lunch, minority students, students with disabilities, English Learners, and students needing to catch up.



Exceeds	60-99
Meets	45-59
Approaching	30-44
Does not meet	1-29

Exceeds	70-99
Meets	55-69
Approaching	40-54
Does not meet	1-39

For Academic Growth and Academic Growth Gaps, the median growth percentile required to earn each rating depends on whether or not the school met adequate growth. Schools that met adequate growth use the rubric on the left; schools that did not meet adequate growth use the rubric on the right.

Postsecondary and Workforce Readiness

The Postsecondary and Workforce Readiness Indicator measures the preparedness of students for college or jobs upon completing high school. This Indicator reflects student graduation rates, disaggregated graduation rates for student subgroups (students eligible for Free/Reduced Lunch, minority students, students with disabilities, and English learners), dropout rates, and average Colorado ACT composite scores.

State Average (Mean) Dropout Rate (2009-10 baseline)

	N of Students	Mean Rate
1-year (2009)	416,953	3.6
3-year (2007-09)	1,238,096	3.9

State Average (Mean) Colorado ACT Composite Score (2009-10 baseline)

	N of Students	Mean Score
1-year (2010)	51,438	20.0
3-year (2008-10)	151,439	20.1

All averages are compared to baselines from the first year the performance framework reports were released (2009-10 for 1-year reports and 2008-10 for 3-year reports).

This School's Graduation Rate and Disaggregated Graduation Rate

Overall Graduation Rate (1-year)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	52.6	62.4	68.2	***71.5***
	2009	44.0	58.0	61.0	
	2010	47.4	56.9		
	2011	33.0			

Overall Graduation Rate (3-year aggregate)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	52.6	62.4	68.2	71.5
	2009	44.0	58.0	61.0	
	2010	47.4	56.9		
	2011	33.0			
	Aggregated	45.3	59.3	65.0	***71.5***

Colorado calculates "on-time" graduation as the percent of students who graduate from high school four years after entering ninth grade. A student is assigned a graduating class when they enter ninth grade, and the graduating class is assigned by adding four years to the year the student enters ninth grade. The formula anticipates, for example, that a student entering ninth grade in fall 2006 will graduate with the Class of 2010.

Free/Reduced Lunch Eligible Graduation Rate (1-year)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	43.9	57.7	65.0	***77.8***
	2009	46.1	61.0	62.5	
	2010	47.6	61.8		
	2011	36.4			

Free/Reduced Lunch Eligible Graduation Rate (3-year aggregate)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	43.9	57.7	65.0	77.8
	2009	46.1	61.0	62.5	
	2010	47.6	61.8		
	2011	36.4			
	Aggregated	45.7	61.1	63.2	***67.0***

For the 1-year SPF, schools earn points based on the highest value among the following: 2010 4-year graduation rate, 2009 5-year graduation rate, 2008 6-year graduation rate and 2007 7-year graduation rate (the shaded cells in the first table above). For the 3-year SPF, schools earn points based on the highest value among the following: aggregated 2007, 2008, 2009 and 2010 4-year graduation rate, aggregated 2007, 2008 and 2009 5-year graduation rate, aggregated 2007 and 2008 6-year graduation rate, or 2007 7-year graduation rate (the shaded cells in the second table above). For each of these rates, the aggregation is the result of adding the graduation totals for all available years and dividing by the sum of the graduation bases across all available years. For both 1-year and 3-year SPFs, the "best of" graduation rate is bolded and italicized on the Performance Indicators detail page.

Minority Student Graduation Rate (1-year)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	46.5	56.1	61.6	***65.7***
	2009	41.9	57.9	60.0	
	2010	45.0	54.5		
	2011	28.2			

Minority Student Graduation Rate (3-year aggregate)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	46.5	56.1	61.6	65.7
	2009	41.9	57.9	60.0	
	2010	45.0	54.5		
	2011	28.2			
	Aggregated	41.3	56.0	60.9	***65.7***

Students w/Disabilities Graduation Rate (1-year)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	32.0	39.1	41.7	50.0
	2009	35.3	44.4	50.0	
	2010	41.2	***52.9***		
	2011	N<16			

Students w/Disabilities Graduation Rate (3-year aggregate)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	32.0	39.1	41.7	50.0
	2009	35.3	44.4	50.0	
	2010	41.2	52.9		
	2011	N<16			
	Aggregated	37.7	44.8	45.2	***50.0***

English Language Learners Graduation Rate (1-year)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	53.2	64.4	73.3	***77.8***
	2009	35.3	50.0	54.3	
	2010	48.9	56.8		
	2011	31.0			

English Language Learners Graduation Rate (3-year aggregate)

		4-year	5-year	6-year	7-year
Anticipated Year of Graduation	2008	53.2	64.4	73.3	77.8
	2009	35.3	50.0	54.3	
	2010	48.9	56.8		
	2011	31.0			
	Aggregated	43.9	57.7	65.0	***77.8***

State Level Graduation Rates and Disaggregated Graduation Rates

2009-2010

Overall

	4-year	5-year	6-year	7-year
2007	68.1	71.1	72.1	72.8
2008	70.2	73.7	**74.7**	
2009	70.7	74.4		
2010	72.4			

Free/Reduced Lunch Eligible

	4-year	5-year	6-year	7-year
2007	52.2	56.9	58.8	59.7
2008	54	59.8	61.4	
2009	55.3	**61.8**		
2010	58.9			

Minority Student

	4-year	5-year	6-year	7-year
2007	51.1	55.3	56.9	57.8
2008	53.6	59.1	60.6	
2009	55.7	**61.5**		
2010	59.1			

Students with Disabilities

	4-year	5-year	6-year	7-year
2007	48.6	55.5	59.9	62.6
2008	50.5	58.1	**62.8**	
2009	50.5	58.2		
2010	52			

English Language Learners

	4-year	5-year	6-year	7-year
2007	44.1	50.6	53.0	54.0
2008	46.2	54.6	**56.7**	
2009	47.1	55.3		
2010	49.2			

2010-2011

Overall

	4-year	5-year	6-year	7-year
2008	70.2	73.7	74.7	75.7
2009	70.7	74.4	76.2	
2010	72.4	**77.1**		
2011	73.9			

Free/Reduced Lunch Eligible

	4-year	5-year	6-year	7-year
2008	54.0	59.8	61.4	62.9
2009	55.3	61.8	64.9	
2010	58.9	**66.1**		
2011	62.2			

Minority Student

	4-year	5-year	6-year	7-year
2008	53.6	59.1	60.6	62.2
2009	55.7	61.5	64.1	
2010	59.1	**66.0**		
2011	63.1			

Students with Disabilities

	4-year	5-year	6-year	7-year
2008	50.5	58.1	62.8	**67.0**
2009	50.5	58.2	65.2	
2010	52.0	61.4		
2011	53.5			

English Language Learners

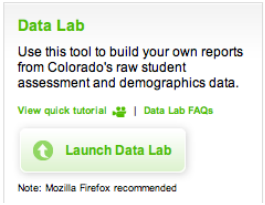
	4-year	5-year	6-year	7-year
2008	46.2	54.6	56.7	58.7
2009	47.1	55.3	58.5	
2010	49.2	**58.8**		
2011	52.8			

Accessing Disaggregated Achievement Data

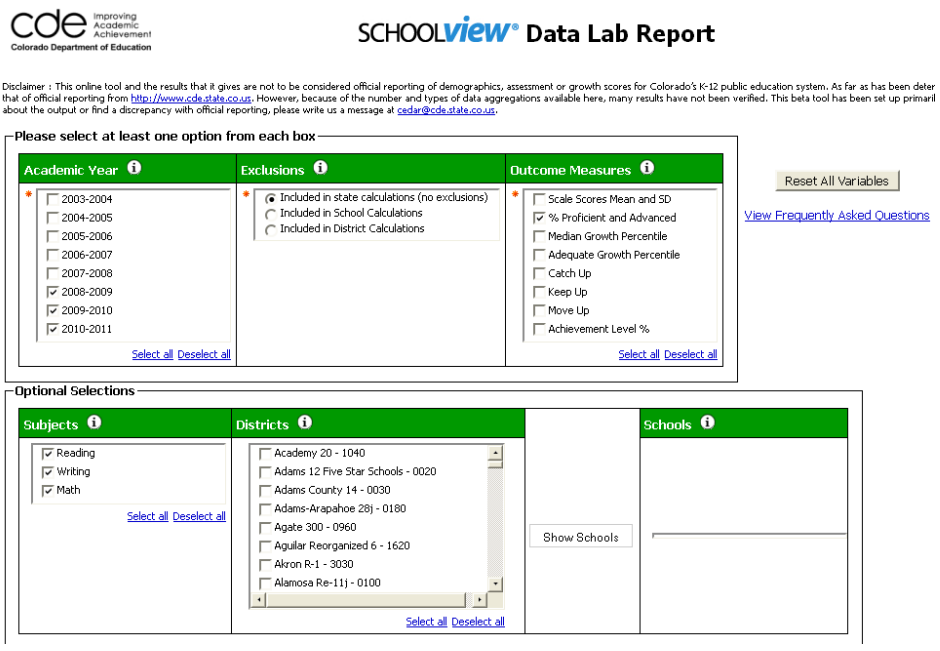
1. **Go to Schoolview.org.**

2. **Enter School Performance.**

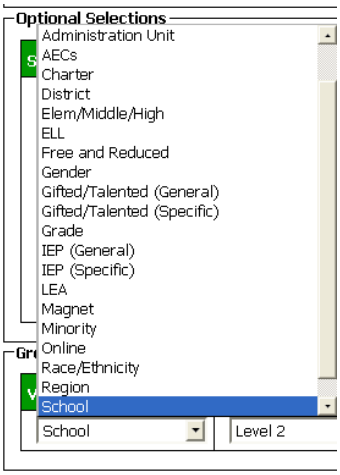
3. **Enter the Data Lab. Click Launch Data Lab.**



4. **Choose the Academic Years and % Proficient and Advanced as the Outcome Measure. Also, choose Optional Selections - Subject(s), District and School.**



5. **Choose "School" in the Grouping Variables options to get overall school results over time. Choose a specific disaggregated group to see the achievement results for that group over time.**



6. **Click Finish to get Data Lab Report.** SCHOOLview® Data Lab Report

7. **Data can be exported to manipulate the data (this step may need an upgrade to the internet browser used).**

Year(s): 2008-2009, 2009-2010, 2010-2011
Subject(s): Reading, Writing, Math
Filters: Included in state calculations (no exclusions)
Measures: % Proficient and Advanced
Grouping Variable 1: School
Grouping Variable 2: None
Grouping Variable 3: None
Grouping Variable 4: None
Grouping Variable 5: None
Export results to Excel 2007

Academic Year	Subject Name	School	N Count Proficiency	Percent Proficient Advanced
2009	Math	Middle School	534	59.18
2009	Reading	Middle School	534	72.28
2009	Writing	Middle School	534	63.67
2010	Math	Middle School	522	54.02
2010	Reading	Middle School	522	74.33
2010	Writing	Middle School	522	59.20
2011	Math	Middle School	504	56.15
2011	Reading	Middle School	504	71.83
2011	Writing	Middle School	504	58.53

Percent Proficient and Advanced Over Time

	2009	**2010**	**2011**
	N = 534	*N = 522*	*N = 504*
Math	59.18%	54.02%	56.15%

Identifying the Magnitude of the Performance Challenge

Use example School Performance Framework Reports for schools with different plan type assignments.

Question	Example School 1	Example School 2	
Are the performance challenges for this school something that impacts 85% or more of the students in the school or less than 15% of the students in the school? **Describe what percent of the student population is impacted by this school's performance challenges.**			
Are significant performance challenges evident across all disaggregated groups? **Is there one or more disaggregated student group in which performance is weaker?** **Summarize the performance of disaggregated student group(s) at the school.**			

Question	Example School 1	Example School 2	
Are significant performance challenges evident across all content areas? **Does performance (achievement and growth) differ across content areas?** **Is there one content area in which performance is weaker? Stronger?** **Summarize performance across content area(s).**			
Summarize the magnitude of the performance challenges faced by this school.			

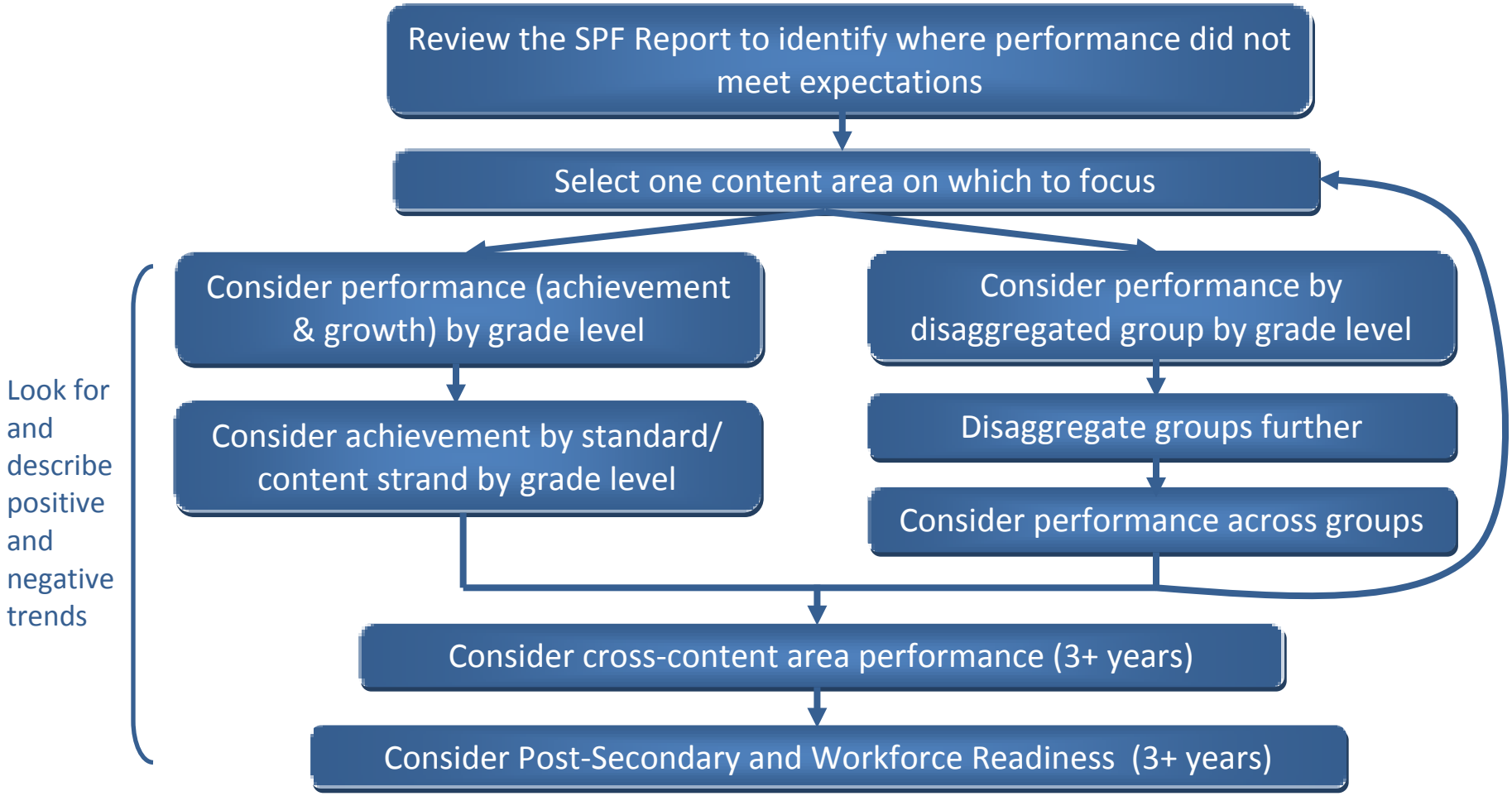
Worksheet #1: Progress Monitoring of Prior Year's Performance Targets

Directions: This chart supports analysis of progress made towards performance targets set for the 2011-12 school year (last year's plan). While this worksheet should be included in your UIP, ***the main intent is to record your school's reflections to help build your data narrative.***

Performance Indicators	Targets for 2011-12 school year (Targets set in last year's plan)	Performance in 2011-12? Was the target met? How close was school in meeting the target?	Brief reflection on why previous targets were met or not met.
Academic Achievement (Status)			
Academic Growth			

Performance Indicators	Targets for 2011-12 school year (Targets set in last year's plan)	Performance in 2011-12? Was the target met? How close was school in meeting the target?	Brief reflection on why previous targets were met or not met.
Academic Growth Gaps			
Post Secondary Readiness			

Organizing Performance Data for Continuous Improvement



Organizing Data for Continuous Improvement

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
Review performance (achievement/ growth) by grade level for 3+ years	Academic Achievement on CSAP/TCAP by grade level for at least three years (***reading, writing, mathematics, science***)	Number and percent scoring at each performance level (Unsatisfactory, Partially Proficient, Proficient, Advanced) Number and percent scoring proficient or better	What is the distribution of student performance by proficiency level? By grade level? How does this compare to minimum state expectations? How would you describe the trend in performance over at least the past three to five years over-all? By grade level? How do these trends compare to the district and/or state trend for the same time period?	CSAP/TCAP Summary
	Academic Growth within the Colorado Growth Model by grade-level for at least three years (**reading, writing, math, English language proficiency**)	Median student growth percentile Median adequate student growth percentile Percent and number making catch-up growth, keep-up growth and move-up	What was the school's one-year median growth percentile? What has been the trend in median student growth over the past three (to five) years? By grade level? How do these trends compare to the district and or state trend for the same time period? What was the school's median	School Growth Summary SPFs over time or

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
		growth	*adequate* growth percentile? Is this higher, lower, or the same as the school's median growth percentile over the last three (to five) years?	Adequate Growth Percentiles (via the data center)
			What is the median student growth percentile for students by achievement level? and by grade level? Are there differences in growth by achievement level? Are trends evident over the last three years?	District Data Tool
			What percentage of students (and how many students), over-all and by grade level and content area made catch-up growth? Keep-up growth? Move-up? Are any patterns evident by grade level? What is the trend/pattern over the last three years? How do these trends compare to the district and/or state trend for the same time period?	School Growth Summary
			Considering only the students who did not make catch-up growth, are	District Data Tool

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
			any patterns evident in terms of race, gender, disability designation, attendance? Program participation? Considering only the students who did not make keep-up growth, are any patterns evident in terms of race, gender, disability designation, attendance? Program participation? Considering only the students who made move-up growth are any patterns evident in terms of race, gender, disability designation, attendance? Program participation?	
	Academic Achievement on CSAP/TCAP and Academic growth within the Colorado Growth Model over three years in combination	Percent proficient or better Median student growth percentile	How do trends in achievement compare to trends in growth?	Percent proficient or better by grade level for 3 (to 5) years and median student growth percentile for 3 (to 5) years.

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
Within grade-levels consider achievement by standard/content strand	Academic Achievement on CSAP/TCAP by grade level by standard area and by sub-content area	Number/ percent scoring proficient and above or below proficient by standard and sub-content area.	How did students in each grade level perform on individual standards? Sub-content areas? Are any patterns evident over time? How do these trends compare to the district and or state trend for the same time period?	
Consider cross-content area performance (3+ years)	Academic Achievement on CSAP/TCAP by grade level for at least three years (***reading, writing, mathematics, science***)	Number and percent scoring unsatisfactory, partially proficient, proficient, and advanced Number/percent scoring proficient or above	To what degree are common performance challenges evident across content areas?	
Consider performance by disaggregated group by grade level for 3+ years	Academic Achievement CSAP/TCAP by disaggregated groups by grade level for at least three years (***reading, writing, mathematics,***	Number and percent scoring at each performance level Number and percent scoring proficient or above	Were there differences in percent of students scoring proficient or above by disaggregated student groups? Were there differences in percent of students scoring below proficient by disaggregated student groups? Are any patterns/trends evident over time? How do these trends compare to school performance	District Data Tool or Schoolview Data Lab/ Data Center

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
	science).		overall? Which students from the disaggregated group scored below proficient? Considering only the student within a specific disaggregated group that scored below proficient, are there any patterns/trends by grade level? Attendance? Gender? Participation in specific instructional programs? Perceptions about school?	
	English Language Attainment for at least three years.	Overall Performance Level (1-5) NEP = 1 or 2 LEP = 3 or 4 FEP = 5	What is the distribution of student performance by ELL designation? By grade level? How would you describe the trend in performance over at least the past three (to five) years by ELL designation? Which and how many students have increased their performance level across each level for each of the last three years?	District Data Tool

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
			Are patterns evident for groups of students who have and have not increased their English Language attainment in terms of race, gender, disability designation, or attendance? Program participation?	
	Academic Growth within the Colorado Growth Model for disaggregated groups (students eligible for free/reduced lunch, minority students, students with disabilities, English language learners, student scoring below proficient) for at least three	Median student growth percentile Median adequate student growth percentile Percent and number making catch-up growth, keep-up growth and move-up growth	Are there differences in median student growth percentile across the disaggregated student groups? Which groups had higher? Which had lower MGPs? How does this compare to minimum state expectations? Are there differences in median adequate growth percentile across the disaggregated student groups? For each disaggregated group, was the median growth percentile greater than or equal to the median adequate growth percentile? If not, what is the	School Growth Summary SPFs over time or Adequate Growth Percentiles (via the data center)

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
	years.		difference (gap)? What has been the pattern in this gap over the last 3 years? How does the trend in growth gaps compare to the district or state trend in growth gaps for the same time period?	
			For a focus disaggregated group (e.g. minority students), are any trends/patterns in median growth percentile evident over the last three (to five) years? How does this trend compare to the over-all school trend for the same time period?	School Growth Summary
			For a focus disaggregated group (e.g. English language learners), what percentage of students did not make adequate growth? At each grade level? Over time (three to five years)?	SPFs over time or Adequate Growth Percentiles (via the data center)
			What percentage of students (and how many students) in each disaggregated group, by grade level and content area made catch-up growth? Keep-up	School Growth Summary Report

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
			growth? Move-up? Are any patterns evident by grade level? What is the trend/pattern over the last three years? How do these trends compare to over-all school trends? District or state trends?	
			Considering only the students who did not make catch-up growth, are any patterns evident in terms of program participation, race, gender, disability designation, attendance, student perceptions?	District Data Tool
			Considering only the students who did not make keep-up growth, are any patterns evident in terms of program participation, race, gender, disability designation, attendance, student perceptions?	District Data Tool
			Considering only the students who made move-up growth are any patterns evident by program participation, race, gender, attendance, student perceptions?	District Data Tool

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
Disaggregate groups further disaggregated • **Minority (Asian, Black, Hispanic, Native American, White)** • **ELL (FEP, NEP, LEP)** • **IEP (Limited Intellectual Capacity, Emotional Disability, Specific Learning Disability, Hearing, Visual, Physical, Speech/ Language, Deaf-Blind, Multiple Disabilities, Infant w/disability, Autism, Traumatic Brain Injury)**	Academic Achievement on CSAP/TCAP by disaggregated disaggregated groups for three years.	Number and percent scoring unsatisfactory, partially proficient, proficient, and advanced Number and percent scoring proficient and advanced	Were there differences in percent of students scoring proficient or better by disaggregated disaggregated student groups (e.g. by Asian, black, Hispanic, native American, white)? Are any trends evident over time? How do these trends compare to the district or state trends for the same time period? Which students from the disaggregated disaggregated group scored below proficient?	District Data Tool
	Academic Growth within the Growth Model for disaggregated groups for at least three years.	Median student growth percentile Median adequate student growth percentile Percent and number making catch-up growth, keep-up growth and move-up growth	What was the median growth percentile for the disaggregated disaggregated group? Has this increased, decreased, or stayed the same over three (or five) years? Are there differences in median student growth percentile across the disaggregated disaggregated student groups (e.g. by Asian, black, Hispanic, native American, white)? Are any trends evident by grade level over time?	District Data Tool

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
			What was the median *adequate* growth percentile for each disaggregated disaggregated group? What percentage of students from the disaggregated disaggregated group did not make adequate growth?	
Post-Secondary and Workforce Readiness		Drop-Out Rate	What is the drop-out rate? How does this rate compare to minimum state expectations? What has been the trend in drop-out rates over the last 3 (to 5) years? How does this trend compare to the state trend for the same time period?	
		Graduation Rate	What are the 4, 5, 6, 7, year over-all graduation rates? What is the best of these rates? How does this compare to minimum state expectations? What has been the trend in over-all graduation rates over the last 3 (to 5) years? How does this compare to the trend in the state graduation rate for the same time period?	

Data Analysis Step	Measures	Metrics	Questions	Data Views/ Reports
		Disaggregated Graduation Rates	What are the 4, 5, 6, 7, year graduation rates for students eligible for free/reduced lunch, minority students, students with disabilities, English language learners? What has been the trend in graduation rates for each of these groups over the last 3 (to 5) years? Are there differences in trends in graduation rates across these disaggregated groups? Which groups had higher? Which had lower graduation rates? How does the trend for each group compare to the state trend for the same group over the same time period?	
		Average Composite ACT Score	What was the school's average composite ACT score? How does this compare to minimum state expectations? What has been the trend in average composite ACT scores over the last 3 years? How does this trend compare to the state trend?	

Data Analysis Questions

Metrics	Questions	Data Views/ Reports
School Over-all Aggregated *Achievement:* • % proficient or better • % and number scoring at each performance level *Growth:* • Median Student Growth Percentiles • Median Adequate Growth Percentiles • % catch-up • % keep-up • % move-up		
Grade-Level *Achievement:* • % proficient or better • % and number scoring at each performance level *Growth:* • Median Student Growth Percentiles • Median Adequate Growth Percentiles • % catch-up		

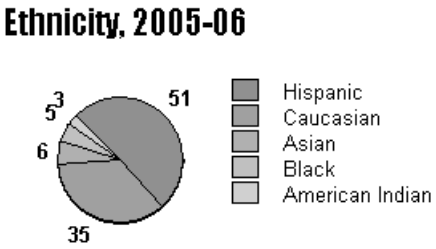
• % keep-up • % move-up		
Standard/Sub-Content Area (by grade level) % proficient or better for each standard and sub-content area		
Disaggregated Groups (Minority overall, Asian, Black, Hispanic, Native American, Free/Reduced, ELL, IEP, Below Proficient) *Achievement:* • % proficient or better • % and number scoring at each performance level *Growth:* • Median Student Growth Percentiles • Median Adequate Growth Percentiles • % catch-up • % keep-up • % move-up		

Optional: **Disaggregated** **Disaggregated Groups** **ELL: FEP, LEP, NEP** **IEP: limited Intellectual capacity, emotional disability, specific learning disability, hearing disability, visual disability, physical disability, speech/language disability, deaf-blind, multiple disabilities, infant disability, autism, traumatic brain injury**		
Post-Secondary and Workforce Readiness • Graduation Rate • Disaggregated Graduation Rates • Drop-out Rate • Average Colorado ACT Composite Score		

Local Performance Assessment		

Interacting with Data

There are many ways to illustrate data. How we represent data can make the data easy to understand or it can confuse. If the data is well represented, the graph can stand alone, needing little explanation, if any. The most common types of graphs are shown below, along with an explanation of the types of data that are well represented with the specific graph. Keep in mind when using color that many people are colorblind and have difficulty distinguishing red from green, green from brown, blue from purple, etc. and those colors shouldn't be used next to one another.

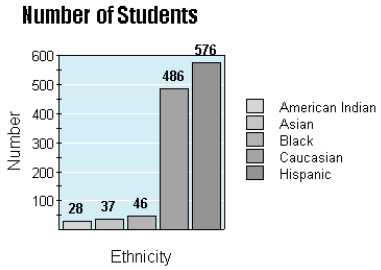


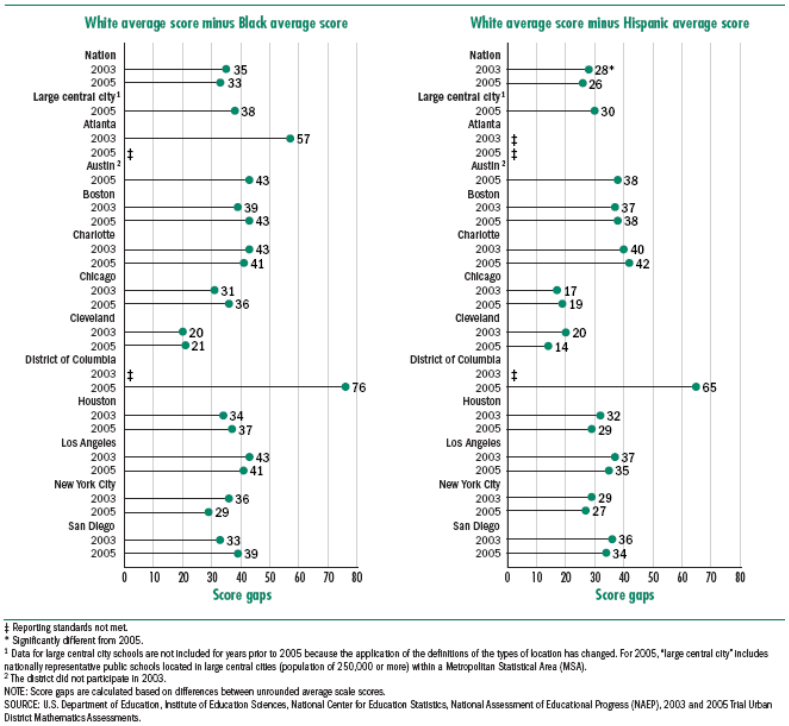
Pie Charts

Pie charts are used to represent the parts, percentages or proportions, of a whole. The size of each part displayed as a percentage makes the relationship among the parts and between the part and whole readily apparent.

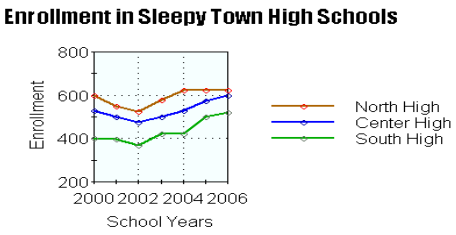
Bar Graphs

Bar graphs are an excellent format to display descriptive data. They can be displayed with horizontal or vertical bars, and usually show the relationship between an x and y axis. Stacked bars show the elements that comprise the total. They can be used to display comparisons, rankings and change over time.





‡ Reporting standards not met.
* Significantly different from 2005.
¹ Data for large central city schools are not included for years prior to 2005 because the application of the definitions of the types of location has changed. For 2005, "large central city" includes nationally representative public schools located in large central cities (population of 250,000 or more) within a Metropolitan Statistical Area (MSA).
² The district did not participate in 2003.
NOTE: Score gaps are calculated based on differences between unrounded average scale scores.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 and 2005 Trial Urban District Mathematics Assessments.

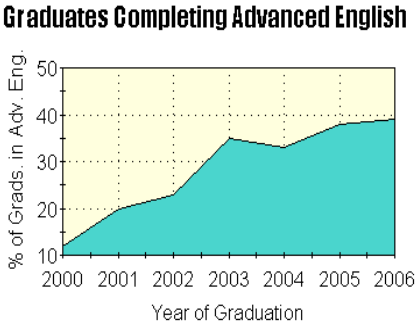


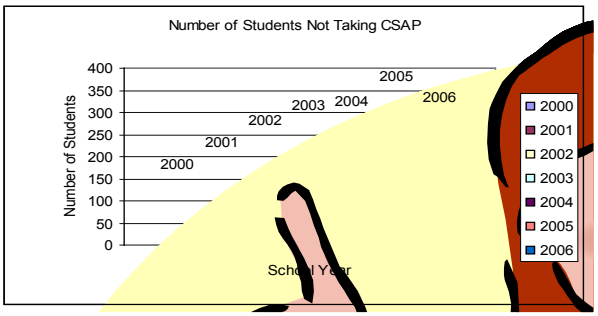
Line Charts

Line charts provide lots of possibilities. One of their best uses is to display change over time. They are can be more helpful than bar charts if complex data is involved. They are useful for displaying trends and comparisons. The x axis usually displays the numbers for the time period; the y axis usually displays the numbers for what is being measured.

Area Graphs

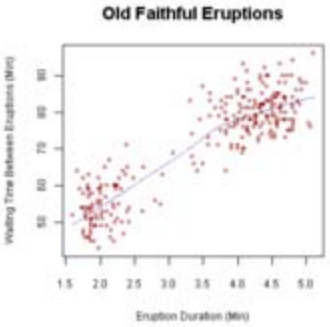
Area graphs can be used to show how something changes over time. They have an x-axis (horizontal) and a y-axis (vertical). Usually, the x-axis has numbers for the time period, and the y-axis has numbers for what is being measured. Area graphs can be used when you're plotting data that has peaks (ups) and valleys (downs), or that was collected in a short time period.





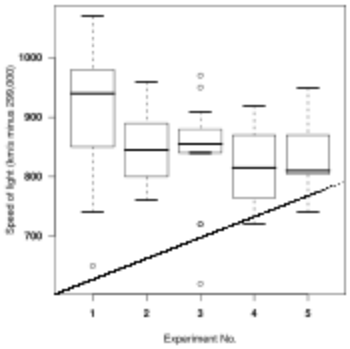
Pictographs

Pictographs are another type of graph that presents a visual display of data, creative and eye-catching.



Scatter Plots

Scatter plots display relationships between two or more variables. They indicate correlation and comparisons, as one point in time, or over time.



Box and Whisker Plots

Box and Whisker plots turn raw data into the "shape" of the score distribution for ease of visual interpretation. The boxes display the distribution of scores, while the whiskers indicate the range above and below the median. These are what go home to parents about students' CSAP performance.

Resources Used

Box plot , Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/, downloaded 6-7-07

Create a Graph, National Center for Education Statistics (NCES), http://nces.ed.gov/nceskids/graphing/index.asp, downloaded 3-12-06

Creating Pictographs with Excel, by Edwin H.B. Tam, downloaded 3-12-06 http://users.vol.net/edwintam/tips/1/TIP1.HTM

Scatterplot , Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/, downloaded 6-7-07

Using Data and Statistics, http://www.nathleague.com/help/data/data/htm, downloaded 3-12-06

Bernhardt, V. L., (1998). Data analysis. Larchmont, NY: Eye on Education, Inc.

Wellman, B. & Lipton, L. (2003). Data driven dialogue: A facilitator's guide to collaborative inquiry. Sherman, CT: MiraVia.

TCAP/CSAP Historic Achievement at a Glance

(reported as percent proficient and above)

Colorado	Reading						Writing					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Grade 3	71	70	73	70	73	74	54	50	54	50	51	52
Grade 4	64	66	65	66	65	67	49	52	51	50	56	49
Grade 5	69	70	69	70	69	69	57	59	58	57	60	58
Grade 6	70	71	72	72	71	73	60	60	61	57	62	56
Grade 7	65	65	67	68	67	68	60	58	62	58	59	62
Grade 8	63	67	64	68	67	67	51	53	53	55	54	55
Grade 9	66	66	67	68	66	67	49	49	51	49	53	51
Grade 10	69	66	69	66	65	68	51	47	49	47	47	48

Colorado	Math						Science					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Grade 3	68	70	69	71	70	71						
Grade 4	71	68	70	70	71	71						
Grade 5	65	65	63	66	66	64	42	44	45	47	47	49
Grade 6	60	61	63	61	63	61						
Grade 7	50	46	54	49	53	53						
Grade 8	46	47	50	51	51	52	52	46	49	48	49	49
Grade 9	35	38	35	39	38	37						
Grade 10	30	30	30	30	32	33	48	47	50	47	47	49

Note: The minimum N for summary reporting is set to 16. X = number of students below the minimum. Blank = no data.

Developing Trend Statements Examples

Performance Indicator	What measure/ data source?	What content area?	Which metric(s)?	Which students? (grade level, disaggregated groups)	Direction of trend? Comparison?	Amount?	Over what time period?	What makes this trend notable?	Trend Statement
Academic Growth Gaps	Colorado Growth Model (CSAP/TCAP)	Reading	Median Growth Percentile and Median Adequate Growth Percentile	9th and 10th graders on an IEP	decreasing	MGP: 55 to 35 AGP: 70 to 71	2009-10 to 2011-12 2010-11	For this disaggregated group, the median growth percentile was below the median adequate growth percentile and decreased 20 percentile points to a level below the minimum state expectation of 55.	The median student growth percentile in reading for 9th and 10th graders on an IEP decreased from 55 to 35 between the 2008-09 and 2010-11 school years, which was below the median adequate growth percentile of 70 and a 20 point decrease to a level below the minimum state expectation of 55.
Academic Growth	Colorado Growth Model (TCAP)	Math	Median Growth Percentile	6th graders	increasing	38 to 46	2009-10 to 2011-12 2010-11	The median growth percentile increased to a level above the adequate growth percentile for this group and above the minimum state expectation of 45.	The median student growth percentile in math for 6th graders increased from 38 to 46 between 2008-09 and the 2010-11 school years to a level above the adequate growth percentile for this group of students and above the minimum state expectation of 45.
Academic Growth (English Language Development)	Colorado Growth Model (CELApro)	English Language Proficiency	Median Growth Percentile and Median Adequate Growth Percentile	9th and 10th graders English Learner	increasing	MGP: 20 to 35 AGP: 60, 55	2009-10 to 2011-12	The median growth percentile for CELApro was below the minimum state expectation of 55 because the median growth percentiles were below the median adequate growth percentiles.	The median student growth percentile for English language proficiency among ELLs increased from 20 to 35 between 2009-10 and 2011-12, but remained below the state minimum expectation of 55 and below the median adequate growth percentile for the same time period.
Achievement	CSAP	Science	Percent proficient and advanced	5th graders qualifying for F/R lunch	stable	40%, 43%, 42%	2009-10 to 2011-12	The percent of students qualifying for free/reduced lunch who were proficient or advanced was substantially below the % of all students in the school who were proficient or advanced (70%, 72%, 68%).	The percent of 5th graders who were proficient or advanced and who qualify for free or reduced lunch was stable (40%, 43%, 42%) between 2010 and 2012 and substantially below the % of students in the school who were proficient or advanced (70%, 72%, 68%) during the same time period.
Postsecondary and Workforce Readiness	Graduation	NA	Disaggregated 4 and 5 year graduation rates	English Learners	decreasing	4 year: 75%, 70%, 62%	2008-9 to 2010-11	The 4 and 5 year graduation rates for English Language Learners was below the minimum state expectation of 80% for each of the last three years.	The percent of ELLs graduating within 4 or 5 years decreased from 75% to 62% between 2009 and 2011, a rate substantially below the minimum state expectation of 80%.
Academic Growth	Colorado Growth Model (TCAP)	Reading	% Catch-up Growth	4th and 5th graders	increasing	5%, 8%, 20%	2009-10 to 2011-12	The percent of students making catch-up growth in the school is significantly below both the state and district rates across the same timeframe.	The percent of 4th and 5th grade students who made catch-up growth increased from 5% to 20% between 2010 and 2012; a 15% point increase, but still substantially below the % catch-up growth for the state overall for this grade-level and content area during the same time period.

Developing Trend Statements Template

Performance Indicator	What measure/ data source?	What content area?	Which metric(s)?	Which students? (grade level, disaggregated group)	Direction of trend? Comparison?	Amount?	Over what time period?	What makes this trend notable?	Trend Statement

Worksheet #2: Data Analysis

Directions: This chart supports planning teams in recording and organizing observations about school-level data in preparation for writing the required data narrative. Planning teams should describe positive and negative trends for all of the four performance indicators using at least three years of data and then prioritize the performance challenges (based on notable trends) that the school will focus its efforts on improving. The root cause analysis and improvement planning efforts in the remainder of the plan should be aimed at addressing the identified priority performance challenge(s). A limited number of priority performance challenges is recommended (no more than 3-5); a performance challenge may apply to multiple performance indicators. At a minimum, priority performance challenges must be identified in any of the four performance indicator areas where minimum state and federal expectations were not met for accountability purposes. Furthermore, schools are encouraged to consider observations recorded in the "last year's targets" worksheet. Finally, provide a brief description of the root cause analysis for any priority performance challenges. Root causes may apply to multiple priority performance challenges. You may add rows, as needed.

Performance Indicators	Description of Notable Trends (3 years of past state and local data)	Priority Performance Challenges	Root Causes
Academic Achievement (Status)			

Performance Indicators	Description of Notable Trends (3 years of past state and local data)	Priority Performance Challenges	Root Causes
Academic Growth			

Performance Indicators	Description of Notable Trends (3 years of past state and local data)	Priority Performance Challenges	Root Causes
Academic Growth Gaps			
Post Secondary & Workforce Readiness			

Planning for Data Analysis / Data Narrative

I. Access and Organize Data Reports/Views for Data Analysis

Tasks	How	Who/When	Complete
A. Access and Organize data reports for required state metrics for each content area.			
Summary of Achievement (% P/A, % and N scoring at each performance level) for math, reading, writing and science, by grade level (for 3-5 years).			
Growth Summary by grade level: MGP, catch-up, keep-up, move-up, and AGP (for 3-5 years). Note AGP is not provided in the School Growth Summary report.			
Achievement and Growth (see metrics above) by disaggregated groups (minority, English learners, students on an IEP, students eligible for free/reduced lunch).			
Achievement and Growth by further disaggregated groups (e.g. minority disaggregated into: Asian, Black, Hispanic, Native American, Caucasian).			
Achievement at the standard and sub-content area level (% above and below proficient).			
B. Access CELApro Growth Data.			
Is English learner population at school large enough for growth to be calculated (at least 20 English learners)? If yes, access CELApro growth via CEDAR for last 3 years.			
C. Access local performance data.			
Use the *Inventory of Performance Data Sources* to identify available local performance data.			
Determine what local performance data sources will be used in UIP data analysis.			
Access the local data reports/views that will be used for analysis.			

Tasks	How	Who/When	Complete
D. Adjust for small N (if summary reports have little or no data due to small numbers).			
Determine an approach to generating meaningful data reports: • Student-Level Data • Summary statistics for smaller N (it is possible in Alpine, for example to set the reports to N = 1) • May not need to disaggregate based on numbers of students in disaggregated groups.			
Access these reports using one of the following options: • District data reporting tool • Downloading student-level records from CEDAR • The Colorado Growth Model web-based application (student-level)			

II. Review Current Performance

Task	How	Who/When	Completed
Review the School Performance Framework (SPF) report, to answer the following questions: 1. What was the school's plan type assignment? 2. In which indicator areas did school performance not at least meet state and federal expectations? 3. In which sub-indicators did school performance not at least meet state expectations? 4. In which indicators and sub-indicators did school performance not at least meet local expectations?			
Summarize and describe the magnitude of the school's overall performance challenge.			

III. Progress Monitoring of Prior Year's Targets

Task	How	Who/When	Completed
Enter prior year's performance targets into the Progress Monitoring of Prior Year's Performance Targets Worksheet.			
Identify which targets from the prior year were met and which were not met (compare targets to current performance).			
Collaboratively reflect on prior year's targets, consider. . . • Why were the school's performance targets met? OR • Why were the school's performance targets not met? • For targets that were met: Is this worth celebration? Were the target(s) rigorous enough? • For targets that were not met: Should this continue to be a priority for the current year? Why or why not?			
Aggregate and summarize school staff reflection on prior year's performance targets and capture in the Progress Monitoring of Prior Year's Performance Targets Worksheet and the Data Narrative.			

IV. Describe Performance Trends

Determine what metrics will be considered and identify questions to guide analysis.

Tasks	How	Who/When	Complete
Review *Organizing Data for Continuous Improvement* and *Data Analysis Questions*.			
Consider the magnitude of the performance challenge and make-up of the student population to determine the degree to which disaggregated data will need to be considered. Determine if disaggregated group data needs to be disaggregated further.			
Determine which local performance data will be used and identify specific achievement and growth metrics.			
Identify which questions will guide your analysis.			
Capture the questions that will guide the analysis for each metric on the *Data Analysis Questions* chart. Include local performance data.			

Determine who will engage in analyzing which data.

Performance Focus	Who	When	Completed
Math			
Reading			
Writing			
Science			
Other Content Areas			
Cross-Content Area			
Post-Secondary and Workforce Readiness			

Steps in Identifying Notable Trends

Steps	Tools we will use
1. Start with a performance focus, relevant data report(s) and questions to guide analysis.	
2. Make predictions about performance.	
3. Interact with data (at least 3 years).	
4. Look for things that pop out, with a focus on patterns over time (at least three years).	
5. List positive and negative facts about the data (observations).	
6. Identify which trends are notable (narrow) and which require additional analysis.	
7. Write trend statements.	

V. Prioritize Performance Challenges

Steps	Who	When	Tools/ Materials	Completed
Review for which performance indicators priorities must be identified and the magnitude of the over-all performance challenge.				
Consider notable trends. Focus the list, combining related trends.				
Identify trends that are most urgent to act on. Do a reality check (initial prioritization).				
Evaluate the degree to which the proposed priorities reflect the magnitude of the over-all performance challenge. Achieve consensus on the top three (or four) priorities.				

VI. Completing the Data Analysis Portion of the Data Narrative

Task	How	Who/When	Completed
Apply the UIP Quality Criteria to the school's trends and priority performance challenges and revise as necessary (Data Analysis Worksheet and Data Narrative).			
Aggregate and summarize the magnitude of performance challenges (Data Narrative).			
Summarize reflections on prior year's performance (Progress Monitoring of Prior Year's Performance Targets, Data Narrative).			
Aggregate and summarize notable trends (Data Analysis Worksheet and Data Narrative).			
Aggregate and summarize priority performance challenges (Data Analysis Worksheet and Data Narrative).			
Draft data analysis components of the data narrative (based on Data Narrative Outline notes).			

After completing root cause analysis:

- Seek consensus on the data narrative contents.
- Apply the UIP Quality Criteria to the draft data narrative.
- Finalize the data narrative.