



Case Examples and Templates Used for Data Informed Instruction 2019 - 2020

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During the last year, Demonstrated Success worked with many schools offering a variety of ways to use data to inform instruction. The following is a sampling of some of the work we did, along with samples of protocols we used.



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Site Specific Examples

The following pages contain site specific examples of work.





Alton Central School



Alton Central School values the importance of using data to inform instruction. Historically they have used NWEA for Reading and Writing. However, they hoped this past year to move to the state assessment options (Interim and Modular/Benchmark). They had hoped to use the Interim September and January and then Modulares along the way. They did some piloting of the state assessments, as pre and post assessments, at the individual teacher level, not school-wide.

They also have considered using locally designed single unit assessments.

The school has data teams and protocols well established. They recognize the need to use this data to inform the curriculum, which is not well defined. The process in place did include:

- A record of student data
- “Student Intention Groups” that met every six weeks to review data
- Use of Running Records (K-6) and Exact Path for math.
- However, a lack of progress monitoring data was a gap in the ability to assess progress.

Going forward with a hybrid year additional time will be provided for teachers.

- Students will be delayed 30 minutes in the morning to provide time for staff to meet.
- Every Friday will include an early release

Some of the forms to support this work, provided for focused grade level meetings and longitudinal view of student progress. See images below.



Grade Span Meeting Focus:



*Alton
Central
School*

K-2 SPARC Meeting Agenda & Action plan

Date

1. Review last meeting notes and summarize

2. Roles:

Note taker: _____ Time Keeper: _____ Facilitator : _____

Agenda Item	Notes/Task	Who	Timeline
Meeting Norms 1. 2. 3. 4.	Follow Meeting Norms	All	Ongoing
Other			

Highlight present:

Hawkins	Knott	LeBlanc	E. Guillemette	Scott	Allard
S.Guillemette	Roy	Ryan	Leathers	Gubellini	Pappaceno
Rees	Leavitt	Cassily	Ekberg	MacDonald	Forbes

Tracking Student Assessment Progress:

Student Name:			Grade:		
Date	Concerns/Testing Scores/Data	Intervention/Frequency	Responsibility/When/Where	Follow-Up	



Derry



Facilitated by Demonstrated Success, Derry school district embarked on an initiative to improve their literacy instruction through coaching and grade level team collaborative inquiry. As part of this initiative, grade level teams used a **Looking at Student Work** protocol, to analyze student writing together and determined an area of focus that the team would like to focus on for their team inquiry.

Looking at Student Work Protocol:


“Thin Slicing” Protocol (Student Work)

1. Teachers bring their class set of work to be assessed
2. Teachers review the standard or standards along with any leveled samples to determine what skills, strategies, content and conventions they should be assessing.
3. In two or three sentences, the team articulate the most salient features one can look at to judge the work. For example, in narrative writing, did the student’s story tell rather than summarize, and did she or he write with detail? (rubric can do this too)
4. Quickly (in 2 minutes) scan and sort your students’ work into low level work, medium level work and high level work. Teachers should really just “eyeball” the work at this point, not read it.
5. Quickly (in 3-4 minutes), each teacher read through their benchmark pile (the medium group), noting pieces that were outliers and moving those pieces to higher or lower piles as necessary. Repeat the quick read-throughs with below and above benchmark piles if time allows.
6. Teachers select a single piece (The SLICE!) that was representative of each pile and placed that piece on top of that pile.
7. Teachers worked together to compare the benchmark piece from their class with the benchmark slices from other classes, as well as with to any corresponding leveled samples
 - How do these “slices” compare with the leveled samples?
 - What are the students already doing in their writing?
 - What are the students attempting but confusing or falling short?
 - What are the students not doing in their writing currently that will lift the level of their work?



After the team determined their area of focus, a Demonstrated Success trainer created a model lesson for that topic, and led a cycle of pre-observation, observation and post observation dialogue. The grade level teachers and building literacy specialist met to review the lesson with the DS trainer and ask questions.


Lesson Plan Format for Team Review:

 DEMONSTRATED SUCCESS <small>Improving student learning by helping teachers do what they love</small>		www.DemonstratedSuccess.com	
Writing Workshop Lesson Planner			
Type (Describe, Narrate, Inform, or Persuade):		Genre:	
Standard(s): Choose an item.			
Unit:		Focus:	Session:
Prior to this lesson will have...			
Mini-Lesson:(10 minutes)			
Connection			
Teaching Point			
Teaching Demonstration, guided practice, explanation with example, or inquiry			
Active Engagement			
Link			
Independent Practice/Conferencing: (30 minutes)			
Individual and Group Differentiation			
Use of Technology			
Supports (organizers, models, rubrics)			
Mid Workshop Teaching Point (2 minutes)			
Support to keep writers working, check in referencing teaching point, give them something to try, point out something someone is doing to celebrate.			
Focus			
Sharing: (10 minutes)			
Assessment			
Student Self-Assessment Method			
Teacher's Formative Assessment method(s)			



Then, the team observed the DS trainer delivering the lesson, and used an **Observation Protocol** to make notes about what they observed.


Observation Protocol:

	
<h2>Observation Form</h2>	
Teacher: _____ Grade: _____ Date: _____	
Start Time: _____ End Time: _____	
Observation Focus: _____	
<ul style="list-style-type: none">• Engagement• Independence• Problem Solving• Motivation• Confidence	<ul style="list-style-type: none">• Language Usage• Pause/Think Time• Background Knowledge• Differentiation• Feedback• Powerful Moments
<h3>Student Behaviors</h3>	<h3>Teaching Behaviors</h3>
What do you want to: <ul style="list-style-type: none">• Know more about• Borrow	



During the **Peer Observation Debrief**, the team used recorded their key takeaways and action steps:

Peer Observation Debrief:

		
<h3>Peer Observation: Debrief</h3>		
<i>I appreciate...</i>	<i>I wonder about...</i>	<i>I can borrow...</i>
<p><i>Next Steps for my writing practice:</i></p> <div style="border: 1px solid black; height: 150px; width: 100%;"></div>		



Epping Elementary School



In 2019-20, Demonstrated Success worked with Epping Elementary School to conduct a school wide literacy evaluation. As part of this evaluation, the team collected perception data, classroom observation data and interview data. Perception data was gathered through a survey that elicited information on how teachers perceived their competence in teaching Readers and Writers workshop and Foundations, and their opinions of resources and training offered. Classroom observations, using observational rubrics in the DS Educator Success platform(ESP) were conducted during Readers Workshop and Foundations lessons, to gather information on patterns of implementation. Lastly, interviews with grade level teams were conducted to learn more about challenges, successes, and training needed.

Image of Readers Workshop Observation Rubric:

Instructional Rubric: Readers Workshop Data Collection

Mini Lesson

	Not Evident	Moderate Evidence	Considerable Evidence
Appropriate Duration (5-12 minutes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes			
<input type="text"/>			
	Not Evident	Moderate Evidence	Considerable Evidence
Connection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes			
<input type="text"/>			
	Not Evident	Moderate Evidence	Considerable Evidence
Focus and Name Teaching Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes			
<input type="text"/>			



Image of Foundations Lessons Observation Summary:

	No Evidence	Some Evidence	Strong Evidence
Alphabetic Order	2 ✓	0 ✓	2 ✓
Drill Sounds/Warm Up	0 ✓	0 ✓	4 ✓
Introduce New Concepts	1 ✓	0 ✓	2 ✓
Letter-Keyword - Sounds	1 ✓	0 ✓	3 ✓
Trick Words	0 ✓	0 ✓	3 ✓
Trick Practice	0 ✓	0 ✓	3 ✓
Dictation/Sounds	0 ✓	0 ✓	4 ✓
Dictation/Words	0 ✓	0 ✓	4 ✓
Dictation/Sentences	1 ✓	1 ✓	1 ✓
Echo/Find Letters	1 ✓	0 ✓	3 ✓
Echo/Find Words	2 ✓	1 ✓	1 ✓
Echo/Letter Formation	3 ✓	0 ✓	0 ✓
Sky Write/ Letter Formation	3 ✓	0 ✓	0 ✓

Image of Qualitative Focus Group Questions:

Qualitative Grade Level Focus Groups
40 minute interviews with each grade level team

Question set:

- Tell me about how your grade level team decides what teaching points to focus on in reading instruction blocks*
Listen for:
 - Common teaching points/learning targets?
 - Common Core Standards aligned?
 - Use of grade level competencies?
 - Where do the lessons originate from?
- Tell me about how you collect formative assessment information around student performance in reading*
Listen for:
 - Common assessment tools?
 - Formative assessment opportunity embedded in instruction?
- What do you see as the greatest need in your grade level for teaching reading to meet the needs of students?*
Listen for:
 - Feedback about Foundations™
 - Feedback about curriculum preferences
 - Feedback about needed PD
 - Information about how they see student trends



The Epping Literacy Team used a protocol that they adapted from Buce Wellman’s Data-Driven Dialogue, to observe, analyse and interpret the data to come to conclusions for next steps. Below is the artifact from that process:

Activating & Engaging: Surfacing Experiences and Expectations
~10 minutes

Before we review the data, *what* do you think you will see in the data and *why* do you think that?

Teacher	Prediction	Underlying assumption
Example	Reading scores will show weakness with comprehension	Students aren't using strategies independently
Participant 1	There are gaps in understanding our current literacy curriculum.	A deep understanding of the curriculum came with writing it which not everyone was part of. Ongoing training has stopped.
Participant 2	There are vast gaps in solving skills and comprehension is a struggle	That students don't master skills before moving on to the next grade and then fall further behind from year to year
Participant 3	There is a need to develop student comprehension and fluency skills.	Fluency is not always considered on F&P benchmarks allowing students to move up levels. Therefore there is a struggle to find that just right book with on level comprehension..

Organizing and Integrating: Generating Theory
~20 minutes (including wrapping up the meeting)

Let's push ourselves to generate multiple theories to ensure thorough reflection and analysis

	What conclusions might we draw? (causation)	What other data sources are needed to verify the conclusion? (confirmation)	What solution can we try based on our conclusion? (action)	What data will be needed to determine success of solution? (calibration)
Example Theory	There is too broad a range of interventions in direct reading students in one group	Grades from PS, anecdotal progress report, etc.	Divide the students into smaller groups for more focused intervention time	PM data from AIMSweb, benchmark data in the spring
Theory 1	A lack of training had caused a variety of interpretations/ ways of implementation in RW	Literacy Evaluation Report, Accountability Assessment Scores, survey from the Book Group, administrators' formative observations, students	More focused, consistent training, yearly refresher training by the same source, change culture around refresher training, do more frequent needs assessments tailor training	Cross-grade- level discussions. Don't rely on Google Forms because they don't lead to discussions after, track PD so we know what's coming up and what we've done, then time for reflect on that, revisit some of the data sources used to confirm

Exploring and Discovering: Analyzing the Data
~20 minutes for group work
~10 minutes to share most salient point

What stands out to you?
Identify, sort, analyze, compare, contrast

We are NOT generating ideas about the causes of these patterns...YET

Data point/Criteria	Pattern
Example: Training	Teachers who have been in Epping for fewer than 5 years have not been formally trained in readers' workshop
Student Conferencing	Teachers meet with students at least once a week.
Student Conferencing	Teachers engage students in small group instruction in a variety of ways (i.e. book clubs, strategy groups, guided reading, independent practice, Foundations).

Action Steps	
<i>What are the instructional changes that will be implemented as a result of this data inquiry?</i>	
Desired outcome	Love of reading and consistency across building!
Who is responsible?	Lit committee, administrators
Monitoring tool <i>What evidence will demonstrate how effective the instructional changes were?</i>	Accountability assessments, teacher and student perceptions, formative observations
Procedure and Timelines	Summer-Fall 2020 1. Audit needs assessment of instructional resources 2. Refresher training on RW 3. Training on informal running records 4. Calibration of Fountas and Pinnell Benchmarks prior to implementation this year



Ernest P. Barka Elementary School



The Barka School used the report below to determine areas of strength and weakness for ELA. By comparing the percent of students scoring at level 3 and level 4 on the SAS assessment for two years, data teams can determine areas of strength and areas that need improvement.

This report is easy to create using your spreadsheet tool and SAS data from either the NH.Portal or from *PerformancePLUS*.

The major benefit of using this report to look at more than one year is that trends can be seen. In the report below we can see that, even though the cohorts are different, *CRAFT and STRUCTURE* for Literature was the area in which students scored the highest for two years in a row. *KEY IDEAS AND DETAIL* scores were low both years for both Literature and Informational Text. If this pattern continues for a third year, either the prior year or the subsequent year, teachers should feel confident that their instruction is strongest for *CRAFT and STRUCTURE* for Literature and needs some improvement in the area of *KEY IDEAS AND DETAIL* for both Literature and Informational Text.



Image of ELA Cluster Scores:

ELA 2018 and 2019		
	2018	2019
Overall ELA - 3rd Grade	51%	51%
RL - 3.A - Key Ideas and Details (6-9)	34%	20%
RL - 3.B - Craft and Structure (5-7)	64%	51%
RL - 3.C - Integration of Knowledge and Ideas (1-3)	38%	24%
RI - 3.A - Key Ideas and Details (6-8)	37%	25%
RI - 3.B - Craft and Structure (4-7)	49%	41%
RI - 3.C - Integration of Knowledge and Ideas (2-5)	24%	29%
L - 3.A - Conventions of Standard English (5)	51%	42%
L - 3.C - Vocabulary Acquisition and Use (1-2)	46%	39%
SL - 3.A - Comprehension and Collaboration (1)	18%	21%
W - 3.A - Purpose, Focus, and Organization (4)	-	24%
W - 3.A - Evidence and Elaboration (4)	-	18%
W - 3.A - Conventions of Standard English (2)	-	57%
	2018	2019
Overall ELA - 4th Grade	43%	55%
RL - 4.A - Key Ideas and Details (7-9)	37%	55%
RL - 4.B - Craft and Structure (4-7)	65%	67%
RL - 4.C - Integration of Knowledge and Ideas (1-4)	52%	35%
RI - 4.A - Key Ideas and Details (6-8)	40%	32%
RI - 4.B - Craft and Structure (5-7)	43%	56%
RI - 4.C - Integration of Knowledge and Ideas (2-5)	21%	37%
L - 4.A - Conventions of Standard English (5)	57%	46%
L - 4.C - Vocabulary Acquisition and Use (1-2)	59%	62%
SL - 4.A - Comprehension and Collaboration (1)	-	41%
W - 4.A - Purpose, Focus, and Organization (4)	-	5%
W - 4.A - Evidence and Elaboration (4)	-	4%
W - 4.A - Conventions (2)	-	50%
	2018	2019
Overall ELA - 5th Grade	55%	71%
RL - 5.A - Key Ideas and Details (5-8)	42%	55%
RL - 5.B - Craft and Structure (6-11)	49%	70%
RL - 5.C - Integration of Knowledge and Ideas (1-2)	27%	41%
RI - 5.A - Key Ideas and Details (5-7)	22%	37%
RI - 5.B - Craft and Structure (4-7)	53%	58%
RI - 5.C - Integration of Knowledge and Ideas (2-4)	32%	27%
L - 5.A - Conventions of Standard English (5)	65%	71%
L - 5.C - Vocabulary Acquisition and Use (1-2)	58%	61%
SL - 5.A - Comprehension and Collaboration (1-2)	-	51%
W - 5.A - Purpose, Focus, and Organization (4)	-	26%
W - 5.A - Evidence and Elaboration (4)	-	15%

*Data has been changed and is for sample use only.



Hampton Academy



Scores are not available from the SAS Writing Assessments on the NH Portal. By taking the data from the spreadsheet offered by the NH Portal and formatting as the report below, teachers and data teams are able to determine strengths and areas of need in their writing programs.

The spreadsheet used to create this report is available in the NH.PORTAL in the SAS Summative Reporting section. The spreadsheet contains all the information for every child for Math, ELA, and Writing. Once the writing score columns (6 of them) are identified by the headings in row 1, total can be calculated and these reports can be created using EXCEL, Google Sheets or any other spreadsheet program.

Teachers and data teams can look at this report to determine areas of strength and areas where instruction may need to be enhanced. From the report below we can see that students have a strong grasp of *Conventions of English Language*, but *Evidence and Elaboration* needs to be looked at in more detail. With only one year of data in front of us we do not know if it is the cohort or the instruction. Past years can be reviewed in the same way to answer this question.



SAS Writing Scores:

Grade 6 SAS 2019 Writing Scores	Argumentation			Informative/Explanatory		
	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English
4 Points	0	0	-	0	0	-
3 Points	30	12	-	20	6	-
2 Points	66	78	94	86	92	100
1 Point	16	22	18	12	20	18
0 Points	0	0	0	0	0	0
PCM	2	2	2	2	2	2

Grade 7 SAS 2019 Writing Scores	Argumentation			Informative/Explanatory		
	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English
4 Points	4	2	-	0	0	-
3 Points	10	6	-	30	20	-
2 Points	98	76	126	92	100	108
1 Point	18	46	4	4	6	16
0 Points	0	0	0	0	0	2
PCM	0	0	0	4	4	4

Grade 8 SAS 2019 Writing Scores	Argumentation			Informative/Explanatory		
	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English	Purpose, Focus, and Organization	Evidence and Elaboration	Conventions of Standard English
4 Points	14	14	-	18	12	-
3 Points	44	42	-	78	66	-
2 Points	38	42	90	28	46	116
1 Point	12	10	14	2	2	8
0 Points	0	0	4	0	0	2
PCM	1	1	1	3	3	3

*Data has been changed and is for sample use only.



Moultonborough School District



The reports below, that we first created for Moultonborough have been extremely helpful for schools to see the change, over three years, in their state assessments scores for each grade. Data teams can see the change for a grade and for a cohort.

It is a simple process to populate this template and can lead to significant discussion. The chart can be used for any subject. Each column represents a year, so you can view data longitudinally over time. Each row represents a grade so you can view how a grade level performs year over year. Looking at the diagonals, we can see how one group of students performs as they progress from grade to grade. This can be completed for a school or district.

It is not uncommon to see a cohort of students struggle year after year. Or a cohort of students who are strong year after year. We can also sometimes see a dip for one year. This exercise can generate discussions about these types of findings.

In the example below, notice the trend of the 2015-16 Grade 4 students in math. This group struggled. Notice the Grade 8 performance, year after year, this group struggles. There may be unavoidable reasons for these trends, or there may be interventions that can be implemented to reverse these trends. Use this format to consider your own schools' trends and generate that discussion.

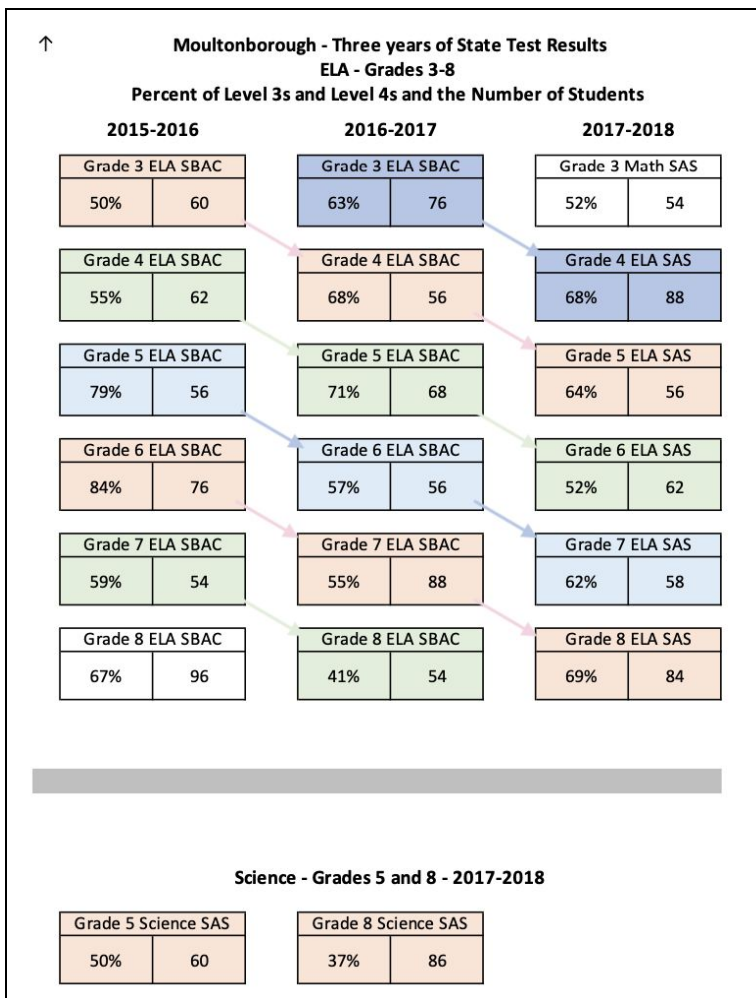
Math Results:

Three years of State Test Results Math - Grades 3-8 Student Scoring Level 3s and Level 4s and the Number of Students (percent of and total number of students)								
2016-2017			2017-2018			2018-2019		
Grade 3 Math SBAC			Grade 3 Math SAS			Grade 3 Math SAS		
78%	40		61%	51		60%	42	
Grade 4 Math SBAC			Grade 4 Math SAS			Grade 4 Math SAS		
26%	39		67%	48		53%	55	
Grade 5 Math SBAC			Grade 5 Math SAS			Grade 5 Math SAS		
47%	45		26%	38		46%	44	
Grade 6 Math SBAC			Grade 6 Math SAS			Grade 6 Math SAS		
46%	39		31%	48		34%	41	
Grade 7 Math SBAC			Grade 7 Math SAS			Grade 7 Math SAS		
58%	33		49%	37		58%	48	
Grade 8 Math SBAC			Grade 8 Math SAS			Grade 8 Math SAS		
55%	31		65%	34		44%	34	

*Data has been changed and is for sample use only.



ELA and Science Results:



*Data has been changed and is for sample use only.



New Franklin School ***(DS Compilation of PLC Binder, based upon school work)***



The following support tool was developed for the 2019-20 school year, based upon work that was done over many years at the New Franklin Schools. This PLC binder was introduced to schools this past year to provide a roadmap to use data to inform targeted instruction.

The key to success for school PLC teams is a rigorous process that is led by the school administration, that is embraced by each PLC team, that is done with efficacy and rigor. The effort requires well defined SMART goals with progress, success and challenges shared among staff at the school level. Staff sharing, along with administrative observations, is vital to build accountability.

The following PLC Binder includes several components that help schools implement data driven instruction.

- A reminder of why we are doing this - to identify what students need as they learn.
- A guide to success teams
 - Understanding components of effective teams
 - Development of Norms and Roles
 - Assessing group work
 - Identifying SMART goals
- A focus on Common Core Standards (or district based standards)
- Local protocols (grading, curriculum, pacing, etc)
- Intervention Cycle Templates - a guide to each component of an intervention cycle
- Forms for each cycle

See [Implementing Professional Learning Communities Binder \(Appendix A: Protocols and Templates\)](#)



Southside Middle School



Southside Middle School Math team implemented a coordinated effort as part of a WINN block to support students in their instructional learning. The teams met in multiple groups throughout the year - both at the school level and at the grade level. The math teachers across the school met one to two times a month to consider student learning. The 8th grade team met on a much more intensive schedule, as frequently as every day. There were three 8th grade math teachers who worked so collaboratively.

The math team took the information they learned at the data coaching workshop to identify the significant need for core instruction. The school used the NH SAS that was presented to better understand the major standards that showed students struggling. As part of reviewing the data, the team recognized the focus of different domains in terms of the number of questions included in the NH SAS. They considered each domain and took that information back to their school to target the instruction. They used the data, along with confirming data to group students as part of the initial WINN support. After an initial 3 heavy weeks of focused instruction on the topics identified in the NH SAS, student grouping could be changed as progress was monitored.

Teachers used the PerformancePLUS reports to consider student needs. After the initial focus on major domains of learning, teachers began exploring in PerformancePLUS and did mini-lessons with PerformancePLUS to help colleagues target how to use the system. They used this information to focus on which standards to provide support.

In addition to support for all students, the team also considered students on the brink of proficiency (ie. between proficiency level 2 and 3), to provide some targeted support. Note: although it is important to focus on all students, it is helpful to demonstrate a quick 'win' to help these students achieve proficiency. The team will plan to use the interim assessment to guide this support 6.5 weeks prior to the NH SAS assessment in the spring.

There is some interest in using the Interim in place of iReady.

The following are Sample AIR and PerformacnePLUS Reports that provide student data.



PerformancePLUS By Cluster and Reporting Category (provides instructional level insights):

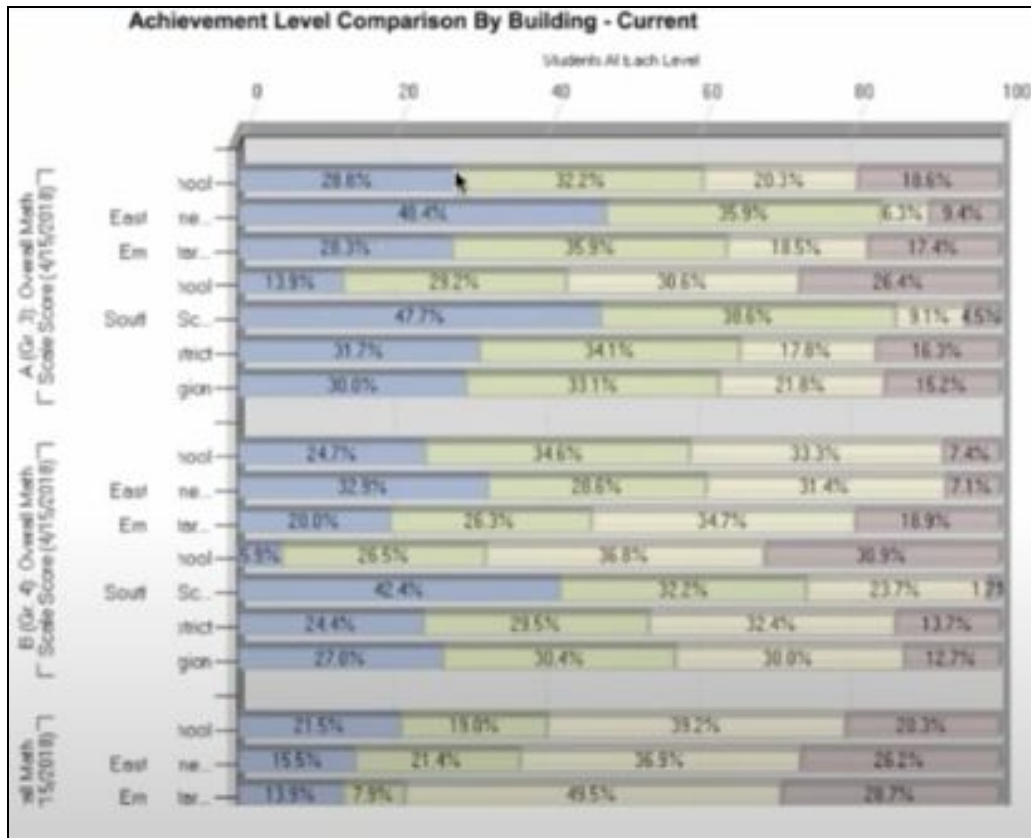
NH SAS ~ Math ~ Grade 5							
Overall Math Scale Score		Measurement, Data and Geometry		Number and Operations in Base 10 and Fractions		Operations and Algebraic Thinking	
Score	Level	Score	Level	Score	Level	Score	Level
498	Level 3	445	Below Standard	493	At/Near Standard	594	Above Standard
497	Level 3	523	At/Near Standard	485	At/Near Standard	496	At/Near Standard
496	Level 3	490	At/Near Standard	500	At/Near Standard	493	At/Near Standard
495	Level 3	448	Below Standard	508	At/Near Standard	511	At/Near Standard
494	Level 2	465	At/Near Standard	506	At/Near Standard	504	At/Near Standard
494	Level 2	450	Below Standard	514	At/Near Standard	497	At/Near Standard
493	Level 2	366	Below Standard	515	At/Near Standard	492	At/Near Standard
493	Level 2	389	Below Standard	516	At/Near Standard	490	At/Near Standard

AIR Standards Based Report (provides instructional level comparisons):

Standard	Areas of Strongest and Weakest Performance	Areas Where Performance Indicates Proficiency
Operations and Algebraic Thinking		
Represent and solve problems involving multiplication and division		
Standard 1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .	—	△
Standard 2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.	=	△
Standard 3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem	—	△
Standard 4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \square \div 3$, $6 \times 6 = ?$.	—	△
Understand the properties of multiplication and the relationship between multiplication and division		
Standard 5 Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)	—	△
Standard 6 Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.	=	△
Multiply and divide within 100		
Standard 7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	=	△



PerformancePLUS Reporting Category and Cluster Comparative Report:





Schools Using the SAS Modular Assessments



The report layout below was used in many schools around the state. This is a report of SAS Modular data. This data can be seen on the NH.Portal, but not in this format. We have found that making the reports as clean as possible makes it much easier for data teams to see the important information.

The report has two parts. Page 1 shows totals for all students on the report. The Question Number, Standard, Possible Number of Points and the Correct Answer Frequency are across the top, sorted by Correct Answer Frequency, high to low. Data teams and teachers can open the Assessment Viewing Application in the NH.Portal to view the questions. With this report and the questions, teachers can quickly determine where students were strong and where instruction may need some changes.

In the reports below, you can see that students did well on question number 10, 88% of students answered question number 10 correctly. Only 23% of students answered question number 7 correctly. This should indicate to the teacher(s) that perhaps the standard related to question number 7 was not taught at all, or not taught in a way students understood, or perhaps was taught months ago. You cannot, from this report, determine the precise reason students were unable to answer some questions correctly, but it does show areas to investigate.

Math Grade 4 - Number and Operations Fractions A - February 2020

Q#	10	5	3	1	6	4	8	2	9	7
Standard	NF.7	NF.3a	NF.2	NF.1	NF.3b	NF.2	NF.5	NF.1	NF.6	NF.4a
Possible Points	2	1	1	2	1	1	1	1	1	1
Corr. Answ. Freq.	88%	84%	80%	73%	67%	45%	41%	39%	33%	23%

2 points	53
1 point	7
0 points	4

40
13
11



Math Grade 4 - Number and Operations Fractions A - February 2020

Q#	10	5	3	1	6	4	8	2	9	7	
Standard	NF.7	NF.3a	NF.2	NF.1	NF.3b	NF.2	NF.5	NF.1	NF.6	NF.4a	
Possible Points	2	1	1	2	1	1	1	1	1	1	
Corr. Answ. Freq.	88%	84%	80%	73%	67%	45%	41%	39%	33%	23%	
	92%	2	1	1	2	1	1	1	1	0	1
o	92%	2	1	1	2	1	1	1	1	1	0
	92%	2	1	1	2	0	1	1	1	1	1
	92%	2	1	1	1	1	1	1	1	1	1
	92%	2	1	1	1	1	1	1	1	1	1
	92%	2	1	1	2	1	0	1	1	1	1
	83%	1	1	1	2	1	1	1	1	1	0
	83%	2	1	1	2	1	1	1	1	0	0
	83%	2	1	1	2	1	1	1	1	0	0
	83%	2	1	1	2	0	1	1	1	0	1
	83%	2	1	1	2	1	1	1	0	1	0
	75%	2	1	1	2	1	1	0	1	0	0
	75%	2	1	1	2	1	1	0	1	0	0
	75%	2	1	0	2	1	1	1	1	0	0
	75%	2	1	1	0	0	1	1	1	1	1
	75%	2	1	1	2	1	1	0	0	1	0
thi	75%	2	1	1	2	1	0	0	0	1	1
	67%	2	1	1	1	0	1	1	1	0	0
	67%	2	1	1	2	1	1	0	0	0	0
	67%	2	1	1	2	1	1	0	0	0	0
	67%	2	1	1	2	1	1	0	0	0	0
	67%	2	1	1	2	1	1	0	0	0	0
	67%	2	1	1	2	1	0	0	1	0	0
	67%	2	1	1	2	1	0	1	0	0	0
in	67%	2	1	1	2	1	0	1	0	0	0



Appendix A

Highlighted PLC Protocols and Other Templates





Guide to Successful Teams

The following pages define six components to building successful educator teams and a culture that facilitates collaborative and meaningful work. Educators have very limited time outside of the classroom to work together. It is critical that this time is focused, valuable and leads to meaningful and measurable improvement for students and the school.

Six Components of Successful Educator Teams





Norms, Roles and Climate

Purpose: Educators spend most of their time teaching in an autonomous environment and time outside of the classroom is scarce. Norms and Roles assure that when educators gather to collaborate, it is done in a safe and effective team environment. Defined norms and roles will help create common expectations required to build a positive culture and climate.

Timeframe: Norms should be established at the first meeting when a group is formed. At future meetings, the norms should be reviewed and at the start of the meeting the group should choose a norm to pay attention to, and monitor during the meeting. Roles can be adopted by team members as suits their skills and preferences; roles can be static, or they can rotate.

Components:

- Norms document: When possible, norms should be posted. Keep the number of norms between 5-7 and norms should guide timeliness, efficacy, and quality of interactions.
- Roles Document: Roles should focus on gaining full participation and eliciting strengths from each member of the group.

To Consider: Start with existing norms and roles such as the 7 Norms of Collaboration or “Roles and Responsibilities” but allow the team to modify as desired. Create a survey and administer periodically to evaluate the climate of the team.

Leaders’ Role: The leader should initiate and facilitate conversation to ensure that norms are agreed upon. But it is important that the leader facilitate ONLY, and refrain from dominating the discussion, thereby encouraging participants to determine the norms and roles. The leader should foster a positive and supportive climate.

Participant’s’ Role: Stay active and engaged. Abide by, and enforce the norms. Each participant should hold him or herself, and others accountable. Each participant should adopt a role within the group that maximizes the group’s effectiveness.



Consistent Protocols

Purpose: Consistent protocols for data analysis, goal setting, action planning, trust building, communication, and shared decision making, are vital to ensure the rigor in team process that leads to success. Consistent protocols enable leadership and team members to hold teams accountable. Protocols build teaming capacity within staff, and protocols work to clearly define process and create clear and recognizable goals.

Timeframe: Initial protocols can be chosen or created up front; however, it is fine to create or implement protocols as your team process unfolds. Protocols should be adapted as they are used, as potential improvements to the protocols are uncovered.

Components: Protocols used in all the steps of the team's work: Trust building, communication, goal setting, action planning, data analysis, entry and exit protocols identifying students the team is supporting, and shared decision making. The protocols will vary, depending on the team's goals and purpose.

Items to Consider: Protocols can be living documents that are continuously revisited and updated. At the same time, teams should 'live with' protocols and given them a chance before revising. Don't let great be the enemy of good!

Leader's Role: Introduce protocols and facilitate consensus around them.

Participant's Role: Contribute to the development of protocols and adhere to them.



Clear Communication Plan

Purpose: A well thought out and documented plan to communicate a team's activities ensures that the whole staff will work collaboratively to meet goals. A communication plan must provide for communication of goals and activities between members, between teams and the staff at large, and between the building staff and leadership teams.

Timeframe: A communication plan will be a working document that is frequently reviewed and adjusted. A draft communication plan should be completed at the first or second team meeting.

Components: The communication plan should include all team information and activities and who needs to be made aware of those activities. The plan should include the activity/information being communicated; the stakeholder who will create and convey the communication, the intended audience, the timeframe of the given communication, the method of communication and the goal of the communication.

Items to Consider: Dedication and persistence are essential to document and follow a communication plan. It's a step that is easy to overlook. When deciding what to share, be targeted and communicate just what is necessary. Enable expanded communication for those who are interested. Remember that access to information is sensitive in schools; it can serve to coalesce or divide a staff.

Leader's Role: Facilitate development at the beginning, and oversee and monitor the communication plan.

Participant's Role: Follow through with all communication activities defined.



Shared Articulated, and Measurable Goals

Purpose: Measurable goals ensure follow through and effectiveness. When measurable goals are set, teams have proof of efficacy, and a standard against which to hold themselves accountable. Interim action steps constitute the path to that larger goal and each action step should have an observable and/or measurable outcome to keep the team on track and moving toward the larger goal.

Timeframe: The team's purpose should be defined in meeting one. The overarching measurable goal should be defined within the first two or three meetings, and ensuing actions steps are fleshed out as a natural continuation of that work. A team's purpose and goal may be revised, but it's important that they exist to guide the work being completed. Revisiting the team's articulated purpose and overarching goal – even if just to remind everyone – is important, and can even be done at the beginning of each meeting.

Components: A team's purpose should clearly define what is driving the work of the team. It involves the underlying principles that motivate the work and therefore, the purpose statement is best developed through collaborative conversation. It is time well spent, in that common language and common understanding can be established. A team's overarching measurable goal is their priority goal in relation to their purpose. Action items must be clear and must be tied to a measurable goal. Action items and goals can be measured by quantitative or qualitative data or by a descriptive rubric.

Items to Consider: Be rigorous with this work. Teams will wander without clear direction. It can be challenging to define challenging but attainable, measurable goals – they must be meaningful, challenging and achievable. It is gratifying and motivating for a team to review their goals and action items and have tangible evidence that goals have been met! **Review frequently and celebrate!**

Leader's Role: Ensure that the team identifies a clear purpose and measurable goal(s). Provide feedback about how the team purpose aligns to building goals and whether measurable goals are attainable but rigorous. If the team is struggling with consensus, the team leader should pull in the school or district lead provide direction.

Participant's Role: All participants should contribute to the articulated team purpose and measurable goal(s). Participants should stay engaged in the difficult process until consensus is reached.



Accountability Process

Purpose: Building (or District) oversight and leadership is essential for team success. Leadership must partner with teams to recognize the value and integrate the work into the larger school infrastructure. Routines and protocols must exist for the leadership to review the work being completed, and provide feedback.

Timeframe: Building or District leadership should be present at initial meetings to underscore the importance of the work, and assess the functionality of the team. Throughout the year, regular review of meeting notes completed by the educator team should be housed in a common location and reviewed by building or district leader. The timing of review and feedback from an administrator must be made explicit to the team, and follow through is important. A building and district leader should attend educator meetings periodically for check-ins to get a face to face update on progress. Team members should upload notes and artifacts at the end of meetings to assure consistency. Protocols for member to member communication between meetings should be established so colleagues can help each other with follow through in the face of so many competing obligations in the school day.

Components: Pre-established consistent and structured formats for note-taking at meetings should define exactly what information will be communicated by the educator team to school or district leadership. These note-taking protocols should include the overall educator team goals, action steps, accomplishments and obstacles. Protocols to assure member to member accountability should be articulated as part of norms and roles. Accountability protocols should be developed to report to, and get feedback from, central office staff on building level team goals and processes.

Items to Consider: Accountability must be rigorous, timely and consistent. All teams should be familiar with the protocols and have common expectations. Timely, consistent descriptive feedback from leaders affirms the work that teams are doing, and can powerfully affect the trajectory a team. Part of accountability is using the opportunity to celebrate the success of your teams!

Leader's Role: Teachers are rightfully focused in the classroom and commitments that are not direct interactions with students are the first to be compromised when educators are overwhelmed. It is the leader's responsibility to support follow through by being diligent with his/her role in accountability and providing positive support so that teams know that there is someone checking on their follow through.

Participant's Role: Be receptive to feedback and support team members to help them with follow through. Celebrate your successes and take responsibility to make changes where change is needed.



Defined Timelines Throughout

Purpose: With such limited and precious time out of the classroom, defined timelines, at many different levels, guide team work completion and communication.

Timeframe: Ongoing. Timelines are created from the initial conception through the completion of the work.

Components: Timelines must define a consistent meeting schedule, duration, how that time is managed, deadlines for 'homework' completion, when student interventions can occur, when information from teams is communicated, and when educator teams must report 'up the chain' to school and district leaders.

Items to Consider: Be visual. Use a common or shared calendar. Be public – this information should be well communicated so the expectation for everyone's involvement is understood across all staff.

Leader's Role: Be imaginative to make time for teachers to collaborate and get the work done that is needed. Be imaginative to reward teams that go out of their way and meet outside of contracted time. Review team's timelines and offer feedback.

Participant's Role: Remain flexible with timing to get the work done. Make the most out of meeting time by attending to agenda times and tasks.



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School Level Self-Assessment for Team Functioning

Component	Beginning	Developing	Deepening	Sustaining
Norms, Roles and Climate	<p><u>Few</u> educator teams actively use norms.</p> <p>The teams that use norms have adopted pre-established norms.</p> <p>Norms are <u>not</u> monitored and discussed in meetings</p> <p><u>Few</u> teams are utilizing a set of consistent meeting roles that members take on to facilitate their work.</p> <p>A few teams have a strong level of trust, consistency, non-hierarchical participation, focus, and openness to a growth oriented mindset.</p>	<p><u>Some</u> educator teams actively use norms.</p> <p>The teams that use norms have adopted pre-established norms.</p> <p>Norms are <u>sometimes</u> monitored and discussed in meetings</p> <p><u>Some</u> teams are utilizing a set of consistent meeting roles that members take on to facilitate their work.</p> <p>A handful of teams have a strong level of trust, consistency, non-hierarchical participation, focus, and openness to a growth oriented mindset.</p>	<p><u>Many</u> educator teams actively use norms.</p> <p>Many teams that use norms have, through consensus, developed norms tailored to meet specific needs.</p> <p>Norms are <u>often</u> monitored and discussed in meetings.</p> <p><u>Many</u> teams are utilizing a set of consistent meeting roles that members take on to facilitate their work.</p> <p>Many teams do not have a strong level of trust, consistency, non-hierarchical participation, focus, and openness to a growth oriented mindset.</p>	<p><u>All</u> educator teams actively use norms.</p> <p>All teams have, through consensus, developed norms tailored to meet their specific needs.</p> <p>Norms are <u>routinely</u> monitored and discussed in meetings.</p> <p><u>All</u> teams are utilizing a set of consistent meeting roles that members take on to facilitate their work.</p> <p>Almost all teams have a strong level of trust, consistency, non-hierarchical participation, focus, and openness to a growth oriented mindset.</p>



Component	Beginning	Developing	Deepening	Sustaining
Consistent Protocols	<u>Few</u> teams use consistent protocols such as agendas, backward planning charts, data protocols.	<u>Some</u> teams use consistent protocols such as agendas, backward planning charts, data protocols.	<u>Many</u> teams use consistent protocols such as agendas, backward planning charts, data protocols.	<u>All</u> teams use consistent protocols such as agendas, backward planning charts, data protocols.

Component	Beginning	Developing	Deepening	Sustaining
Clear Communication Plan	<u>Few</u> teams have a consistent shared space to house meeting artifacts, minutes, action planning documents.	<u>Some</u> teams have a consistent shared space to house meeting artifacts, minutes, action planning documents.	<u>Many</u> teams have a consistent shared space to house meeting artifacts, minutes, action planning documents.	<u>All</u> teams have a consistent shared space to house meeting artifacts, minutes, action planning documents.
	<u>Few</u> teams have an articulated plan for communicating action steps and outcomes: a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office	<u>Some</u> teams have an articulated plan for communicating action steps and outcomes: a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office	<u>Many</u> teams have an articulated plan for communicating action steps and outcomes: a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office	<u>All</u> teams have an articulated plan for communicating action steps and outcomes: a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office



Component	Beginning	Developing	Deepening	Sustaining
<p>Shared Articulated Purpose with Measurable Goals</p>	<p><u>Few</u> educator teams have collaborated to articulate and record in writing, their team purpose.</p> <p><u>Few</u> educator teams have articulated in writing, a measurable goal for their work and determined how their success will be measured.</p> <p><u>Few</u> educator teams have set interim action steps and set measurable outcomes for those interim steps.</p>	<p><u>Some</u> educator teams have collaborated to articulate and record in writing, their team purpose.</p> <p><u>Some</u> educator teams have articulated in writing, a measurable goal for their work and determined how their success will be measured.</p> <p><u>Some</u> educator teams have set interim action steps and set measurable outcomes for those interim steps.</p>	<p><u>Many</u> educator teams have collaborated to articulate and record in writing, their team purpose.</p> <p><u>Many</u> educator teams have articulated in writing, a measurable goal for their work and determined how their success will be measured.</p> <p><u>Many</u> educator teams have set interim action steps and set measurable outcomes for those interim steps.</p>	<p><u>All</u> educator teams have collaborated to articulate and record in writing, their team purpose.</p> <p><u>All</u> educator teams have articulated in writing, a measurable goal for their work and determined how their success will be measured.</p> <p><u>All</u> educator teams have set interim action steps and set measurable outcomes for those interim steps.</p>

Component	Beginning	Developing	Deepening	Sustaining
<p>Accountability Process</p>	<p>Teacher leaders and/or administrators <u>do not</u> collect and review meetings notes and action steps.</p> <p>For most teams, a system <u>does not</u> exist for team members to hold each other accountable for action steps established at meetings.</p>	<p>Teacher leaders and/or administrators <u>occasionally</u> collect and review meeting notes and action steps.</p> <p>For many teams, a system <u>exists</u> for team members to hold each other accountable for action steps established at meetings but it happens only <u>sometimes</u>.</p>	<p>Teacher leaders and/or administrators <u>often</u> collect and review meeting notes and action steps and provide written feedback to team.</p> <p>For most teams, a system <u>exists</u> for team members to hold each other accountable for action steps established at meetings and this <u>often</u> happens.</p>	<p>Teacher leaders and/or administrators <u>regularly</u> and <u>predictably</u> collect and review meeting notes and action steps and provide written feedback to team.</p> <p>A system exists for team members to hold each other accountable for action steps established at meetings and this <u>almost always</u> happens.</p>



Component	Beginning	Developing	Deepening	Sustaining
<p>Defined Timelines Throughout</p>	<p>Few teams have mapped out complete timelines for achieving their articulated goals.</p> <p>Consistent and adequate meeting time has <u>not yet</u> been established for many teams.</p>	<p>Some teams have mapped out complete timelines for achieving their articulated goals.</p> <p>Consistent and adequate meeting time <u>has been</u> established for some teams for a duration and at an interval that <u>allows the work to get done.</u></p>	<p>Many teams have mapped out complete timelines for achieving their articulated goals.</p> <p>Consistent and adequate meeting time <u>has been</u> established for many teams for a duration and at an interval that <u>allows most of the work to get done</u></p>	<p>All teams have mapped out complete timelines for achieving their articulated goals.</p> <p>Consistent and adequate meeting time <u>has been</u> established for <u>all</u> teams for a duration and at an interval that <u>allows all the work to get done</u></p>



Data Driven Dialogue Long Form

Data Meeting Protocol for Examining National, State, and Longitudinal Data

**Developed based on Using Data: Collaborative Inquiry for School Improvement, Nancy Love's Data Coach, Laura Lipton and Bruce Wellman's Data Team Work, and National School Reform Faculty.*

Purpose: *This protocol was developed for use by a team facilitator in guiding a group through analysis of student achievement data as a starting point to increase educator awareness of areas of potential strengths, areas for potential improvement and to surface questions that lead to examination of other data. This protocol can be used each time NECAP, SBAC, local benchmark assessments, or longitudinal data are reviewed. It can be used for other forms of data such as demographic, questionnaires, and process. It can continue to be used with teams that are still developing expertise (and safety) around data analysis. It can be used after long periods of data review and analysis inactivity (i.e. at the beginning of a new school year).*

Getting Started

- a. Define the Purpose and the Desired Outcome of the session. (E.g., Purpose might be "To identify students in need of additional support in reading based on the fall NWEA benchmark." Outcome might be: "Establish cross-classroom reading groups for the next 6-week intervention block.")
- b. The facilitator shares/reminds the group of the norms, assigns roles and outlines the time limits for each part of the analysis process.

Sample Norms of Collaborative Work:

- \Posing Questions
- Putting Ideas on the Table
- Providing Data
- Paying attention to self and others
- Presuming Positive Presuppositions

Sample Roles:

- Facilitator
- Timekeeper
- Recorder
- Process

- c. Facilitator provides the group with the annotated version of the Norms of Collaboration. The group discusses one or two norms to pay particular attention to during the work session. Agreed norm(s) to monitor is/are posted in the room where all can see it/them.



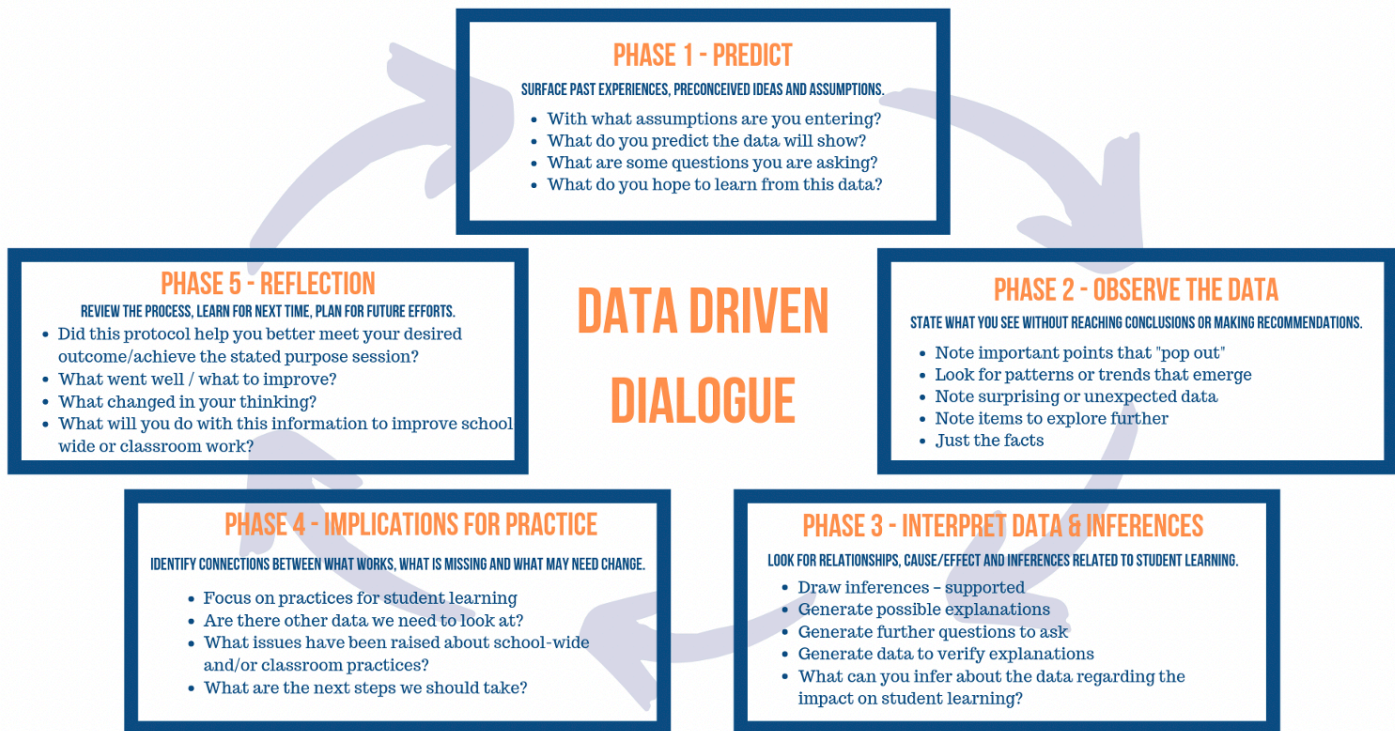
For each step, the individuals will be given time to record personal thinking. The group will then share recording in round robin format. It is okay to pass. Everyone listens carefully to sharing.

The recorder will use the chart paper, white board, or other method to document and display the group's thinking through the steps.

- d. Introduce a warm up activity for the group to come together and “ease” their way into examining data. This is a helpful beginning step for teams new to looking at data, teams that with reservations with using data, or when the facilitator is new to the school or district team. *Examples: “Are You a Data Lova or Data Hata”* - Participants will be given time to record where their data preference falls and participants will share with a partner. Then a few volunteers will be asked to share with the whole group either something they said or something they heard from their partner. Provide each participant with an index card. On one side of the card, the participant will be given three minutes to write why they associate with being a “data lova or data hata.” After they have written their reaction to their associated choice, each participant will find a partner to share which side they associated with and why (5 minutes total with cue to switch roles at the 2 1/2-minute mark). Participants will record points shared from their partner on the blank back side of their card. Facilitator will reconvene the whole group and ask for a handful of participants to share either something they said or something they heard from their partner.

Data Identifier - Table groups will be provided with postcards or pictures of famous people and respond as to how the person is like using data and how the person is not like using data. Responses can include feelings associated with using data, how they/their profession connects with using data, etc. Groups are given 7 minutes to agree on a picture and determine how the person is like or unlike using data. Each group reports out to the whole group the person they selected, why they chose the person, how he/she is like or connects to using data, and how he/she is unlike or doesn't connect to using data.

Additional examples can be found at [Warm Up examples](#).



Overview of Data (5 minutes)

(Prior to the session, the facilitator and school leader or school's data leadership team agree on the data to be examined that suits the purpose and desired outcomes defined for the meeting.)

- The facilitator shares a sample data report, chart, or document that resembles the data the participants are about to see. This can be shared through a slide in the PowerPoint presentation or a handout for all participants. The facilitator reviews parts of the sample data to enable participants to better interact with the data and the protocol. The participants can review the sample data with a partner to discuss the components within the sample for greater understanding. The facilitator finalizes the review of the sample document with the question, "Is there anything about this sample data that you need more clarity on?"

The group does not see the actual data report for the day's session until Step 2. Overview of the Process

- The facilitator gives each participant a copy of the data driven dialogue diagram. Facilitator gives each group (if working in small groups) or a few people "No Because" cards.



Phase 1: Predicting the Data

(5 minutes: 2 minutes silently writing individual predictions, 3 minutes discussing as a group)

The facilitator tells the group that in order to surface past experiences, preconceived ideas, and assumptions, the group will make predictions about what they believe the data will show. The facilitator shares the following questions to guide participants thinking when making predictions.

- With what assumptions are we entering?
- What are some predictions we are making?
- What are some questions we are asking?
- What are some possibilities for learning that this experience presents us?

After two minutes of silent writing, the facilitator has group share their predictions and why they believe that is what they will see.

Phase 2: Observe the data (Literal)

(10 minutes: 3 minutes silently writing individual observations, 7 minutes discussing as a group)

The facilitator reminds the group that this phase is to just state what they see without reaching conclusions or making recommendations. Consider the following:

- Note important points that “pop out”
- Look for patterns or trends that emerge
- Note surprising or unexpected data
- Note things/data we might want to explore further
- Just the facts, Ma’am

After three minutes of writing, the facilitator has the group share their observations. If judgments, rationalizations or excuses arise, the facilitator should ask the person to defer that thinking until the next step or process observer can raise the “No Because” card and remind the person this stage excludes justifications for any observations. The recorder will document the ideas from the group on chart paper, white board, or other.

Phase 2a: Refining Observations

Often individuals and team record general observations. General observations may not produce enough identifying information for teams to accurately determine a relative strength or opportunity. Vague language can lead data teams to examining areas that don’t lead to the root cause(s) of the surfaced issue or best places to intervene within the system. This can lead team to false starts, confusion, anxiety, and frustration. Teams need to refine observation statements to quantifying statements which identify precise observations.

The facilitator explains that when we are looking at data and observation statements, we need to quantify our statements to determine potential points of leverage to accelerate improvement of the school’s/district’s learning system, including students learning, teacher satisfaction, impact on the community, and overall culture.



The facilitator directs the group's attention to a single observation statement that might benefit from greater clarity. Such as, "Most students reading scores improved over time." Ask the group questions like, "What is meant by most?", "What is the time period?", and "What is the percentage of growth for that time period?" Rework the statement with the whole group to provide an example of a stronger statement. (Note: the revision may result in several statements.)

Examples:

Original Statement	Revised Statements
Most students reading scores increased over time.	Grade 5 reading scores increased 36% in a six year period from spring 2009 to spring of 2014.
	Grade 4 reading scores increased by 42% in six year period from spring 2009 to 2014.
	Grade 4 reading scores decreased by 3% points from spring 2011 to 2012.

Phase 3: Interpret Data/Develop Inferences

(10 minutes: 3 minutes silently writing individual inferences, 7 minutes discussing as a group)

The facilitator tells the group that this step is to look beyond the obvious for **relationships, causal correlations**, and to make **inferences related to student learning**. This is also the step to **generate questions** about what if, and why. Keep in mind the following prompts:

- Draw inferences - supported
- Generate possible explanations
- Generate further questions to ask
- Generate further data needed to verify explanations
- What can you infer about the data regarding the impact on student learning?

After three minutes of writing, the facilitator has the group share their inferences through a go-around process. The facilitator encourages team members to **support their statements with evidence** from the data. The recorder will document the ideas from the group chart paper, white board, or other.

Phase 4: Implications for practice

(10 minutes: 3 minutes silently writing individual ideas for practice, 7 minutes for group discussion)

The facilitator tells that group that this step is designed to help answer the question, "What do the data suggest is working for our students and what areas might not be working?" The group will seek to identify connections between

what is missing, what needs to change and what is working. Keep in mind the following prompts:



- Focus on practices for improving student learning
- What issues have been raised about school-wide practices/classroom practices?
- What is the first step to increase student success in this area?
- Where do you suggest we go from here?
- What are the next steps this group should take?
- Is there other data or material we should look at?

After three minutes of writing, the facilitator leads the group in the discussion of what this data implies for their classroom practice. This is the action phase of the data analysis. The group will design an action plan that might outline changes in instructional practice, analysis of textbook alignment, or a new unit organization. The data for the next meeting will be identified based on the conclusions reached during Step 4. The recorder will document the next step from the group on the Data Team Feedback Sheet.

Phase 5. Reflect on the process

(5 minutes)

Review the process, learn for next time, plan for future efforts.

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Using opportunities to reflect help the team improve their data analysis process. This may seem minor, but should never be overlooked or left out.

The facilitator leads the group through a discussion of this protocol process using the following prompts:

- Did the protocol help us better meet our desired outcome/ achieve our stated purpose for this session?
- What went well, what could be improved?
- What new learning do you have?
- What changed in your thinking?
- What will you do with this information to improve our practice?

A new facilitator may be selected for the next meeting. Roles can be rotated regularly to share the responsibility. The recorder completes the Data Team Feedback Sheet for the group and returns it to administrator.



Data Driven Dialogue

Team: _____ Date: _____

Phase 1: Prediction

(5 minutes: 2 minutes alone, 3 minutes discussing)

I hope to learn...

I'm expecting to see...

Phase 2: Observation

(10 minutes: 3 minutes alone, 7 minutes discussing)

State what you see without reaching conclusions or making recommendations.

I notice that...

I'm surprised that...



Phase 3: Inference

(10 minutes: 3 minutes alone, 7 minutes discussing)

Look beyond the obvious for relationships, cause/effect and to make inferences related to student learning.

I think the data tells us that...

What the data doesn't tell us is...

Phase 4: Implications for Practice

(10 minutes: 3 minutes alone, 7 minutes discussing)

Try to identify connections between what is missing, what needs to change and what is working. Focus on practices to improve student learning.

The first thing we need to do is...

And after that we should certainly...



Phase 5: Reflection

(5 minutes)

Review the process, learn for next time, plan for future efforts.

What went well...

What to improve...

Goal for CYCLE:



Principal PLC Summary Report

School Name	
Grade	
Teacher Name (s)	
Subject Area Focus	
Name of Assessment	

Which Content and/or Practice Standards were assessed?	
Key Observations: What is the main observation from the data that is being addressed?	
Inference: Inferences from Data Driven Dialog	
Implications for Practice: What will be changed to address issues found in Data Driven Dialogue?	



**DEMONSTRATED
SUCCESS**

Improving student learning by
helping teachers do what they love

Data Inventory: What Do We Have?

(Assessment, Demographic, Climate)

Example

Name of Assessment	What is assessed?	How is it used?	When Given	To whom?	Formative or Summative	How is the data stored?	Who is responsible for the data?
Fountas and Pinnell	Fluency Comprehension Accuracy	Classroom teachers use to differentiate education.	October and May	Students K-4	Formative	Paper files	Classroom teachers
Student Perception Survey	Student perception of safety, respect and community in our school	District Admin team is using this for district wide goal to improve culture and climate.	November	Students K-5	Formative	Survey monkey	Assistant Principal
Mid Year Math	Grade Level Math to date	PLC teams used the data for RTI placement.	End of January	All Students	Both	Google Drive	PLC Teams
Writing Narrative	Student Writing Ability	PLC teams used the data for RTI placement. September conduct used to calibrate across grade level teachers	September February May	All Students	Both	Google Drive for prompts	PLC teams
State Assessment	Reporting Categories and Clusters	PLC Teams Spring for Fall Planning; Classroom teachers (Fall Prep)	June, August	All Students	Both	Performance PLUS	PLC Teams



Data Inventory: What Do We Have?

(Assessment, Demographic, Climate)

Name of Assessment	What is assessed?	How is it used?	When Given	To whom?	Formative or Summative	How is the data stored?	Who is responsible for the data?

Note: Potential uses of assessments to consider: Yearlong Student Growth; Teacher Self Assessment; Inform Daily Instruction; Define School-wide PD; Student Self Assessment; Teacher Effectiveness; Federal Accountability; Instruction & Curriculum Effectiveness; Learning Climate; Individual Intervention Effectiveness.



**DEMONSTRATED
SUCCESS**

Improving student learning by
helping teachers do what they love

Communication Plan: Who Needs to Know? (Protocol for educator team to communicate activities)

Example

Team__ Fifth Grade Team _____

Goal : Improve Student knowledge of Target B Analyze Patterns and Relationships – Goal improve from 40% to 80% proficient

Stakeholder	Medium	Activity	Timeframe	Owner
Grade 5 Teachers (all subjects and specialties)	Presentation at staff meeting	Review goal and describe standards being taught.	January 24 th PD Day – 1 hour presentation	Jon Smith
Grade 5 Students	Lesson Plan material used by all teachers.	Review goal. Let the students understand the focus for this unit.	January 31 st class	All teachers
Grade 5 Parents	School Newsletter	Include examples of this content in the Friday parent’s newsletter.	January 27th Newsletter	Chris Jones
Grade 5 Teachers	Presentation and instructional material	Share examples of best practice curriculum for Target B.	February 2 nd .	Chris Jones



Communication Plan: Who Needs to Know? (Protocol for educator team to communicate activities)

Team _____

Goal _____

Stakeholder	Medium	Activity	Timeframe	Owner



Observation Form

Teacher: _____ Grade: _____ Date: _____

Start Time: _____ End Time: _____

Observation Focus: _____

- Engagement
- Independence
- Problem Solving
- Motivation
- Confidence

- Language Usage
- Pause/Think Time
- Background Knowledge
- Differentiation
- Feedback
- Powerful Moments

Student Behaviors

Teaching Behaviors

What do you want to:

- Know more about
- Borrow

Thin Slice Writing Review

We are going to review our students' writing on-demand pieces utilizing a three-step process that was developed by Mary Ehrenworth, the Deputy Director of Reading and Writing at Teachers' College in New York. Mary's process originated from the "thin-slicing protocol" advanced by Malcolm Gladwell in his NY Times best-seller "Blink". Essentially, thin-slicing is a term that describes the phenomenon of training your mind to discover a lot from a small amount of data, or assessing with your gut feeling.

With your class writing prompts in hand, follow the following review process.

1. Step One: Glance (no reading) at student prompts for 5-10 minutes, and pre-sort them into three piles: High/skilled, Medium/intermediate, Novice/low.
2. Look at the writing again, and re-sort the pieces. Still looking quickly, thin slice for kids who write with craft and/or meaning- those are the high writers; kids writing with perhaps not much craft but some structure- those are medium; lower writers will be fairly simple to spot. In this phase, we may move one piece from one pile to another.
3. Select three emblematic or representative pieces, one from each pile. The task here is to try and select three students who represent a larger swath.

Once students' prompts have been sorted, use the rubric and the emblematic pieces as a guideline to think about your students. Contemplate areas of strength and weakness for each group. Record next steps for responsive instruction that can be accomplished in whole-group, small group, partners, or in one on one teaching.



Thin Slicing Writing Sort

Teacher _____ Grade _____ Genre _____

After reviewing the three representative pieces that you have chosen from the *Thin Slice Process*, consider next steps for instruction. You may compare your emblematic pieces to grade level rubrics and exemplars to help with this process.

Low Sort	Next Steps:
Medium Sort	Next Steps:
High Sort	Next Steps:

Math - Grades 3-8
Percent of Level 3s and Level 4s and the Number of Students

2017-2018

Grade 3 Math SAS	

Grade 4 Math SAS	

Grade 5 Math SAS	

Grade 6 Math SAS	

Grade 7 Math SAS	

Grade 8 Math SAS	

2018 - 2019

Grade 3 Math SAS	

Grade 4 Math SAS	

Grade 5 Math SAS	

Grade 6 Math SAS	

Grade 7 Math SAS	

Grade 8 Math SAS	

2020-2021

Grade 3 Math SAS	

Grade 4 Math SAS	

Grade 5 Math SAS	

Grade 6 Math SAS	

Grade 7 Math SAS	

Grade 8 Math SAS	

ELA - Grades 3-8
Percent of Level 3s and Level 4s and the Number of Students

2017-2018

Grade 3 ELA SAS	

Grade 4 ELA SAS	

Grade 5 ELA SAS	

Grade 6 ELA SAS	

Grade 7 ELA SAS	

Grade 8 ELA SAS	

2018 - 2019

Grade 3 ELA SAS	

Grade 4 ELA SAS	

Grade 5 ELA SAS	

Grade 6 ELA SAS	

Grade 7 ELA SAS	

Grade 8 ELA SAS	

2020-2021

Grade 3 ELA SAS	

Grade 4 ELA SAS	

Grade 5 ELA SAS	

Grade 6 ELA SAS	

Grade 7 ELA SAS	

Grade 8 ELA SAS	

Science - Grades 5 and 8
Percent of Level 3s and Level 4s and the Number of Students

2017-2018

Grade 5 Science SAS	

2018 - 2019

Grade 5 Science SAS	

2020-2021

Grade 5 Science SAS	

2017-2018

Grade 8 Science SAS	

2018 - 2019

Grade 8 Science SAS	

2020-2021

Grade 8 Science SAS	



Appendix B

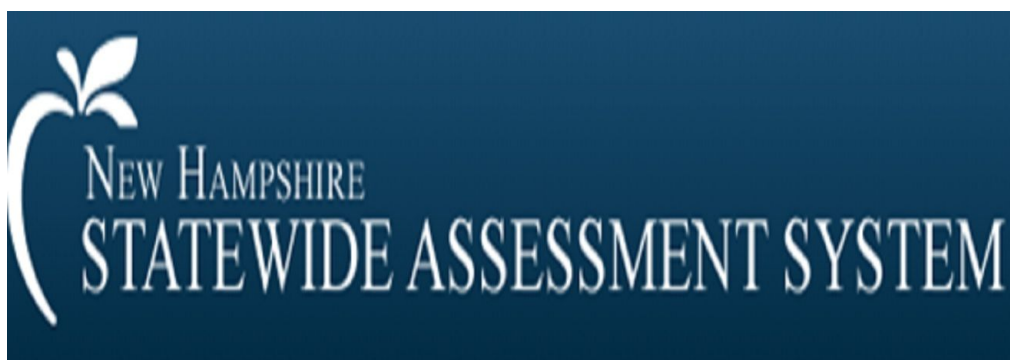
Recommended Instructional Guides: NH SAS





Math 3-8 Grade

SAS Possible Points



Common Core Emphasis and NH SAS Emphasis

3rd Grade Math		
Operations and Algebraic Thinking - OA		
OA.3.A - Represent and solve problems involving multiplication and division.	4-6	M
OA.3.B - Understand the properties of multiplication and the relationship between multiplication and division.	2-3	M
OA.3.C - Multiply and divide within 100.	1-3	M
OA.3.D - Solve problems involving the four operations, and identify and explain patterns in arithmetic.	2-4	M
Number in Base Ten - NBT		
NBT.3.E - Use place value understanding and properties of operations to perform multi-digit arithmetic.	6-9	A
Number in Base Ten - Fractions - NF		
NF.3.F - Develop understanding of fractions as numbers.	7-10	M
Measurement and Data - MD		
MD.3.G - Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	1-4	M
MD.3.H - Represent and interpret data.	1-3	S
MD.3.I - Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	1-3	M
MD.3.J - Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	1	S
Geometry - G		
G.3.K - Reason with shapes and their attributes.	1-3	S

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster

Common Core Emphasis and NH SAS Emphasis

4th Grade Math		
Operations and Algebraic Thinking - OA	SAS*	CC*
OA.4.A - Use the four operations with whole numbers to solve problems.	5-7	M
OA.4.B - Gain familiarity with factors and multiples.	1-2	S
OA.4.C - Generate and analyze patterns.	1-2	A
Number in Base Ten - NBT		
NBT.4.D - Generalize place value understanding for multi-digit whole numbers.	3-4	M
NBT.4.E - Use place value understanding and properties of operations to perform multi-digit arithmetic.	3-6	M
Number in Base Ten - Fractions - NF		
NF.4.F - Extend understanding of fraction equivalence and ordering.	2-5	M
NF.4.G - Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	2-4	M
NF.4.H - Understand decimal notation for fractions, and compare decimal fractions.	3-5	M
Measurement and Data - MD		
MD.4.I - Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	2-3	S
MD.4.J - Represent and interpret data.	1-2	S
MD.4.K - Geometric measurement: understand concepts of angle and measure angles.	2-3	A
Geometry - G		
G.4.L - Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	2-3	A

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster

Common Core Emphasis and NH SAS Emphasis

5th Grade Math		
Operations and Algebraic Thinking - OA	SAS*	CC*
OA.5.A - Write and interpret numerical expressions.	5-9	A
OA.5.B - Analyze patterns and relationships.	2-5	A
Number in Base Ten - NBT		
NBT.5.C - Understand the place value system.	3-7	M
NBT.5.D - Perform operations with multi-digit whole numbers with decimals.	3-5	M
Number in Base Ten - Fractions - NF		
NF.5.E - Use equivalent fractions as a strategy to add and subtract fractions.	2-5	M
NF.5.F - Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	5-7	M
Measurement and Data - MD		
MD.5.G - Convert like measurement units within a given measurement.	1-2	S
MD.5.H - Represent and interpret data.	1-2	S
MD.5.I - Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	3-4	M
Geometry - G		
G.5.J - Graph points on the coordinate plane to solve real-world and mathematical problems.	1-3	A
G.5.K - Classify two-dimensional figures into categories based on their properties.	1-2	A

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster

Common Core Emphasis and NH SAS Emphasis

6th Grade Math		
Ratios and Proportional Relationships RP	SAS*	CC*
6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.	6-9	M
The Number System NS		
6.NS.B Apply and extend previous understandings of multiplication and division to divide fractions by fractions	1-2	M
6.NS.C Compute fluently with multi-digit numbers and find common factors and	2-4	A
6.NS.D Apply and extend previous understandings of numbers to the system of rational numbers	3-6	M
Expressions and Equations EE		
6.EE.E Apply and extend previous understandings of arithmetic to algebraic expressions	4-6	M
6.EE.F Reason about and solve one-variable equations and inequalities	4-8	M
6.EE.G Represent and analyze quantitative relationships between dependent and independent variables.	1-2	M
Geometry G		
6.G.F Solve real-world and mathematical problems involving area, surface area, and	3-4	S
Statistics and Probability SP		
6.SP.G Develop understanding of statistical variability	2-3	A
6.SP.H Summarize and describe distributions.	2	A

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster

Common Core Emphasis and NH SAS Emphasis

7th Grade Math		
Ratios and Proportional Relationships RP	SAS*	CC*
7.RP.A - Analyze proportional relationships and use them to solve real-world and mathematical problems	4-6	M
The Number System NS		
7.NS.B - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers	3-7	M
Expressions and Equations EE		
7.EE.C - Use properties of operations to generate equivalent expressions	4-6	M
7.EE.D - Solve real-life and mathematical problems using numerical and algebraic expressions and equations	3-6	M
Geometry G		
7.G.E - Draw, construct, and describe geometrical figures and describe the relationships between them	3-6	A
7.G.F - Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	4-5	A
Statistics and Probability SP		
7.SP.G - Use random sampling to draw inferences about a population	1-3	S
7.SP.H - Draw informal comparative inferences about two populations	1-3	A
7.SP.I - Investigate chance processes and develop, use, and evaluate probability models	3-7	S

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster

Common Core Emphasis and NH SAS Emphasis

8th Grade Math		
The Number System NS	SAS*	CC*
8.NS.A - Know that there are numbers that are not rational, and approximate them by rational numbers	2	S
Expressions and Equations EE		
8.EE.B - Work with radicals and integer exponents	2-5	M
8.EE.C - Understand the connections between proportional relationships, lines, and linear equations	2-4	M
8.EE.D - Analyze and solve linear equations and pairs of simultaneous linear equations	2-4	M
Functions F		
8.F.E - Define, evaluate, and compare functions	4-6	M
8.F.F - Use functions to model relationships between quantities	3-5	M
Geometry G		
8.G.G - Understand congruence and similarity using physical models, transparencies, or geometric software	4-6	M
8.G.H - Understand and apply the Pythagorean Theorem	2-4	M
8.G.I - Solve real-world problems involving volume cylinders, cones, spheres	1-2	A
Statistics and Probability SP		
8.SP.J - Investigate patterns of association in bivariate data	3-8	S

SAS* Number of possible points per cluster

CC* M=Major Cluster S=Supporting Cluster A=Additional Cluster



Instructional Rubric for Math Practices



Using the Rubric:

Review each row corresponding to a mathematical practice. Use the boxes to mark the appropriate description for your task or teacher action. The task descriptors can be used primarily **as** you develop your lesson to make sure your classroom tasks help cultivate the mathematical practices. The teacher descriptors, however, can be used **during** or **after** the lesson to evaluate how the task was carried out. The column titled “proficient” describes the expected norm for task and teacher action while the column titled “exemplary” includes all features of the proficient column and more. A teacher who is exemplary is meeting criteria in **both** the proficient and exemplary columns.

PRACTICE	NEEDS IMPROVEMENT	EMERGING (teacher does thinking)	PROFICIENT (teacher mostly models)	EXEMPLARY (students take ownership)
<p>Make sense of problems and persevere in solving them.</p> <p>Needs</p>	<p>Task:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is strictly procedural. <input type="checkbox"/> Does not require students to check solutions for errors. <p>Teacher:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not allow for wait time; asks leading questions to rush through task. <input type="checkbox"/> Does not encourage students to individually process the tasks. <input type="checkbox"/> Is focused solely on answers rather than processes and reasoning. 	<p>Task:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is overly scaffolded or procedurally “obvious”. <input type="checkbox"/> Requires students to check answers by plugging in numbers. <p>Teacher:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Allots too much or too little time to complete task. <input type="checkbox"/> Encourages students to individually complete tasks, but does not ask them to evaluate the processes used. <input type="checkbox"/> Explains the reasons behind procedural steps. <input type="checkbox"/> Does not check errors publicly. 	<p>Task:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is cognitively demanding. <input type="checkbox"/> Has more than one entry point. <input type="checkbox"/> Requires a balance of procedural fluency and conceptual understanding. <input type="checkbox"/> Requires students to check solutions for errors using one other solution path. <p>Teacher:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Allows ample time for all students to struggle with task. <input type="checkbox"/> Expects students to evaluate processes implicitly. <input type="checkbox"/> Models making sense of the task (given situation) and the proposed solution. 	<p>Task:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Allows for multiple entry points and solution paths. <input type="checkbox"/> Requires students to defend and justify their solution by comparing multiply solution paths. <p>Teacher:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Differentiates to keep advanced students challenged during work time. <input type="checkbox"/> Integrates time for explicit meta-cognition. <input type="checkbox"/> Expects students to make sense of the task and the proposed solution.

PRACTICE	NEEDS IMPROVEMENT	EMERGING (teacher does thinking)	PROFICIENT (teacher mostly models)	EXEMPLARY (students take ownership)
Reason abstractly and quantitatively.	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Lacks context. <input type="checkbox"/> Does not make use of multiple representations or solution paths. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not expect students to interpret representations. <input type="checkbox"/> Expects students to memorize procedures with no connection to meaning. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is embedded in a contrived context. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Expects students to model and interpret tasks using a single representation. <input type="checkbox"/> Explains connections between procedures and meaning. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Has realistic context. <input type="checkbox"/> Requires students to frame solutions in a context. <input type="checkbox"/> Has solutions that can be expressed with multiple representations. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Expects students to interpret and model using multiple representations. <input type="checkbox"/> Provides structure for students to connect algebraic procedures to contextual meaning. <input type="checkbox"/> Links mathematical solution with a question's answer. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Has relevant realistic context. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Expects students to interpret, model, and connect multiple representations. <input type="checkbox"/> Prompts students to articulate connections between algebraic procedures and contextual meaning.
Construct viable arguments and critique the reasoning of others.	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is either ambiguously stated. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not ask students to present arguments or solutions. <input type="checkbox"/> Expects students to follow a given solution path without opportunities to make conjectures. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is not at the appropriate level. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not help students differentiate between assumptions and logical conjectures. <input type="checkbox"/> Asks students to present arguments but not to evaluate them. <input type="checkbox"/> Allows students to make conjectures without justification. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Avoids single steps or routine algorithms. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Identifies students' assumptions. <input type="checkbox"/> Models evaluation of student arguments. <input type="checkbox"/> Asks students to explain their conjectures. 	<p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Helps students differentiate between assumptions and logical conjectures. <input type="checkbox"/> Prompts students to evaluate peer arguments. <input type="checkbox"/> Expects students to formally justify the validity of their conjectures.

PRACTICE	NEEDS IMPROVEMENT	EMERGING (teacher does thinking)	PROFICIENT (teacher mostly models)	EXEMPLARY (students take ownership)
<p>Model with mathematics.</p>	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to identify variables and to perform necessary computations. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Identifies appropriate variables and procedures for students. <input type="checkbox"/> Does not discuss appropriateness of model. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to identify variables and to compute and interpret results. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Verifies that students have identified appropriate variables and procedures. <input type="checkbox"/> Explains the appropriateness of model. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to identify variables, compute and interpret results, and report findings using a mixture of representations. <input type="checkbox"/> Illustrates the relevance of the mathematics involved. <input type="checkbox"/> Requires students to identify extraneous or missing information. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Asks questions to help students identify appropriate variables and procedures. <input type="checkbox"/> Facilitates discussions in evaluating the appropriateness of model. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to identify variables, compute and interpret results, report findings, and justify the reasonableness of their results and procedures within context of the task. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Expects students to justify their choice of variables and procedures. <input type="checkbox"/> Gives students opportunity to evaluate the appropriateness of model.
<p>Use appropriate tools strategically.</p>	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not incorporate additional learning tools. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not incorporate additional learning tools. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Lends itself to one learning tool. <input type="checkbox"/> Does not involve mental computations or estimation. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Demonstrates use of appropriate learning tool. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Lends itself to multiple learning tools. <input type="checkbox"/> Gives students opportunity to develop fluency in mental computations. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Chooses appropriate learning tools for student use. <input type="checkbox"/> Models error checking by estimation. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires multiple learning tools (i.e., graph paper, calculator, manipulatives). <input type="checkbox"/> Requires students to demonstrate fluency in mental computations. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Allows students to choose appropriate learning tools. <input type="checkbox"/> Creatively finds appropriate alternatives where tools are not available.

PRACTICE	NEEDS IMPROVEMENT	EMERGING (teacher does thinking)	PROFICIENT (teacher mostly models)	EXEMPLARY (students take ownership)
Attend to precision.	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Gives imprecise instructions. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not intervene when students are being imprecise. <input type="checkbox"/> Does not point out instances when students fail to address the question completely or directly. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Has overly detailed or wordy instructions. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Inconsistently intervenes when students are imprecise. <input type="checkbox"/> Identifies incomplete responses but does not require student to formulate further response. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Has precise instructions. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Consistently demands precision in communication and in mathematical solutions. <input type="checkbox"/> Identifies incomplete responses and asks student to revise their response. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Includes assessment criteria for communication of ideas. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Demands and models precision in communication and in mathematical solutions. <input type="checkbox"/> Encourages students to identify when others are not addressing the question completely.
Look for and make use of structure.	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to automatically apply an algorithm to a task without evaluating its appropriateness. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not recognize students for developing efficient approaches to the task. <input type="checkbox"/> Requires students to apply the same algorithm to a task although there may be other approaches. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to analyze a task before automatically applying an algorithm. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Identifies individual students' efficient approaches, but does not expand understanding to the rest of the class. <input type="checkbox"/> Demonstrates the same algorithm to all related tasks although there may be other more effective approaches. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to analyze a task and identify more than one approach to the problem. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Facilitates all students in developing reasonable and efficient ways to accurately perform basic operations. <input type="checkbox"/> Continuously questions students about the reasonableness of their intermediate results. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Requires students to identify the most efficient solution to the task. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Prompts students to identify mathematical structure of the task in order to identify the most effective solution path. <input type="checkbox"/> Encourages students to justify their choice of algorithm or solution path.

PRACTICE	NEEDS IMPROVEMENT	EMERGING (teacher does thinking)	PROFICIENT (teacher mostly models)	EXEMPLARY (students take ownership)
<p>Look for and express regularity in repeated reasoning.</p>	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is disconnected from prior and future concepts. <input type="checkbox"/> Has no logical progression that leads to pattern recognition. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Does not show evidence of understanding the hierarchy within concepts. <input type="checkbox"/> Presents or examines task in isolation. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Is overly repetitive or has gaps that do not allow for development of a pattern. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Hides or does not draw connections to prior or future concepts. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Reviews prior knowledge and requires cumulative understanding. <input type="checkbox"/> Lends itself to developing a pattern or structure. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Connects concept to prior and future concepts to help students develop an understanding of procedural shortcuts. <input type="checkbox"/> Demonstrates connections between tasks. 	<p><u>Task:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Addresses and connects to prior knowledge in a non-routine way. <input type="checkbox"/> Requires recognition of pattern or structure to be completed. <p><u>Teacher:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Encourages students to connect task to prior concepts and tasks. <input type="checkbox"/> Prompts students to generate exploratory questions based on current task. <input type="checkbox"/> Encourages students to monitor each other's intermediate results.



Mathematical Practice Standards



Mathematics | Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).

1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions,

communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

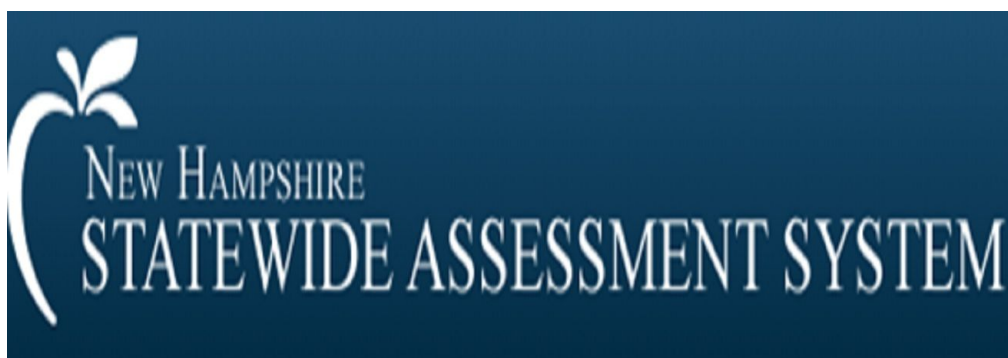
The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.



ELA 3-8 Grade

SAS Possible Points



3rd Grade ELA SAS Possible Points 2018

L - Language Standards	
L - 3.A - Conventions of Standard English	1-2
L - 3.C - Vocabulary Acquisition and Use	0-2
RI - Reading Standards for Informational Text	
RI - 3.A - Key Ideas and Details	7-8
RI - 3.B - Craft and Structure	5-6
RI - 3.C - Integration of Knowledge and Ideas	2-3
RL - Reading Standards for Literature	
RL - 3.A - Key Ideas and Details	6-7
RL - 3.B - Craft and Structure	5-7
RL - 3.C - Integration of Knowledge and Ideas	2-4
SL - Speaking and Listening Standards	
SL - 3.A - Comprehension and Collaboration	0-1
W - Writing Standards	
W - 3.A - Text Types and Purposes	10

4th Grade ELA SAS Possible Points 2018

L - Language Standards	
L - 4.A - Conventions of Standard English	5
L - 4.C - Vocabulary Acquisition and Use	1-2
RI - Reading Standards for Informational Text	
RI - 4.A - Key Ideas and Details	6-7
RI - 4.B - Craft and Structure	5-6
RI - 4.C - Integration of Knowledge and Ideas	2-4
RL - Reading Standards for Literature	
RL - 4.A - Key Ideas and Details	7-9
RL - 4.B - Craft and Structure	3-6
RL - 4.C - Integration of Knowledge and Ideas	1-4
W - Writing Standards	
W - 4.A - Text Types and Purposes	10

5th Grade ELA SAS Possible Points 2018

L - Language Standards	
L - 5.A - Conventions of Standard English	5
L - 5.C - Vocabulary Acquisition and Use	1-2
RI - Reading Standards for Informational Text	
RI - 5.A - Key Ideas and Details	3-8
RI - 5.B - Craft and Structure	3-7
RI - 5.C - Integration of Knowledge and Ideas	2-5
RL - Reading Standards for Literature	
RL - 5.A - Key Ideas and Details	5-7
RL - 5.B - Craft and Structure	6-9
RL - 5.C - Integration of Knowledge and Ideas	1-2
SL - Speaking and Listening Standards	
SL - 5.A - Comprehension and Collaboration	1
W - Writing Standards	
W - 5.A - Text Types and Purposes	10

6th Grade ELA SAS Possible Points 2018

L - Language Standards	
L - 6.A - Conventions of Standard English	5
L - 6.C - Vocabulary Acquisition and Use	1-2
RI - Reading Standards for Informational Text	
RI - 6.A - Key Ideas and Details	5-8
RI - 6.B - Craft and Structure	5-7
RI - 6.C - Integration of Knowledge and Ideas	2-4
RL - Reading Standards for Literature	
RL - 6.A - Key Ideas and Details	6-8
RL - 6.B - Craft and Structure	6-8
RL - 6.C - Integration of Knowledge and Ideas	1-2
SL - Speaking and Listening Standards	
SL - 6.A - Comprehension and Collaboration	1-2
W - Writing Standards	
W - 6.A - Text Types and Purposes	10

7th Grade ELA SAS Possible Points 2018

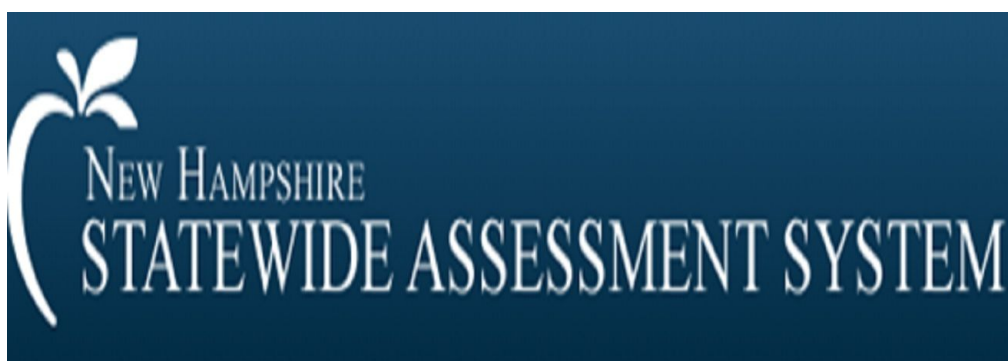
L - Language Standards	
L - 7.A - Conventions of Standard English	3-5
L - 7.C - Vocabulary Acquisition and Use	1-2
RI - Reading Standards for Informational Text	
RI - 7.A - Key Ideas and Details	6-8
RI - 7.B - Craft and Structure	6-8
RI - 7.C - Integration of Knowledge and Ideas	1-4
RL - Reading Standards for Literature	
RL - 7.A - Key Ideas and Details	6-9
RL - 7.B - Craft and Structure	5-8
RL - 7.C - Integration of Knowledge and Ideas	1-3
SL - Speaking and Listening Standards	
SL - 7.A - Comprehension and Collaboration	1-2
W - Writing Standards	
W - 7.A - Text Types and Purposes	10

8th Grade ELA SAS Possible Points 2018

L - Language Standards	
L - 8.A - Conventions of Standard English	3-5
L - 8.C - Vocabulary Acquisition and Use	1-2
RI - Reading Standards for Informational Text	
RI - 8.A - Key Ideas and Details	6-8
RI - 8.B - Craft and Structure	6-8
RI - 8.C - Integration of Knowledge and Ideas	1-3
RL - Reading Standards for Literature	
RL - 8.A - Key Ideas and Details	7-10
RL - 8.B - Craft and Structure	5-6
RL - 8.C - Integration of Knowledge and Ideas	1-2
SL - Speaking and Listening Standards	
SL - 8.A - Comprehension and Collaboration	1-2
W - Writing Standards	
W - 8.A - Text Types and Purposes	10



English Language Arts
Text-based Writing Rubrics Grades 3–5
Informative/Explanatory



Grades 3–5

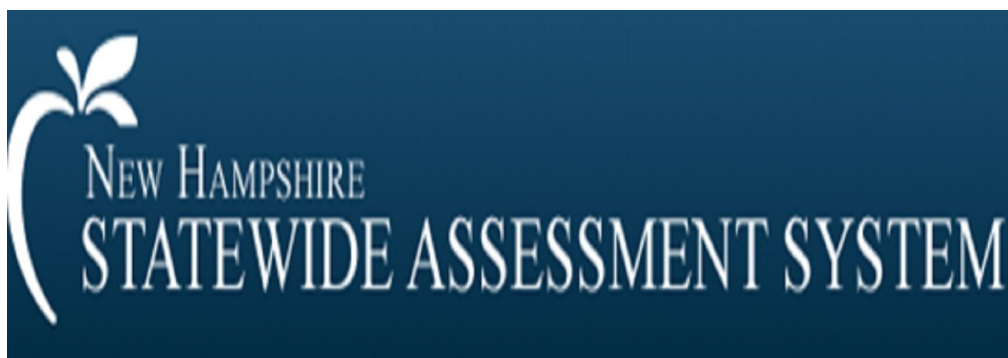
Informative/Explanatory Text-based Writing Rubric		
(Score points within each domain include most of the characteristics below.)		
Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)
		Conventions of Standard English (2-point Rubric begins at score point 2)
4	<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clearly stated controlling idea and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained controlling idea with little or no loosely related material • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end, including a satisfying introduction and conclusion 	<p>The response provides thorough and convincing support/evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Relevant evidence integrated smoothly and thoroughly with references to sources • Effective use of a variety of elaborative techniques (including but not limited to definitions, quotations, and examples), demonstrating an understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility
3	<p>The response is adequately sustained and generally focused within the purpose, audience, and task; and it has a controlling idea and evident organizational structure with a sense of completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Maintained controlling idea, though some loosely related material may be present • Adequate use of transitional strategies with some variety to clarify the relationships between and among ideas • Adequate progression of ideas from beginning to end, including a sufficient introduction and conclusion 	<p>The response provides adequate support/evidence for the controlling idea or main idea that includes the use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Generally integrated evidence from sources, though references may be general, imprecise, or inconsistent • Adequate use of some elaborative techniques • Adequate expression of ideas, employing a mix of precise and general language • Domain-specific vocabulary generally appropriate for the audience and purpose • Some variation in sentence structure

Continued on the following page

Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric)
2	<p>The response is somewhat sustained within the purpose, audience, and task but may include loosely related or extraneous material; and it may have a controlling idea with an inconsistent organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Partially focused controlling idea, but insufficiently sustained or unclear • Inconsistent use of transitional strategies with little variety • Uneven progression of ideas from beginning to end and may include an inadequate introduction or conclusion 	<p>The response provides uneven, cursory support/evidence for the controlling idea or main idea that includes ineffective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Weakly integrated evidence from sources and erratic or irrelevant references • Repetitive or ineffective use of elaborative techniques • Imprecise or simplistic expression of ideas • Inappropriate or ineffective domain-specific vocabulary • Sentences possibly limited to simple constructions 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage, but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling
1	<p>The response is related to the topic but may demonstrate little or no awareness of the purpose, audience, and task; and it may have little or no discernible controlling idea or organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Confusing or ambiguous ideas • Frequent extraneous ideas impeding understanding • Few or no transitional strategies • Too brief to demonstrate knowledge of focus or organization 	<p>The response provides minimal support/evidence for the controlling idea or main idea, including little if any use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Minimal, absent, erroneous, or irrelevant evidence from the source material • Expression of ideas that is vague, lacks clarity, or is confusing • Limited or inappropriate language or domain-specific vocabulary • Sentences limited to simple constructions 	<p>The response demonstrates a partial command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Various errors in usage • Inconsistent use of correct punctuation, capitalization, sentence formation, and spelling
0			<p>The response demonstrates a lack of command of conventions, with frequent and severe errors often obscuring meaning.</p>



English Language Arts
Text-based Writing Rubrics Grades 3–5
Opinion



Grades 3-5			
Opinion Text-based Writing Rubric			
(Score points within each domain include most of the characteristics below.)			
Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric begins at score point 2)
4	<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clearly stated opinion and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained opinion with little or no loosely related material • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end with a satisfying introduction and conclusion 	<p>The response provides thorough and convincing support/evidence for the writer’s opinion that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Relevant evidence integrated smoothly and thoroughly with references to sources • Effective use of a variety of elaborative techniques, demonstrating understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility 	
3	<p>The response is adequately sustained and generally focused within the purpose, audience, and task; and it has an opinion and evident organizational structure with a sense of completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • A maintained opinion, though some loosely related material may be present • Adequate use of transitional strategies with some variety to clarify the relationships between and among ideas • Adequate progression of ideas from beginning to end with a sufficient introduction and conclusion 	<p>The response provides adequate support/evidence for the writer’s opinion that includes the use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Generally integrated evidence from sources, though references may be general, imprecise, or inconsistent • Adequate use of some elaborative techniques • Adequate expression of ideas, employing a mix of precise and general language • Domain-specific vocabulary generally appropriate for the audience and purpose • Some variation in sentence structure 	
<i>Continued on the following page</i>			

FINAL ELA Text-based Writing Rubrics, Grades 3–5: Opinion

Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric)
2	<p>The response is somewhat sustained within the purpose, audience, and task but may include loosely related or extraneous material; and it may have an opinion with an inconsistent organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Partially focused opinion but insufficiently sustained or unclear • Inconsistent use of transitional strategies with little variety • Uneven progression of ideas from beginning to end and an inadequate introduction or conclusion 	<p>The response provides uneven, cursory support/evidence for the writer’s opinion that includes ineffective use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Weakly integrated evidence from sources and erratic or irrelevant references • Repetitive or ineffective use of elaborative techniques • Imprecise or simplistic expression of ideas • Inappropriate or ineffective domain-specific vocabulary • Sentences possibly limited to simple constructions 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling
1	<p>The response is related to the topic but may demonstrate little or no awareness of the purpose, audience, and task; and it may have no discernible opinion and little or no discernible organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Absent, confusing, or ambiguous opinion • Frequent extraneous ideas impeding understanding • Few or no transitional strategies • Too brief to demonstrate knowledge of focus or organization 	<p>The response provides minimal support/evidence for the writer’s opinion, including little if any use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Minimal, absent, erroneous, or irrelevant evidence from the source material • Expression of ideas that is vague, unclear, or confusing • Limited or inappropriate language or domain-specific vocabulary • Sentences limited to simple constructions 	<p>The response demonstrates a partial command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Various errors in usage • Inconsistent use of correct punctuation, capitalization, sentence formation, and spelling
0			<p>The response demonstrates a lack of command of conventions, with frequent and severe errors often obscuring meaning.</p>



English Language Arts

Text-based Writing Rubrics Grades 6-11

Informative/Explanatory



Grades 6-11

Informative/Explanatory Text-based Writing Rubric		
(Score points within each domain include most of the characteristics below.)		
Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)
4	<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear controlling idea and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained controlling idea with little or no loosely related material • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end with a satisfying introduction and conclusion • Appropriate style and objective tone established and maintained 	<p>The response provides thorough and convincing support, citing evidence for the controlling idea or main idea that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Smoothly integrated, thorough, and relevant evidence, including precise references to sources • Effective use of a variety of elaborative techniques (including but not limited to definitions, quotations, and examples), demonstrating an understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility
3	<p>The response is adequately sustained and generally focused within the purpose, audience, and task; and it has a clear controlling idea and evident organizational structure with a sense of completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Maintained controlling idea, though some loosely related material may be present • Adequate use of a variety of transitional strategies to clarify the relationships between and among ideas • Adequate progression of ideas from beginning to end with a sufficient introduction and conclusion • Appropriate style and objective tone established 	<p>The response provides adequate support, citing evidence for the controlling idea or main idea that includes the use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Generally integrated and relevant evidence from sources, though references may be general or imprecise • Adequate use of some elaborative techniques • Adequate expression of ideas, employing a mix of precise and general language • Domain-specific vocabulary generally appropriate for the audience and purpose • Some variation in sentence structure

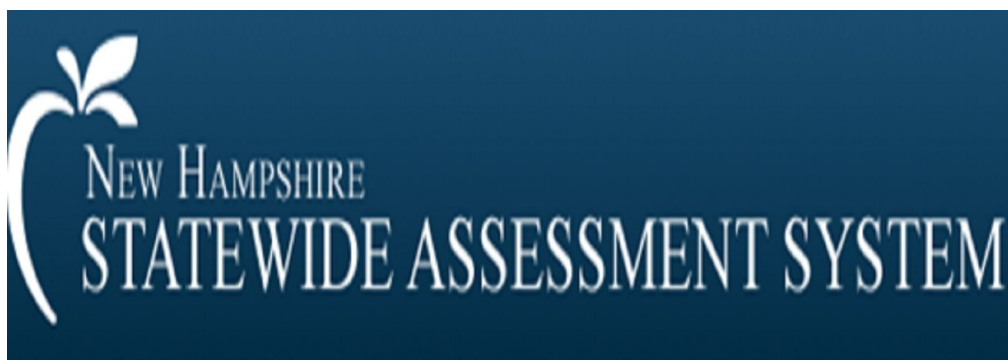
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FINAL ELA Text-based Writing Rubrics, Grades 6–11: Informative/Explanatory

Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric)
2	<p>The response is somewhat sustained within the purpose, audience, and task but may include loosely related or extraneous material; and it may have a controlling idea with an inconsistent organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Focused controlling idea but insufficiently sustained or unclear • Inconsistent use of transitional strategies with little variety • Uneven progression of ideas from beginning to end with an inadequate introduction or conclusion 	<p>The response provides uneven, cursory support/evidence for the controlling idea or main idea that includes partial use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Weakly integrated evidence from sources; erratic or irrelevant references or citations • Repetitive or ineffective use of elaborative techniques • Imprecise or simplistic expression of ideas • Some use of inappropriate domain-specific vocabulary • Most sentences limited to simple constructions 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling
1	<p>The response is related to the topic but may demonstrate little or no awareness of the purpose, audience, and task; and it may have little or no controlling idea or discernible organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Confusing or ambiguous ideas • Few or no transitional strategies • Frequent extraneous ideas that impede understanding • Too brief to demonstrate knowledge of focus or organization 	<p>The response provides minimal support/evidence for the controlling idea or main idea, including little if any use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Minimal, absent, erroneous, or irrelevant evidence or citations from the source material • Expression of ideas that is vague, unclear, or confusing • Limited and often inappropriate language or domain-specific vocabulary • Sentences limited to simple constructions 	<p>The response demonstrates a partial command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Various errors in usage • Inconsistent use of correct punctuation, capitalization, sentence formation, and spelling
0			<p>The response demonstrates a lack of command of conventions, with frequent and severe errors often obscuring meaning.</p>



English Language Arts
Text-based Writing Rubrics Grades 6-11
Argumentation



Grades 6–11			
Argumentation Text-based Writing Rubric			
(Score points within each domain include most of the characteristics below.)			
Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric begins at score point 2)
4	<p>The response is fully sustained and consistently focused within the purpose, audience, and task; and it has a clear claim and effective organizational structure creating coherence and completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Strongly maintained claim with little or no loosely related material • Clearly addressed alternate or opposing claims* • Skillful use of a variety of transitional strategies to clarify the relationships between and among ideas • Logical progression of ideas from beginning to end with a satisfying introduction and conclusion • Appropriate style and tone established and maintained 	<p>The response provides thorough, convincing, and credible support, citing evidence for the writer’s claim that includes the effective use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Smoothly integrated, thorough, and relevant evidence, including precise references to sources • Effective use of a variety of elaborative techniques to support the claim, demonstrating an understanding of the topic and text • Clear and effective expression of ideas, using precise language • Academic and domain-specific vocabulary clearly appropriate for the audience and purpose • Varied sentence structure, demonstrating language facility 	
3	<p>The response is adequately sustained and generally focused within the purpose, audience, and task; and it has a clear claim and evident organizational structure with a sense of completeness. The response includes most of the following:</p> <ul style="list-style-type: none"> • Maintained claim, though some loosely related material may be present • Alternate or opposing claims included but may not be completely addressed* • Adequate use of a variety of transitional strategies to clarify the relationships between and among ideas • Adequate progression of ideas from beginning to end with a sufficient introduction and conclusion • Appropriate style and tone established 	<p>The response provides adequate support, citing evidence for the writer’s claim that includes the use of sources, facts, and details. The response includes most of the following:</p> <ul style="list-style-type: none"> • Generally integrated and relevant evidence from sources, though references may be general or imprecise • Adequate use of some elaborative techniques • Adequate expression of ideas, employing a mix of precise and general language • Domain-specific vocabulary generally appropriate for the audience and purpose • Some variation in sentence structure 	

Continued on the following page

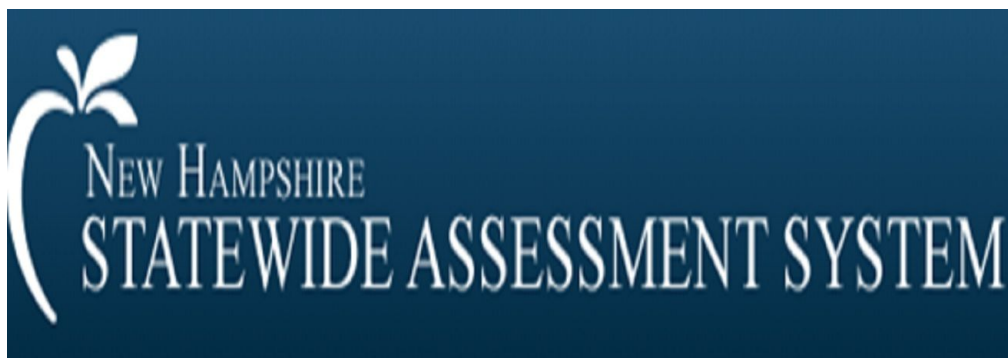
FINAL ELA Text-based Writing Rubrics, Grades 6–11: Argumentation

Score	Purpose, Focus, and Organization (4-point Rubric)	Evidence and Elaboration (4-point Rubric)	Conventions of Standard English (2-point Rubric)
2	<p>The response is somewhat sustained within the purpose, audience, and task but may include loosely related or extraneous material; and it may have a claim with an inconsistent organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Focused claim but insufficiently sustained or unclear • Insufficiently addressed alternate or opposing claims* • Inconsistent use of transitional strategies with little variety • Uneven progression of ideas from beginning to end with an inadequate introduction or conclusion 	<p>The response provides uneven, cursory support/evidence for the writer’s claim that includes partial use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Weakly integrated evidence from sources; erratic or irrelevant references or citations • Repetitive or ineffective use of elaborative techniques • Imprecise or simplistic expression of ideas • Some use of inappropriate domain-specific vocabulary • Most sentences limited to simple constructions 	<p>The response demonstrates an adequate command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Some minor errors in usage but no patterns of errors • Adequate use of punctuation, capitalization, sentence formation, and spelling
1	<p>The response is related to the topic but may demonstrate little or no awareness of the purpose, audience, and task; and it may have no discernible claim and little or no discernible organizational structure. The response may include the following:</p> <ul style="list-style-type: none"> • Absent, confusing, or ambiguous claim • Missing alternate or opposing claims* • Few or no transitional strategies • Frequent extraneous ideas that impede understanding • Too brief to demonstrate knowledge of focus or organization 	<p>The response provides minimal support/evidence for the writer’s claim, including little if any use of sources, facts, and details. The response may include the following:</p> <ul style="list-style-type: none"> • Minimal, absent, erroneous, or irrelevant evidence or citations from the source material • Expression of ideas that is vague, unclear, or confusing • Limited and often inappropriate language or domain-specific vocabulary • Sentences limited to simple constructions 	<p>The response demonstrates a partial command of basic conventions. The response may include the following:</p> <ul style="list-style-type: none"> • Various errors in usage • Inconsistent use of correct punctuation, capitalization, sentence formation, and spelling
0			<p>The response demonstrates a lack of command of conventions, with frequent and severe errors often obscuring meaning.</p>

*Not applicable at grade 6



NH SAS Modular Types



SAS Interim Assessment Choices

ELA Grades 3-8

Editing
Informational Text
Listening
Reading Literature

Writing Grades 3-5

Informative
Opinion

Writing Grades 6-8

Informative
Argumentative

Math Grades 3-5

Measurement and Data, and Geometry
Number and Operations Base Ten
Number and Operations Fractions
Operations and Algebraic Thinking

Math Grade 6

Expressions and Equations
Geometry, Statistics and Probability
The Number System
Ratio and Proportions

Math Grade 7

Expressions and Equations
The Number System
Ratio and Proportions
Geometry
Statistics and Probability

Math Grade 8

Expressions and Equations
Functions
Statistics and Probability
Geometry/The Number System

Science Grade 5

Earth Systems
Weather
Eco systems
Inheritance
Forces and Energy
Structure Properties
Waves

Science Grade 8

History of Earth
Space Systems
Weather and Climate
Growth and Development
Matter and Energy
Natural Selection
Structure and Function
Forces and Energy
Structure Properties
Waves

Science Grade 11

History of Earth
Space Systems
Weather and Climate
Growth and Development
Energy
Natural Selection
Structure and Function
Forces and Energy
Structure Properties
Waves



Appendix C

The following pages contain our full PLC Binder





**DEMONSTRATED
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Implementing Professional Learning Communities

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PLC BINDER

Professional Learning Communities

Four questions that are fundamental to the PLC process

1. **What do we want our students to learn?**
2. **How will we know if they have learned it?**
3. **What will we do if they don't learn?**
4. **What will we do if they do learn it?**

(DuFour, DuFour, Eaker, Many, 2010)

Contents of Binder

Section 1: Team Information

- Guide to Successful Teams
- Team Self-Assessment Rubric
- Establishing Norms Protocol
- Sample Ideas for Team Norms
- Team Norms
- Assigned Team roles
- Year-Long SMART Goal Worksheet

Section 2: CCSS & Standards Emphasis

- Common Core Standards
- Standards Definitions

Section 3: Local Information

- Local Curriculum Map
- Pacing Guides
- Local 'Power Standards'
- Report Card

Section 4: Intervention Cycle Blank Sample Documents

- Cycle Steps Checklist
- Weekly Notes
- Pre-Assessment Information Sheet
- Grade PRE-Assessment Data
- Data Driven Dialogue Template
- Cycle Goal
- Student Groups
- Strategies and Material
- POST Assessment Information
- Grade POST Assessment Data
- Evaluation and Celebration
- Cycle Summary

Section 5: – Cycle 1 Documents

Section 6: – Cycle 2 Documents

Section 7: – Cycle 3 Documents

Divider Labeled **Team Information**

Team Information



Guide to Successful Teams

The following pages define six components to building successful educator teams and a culture that facilitates collaborative and meaningful work. Educators have very limited time outside of the classroom to work together. It is critical that this time is focused, valuable and leads to meaningful and measurable improvement for students and the school.

Six Components of Successful Educator Teams





Norms, Roles and Climate

Purpose: Educators spend most of their time teaching in an autonomous environment and time outside of the classroom is scarce. Norms and Roles assure that when educators gather to collaborate, it is done in a safe and effective team environment. Defined norms and roles will help create common the expectations required to build a positive culture and climate.

Timeframe: Norms should be established at the first meeting when a group is formed. At future meetings, the norms should be reviewed and at the start of the meeting the group should choose a norm to pay attention to, and monitor during the meeting. Roles can be adopted by team members as suits their skills and preferences; roles can be static or they can rotate.

Components:

- Norms document: When possible, norms should be posted. Keep the number of norms between 5-7 and norms should guide timeliness, efficacy, and quality of interactions.
- Roles Document: Roles should focus on gaining full participation and eliciting strengths from each member of the group.

To Consider: Start with existing norms and roles such as the 7 Norms of Collaboration or “Roles and Responsibilities” but allow the team to modify as desired. Create a survey and administer periodically to evaluate the climate of the team.

Leaders’ Role: The leader should initiate and facilitate conversation to ensure that norms are agreed upon. But it is important that the leader facilitate ONLY, and refrain from dominating the discussion, thereby encouraging participants to determine the norms and roles. The leader should foster a positive and supportive climate.

Participant’s’ Role: Stay active and engaged. Abide by, and enforce the norms. Each participant should hold him or herself, and others accountable. Each participant should adopt a role within the group that maximizes the group’s effectiveness.



Consistent Protocols

Purpose: Consistent protocols for data analysis, goal setting, action planning, trust building, communication, and shared decision making, are vital to ensure the rigor in team process that leads to success. Consistent protocols enable leadership and team members to hold teams accountable. Protocols build teaming capacity within staff, and protocols work to clearly define process and create clear and recognizable goals.

Timeframe: Initial protocols can be chosen or created up front; however, it is fine to create or implement protocols as your team process unfolds. Protocols should be adapted as they are used, as potential improvements to the protocols are uncovered.

Components: Protocols used in all the steps of the team's work: Trust building, communication, goal setting, action planning, data analysis, entry and exit protocols identifying students the team is supporting, and shared decision making. The protocols will vary, depending on the team's goals and purpose.

Items to Consider: Protocols can be living documents that are continuously revisited and updated. At the same time, teams should 'live with' protocols and given them a chance before revising. Don't let great be the enemy of good!

Leader's Role: Introduce protocols and facilitate consensus around them.

Participant's Role: Contribute to the development of protocols and adhere to them.



Clear Communication Plan

Purpose: A well thought out and documented plan to communicate a team's activities ensures that the whole staff will work collaboratively to meet goals. A communication plan must provide for communication of goals and activities between members, between teams and the staff at large, and between the building staff and leadership teams.

Timeframe: A communication plan will be a working document that is frequently reviewed and adjusted. A draft communication plan should be completed at the first or second team meeting.

Components: The communication plan should include all team information and activities and who needs to be made aware of those activities. The plan should include the activity/information being communicated; the stakeholder who will create and convey the communication, the intended audience, the timeframe of the given communication, the method of communication and the goal of the communication.

Items to Consider: Dedication and persistence are essential to document and follow a communication plan. It's a step that is easy to overlook. When deciding what to share, be targeted and communicate just what is necessary. Enable expanded communication for those who are interested. Remember that access to information is sensitive in schools; it can serve to coalesce or divide a staff.

Leader's Role: Facilitate development at the beginning, and oversee and monitor the communication plan.

Participant's Role: Follow through with all communication activities defined.



Shared Articulated, and Measureable Goals

Purpose: Measurable goals ensure follow through and effectiveness. When measurable goals are set, teams have proof of efficacy, and a standard against which to hold themselves accountable. Interim action steps constitute the path to that larger goal and each action step should have an observable and/or measurable outcome to keep the team on track and moving toward the larger goal.

Timeframe: The team's purpose should be defined in meeting one. The overarching measurable goal should be defined within the first two or three meetings, and ensuing actions steps are fleshed out as a natural continuation of that work. A team's purpose and goal may be revised, but it's important that they exist to guide the work being completed. Revisiting the team's articulated purpose and overarching goal – even if just to remind everyone – is important, and can even be done at the beginning of each meeting.

Components: A team's purpose should clearly define what is driving the work of the team. It involves the underlying principles that motivate the work and therefore, the purpose statement is best developed through collaborative conversation. It is time well spent, in that common language and common understanding can be established. A team's overarching measurable goal is their priority goal in relation to their purpose. Action items must be clear and must be tied to a measurable goal. Action items and goals can be measured by quantitative or qualitative data or by a descriptive rubric.

Items to Consider: Be rigorous with this work. Teams will wander without clear direction. It can be challenging to define challenging but attainable, measurable goals – they must be meaningful, challenging and achievable. It is gratifying and motivating for a team to review their goals and action items and have tangible evidence that goals have been met! **Review frequently and celebrate!**

Leader's Role: Ensure that the team identifies a clear purpose and measureable goal(s). Provide feedback about how the team purpose aligns to building goals and whether measurable goals are attainable but rigorous. If the team is struggling with consensus, the team leader should pull in the school or district lead provide direction.

Participant's Role: All participants should contribute to the articulated team purpose and measurable goal(s). Participants should stay engaged in the difficult process until consensus is reached.



Accountability Process

Purpose: Building (or District) oversight and leadership is essential for team success. Leadership must partner with teams to recognize the value and integrate the work into the larger school infrastructure. Routines and protocols must exist for the leadership to review the work being completed, and provide feedback.

Timeframe: Building or District leadership should be present at initial meetings to underscore the importance of the work, and assess the functionality of the team. Throughout the year, regular review of meeting notes completed by the educator team should be housed in a common location and reviewed by building or district leader. The timing of review and feedback from an administrator must be made explicit to the team, and follow through is important. A building and district leader should attend educator meetings periodically for check-ins to get a face to face update on progress. Team members should upload notes and artifacts at the end of meetings to assure consistency. Protocols for member to member communication between meetings should be established so colleagues can help each other with follow through in the face of so many competing obligations in the school day.

Components: Pre-established consistent and structured formats for note-taking at meetings should define exactly what information will be communicated by the educator team to school or district leadership. These note-taking protocols should include the overall educator team goals, action steps, accomplishments and obstacles. Protocols to assure member to member accountability should be articulated as part of norms and roles. Accountability protocols should be developed to report to, and get feedback from, central office staff on building level team goals and processes.

Items to Consider: Accountability must be rigorous, timely and consistent. All teams should be familiar with the protocols and have common expectations. Timely, consistent descriptive feedback from leaders affirms the work that teams are doing, and can powerfully affect the trajectory a team. Part of accountability is using the opportunity to celebrate the success of your teams!

Leader's Role: Teachers are rightfully focused in the classroom and commitments that are not direct interactions with students are the first to be compromised when educators are overwhelmed. It is the leader's responsibility to support follow through by being diligent with his/her role in accountability and providing positive support so that teams know that there is someone checking on their follow through.

Participant's Role: Be receptive to feedback and support team members to help them with follow through. Celebrate your successes and take responsibility to make changes where change is needed



Defined Timelines Throughout

Purpose: With such limited and precious time out of the classroom, defined timelines, at many different levels, guide team work completion and communication.

Timeframe: Ongoing. Timelines are created from the initial conception through the completion of the work.

Components: Timelines must define a consistent meeting schedule, duration, how that time is managed, deadlines for 'homework' completion, when student interventions can occur, when information from teams is communicated, and when educator teams must report 'up the chain' to school and district leaders.

Items to Consider: Be visual. Use a common or shared calendar. Be public – this information should be well communicated so the expectation for everyone's involvement is understood across all staff.

Leader's Role: Be imaginative to make time for teachers to collaborate and get the work done that is needed. Be imaginative to reward teams that go out of their way and meet outside of contracted time. Review team's timelines and offer feedback.

Participant's Role: Remain flexible with timing to get the work done. Make the most out of meeting time by attending to agenda times and tasks.



Team Level Self-Assessment for Team Functioning

Norms, Roles and Climate	Beginning	Developing	Deepening	Sustaining
	<p>Our team has <u>not yet</u> adopted norms.</p> <p>Our team <u>does not yet</u> utilize a set of consistent meeting roles that members execute to facilitate our work.</p> <p>It is <u>unclear</u> how members feel about our level of trust, consistency, non-hierarchical, participation, focus, and openness to a growth oriented mindset</p>	<p>Our team <u>has adopted</u> pre-established norms like the 7 Norms of Collaboration</p> <p>Our norms are posted but we <u>rarely</u> refer to them. Not all members adhere to them.</p> <p>Our team <u>uses</u> a set of consistent meeting roles that members <u>occasionally</u> execute to facilitate our work.</p> <p>It is <u>unclear</u> how members feel about our level of trust, consistency, non-hierarchical, participation, focus, and openness to a growth oriented mindset</p>	<p>Our team <u>has adopted</u> pre-established norms like the 7 Norms of Collaboration.</p> <p>Our norms are posted, and we <u>sometimes</u> monitor and discuss them as part of our meetings. Most members adhere to them.</p> <p>Our team <u>uses</u> a set of consistent meeting roles that members <u>often</u> execute to facilitate our work.</p> <p>Our members <u>feel positively</u> about our level of trust, consistency, non-hierarchical, participation, focus, and openness to a growth oriented mindset.</p>	<p>Our team <u>has developed</u> tailored norms through a discussion and consensus process.</p> <p>They are posted, and we <u>consistently</u> monitor and discuss them as part of our meetings. All members adhere to them.</p> <p>Our team <u>uses</u> a set of consistent meeting roles that members <u>routinely</u> take on to facilitate our work.</p> <p><u>We regularly use norms and quick activities to reinforce existing positive feelings</u> about our level of trust, consistency, non-hierarchical, participation, focus, and openness to a growth oriented mindset.</p>
Consistent Protocols	<p>Our team <u>has never used</u> consistent protocols such as agendas, backward planning charts, data protocols.</p>	<p>Our team <u>has used</u> protocols such as agendas, backward planning charts, data protocols in the past but does not use them currently.</p>	<p>Our team <u>often uses</u> protocols such as agendas, backward planning charts, data protocols.</p>	<p>Our team <u>consistently uses</u> standard protocols such as agendas, backward planning charts, data protocols.</p>



Team Level Self-Assessment for Team Functioning

<p>Clear Communication Plan</p>	<p>Our team <u>has not</u> established shared space to house meeting artifacts, minutes, action planning documents.</p> <p>Our team has not articulated a plan for communicating action steps and outcomes:</p> <ul style="list-style-type: none"> a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office 	<p>Our team <u>has</u> a shared space to house meeting artifacts, minutes, action planning documents and <u>some</u> <u>members</u> upload as needed and check.</p> <p>Our team has an articulated plan for communicating action steps and outcomes for 2 of the following:</p> <ul style="list-style-type: none"> a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office 	<p>Our team <u>has</u> a shared space to house meeting artifacts, minutes, action planning documents and <u>all members</u> upload as needed and check.</p> <p>Our team has an articulated plan for communicating action steps and outcomes for ALL of the following:</p> <ul style="list-style-type: none"> a) Member to member b) Facilitator to member c) Facilitator to Principal d) Facilitator/admin to staff e) Principal to central office 	
<p>Shared Articulated Purpose with Measurable Goals</p>	<p>Our team has <u>not yet</u> articulated an agreement of our team purpose.</p> <p>We have <u>not yet</u> articulated a measurable goal for our work.</p> <p>Our team has <u>not yet</u> set interim action steps and measurable outcomes toward our articulated goal.</p>	<p>Our team has talked about our purpose informally but it is not clear if all team members have common understanding.</p> <p>We have talked about our measurable goal but not talked about how our success will be measured.</p> <p>Our team has talked about some interim action steps but it remains unclear how we will measure their efficacy.</p>	<p>Our team has talked about and written our purpose but we do not regularly review to assure common understanding.</p> <p>We have articulated a measurable goal in writing, but we have not written how our success will be measured.</p> <p>Our team has set in writing, some interim action steps, who is responsible and how we will measure their efficacy.</p>	<p>Our team has used collaboration and consensus to articulate in writing, our team purpose and we regularly review so it is clear that all team members have common understanding.</p> <p>We have articulated our measurable goal in writing, and we have also articulated in writing, how our success will be measured.</p> <p>Our team has set in writing, a comprehensive and coordinated set of interim action steps, who is responsible, and how we will measure their efficacy.</p>



Team Level Self-Assessment for Team Functioning

<p>Accountability Process</p>	<p>Teacher Leaders and/or administrators <u>do not</u> collect and review our meetings notes and action steps.</p> <p>An articulated, agreed upon system <u>does not</u> exist for our team members to hold each other accountable for action steps established at meetings.</p>	<p>Teacher Leaders and/or administrators <u>occasionally</u> collect and review our meeting notes and action steps.</p> <p>An articulated, agreed upon system <u>exists</u> for our team members to hold each other accountable for action steps established at meetings but it happens only <u>sometimes</u>.</p>	<p>Teacher Leaders and/or administrators <u>often</u> collect and review our meeting notes and provide written feedback to team.</p> <p>An articulated, agreed upon system <u>exists</u> for our team members to hold each other accountable for action steps established at meetings and this <u>often</u> happens.</p>	<p>Teacher Leaders and/or administrators <u>regularly and predictably</u> collect and review meeting notes and action steps and provide written feedback to team.</p> <p>An articulated, agreed upon system <u>exists</u> for team members to hold each other accountable for action steps established at meetings and this almost <u>always</u> happens.</p>
<p>Defined Timelines Throughout</p>	<p>Our team has <u>not</u> mapped out complete timelines for achieving our goals.</p> <p>We <u>don't</u> frequently use an agenda.</p> <p>Consistent and adequate meeting time <u>has not yet</u> been established for our teams.</p> <p>We <u>frequently</u> miss meetings or scheduled goals.</p>	<p>Our team has mapped out rough timelines for achieving our articulated goals.</p> <p>We <u>have an</u> agenda but <u>rarely</u> adhere to agenda times.</p> <p>Consistent meeting time <u>has been</u> established for our teams but the duration and interval <u>permits limited work</u> to get done.</p> <p>We <u>frequently</u> miss meetings or scheduled goals.</p>	<p>Our team has mapped out complete timelines for achieving our articulated goals.</p> <p>We <u>often</u> adhere to agenda times</p> <p>Consistent meeting time <u>has been</u> established for our team and the duration and interval permits <u>some of the work</u> to get done.</p> <p>We <u>occasionally</u> miss meetings or scheduled goals.</p>	<p>Our teams have mapped out complete timelines for achieving their articulated goals.</p> <p>We <u>almost always</u> adhere to agenda times.</p> <p>Consistent meeting time <u>has been</u> established for our team and the duration and interval permits <u>ALL of the work</u> to get done.</p> <p>We <u>very rarely</u> miss meetings or scheduled goals.</p>

Establishing Norms Protocol

Adapted from *Keys to Successful Meetings* by Stephanie Hirsh, Ann Delehant, and Sherry Sparks Oxford, OH: National Staff Development Council, 1994

1. Talk to your team about how in order to be effective, we need to commit to a set of operational norms that will encourage deep thinking, efficiency, clear communication, and an action orientation. (2 minutes)
2. Show the 7 Norms of Collaboration as an example set of norms. (2 minutes)
3. Give five index cards and the same kind of writing tool to each person in the group.
4. Ask each member to consider their own behavior in meetings and the behavior of colleagues. On each index card, each member will list an ideal behavior for a good working group. (10 minutes)
5. Shuffle all the cards together.
6. Turn cards face up and read each card aloud. Allow time for the group members to discuss each idea. Tape or tack each card to a display board so that all group members can see it. As each card is read aloud, ask the group to determine if it is similar to another idea that already has been expressed. Cards with similar ideas should be grouped together.
7. When all of the cards have been sorted, construct with the team, the norm suggested by each group of cards. Have the artifact collector record these new norms on a large sheet of paper or on their computer attached to a projector.
8. Review the proposed norms with the group. Determine whether the group can support the norms before the group adopts them.

Make Sure Your Norms take into consideration the following:

- **Time:** When do we meet? Will we set a beginning and ending time? Will we start and end on time?
- **Listening:** How will we encourage listening? How will we discourage interrupting?
- **Confidentiality:** Will the meetings be open? Will what we say in the meeting be held in confidence? What can be said after the meeting?
- **Decision Making:** How will we make decisions? Are we an advisory or a decision-making body? Will we reach decisions by consensus? How will we deal with conflicts?
- **Participation:** How will we encourage everyone's participation? Will we have an attendance policy?
- **Expectations:** What do we expect from members? Are there requirements for participation?



Norms of Collaboration

Annotated

Pausing

Pausing before responding or asking a question allows time for thinking and enhances dialogue, discussion, and decision-making.

2. Paraphrasing

Using a paraphrase starter that is comfortable for you – “So...” or “As you are...” or “You’re thinking...” – and following the starter with an efficient paraphrase assists members of the group in hearing and understanding one another as they converse and make decisions.

3. Posing Questions

Two intentions of posing questions are to explore and to specify thinking. Questions may be posed to explore perceptions, assumptions, and interpretations, and to invite others to inquire into their thinking. For example, “What might be some conjectures you are exploring?” Use focusing questions such as, “Which students, specifically?” or “What might be an example of that?” to increase the clarity and precision of group members’ thinking. Inquire into others’ ideas before advocating one’s own.

4. Putting Ideas on the Table

Ideas are the heart of meaningful dialogue and discussion. Label the intention of your comments. For example: “Here is one idea...” or “One thought I have is...” or “Here is a possible approach...” or “Another consideration might be...”.

5. Providing Data

Providing data, both qualitative and quantitative, in a variety of forms supports group members in constructing shared understanding from their work. Data have no meaning beyond that which we make of them; shared meaning develops from collaboratively exploring, analyzing, and interpreting data.

6. Paying Attention to Self and Others

Meaningful dialogue and discussion are facilitated when each group member is conscious of self and of others, and is aware of what (s)he is saying and how it is said as well as how others are responding. This includes paying attention to learning styles when planning, facilitating, and participating in group meetings and conversations.

7. Presuming Positive Intentions

Assuming that others’ intentions are positive promotes and facilitates meaningful dialogue and discussion, and prevents unintentional put-downs. Using positive intentions in speech is one manifestation of this norm.



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Team Norms

Grade/Team:

Date:

Team Member:

1.

2.

3.

4.

5.

6.

7.



Team Norms (Sample)

Grade/Team: MS Science Team

Date: September 22, 2019

Team Member: Sue, Barbara, Bill, Jack

1. Arrive on time ready to work
2. Each person shares a 'great thing that happened today'
3. Presume Positive Intentions
4. Arrive with appropriate tools for your role
5. Remember to listen to others and Pause!
6. Put Ideas on the table

ROLES and RESPONSIBILITIES for Action-Oriented Educator Meetings

Team Role	Description	Team Member	Duration
Facilitator	<ul style="list-style-type: none"> Develop the agenda and distribute it to all team members Facilitate the meeting Review minutes from previous meeting Keep team focused on the SMART goal Make sure all voices are heard 		Month/Quarter/All Year
Recorder	<ul style="list-style-type: none"> Record minutes throughout meeting 		Month/Quarter/All Year
File Keeper	<ul style="list-style-type: none"> Maintain 'Data binder' either electronically or hard copy or both, that contains team meeting minutes, norms, roles, data results, and resources. 		Month/Quarter/All Year
Timekeeper	<ul style="list-style-type: none"> Monitor agenda times and topics Keep the group focused and moving Monitor start and end times Call for tabling the subject or making a decision 		Month/Quarter/All Year
Artifact Collector	<ul style="list-style-type: none"> Create charts, visuals during meeting and take photos of visuals after to give to file manager to post and file 		Month/Quarter/All Year
Norms Manager	<ul style="list-style-type: none"> Direct attention to norms at start of meetings Monitor a norm throughout the meeting, as decided on by the group Assess the team's use of norms at the end of the meeting 		Month/Quarter/All Year



Materials Organizer	<ul style="list-style-type: none">Bring all materials needed for meetings, as determined by agenda items, including all data to be reviewed		Month/Quarter/All Year
"Food Dude"	<ul style="list-style-type: none">Rotating snacks person to change for each meeting		Month/Quarter/All Year

Professional Learning Communities...

Focus on and ensure learning for all. Collaborate and work interdependently. Expect results and strive for continuous improvement.

ESTABLISHING YEAR LONG GOALS

Step #1: As a team, brainstorm areas that you believe might need improvement. Use available data; Data includes: test data (summative, formative and standardized), survey data, observational data, student work, behavior data, attendance, etc.

Step #2: Based on evidence of need and your teammates desires to improve student learning, what would your team like to get accomplished this year?

Step #3: Highlight the district goals that align with your desired PLC work

Step #4: Based on the evidence and priorities above, write a yearlong student learning goal. This goal will become the focus of your collaborative work.

Student Learning SMART goal

Student Learning Goal:
Specific
Measurable
Attainable
Results- Oriented
Time- Bound

Example Student Learning SMART Goal Our 5th grade students will demonstrate improved comprehension of grade level informational text as demonstrated by results of the Grade 5 ELA Common Formative Assessment. 98% of our students will progress at least one level in two or more elements of the Grade 5 ELA Common Formative Assessment rubric by last semester of the 2019-20 school year.

The chart below illustrates how this student learning goal is SMART:

Specific	Aimed specifically at comprehension of informational text skills
Measurable	The Grade 5 Formative assessment allows us to measure
Attainable	This goal is possible as indicated in previous data that we collected
Results- Oriented	98% of our students will make growth as reflected in at least two categories of the 9th grade formative assessment
Time-Bound	Last semester 19-20 school year



Year-Long Action Steps				
School:				
Team Name:				
Team Members:				
Team SMART GOAL	Strategies and Action Steps	Responsibilities	Timeline	Evidence of Effectiveness
Current Situation: Year-Long Smart Goal:				

Divider Labeled **Standards and Competencies**

Grade Level Standards and Practices

Grade Level Competencies

Any other documents that relate to your standards and understanding them

Divider labeled **Local Information**

Local Focus topics

Local Curriculum Map/Scope and Sequence

Local Assessment Schedule

Local Info

Divider Labeled **PLC/Intervention Cycle Blank Sample Documents**

**PLC/Intervention Cycle
Blank Sample Documents**

PLC Cycle Steps Checklist

Date:

PLC Cycle:

Team Members:

1. Keep weekly notes of meetings

- a. Recorder takes notes in PLC Weekly Notes Document

2. Pre-Assessment and Data Analysis Phase

- a. Complete the Pre-Assessment Information Sheet
- b. Assess students
- c. Collect data into an Organized EXCEL Spreadsheet
- d. Organize Data for Analyzing
- e. Analyze data using Data Driven Dialog Sheet
- f. Summarize data – Place at bottom of Organized EXCEL Spreadsheet
- g. Determine a goal for the cycle

3. Intervention Cycle Phase

- a. Determine Student Groups – Assign Adults – Assign Location for Intervention groups to meet
- b. Plan Strategies and Materials (update as needed)
- c. Discuss - Enter information into Weekly Notes

Progress

Student Concerns

Plans and timing of Post Assessment

4. Post Assessment and Evaluation Phase

- a. Complete the Post-Assessment Information Sheet
- b. Assess students
- c. Collect data into an Organized EXCEL Spreadsheet
- d. Organize Data to Determine Success
- e. Summarize data – Place at bottom of Organized EXCEL Spreadsheet

5. Evaluation and Celebration Phase

- a. Complete Evaluation and Celebration Document
- b. Review Strategies and Materials; Update if needed
- c. Complete the Summary Sheet

PLC Meeting Notetaking Template

Meeting Date:

Grade/Team:

Norm(s) monitored:

In Attendance (name and role for the meeting):

Today's PLC Agenda: Check all that apply:

{ } Observing student data; what data is that?....

- Key Observations from Data
- Key Inferences from Data
- Key Conclusions from Data
- Key Action Steps Based on Data

{ } Forming Conclusions and Action Steps around Student Data; See Action Planning Chart....

{ } Creating new assessments to monitor student progress; what assessments?.....

{ } Scoring student work or assessments; what assessments?....

{ } Discussing re-teaching and core instruction strategies

{ } Celebrating Student Success; how? @.....

{ } Establishing our practices as a PLC: Such as.....

Date:

Notes:

Important Conclusions, Comments, Parking Lot items:

Date:

Notes:

Important Conclusions, Comments, Parking Lot items:

PLC Meeting Notetaking Template (Sample)

Grade/Team: 4th Grade **Cycle:** 3
Norm(s) monitored: Put ideas on the table.
In Attendance (name and role for the meeting): Sarah, Bill, Susan, Joan

Today's PLC Agenda: Check all that apply:

- { } Observing student data; what data is that?....
 - Key Observations from Data
 - Key Inferences from Data
 - Key Conclusions from Data
 - Key Action Steps Based on Data
- { } Forming Conclusions and Action Steps around Student Data; See Action Planning Chart....
- { } Creating new assessments to monitor student progress; what assessments?....
- { } Scoring student work or assessments; what assessments?....
- { } Discussing re-teaching and core instruction strategies
- { } Celebrating Student Success; how? @.....
- { } Establishing our practices as a PLC: Such as.....

September 10, 2014

Notes:

Susan, Karen, Ann at meeting. We discussed and created a new set of Norms for the year. We were supposed to create a yearlong goal for our students in Math but decided we need to determine where they were in their math skills first, so we are going to look at the data from the 3rd grade EOY assessment. Students who were not here last year, will take the assessment; their data will be added.

Important Conclusions, Comments, Parking Lot items:

Susan will gather data for us to look at next week.

Date: September 17, 2014

Notes:

Susan, Ann and Karen are here. Susan is the 'data person' she brought the data from the 3rd Grade EOY tests. Data from new students was added. Susan sorted the data so we could really look at it. We followed the Data driven Protocol. We were not able to finish. Will finish next week.

Important Conclusions, Comments, Parking Lot items:



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PRE-Assessment Information

Grade/Team:

Date:

Cycle:

Describe the assessment:

Why are you choosing this assessment?

Attach a copy of the pre-assessment



PRE-Assessment Information (Sample)

Grade/Team: 3rd Grade

Date: January 13, 2019

Cycle: 2

Describe the assessment:

This assessment will be used for the first cycle of PLC for 2014
It assesses student ability to solve multiplication problems. It has single digit problems up to double digits.

Why are you choosing this assessment?

By looking at the EOY 3rd grade data we noticed that this was a weak area for our students.

Attach a copy of the pre-assessment

Pre Assessment Data

Grade:

Date:

Intervention Cycle:

Team Members:

Students	Score	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	ETC
Average Score		Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct

PRE-TEST SUMMARY	

Pre Assessment Data (Sample)

Grade: 4

Date: October

Intervention Cycle: 1

Team Members: Susan, Ann, Karen, Paula

Students	Score	Q1	Q2	Q3	Q4	Q5	Q6	TOTAL
S. Allen	92%	2	2	2	2	2	2	12
B. Jones	77%	2	1	2	2	1	2	10
S. Wonder	69%	2	2	1	1	2	1	9
P. Simon	62%	2	1	1	1	2	1	8
J. Paul	62%	1	2	1	1	2	1	8
M. Smith	54%	1	1	1	1	2	1	7
K. Vashro	46%	1	1	1	1	1	1	6
C. Myers	38%	1	0	1	1	1	1	5
D. Haberland	31%	1	0	0	1	1	1	4
P. Cousins	31%	1	0	0	1	1	1	4
M. Tills	23%	1	0	0	1	0	1	3

PRE-TEST SUMMARY	
1	Student Scored 100%
4	Students scored from 60% to 70%
55%	of students scored below 60%



DATA DIVE PROTOCOL

The Data Dive Protocol can be used when considering any data and identifying goals and action items.

PHASE 1 - PREDICT

SURFACE PAST EXPERIENCES, PRECONCEIVED IDEAS AND ASSUMPTIONS.

- Which what assumptions are you entering?
- What do you predict the data will show?
- What are some questions you are asking?
- What do you hope to learn from this data?

PHASE 5 - REFLECTION

REVIEW THE PROCESS, LEARN FOR NEXT TIME, PLAN FOR FUTURE EFFORTS.

- Did this protocol help you better meet your desired outcome/achieve the stated purpose session?
- What went well / what to improve?
- What changed in your thinking?
- What will you do with this information to improve school wide or classroom work?

DATA DRIVEN DIALOGUE

PHASE 2 - OBSERVE THE DATA

STATE WHAT YOU SEE WITHOUT REACHING CONCLUSIONS OR MAKING RECOMMENDATIONS.

- Note important points that "pop out"
- Look for patterns or trends that emerge
- Note surprising or unexpected data
- Note items to explore further
- Just the facts

PHASE 4 - IMPLICATIONS FOR PRACTICE

IDENTIFY CONNECTIONS BETWEEN WHAT WORKS, WHAT IS MISSING AND WHAT MAY NEED CHANGE.

- Focus on practices for student learning
- Are there other data we need to look at?
- What issues have been raised about school-wide and/or classroom practices?
- What are the next steps we should take?

PHASE 3 - INTERPRET DATA & INFERENCES

LOOK FOR RELATIONSHIPS, CAUSE/EFFECT AND INFERENCES RELATED TO STUDENT LEARNING.

- Draw inferences - supported
- Generate possible explanations
- Generate further questions to ask
- Generate data to verify explanations
- What can you infer about the data regarding the impact on student learning?

Data Dive Protocol – Facilitator Overview

Purpose: *This protocol was developed for use by a team facilitator in guiding a group through analysis of student achievement data as a starting point to increase educator awareness of areas of potential strengths, areas for potential improvement and to surface questions that lead to examination of other data. This protocol can be used each time evaluative or assessment data are reviewed. It can be used for other forms of data such as demographic, questionnaires, and process. It can continue to be used with teams that are still developing expertise (and safety) around data analysis. It can be used after long periods of data review and analysis inactivity (i.e. at the beginning of a new school year).*

Getting Started

- a. Define the Purpose and the Desired Outcome of the session. (E.g., Purpose might be “To identify students in need of additional support in reading based on a fall benchmark.” Outcome might be: “Establish cross-classroom reading groups for the next 6-week intervention block.”)
- b. The facilitator shares/reminds the group of the norms, assigns roles and outlines the time limits for each part of the analysis process.

Seven Norms of Collaborative Work:

- Pausing
- Paraphrasing
- Posing Questions
- Putting Ideas on the Table Observer
- Providing Data
- Paying attention to self and others
- Presuming Positive Presuppositions

Roles:

- Facilitator
 - Timekeeper
 - Recorder
 - Process
- c. Facilitator provides the group with the annotated version of the Norms of Collaboration. The group discusses one or two norms to pay particular attention to during the work session. Agreed norm(s) to monitor is/are posted in the room where all can see it/them.

For each step, the individuals will be given time to record personal thinking. The group will then share recording in round robin format. It is okay to pass. Everyone listens carefully to sharing.

The recorder will use the chart paper, white board, or other method to document and display the group’s thinking through the steps.

- d. Introduce a warm up activity for the group to come together and “ease” their way into



examining data. This is a helpful beginning step for teams new to looking at data, teams that with reservations with using data, or when the facilitator is new to the school or district team.

Examples:

"Are You a Data Lova or Data Hata" - Participants will be given time to record where their data preference falls and participants will share with a partner. Then a few volunteers will be asked to share with the whole group either something they said or something they heard from their partner. Provide each participant with an index card. On one side of the card, the participant will be given three minutes to write why they associate with being a "data lova or data hata." After they have written their reaction to their associated choice, each participant will find a partner to share which side they associated with and why (5 minutes total with cue to switch roles at the 2 1/2-minute mark). Participants will record points shared from their partner on the blank backside of their card. Facilitator will reconvene the whole group and ask for a handful of participants to share either something they said or something they heard from their partner.

Data Identifier - Table groups will be provided with postcards or pictures of famous people and respond as to how the person is like using data and how the person is not like using data.

Responses can include feelings associated with using data, how they/their profession connects with using data, etc. Groups are given 7 minutes to agree on a picture and determine how the person is like or unlike using data. Each group reports out to the whole group the person they selected, why they chose the person, how he/she is like or connects to using data, and how he/she is unlike or doesn't connect to using data.

Overview of Data (5 minutes)

(Prior to the session, the facilitator and school leader or school's data leadership team agree on the data to be examined that suits the purpose and desired outcomes defined for the meeting.)

- a. The facilitator shares a sample data report, chart, or document that resembles the data the participants are about to see. This can be shared through a slide in the PowerPoint presentation or a handout for all participants. The facilitator reviews parts of the sample data to enable participants to better interact with the data and the protocol. The participants can review the sample data with a partner to discuss the components within the sample for greater understanding. The facilitator finalizes the review of the sample document with the question, "Is there anything about this sample data that you need more clarity on?"

Note: The group does not see the actual data report for the day's session until Step 2 (below).

- b. The facilitator gives each participant a copy of the data driven dialogue diagram. Facilitator gives each group (if working in small groups) or a few people "No Because" cards.



Overview of the Process

Step 1: Predicting the Data

(5 minutes: 2 minutes silently writing individual predictions, 3 minutes discussing as a group)

The facilitator tells the group that in order to surface past experiences, preconceived ideas, and assumptions, the group will make predictions about what they believe the data will show. The facilitator shares the following questions to guide participants thinking when making predictions.

- With what assumptions are we entering?
- What are some predictions we are making?
- What are some questions we are asking?
- What are some possibilities for learning that this experience presents us?

After two minutes of silent writing, the facilitator has group share their predictions and why they believe that is what they will see.

Step 2: Observe the data (Literal)

(10 minutes: 3 minutes silently writing individual observations, 7 minutes discussing as a group)

The facilitator reminds the group that this phase is to just state what they see without reaching conclusions or making recommendations. Consider the following:

- Note important points that “pop out”
- Look for patterns or trends that emerge
- Note surprising or unexpected data
- Note things/data we might want to explore further
- Just the facts, Ma’am

After three minutes of writing, the facilitator has the group share their observations. If judgments, rationalizations or excuses arise, the facilitator should ask the person to defer that thinking until the next step or process observer can raise the “No Because” card and remind the person this stage excludes justifications for any observations. The recorder will document the ideas from the group on chart paper, white board, or other.

Step 2a: Refining Observations

Often individuals and team record general observations. General observations may not produce enough identifying information for teams to accurately determine a relative strength or opportunity. Vague language can lead data teams to examining areas that don’t lead to the root cause(s) of the surfaced issue or best places to intervene within the system. This can lead team to false starts, confusion, anxiety, and frustration. Teams need to refine observation statements to quantifying statements that identify precise observations.



The facilitator explains that when we are looking at data and observation statements, we need to quantify our statements to determine potential points of leverage to accelerate improvement of the school's/district's learning system, including students learning, teacher satisfaction, impact on the community, and overall culture.

The facilitator directs the group's attention to a single observation statement that might benefit from greater clarity. Such as, "Most students reading scores improved over time." Ask the group questions like, "What is meant by most?", "What is the time period?", and "What is the percentage of growth for that time period?" Rework the statement with the whole group to provide an example of a stronger statement. Note: the revision may result in several statements. Examples:

Original Statement	Revised Statements
Most students reading scores increased over time.	Grade 5 reading scores increased 36% in a six year period from spring 2009 to spring of 2014.
	Grade 4 reading scores increased by 42% in six year period from spring 2009 to 2014.
	Grade 4 reading scores decreased by 3% points from spring 2011 to 2012.

Step 3: Interpret Data/Develop Inferences (10 minutes: 3 minutes silently writing individual inferences, 7 minutes discussing as a group)

The facilitator tells the group that this step is to look beyond the obvious for **relationships**, **causal correlations**, and to make **inferences related to student learning**. This is also the step to **generate questions** about what if, and why. Keep in mind the following prompts:

- Draw inferences - supported
- Generate possible explanations
- Generate further questions to ask
- Generate further data needed to verify explanations
- What can you infer about the data regarding the impact on student learning?

After three minutes of writing, the facilitator has the group share their inferences through a go-around process. The facilitator encourages team members to **support their statements with evidence** from the data. The recorder will document the ideas from the group chart paper, white board, or other.

Step 4: Implications for practice (10 minutes: 3 minutes silently writing individual ideas for practice, 7 minutes for group discussion)

The facilitator tells that group that this step is designed to help answer the question, "What do the data suggest is working for our students and what areas might not be working?" The group will seek to identify connections between what is missing, what needs to change and what is working. Keep in mind the following prompts:

- Focus on practices for improving student learning
- What issues have been raised about school-wide practices/classroom



- What is the first step to increase student success in this area?
- Where do you suggest we go from here?
- What are the next steps this group should take?
- Is there other data or material we should look at?

After three minutes of writing, the facilitator leads the group in the discussion of what this data implies for their classroom practice. This is the action phase of the data analysis. The group will design an action plan that might outline changes in instructional practice, analysis of textbook alignment, or a new unit organization. The data for the next meeting will be identified based on the conclusions reached during Step 4. The recorder will document the next step from the group on the Data Team Feedback Sheet

Step 5. Reflect on the process (5 minutes)

Using opportunities to reflect help the team improve their data analysis process. This may seem minor, but should never be overlooked or left out.

The facilitator leads the group through a discussion of this protocol process using the following prompts:

- Did the protocol help us better meet our desired outcome/ achieve our stated purpose for this session
- What went well, what could be improved?
- What new learning do you have?
- What changed in your thinking?
- What will you do with this information to improve our practice?

A new facilitator may be selected for the next meeting. Roles can be rotated regularly to share the responsibility. The recorder completes the Data Team Feedback Sheet for the group and returns it to administrator.

Data Driven Dialogue Template (short form)

Team:

Date:

Phase 1: Prediction

(5 minutes: 2 minutes alone, 3 minutes discussing)

I hope to learn...

I'm expecting to see...

Phase 2: Observation

(10 minutes: 3 minutes alone, 7 minutes discussing)

State what you see without reaching conclusions or making recommendations.

I notice that...

I'm surprised that...

A strength is...

We need to improve...

Data Driven Dialogue Template (short form)

Team:

Date:

Phase 3: Inference

(10 minutes: 3 minutes alone, 7 minutes discussing)

Look beyond the obvious for relationships, cause/effect and to make inferences related to student learning.

I think the data tells us that...

What the data doesn't tell us is...

Phase 4: Implications for Practice

(10 minutes: 3 minutes alone, 7 minutes discussing)

Try to identify connections between what is missing, what needs to change and what is working. Focus on practices to improve student learning.

The first thing we need to do is...

And after that we should certainly...

Next Step: Create a Goal based on this data



Cycle Smart Goal Worksheet (Sample)

<p>School: _____</p> <p>Team Name: _____</p> <p>Cycle: _____</p>				
Team SMART GOAL	Strategies and Action Steps	Responsibilities	Timeline	Evidence of Effectiveness
<p>Current Situation: 42% of 6th grade student came to school this year with the ability to solve real-world problems involving multiplication of fractions and mixed numbers – as shown on the SAS Benchmark Assessments given during the first week of school</p> <p>Cycle Smart Goal: 90% of our student will solve real world problems involving multiplication of fractions and mixed numbers with 85% accuracy as measured by a teacher made assessment at the end of Unit 6.</p>	1. Determine student groupings	Team together		
	2. Assign adults to groups	Team together		
	3. Plan for week's lessons	Each teacher		
	4. Determine and gather materials	Each teacher		
	5. Re-teach	Each teacher		
	6. Develop/decide/find goal-aligned Post-Assessment	Team together		
	7. Post-Assess	Whole Team		
	8. Collect and review data	Susan/ whole team		
	9. Celebrate	Whole Team		



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PLC Cycle Intervention Planning

Cycle: _____ Dates: _____ Team Members: _____

	Location	Intervention Teacher Responsible	Strategies Planned	Progress Monitoring Strategy
Group 1				
Group 2				
Group 3				
Group 4				



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Strategies and Materials

Grade/Team:

Date:

Cycle:

Planned Strategies and Materials for group _____

Strategies and Materials Used for group _____



POST-Assessment Information

Grade/Team:

Date:

Intervention Cycle:

Describe the assessment:

Attach a copy of the post-assessment

POST Assessment Data

Grade:

Date:

Intervention Cycle:

Team Members:

Students	Score	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	ETC
	Average Score	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct	Avg % correct

PRE	TEST SUMMARY	POST

Post Assessment Data (Sample)

Grade: 4

Date: 30-Nov

Intervention Cycle: 1

Team Members: Susan, Ann, Karen, Paula

Students	Score	Q1	Q2	Q3	Q4	Q5	Q6	TOTAL
B. Jones	100%	2	2	2	2	2	2	12
M. Smith	100%	2	2	2	2	2	2	12
S. Allen	100%	2	2	2	2	2	2	12
P. Simon	92%	2	1	2	2	2	2	11
S. Wonder	92%	2	2	2	1	2	2	11
C. Myers	83%	2	0	2	2	2	2	10
J. Paul	83%	1	2	2	1	2	2	10
K. Washro	83%	2	1	2	1	2	2	10
P. Cousins	83%	2	0	2	2	2	2	10
D. Haberland	75%	2	0	2	1	2	2	9
M. Tills	50%	1	0	0	1	2	2	6

PRE-TEST SUMMARY		Post
1	Student Scored 100%	3
4	Students scored from 60% to 90%	7
9%	of students scored below 60%	0.1



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Evaluation and Celebration

Grade/Team:

Date:

Cycle:

**Did you reach your goal? If you didn't reach your goal did you make growth?
Explain?**

What went well?

What would you have done differently?

**Celebrate completing the goal and learning more about your students that you
knew before!!!**



Evaluation and Celebration (Sample)

Grade/Team:

Date:

Cycle:

Did you reach your goal? If you didn't reach your goal did you make growth? Explain?

No, Our goal was that all of our students would demonstrate the ability to multiply 2 digits numbers... We still have one student to work with towards this goal.

What went well?

Susan successfully use the on line tool 1234 MAGIC with the really struggling students.

Martha had a high school student in to work with her students.

What would you have done differently?

Give our lowest student one on one help for the entire cycle.

Celebrate completing the goal and learning more about your students that you knew before!!!





PLC Intervention Cycle # _____ Summary

School
Grade
Dates: _____ **to** _____
Team Members:

Skill / Standard:

Pre-assessment Description (or attach copy):

Pre-assessment summary of results:
Date of Pre-assessment _____

Goal:
(Substitute: **SMART Goal** worksheet if desired)

Post Assessment Description (or attach copy):

Post Assessment summary of results:
Date of Post-assessment _____

What we did really well ...
(Substitute: **Cycle Eval** worksheet if desired)

What could we have done differently?
(Substitute: **Cycle Eval** worksheet if desired)



PLC Intervention Cycle #3 Summary (Sample)

School: Loker School

Grade: 4

Dates: March 10, 2019 to May 12, 2019

Team Members: Sarah H, Martha P., Joe P. Jane M.

Skill / Standard:

Assessment covers comparing and ordering fractions and related word problems.

Pre-assessment Description:

This is the End of Unit 8 assessment from our math program. 25 questions, mix of Word problems and fraction comparison.

Pre-assessment summary of results (or attach):

Date of Pre-assessment March 13, 2019

Pre-	Cycle 2 - 4th grade - compare fractions	Post-
26%	of Students scored 85% or higher	
27%	of Students scored 61% to 71%	
47%	of Students scored Below 60%	

Goal:

(Substitute: **SMART Goal** worksheet if desired)

By April 24, 2015, 80% of 4th grade students will understand how to compare and order fractions as demonstrated on the Unit 4 post assessment

Post Assessment Description (or attach):

Same as pre assessment

Post Assessment summary of results:

Date of Post-assessment May 4, 2019

What we did really well ...

(Substitute: **Cycle Eval** worksheet if desired)

- Our students improved by leaps and bounds
- Using the new intervention program was very successful with lowest students
- Groupings were great

What could we have done differently?

(Substitute: **Cycle Eval** worksheet if desired)

- We need to beef up our tier 1 teaching. Only 56% were proficient after we completed the unit.

Divider Labeled **Cycle 1**

Cycle 1

Divider Labeled **Cycle 2**

Cycle 2

Divider Labeled **Cycle 3**

Cycle 3