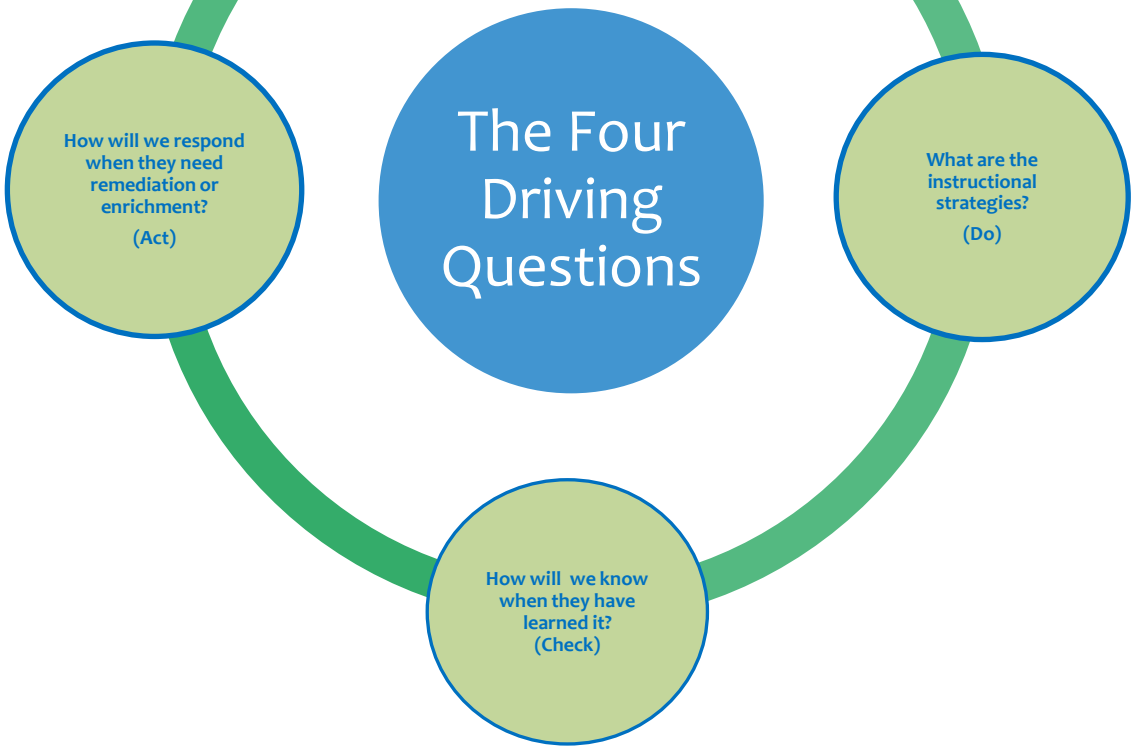

Dennis-Yarmouth Regional School District
PLC Handbook for Teacher Leaders
2018-2019

Table of Contents

Welcome

As a district we value teacher leadership. We offer many opportunities for teachers to lead their peers. Team leaders and department chairs are one of the most important roles for teachers within our district. Keeping this in mind, we realize that these roles can be challenging. As district leaders we want to do everything we can to support you in this work. It is our hope that this handbook will assist you in your success in this role, whether you are a new leader or an experienced veteran. Research demonstrates that high-functioning teams have the ability to improve a school's effectiveness. As a leader, you play a key role in setting the stage for the team's work. We appreciate the seriousness with which you approach this task. The beginning of the year is a critical time for building team cohesiveness and setting the tone and direction for the year. To assist you, this handbook is arranged to meet your needs from the beginning of the year. It continues with our Professional Learning Community (PLC) timeline. We enjoy the opportunity to meet with PLCs so if you have questions or would like to schedule a visit, send an email to Sherry (santinis@dy-regional.k12.ma.us) or Leila (maxwelll@dy-regional.k12.ma.us).

Best wishes for a productive and rewarding school year!

Welcoming New Members

Most schools will see some degree of grade level or subject team member change during the summer months. As these new teams come together in the fall it is critical that the facilitator builds 'TEAM' with the group. There are many ingredients needed to develop this team spirit. Getting to know each other is important. An ice breaker activity is included in this handbook which will assist in getting members more familiar with each other.

The Rationale for Collaboration

PLCs foster collaboration and the sharing of best practice. By joining together, teachers have the potential to affect great changes in their students and their school. High-performing schools embrace collaboration and a shared responsibility for the success of all students; it is a part of their culture. It is essential that this professional practice remain an integral part of the way we do business.

Confidentiality

Confidentiality is key. It is critical that you develop a safe environment for your team members. Most people will share if they feel safe in their environment. If you have a team member who leaves the meeting and discusses student data, a particular team member, or that member's data, it may cause the team to shut down. As professionals, we share student data all the time for educational purposes. FERPA regulations guide our ability to share that information; it is important to maintain professional transparency while preserving the privacy of students and teachers. As a team leader, you will need to address any breaches in confidentiality or your team may be hampered for the remainder of the year. Discuss any confidentiality issues with your administrator.

Maintaining Focus

Keeping the meeting on track takes skill and practice but, in time, the meetings will flow smoothly from one agenda item to the next. The workplace is filled with distractions that take our attention away from what is at hand. They cloud our thoughts, purpose and, ultimately, what we started to do in the first place. The same is true with our collaborative meetings. With limited time to accomplish many tasks it is imperative that the focus be maintained. One team member can derail the meeting. One off-topic conversation can take several of those too-few minutes and delay the work you intended to accomplish.

Distractions can also come from outside the meeting. Be conscious of what you are being asked to do as a facilitator. Your job is to keep the team cycle moving in the right direction. Looking at data, sharing strategies, making instructional decisions, etc. is what the team does. Many a well-intended person will print out piles of data for your team to evaluate, but is the data related to your SMART goal? If your SMART goal is to improve reading, what kind of data should you be looking at? The answer is simple. If it does not relate to your goal, it is not relevant at that setting. Choose another time to review and evaluate that data.

In her book, *The Skillful Team Leader*, Elisa MacDonald devotes an entire chapter to the importance of rigorous discourse. She defines it as being evidence-based, dialogic, culturally proficient, reflective and actionable. There will be many potential hurdles that you will need to find a way to overcome. Some individuals may be reluctant to be active participants. Others will not want to move beyond superficial talk or may place blame or make excuses. Teachers feeling overwhelmed may withdraw from the team discussions. It is your role as teacher leader to guide them through these difficulties so the PLC can meet their goals.

Part of your professional responsibility as a team leader is to prepare an agenda and maintain the meeting minutes. The agenda is a valuable tool for keeping the meeting on task and ensuring that accomplish your goals for each meeting. Meeting minutes allow the team to reflect on the work that has been completed and plan for what lies ahead. In this handbook, we have provided you with an Agenda and Meeting Minutes template which combines the two documents into one easy-to-use format. We have also included the Group Role descriptors so everyone has the chance to be active participants.

Another way to get the most out of every PLC minute is to come to the meeting prepared. You are the role model. You are the standard setter. It is you who will set the bar so please come to each meeting READY. Data is an integral part of each PLC meeting so make sure it is ready for sharing and discussion.

At the conclusion of each meeting you will need to share Meeting Minutes with your administrator. If you can automate this process via templates and email, you may find it more efficient. (E-form template is available on the District webpage under the Office of Instruction tab.)

Remember; keep the main thing the main thing.

The forms in this book are interactive for your convenience.
You can then enter information directly to the form and save it as a single document to your computer.
*****
You can also use each interactive page separately on the
DYRSD WEBSITE:
Office of Instruction:
Teaching and Learning council home page under this PLC Handbook.

PLC Team Timeline

The purpose of the timeline is to assist your PLC in mapping out the work that needs to be accomplished throughout the school year. Some work has already been plotted for your team; it is up to the team to complete the matrix. Blank spaces have been provided so that you can add topics specific to the work of your PLC.

PLC TOPICS	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE
Build Team- set norms, establish roles, determine schedule	**X**									
State & Local Data Analysis- State Testing, BAS, Common Formative Assessment	**X** (State Testing)	**X** (SRI)			**X**				**X**	
Create SMART Goals (PLC/Evaluation)	**X**	**X**								
Regular use of formative classroom/grade level assessments to drive instruction **(Plan, Do, Check, Act)**		**X**	**X**							
Identify 2 CFAs; create schedule	**X**	**X**								
Monitor progress of CFAs and SMART Goals					**X**				**X**	
eDoctrina Curriculum Unit development and /or revision	**X**	**X**	**On Going**							
Monitor pacing of instructional units and assessment calendar					**X**					

Evaluation Timeline

For planning purposes, the evaluation timeline has been mapped out so that your PLC can attend to the necessary timelines when setting goals, planning assessments, collecting data, etc. The specific Teach Point forms required for each step have also been noted.

EVALUATION DEADLINES	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE
Notification of Evaluation	**X (15th)**									
Submit self-assessment and proposed goals *(Forms 1, 2a)*		**X (1st)**								
Meet with Evaluator to establish plan		**X (15th)**								
Educator Plan deadline *(Form 2b)*			**X (1st)**							
Evidence on parent outreach, professional growth, progress on goals (year 1) *(Form 3b)*					**X (15th)**					
Mid-Cycle Formative Assessments *(Form 4a)*						**X (15th)**				
Evidence on parent outreach, professional growth, progress on goals (years 1 &2) *(Form 3b)*								**X (15th)**		
Formative (year 1) Form 4B Summative (One-Year Plan) Summative (year 2) *(Form 5)*										**X (10th) ***

*JUNE (1st for Educators with Needs Improvement or Unsatisfactory ratings and all one-year plan)

DENNIS-YARMOUTH REGIONAL SCHOOL DISTRICT

2018-2019 School Calendar

Approved 6-11-18

August

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September (19 days)

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October (21 days)

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	~~23~~	24	~~25~~	26	27
28	29	30	31			

November (18 days)

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December (15 days)

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

January (20 days)

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February (15 days)

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

March (21 days)

S	M	T	W	T	F	S
					1	2
3	4	~~5~~	6	~~7~~	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April (17 days)

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May (22 days)

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June (12 days)

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

First and last days of school
Holiday/Vacation - no school
Tea. Prof. Day - no school
1/2 day of sch. - students

8/28/18	Opening Day for Teachers
8/29/18	Teacher Professional Day - No School
8/30/18	Teacher Professional Day - No School
8/31/18	No School
9/3/18	Labor Day
9/4/18	1st Student Day/1st Kindergarten Day
10/5/18	All Cape Prof. Day - No School
10/8/18	Columbus Day
11/12/18	Veterans' Day - Observance
11/21-11/23	Thanksgiving Break
12/24-1/1/19	Christmas Day - Holiday Vacation begins
1/2/2019	School Resumes
1/18/19	Teacher Professional Day - No School
1/21/19	Martin Luther King, Jr. Day
2/18-2/22/19	Presidents' Day - Winter Vacation Begins
4/3/19	Kindergarten Registration
4/15-4/19/19	Patriots' Day - Spring Vacation begins
4/19/19	Good Friday
5/27/19	Memorial Day
6/8/19	DYRHS Graduation
6/25/19	*Last day incl. 5 snow days

Dennis-Yarmouth Regional Sch. District Phone Numbers

Administration Office	508-398-7600
E. H. Baker Innovation School	508-398-7690
D-Y Regional High School	508-398-7630
Mattacheese Middle School	508-778-7979
M. E. Small Elementary School	508-778-7975
Station Avenue Elementary School	508-760-5600
N. H. Wixon Innovation School	508-398-7695
Early Learning	508-778-7988

Dennis-Yarmouth Regional School District Web Page

www.dy-regional.k12.ma.us

Conference Days: 10/23,10/25; 3/5,3/7
Early Release for all grades

Ele-Mid. Tri. Term Dates: 9/4-11/30, 12/3-3/15, 3/18-Last Day; Gr.K-7 Report Card Dates: 12/12, 3/27, Last Day
HS Quarterly Term Dates: 9/4-11/7, 11/8-1/28,1/29-4/12, 4/22-Last Day; HS Report Card Target Dates: 11/16, 2/4, 4/26, 6/21/19

*The last day is a half day for students

Planning Calendar

The purpose of this calendar is to assist you and your team in planning out your school year at-a-glance.
You can use it to schedule topics for PLC meetings, common assessments, and any other important event or reminders that are essential for planning.

SEPTEMBER 2018

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

3 Labor Day

4 1st Student Day
1st Kindergarten Day

OCTOBER 2018

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

5 All Cape Prof. Day No School

8 Columbus Day

23 & 25 Conference days

23 ½ day for students

25 ½ day for students

NOVEMBER 2018

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

4 Daylight Saving Fall Back
6 Election day
11 Veteran's Day
12 Veteran's Day Observed
21 Thanksgiving Break
22 Thanksgiving Day
23 Thanksgiving Break

DECEMBER 2018

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

2 Hanukkah

24-1/1/19 Holiday Vacation

25 Christmas Day

JANUARY 2019

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

1 New Year's Day

18 Teacher Professional Day

21 Martin Luther King Day

FEBRUARY 2019

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

18 Presidents' Day

18-22 Winter Vacation Break

10 Daylight Savings Begins
Spring Ahead

MARCH 2019

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

15 Patriots' Day

15-19 Spring Vacation Break

19 Good Friday

21 Easter Sunday

APRIL 2019

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

6 Teacher Appreciation Week

27 Memorial Day

MAY 2019

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE 2019

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

4 Independence Day

JULY 2019

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST 2019

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Two Facts and One Nonfact

Brief Description

People write down two facts about themselves and one thing that is not true (nonfact). Then introduce the three "facts" to the rest of the group who tries to guess which one is not true.

Time:

15-20 minutes or more

2 Facts & One Nonfact

- A different kind of get-to know-you activity which engages and challenges each group member in a fun way
- Particularly useful as an icebreaker, e.g. can be used as an opener for a workshop or conference.
- For large groups (e.g., 30+), it is best to split into smaller group sizes.
- Hand out cards or paper and pens (or if participants bring their own, that's fine)
- Explain that in this activity each person writes two facts and a nonfact about themselves and then we will try to guess each other's nonfact. The goal is to: a) convince others that your nonfact is true (and that one of your facts is the nonfact)
  and b) to correctly guess other people's nonfact.
- Allow approx. 5+ minutes for writing 2 fact and 1 nonfact-this isn't easy for a lot of people – there will be some scribbling out, etc. Some people will probably need to be urged along to "put anything you can think of" down. Allocate 5-8 minutes, but you will probably need to urge people along.
- Announce that we will now share each other's facts and nonfact. In a circle, each person presents the facts and the nonfact. The goal is to quiz each other about each statement to help determine which are the facts and which is the nonfact, while trying to convince other people into thinking that your own nonfact is a fact. At the end we will cast our votes and find out the fact.
- Emphasize that people should not reveal their nonfact, even if it seems others might have guessed.
- Start with one person who reads their three statements aloud. Then read the statements again, stopping to allow a vote for each one. e.g., "I am Turkish. Who thinks that is not true? [Vote]. OK, my nonfact was "I am vegetarian."
- The Facilitator will need to help each person out, especially initially until the basic format is understood. The facilitator may add drama and reinforcement, etc. for correct guesses, tricky statements, etc.

Norms of Collaboration

1. **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 a paraphrase assists members of the group to hear and understand one another as they formulate decisions.

3. **Putting inquiry at the center:**
   Inquiring to explore perceptions, assumptions and interpretations and inviting others to inquire into their own thinking. Inquiring into the ideas of others' before advocating for one's own ideas.

4. **Probing:**
   Using gentle open-ended probes or inquiries such as, "Please say more..." or "I'm curious about..." or "I'd like to hear more about..." or "Then, are you saying...?" increases the clarity and precision of the group's thinking.

5. **Placing ideas on the table:**
   Ideas are the heart of a meaningful dialogue. Label the intention of your comments. For example, you might say, "Here is one idea..." or "One thought I have is..." or "Here is a possible approach...".

6. **Paying attention to self and others:**
   Meaningful dialogue is facilitated when each group member is conscious of self and others and is aware of not only what she/he is saying, but also how it is said and how others are responding. This includes paying attention to learning style when planning, facilitating, and participating in group meetings. Responding to others in their own language forms is one manifestation of this norm.

7. **Presuming positive intentions:**
   Assuming that others' intentions are positive promotes and facilitates meaningful dialogue and eliminates unintentional put-downs. Using positive intentions in your speech is one manifestation of this norm.

Developing Norms

What Are Norms and Why Do We Need Them?

Norms are the framework from which team members commit to conduct business. Attention to their development and adherence to them ensure the success of the group and facilitate the members' ability to deal with critical issues. Norms are comprised of several components that clarify team dynamics.

Norm Elements to Address

TIME: When and where will we meet? Will we start on time?

LISTENING: How will we listen to our peers? Are there any bad ideas? How will we discourage verbal interruptions when others are speaking?

CONFIDENTIALITY: What content is to be held in confidence? What can be shared after the meeting?

DECISION MAKING: How will we arrive at a decision? What if everyone doesn't agree with the group decision?

PARTICIPATION: Is participation optional? Will we have an attendance policy? What will we do if a member consistently misses or is late for meetings?

EXPECTATIONS: What do we expect from team members? Do we need a method for ensuring each member comes to the meeting prepared with appropriate data or other items?

Examples of Team Norms

We will maintain a positive attitude during each meeting.
We will stay on topic and follow the agenda.

Tips:

Teams develop their own norms.
Read the norms at each meeting.
Less is more.
Norm violations should be addressed.

Give some thought to the development of a means to address how to ensure adherence of the NORMS . If a team member consistently breaks the norms, how will the team respond to that?

Team member signatures on the agreed-upon norms document will solidify its meaning and importance.

How to Lead Your Team in the Development of the Team Norms

1. All team members must be present.

2. Ask members to verbalize things that they have seen, heard or experienced in a meeting that they did not like. Examples: People interrupting each other, members showing up late, etc. Construct a list of their responses on chart paper.

3. Ask members to verbalize elements of a good meeting. Examples: People listen to each other, all ideas are open for consideration, stakeholders treat each other with respect, etc. Construct a list of their responses on chart paper.

4. From these lists, agree on items to put in the appropriate areas of the Norms Development Template.

5. Record the team Norms on the Our Team Norms page.

6. Ask team members to sign the completed document.

7. Distribute a copy of the finalized document to each member at your next meeting.

Tips to Ensure the Team Norms are Successful

- Ask a team member to read the norms at the beginning of each meeting.
- Post the norms during each meeting.
- Review the norms monthly, or as needed, to ask members if the norms are effective or if they need revision.
- Don't use the norms as a rule book. They are guides.
- If a new member joins the team, review the norms and offer an opportunity for their input.

Norms Development Template

Elements To Consider	Group Proposed Norms
Time ❖When will we meet? ❖Where will we meet? ❖Will we be on time?	
Listening ❖How will we listen to our peers? ❖Are there any bad ideas? ❖How will we discourage verbal interruptions when others are speaking?	
Confidentiality ❖What content is to be held in confidence? ❖What can be shared after the meeting?	
Decision Making: ❖How will we arrive at a decision? ❖What if everyone doesn't agree with the group's decision?	
Participation ❖Is participation optional? ❖Will we have an attendance policy? ❖What will we do if a member regularly misses meetings?	
Expectations ❖What do we expect from team members? ❖Do we need a method for ensuring each member comes to the meeting prepared with appropriate data or other items?	

Our Team Norms

Team:	Date:
Our Team Norms	
Time	
Listening	
Confidentiality	
Decision Making	

Participation
Expectations
Other
Team Member Signatures

Survey on Team Norms

Team: _____ Date: _____

Use the following ratings to honestly reflect on your experience as a member of a collaborative team:

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

1. _____ I know the norms and protocols established by my team.

   Comments:

2. _____ Members of my team are living up to the established norms and protocols.

   Comments:

3. _____ Our team maintains focus on the established team goals.

   Comments:

4. _____Our team is making progress toward the achievement of our goals.

   Comments:

5. _____The team is having a positive impact on my classroom practice.

   Comments:

Group Role Descriptors

Facilitator:

- Remains neutral, but also fully engages as a participant
- Keeps PLC on task by being mindful of the process
- Encourages everyone to participate
- Protects PLC members from attack
- Negotiates role with the group
- Shares meeting minutes with administrator

Recorder:

- Supports facilitator
- Records PLC meeting minutes
- Asks the PLC for corrections

Materials Manager:

- Gathers material needed for PLC
- Works with administrator, facilitator or others to make copies of data and information for team
- Distributes materials as needed during team meeting
- Keeps Data Wall organized (stores until next meeting if needed)

Dialogue Monitor:

- Reminds PLC of which phase of the Data-Driven Dialogue process the PLC is in (predict, go visual, observe, infer)
- Uses the No Because sign as needed
- Suggest that the PLC use chart paper labeled "parking Lot" to save inferences for later
- Identifies and alerts group to equity issues

Time Keeper:

- Works with facilitator before the meeting if possible to establish time allotments for the agenda items
- Monitors time for each section
- Gives 1-minute warnings for discussion ending.

Reporter:

- Summarizes the group's key ideas
- Articulates ideas clearly and concisely
- Uses participant language
- Ensure that all key ideas are shared
- Confirms accuracy of reports with group

Adapted from Robert Garmston and Bruce Wellman, *The Adaptive School: Developing Collaborative Groups Syllabus,* revised printing, 2002. El Dorado Hills, CA" Four Hats Seminars. Used with permission.

Group Role Description Tent Cards

See Appendix C

Using Data

Reporter

Reporter

- Summarizes the group's key ideas
- Articulates ideas clearly and concisely
- Uses participant language
- Ensures that all key ideas are shared
- Confirms accuracy of reports with group

Using Data

Facilitator

Facilitator

- Remains neutral
- Keeps group on task
- Assists the group to focus on identified norms
- Creates a safe environment for all participants
- Directs the process
- Encourages everyone to participate

Recorder

Using Data

Recorder

- Supports the facilitator
- Remains neutral (may signal "change of hats")
- Records basic ideas
- Uses participant language
- Writes legibly and large
- Used color and/or symbols to assist in communicating

Dialogue Monitor

Using Data

Dialogue Monitor

- Reminds the group where they are in the process (e.g., phase 1, phase 2, etc.)
- Uses the BECAUSE sign as needed
- Suggests that group members put inferences aside for the moment and captures them

Timekeeper

Using Data

Timekeeper

- Clarifies the time set aside and/or needed for the task or process
- Works with the group to clarify time checks that will be needed (e.g., 5 minutes before time's up, 2 minute warning, etc.)
- Uses signal defined by the group (e.g., bell, verbal, etc.)

Materials Manager

Using Data

Materials Manager

- Supports the facilitator and group members by making certain all necessary materials are available
- Ensures that materials are returned to their proper location (e.g., box, bag, etc.)

SMA(H)RT Goals Guiding Questions

Specific

- According to our analysis of the student data, which group of students will this goal benefit?
- What content, skills, or knowledge have they mastered? What are they ready to master next? By how much?
- Did we name a teaching strategy or student activity as our goal? If so, what student learning do we expect to achieve as a result of this strategy or activity?
- What additional goals or targets must we set for other groups of students?

Measurable

- What information about students do we need as we work toward our goal? How will we get it? By when do we need it?
- What pre- and post- assessment will tell us if students did or did not meet our goal?
- Do our assessments measure implementation of a teaching strategy? If so, what can we use that will instead give us information about our students' learning and performance as a result of this strategy?

Attainable

- What support and resources do we have access to?
- What strategies are needed to attain this goal? Are these strategies sustainable?
- If our resources deplete, can we still attain our goal?

Heartfelt (for consideration purposes)

- Is each person fully invested in the achievement of this goal?
- Will this goal interfere with the "real" work of teaching? If yes, what is the "real" need of students that we must solve?
- Does this goal target a high-leverage standard or skill that if accomplished will help students and teachers succeed?

Results Oriented

- What are our students going to be able to know and do as a result of our goal?
- If our goal results in a teaching resource, what results do we expect to see in students' work?

Time Bound

- By when do students need to achieve this goal?
- How much time do we need to teach and assess this goal?
- What do we need to stop doing in order to utilize our time to achieve our goal?

(From: The Skillfull Team Leader by Elisa MacDonald, 2013.)

SMA(H)RT Goals

SMA(H)RT goals are set with the purpose of increasing student growth and achievement. SMA(H)RT goals are specific in that they clarify precisely what students should learn, the level of the learning (proficiency level), the assessments that will be used to make the proficiency determination and a time frame. A *SMA(H)RT* Goal is:

Specific - Linked to the School Improvement Plan (SIP) goals. It focuses on specific student learning and answers WHO and WHAT.

Measureable - Student success is measured by assessment. It answers the question – HOW.

Attainable - The goal should be set high but within reason. High goals are not always attained but this does not mean it was a failure.

Heartfelt:-Each team member should be fully invested in the achievement of this goal. The goal should target a high-leverage standard or skill that, if accomplished, will help students succeed.

Results Oriented/Relevant/Rigorous - Supporting the SIP, results tell you who has achieved proficiency. These results determine which students need remediation or enrichment.

Time Bound – All goals are bound by a clearly-defined time frame.

SMART Goal Examples

1. _____% of grade 9 math students will increase their_____ scores by _____ % by the end of the second nine weeks as measured on the (assessment) _____.

2. Fifty-two percent of my writing students will increase their average writing scores by one point by the end for the first nine weeks as measured by the (assessment)_____.

NOT *SMART* Goals:

1. My students will do better on their math tests.

2. The team's students will increase their understanding of expository writing.
   My reading students will complete 80% of their homework.

SMART Goals Worksheet

Specific/Student-Centered: *Targeted subject areas, grade level, and student population* • What is the desired result? (who, what, when, why, how)	
Measurable: *Includes baseline & growth targets* • How can you quantify (numerically or descriptively) completion? • How can you measure progress? • What indicators will you use?	
Achievable/Attainable: *% of expected change* • What skills are needed? • What resources are necessary? • How does the environment impact goal achievement? • Does the goal require the right amount of effort?	
Results Based/Relevant • Is the goal in alignment with the overall mission or strategy? • Is the goal addressing an urgent need?	
Time –Bound • What is the deadline? • Is the deadline realistic? • Do I need to make a different short term goal?	
Write your SMART goal here:	
Next Steps: *Select Specific Strategies to meet the goal. Adult actions will impact student achievement. Strategies should be:* • Action-oriented • Measureable/Accountable • Specific • Research-based	

Sample Team SMART Goal

School: Auburn High School **Grade/Content** American Lit. **Teacher:** Mildred Prince
School Goal(s) Increase the percentage of students scoring at or above level 3 in FCAT Reading by 20%
Team Members: Mildred Prince, Marion Brown, George Markey, Shirley Lewis, Bob Lingner

Plan 	Analyze the Data & Define the Focus/Goal	What Is The Data Telling Us?	Sixty-one % of our currently-enrolled 10th grade students scored an achievement level of three or higher on FCAT Reading last year. Source: ODMS report DEM0050. Subtests of least growth include: Main Idea -12% and Comparisons - 7%. Source: ODMS report CAR0010.
		Our Goal Proficiency Level 80 %	Increase the percentage of students scoring proficient in the two FCAT subtest categories to 80%.
Do 	Implementation Strategies	Our Action Plan	Students will be identified for assistance by using two subtests. Source: ODMS report CAR0025
Check 	Assessing, Maintaining & Monitoring	What is the timeline? How and when will we assess the students?	We will be administering common formative assessments every two weeks to monitor student progress. These assessments will be written by the team members. Data will be recorded on a Test Item Analysis spreadsheet and graphed. This plan will begin (date). The plan will be amended when the proficiency level is reached.
Act 	Response	Our remediate or enrichment Plan	Lists of students who did, and did not, achieve proficiency will be maintained and updated twice monthly. Student in need of remediation will be (plan) _____ Students who are being enriched will be (plan)_____.

Team SMART Goal Blank Template

Team SMART Goal

School: _____ **Grade/Content** _____ **Teacher:** _____

School Goal(s) _____

_____

Team Members: _____

Plan	Analyze the Data & Define the Focus/Goal	What is the data telling us?	
		Our Goal Proficiency Level __80_%	
Do	Implementation Strategies	Our Action Plan	
Check	Assessing, Maintaining & Monitoring	What is the timeline? How and when will we assess the students?	
Act	Response	Our remediate or enrichment plan	

PLC Agenda & Meeting Minutes

PLC Team: _____ Meeting Date: _____

PLC Agenda: _____ Meeting Time: _____

Meeting Location: _____

Members Present:	Members Absent:

Team Norms:

School Goal:

Team Goal:

Focus Questions:

Topics of Discussion:

What do we want students to learn? (*'PLAN' Section of SMART Goal*).

How is our implementation plan working? (*'DO' Section of SMART Goal*).

What is our common assessment data telling us? (*'CHECK' Section of Smart Goal).*

How are our strategies working for the students who HAVE NOT attained proficiency?
Data Based. *('ACT' Section of SMART Goal)*

How are our strategies working for the students who HAVE attained proficiency?
Data Based. *('ACT' Section of SMART Goal)*

Best practices that were shared during the meeting:

We need, our questions, etc. (attention school administration)

Evidence that our plan is working: (Data is attached). Yes ☐ No ☐

Unanswered Questions:

Next Meeting:

Agenda Items:

Analysis of Student Work

Date: _____ **Subject Area:** _____

Work being analyzed: _____

Learning targets:

Success Criteria:

Questions:	Responses:
In what areas did our students do well?	
What skill deficiencies do we see?	
What are the mistake patterns? What do they tell us?	

At Risk	Some Risk	Benchmark	Enrichment
% of students	*% of Students*	*% of Students*	*% of Students*

Next step: Interventions and Progress Monitoring

At Risk	Some Risk	Benchmark	Enrichment

Questions:	*Responses:*
What instructional strategies were helpful?	
How will we improve this assessment?	

The Team Cycle

PLC Meets

PLC Meets

Focus

Using Data, the team creates a lesson plan and a common assessment.

Strategies

Teacher instructs using effective strategies from the team's focus meeting.

Assessment

The team administers a common assessment then meets to analyze data and discuss strategies.

Response

Teacher remediates or enriches based on the pre-determined proficiency level.

Curriculum Pacing Guide ~ Sept. - Nov.

Content: _____ Grade level: _____ Teacher: _____

Sept- 2018							Oct-2018							Nov-2018						
						1		1	2	3	4	5	6					1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	0	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	
30																				
	Topics Knowledge/Skills							**Topics Knowledge/Skills**							**Topics Knowledge/Skills**					
	Assessments							**Assessments**							**Assessments**					

Curriculum Pacing Guide ~ Dec. – Mar.

Content: _____ Grade level: _____ Teacher: _____

Dec. 2018							Jan. 2019							Feb. 2019							Mar. 2019						
						1			1	2	3	4	5						1	2						1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
30	31																				31						
	Topics Knowledge/Skills							**Topics Knowledge/Skills**							**Topics Knowledge/Skills**							**Topics Knowledge/Skills**					
	Assessments							**Assessments**							**Assessments**							**Assessments**					

Curriculum Pacing Guide ~ Apr. - June

Content: _____ Grade level: _____ Teacher: _____

April 2019							May 2019							June 2019						
	1	2	3	4	5	6				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						
	Topics Knowledge/Skills							**Topics Knowledge/Skills**							**Topics Knowledge/Skills**					
	Assessments							**Assessments**							**Assessments**					

Appendix A

Glossary of PLC Terms

Glossary of PLC Terms

Attainable Goals. Goals perceived as achievable by those who set them. Attainable goals are intended to document incremental progress and build momentum and self-efficacy through short-term wins.

Benchmark. Specific points of reference related to levels of performance or outcomes against which students are monitored or measured. They may also be defined as targets that are used to analyze output of students, and staff as well, on a continuous basis in order to identify effectiveness and/or efficiency. This may also be applied to processes within educational institutions.

Building Shared Knowledge. Learning together. Members of professional learning communities always attempt to answer critical questions by first learning together. They engage in collective inquiry to build shared knowledge. This collective study of the same information increases the likelihood that members will arrive at the same conclusion. Members of a PLC, by definition, will learn together.

Collaboration. A systematic process in which people work together, interdependently, to analyze and impact professional practice in order to improve individual and collective results. In a PLC, collaboration focuses on the critical questions of learning: What is it we want each student to learn? How will we know when each student has learned it? How will we respond when a student experiences difficulty in learning? How will we enrich and extend the learning for students who are proficient?

Common Assessment. An assessment of student learning that uses the same instrument or a common process utilizing the same criteria for determining the quality of student work. State and provincial assessments and district benchmark assessments are "common" assessments. However, in a PLC, common assessments are also created by a team of teachers with collective responsibility for the learning of a group of students who are expected to acquire the same knowledge and skills. Team-developed common assessments provide members with the basis of comparison that turns data into information and help individuals identify strengths and weaknesses in their instructional strategies. They also help identify problem areas in the curriculum that require attention.

Common Formative Assessment. An assessment typically created collaboratively by a team of teachers responsible for the same grade level or course. Common formative assessments are used frequently throughout the year to identify (1) individual students who need additional time and support for learning, (2) the teaching strategies most effective in helping students acquire the intended knowledge and skills, (3) curriculum concerns—areas in which students generally are having difficulty achieving the intended standard—and (4) improvement goals for individual teachers and the team.

Community. A group linked by common interests. Whereas the term organization tends to emphasize structure and efficiency, community suggests shared purpose, mutual cooperation, and supportive relationships.

Consensus. Consensus is achieved when (1) all points of view have not only been heard but also solicited, and (2) the will of the group is evident even to those who most oppose it.

Continuous Improvement Process. The ongoing cycle of planning, doing, checking, and acting designed to improve results—constantly. In a PLC, this cycle includes gathering evidence of current levels of student learning, developing strategies and ideas to build on strengths and address weaknesses in that learning, implementing those strategies and ideas, analyzing the impact of the changes to discover what was effective and what was not, and applying the new knowledge in the next cycle of continuous improvement.

Criterion-referenced Assessment. An assessment used to determine if a student or group of students have met a specific standard or intended learning outcome (Ainsworth & Viegut, 2006).

Curriculum Mapping. A systemic process that can improve student performance by sharpening the alignment of all aspects of the curriculum to reduce repetitions and gaps, and strengthen the articulation of skills.

In most cases, curriculum mapping refers to the alignment of learning standards and teaching –i.e., how well and to what extend a school or teacher has matched the content that students are actually taught with the academic expectations described in learning standards-but it may also refer to the mapping and alignment of all the many elements that are entailed in educating students, including assessments, textbooks, assignments, lessons, and instructional techniques.

Essential Learning. The critical skills, knowledge, and dispositions each student must acquire as a result of each course, grade level, and unit of instruction. Essential learning may also be referred to as essential outcomes, power standards (Reeves, 2002), guaranteed and viable curriculum (Marzano, 2003), essential academic goals (Lezotte, 1991), learning intentions and success criteria (Hattie, 2009), or learning expectations and tangible exemplars of student proficiency (Saphier, 2005).

Formative Assessment. An assessment for learning used to advance and not merely monitor each student's learning; the assessment informs the teacher regarding the effectiveness of instruction and the individual student regarding progress in becoming proficient. The checks for understanding that individual teachers use in the classroom on a daily basis are examples of formative assessments. In a PLC, collaborative teams also use common formative assessments to (1) identify students who are experiencing difficulty in their learning, (2) provide those student with additional time and support in a way that does not remove them from new direct instruction, and (3) give them additional opportunities to demonstrate their learning.

Goals. Measurable milestones that can be used to assess progress in advancing toward a vision. Goals establish targets and timelines to answer the question, what results do we seek, and how will we know we are making progress?

Learning Targets. Brief statements that describe what students will be expected to learn by the end of school year, course, unit, lesson, project, or class period.

Norm-referenced Assessment. An assessment designed to compare the performance of an individual or group with a larger "norm" group typically representing a national sample with a wide and diverse cross-section of students (Ainsworth & Viegut, 2006).

Pacing Guides. In contrast to curriculum maps, pacing guides are like timelines showing what each teaching team plans to cover over the course of a year. Each subject area follows a logical sequence within a grade level and between grade levels.

Progress Monitor. A scientifically based practice that is used to assess students' academic performance and evaluate the effectiveness of instruction. Progress monitoring can be implemented with individual students or an entire class.

Professional Learning Community (PLC). An ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators.

Protocols. A system of agreed upon rules that explain the correct conduct and procedures to be followed.

Pyramid of Interventions. A systematic school-wide plan that ensures every student in every course or grade level will receive additional time and support for learning as soon as he or she experiences difficulty in acquiring essential knowledge and skills. The multi-tiered intervention occurs during the school day, and students are required rather than invited to devote the extra time and secure the extra support for learning.

SMART Goals. Goals that are Strategic & Specific, Measurable, Attainable, Results-oriented, and Timebound (O'Neill & Conzemius, 2005)**.**

Success Criteria. Describes what success looks like when the learning target is met. They are specific, concrete, and measureable.

Summative Assessment. An assessment of learning (Stiggins, 2002) designed to provide a final measure to determine if learning goals have been met (Ainsworth & Viegut, 2006). Summative assessments yield a dichotomy: pass or fail, proficient or not proficient. Additional timely support is typically not forthcoming.

Team. A group of people working interdependently to achieve a common goal for which members are held mutually accountable. Collaborative teams are the fundamental building blocks of PLCs.

Team Learning Process. The cyclical process in which all teams in a PLC engage to stay focused on learning. The team learning process includes: clarifying essential student learnings (skills, concepts, and dispositions) for each course and content area; agreeing on common pacing of instruction; developing multiple common formative assessments aligned to each essential outcome; establishing specific, rigorous target scores or benchmarks that will lead to success on high-stakes assessments; analyzing common assessment results; and identifying and implementing improvement strategies. Teams address each step in the process by first building shared knowledge rather than pooling opinions.

Team Norms. In PLCs, norms represent collective commitments developed by each team to guide members in working together. Norms help team members clarify expectations regarding how they will work together to achieve their shared goals.

Appendix B

Protocols

Collaborative Scoring Protocol

In order to ensure that all members of your collaborative team are scoring student work consistently, your team should practice collaborative scoring. This protocol provides a step-by-step process to guide you through that activity.

Materials: Copies of the rubric, sticky notes, one or more pieces of unscored student work from each teacher's classroom

Step	Procedure	Time Allotment
1	Team reviews the student assignment and the rubric and discusses any scoring procedures that apply to the task.	Five minutes
2	Each team member scores one piece of student work without discussion and puts the rubric score he or she believes is appropriate on a sticky note on the back of the work.	Five minutes, depending on the length of the task
3	The team members pass the pieces of student work to a new team member who also scores the work and puts another sticky note on the back. This process continues until everyone on the team has scored all pieces of student work.	Up to twenty minutes
4	The team turns over a piece of student work to reveal the teachers' scores. The team members discuss the differences in the scores and explain why they each scored it the way they did. This continues until the team has discussed all pieces of student work or until the team feels confident teachers are applying the rubric in the same way.	Varies by the amount of discussion
5	The team makes any needed changes to the rubric to reflect new understanding.	Five minutes
6	The team discusses implications for future instruction and how to respond when students need more time and support.	Ten minutes

Peeling the Onion
Developing a Problem Protocol

Developed in the field by educators affiliated with NSRF.

Purpose

To provide a structured way to develop an appreciation for the complexity of a problem in order to avoid the inclination to start out by "solving" the problem, before it has been fully defined.

Procedure

As with all protocols, it is important to identify a facilitator who is responsible for keeping the group to the allotted time. This allows the group to maintain focus, keep on track, and frees the group to do its best thinking. The facilitator reviews the process with the group and then it begins. The times for each step can be adjusted to fit the available amount of time and the number of people in the group.

Facilitation Tips

Most of us are eager to solve problems before we truly understand their depth. This protocol is designed to help us peel away the layers in order to address the deeper issues that lie underneath the surface. If the problem were easy to solve, it would not still be a concern to the group. The facilitator should keep to the times strictly and gently remind people when they are giving advice too early.

The Protocol

1. The keepers of the problem describe the problem/dilemma and ask a question to help focus the group's responses. (5 minutes)

2. Clarifying questions from group members to the presenters (these must be purely informational). (3 minutes)

3. A round where everyone says: "What I heard [the presenters say] is …" (The presenters are silent and take notes.)

4. A round where everyone says: "One assumption that seems to be part of the problem/dilemma is…" OR, "One thing I assume to be true about this problem is … " (The presenters are silent and take notes.)

5. Another round where everyone says: "A question this raises for me is…" (The presenters are silent and take notes).

6. [Perhaps] another round where everyone says: "Further questions this raises for me are…" (The presenters are silent and take notes.)

7. Another round where everyone asks: "What if…?" Or, "Have we thought about…?" Or, "I wonder…?" (The presenters are silent and take notes.)

8. Presenters review their notes and say, "Having heard these comments and questions, now I think…" (The group members are silent and take notes.)

9. *Now what?* Together, the presenter and consultants talk about the possibilities and options that have surfaced.

10. Debrief the process. How was this like peeling an onion? What about the process was useful? Frustrating?

Consultancy Protocol

The Consultancy Protocol was developed by Gene Thompson-Grove, Paula Evans and Faith Dunne as part of the Coalition of Essential Schools' National Re:Learning Faculty Program, and further adapted and revised as part of work of NSRF.

A Consultancy is a structured process for helping an individual or a team thinks more expansively about a particular, concrete dilemma.

Time
Approximately 50 minutes

Roles
Presenter (whose work is being discussed by the group)
Facilitator (who sometimes participates, depending on the size of the group)

1. The presenter gives an overview of the dilemma with which s/he is struggling, and frames a question for the Consultancy group to consider. The framing of this question, as well as the quality of the presenter's reflection on the dilemma being discussed, are key features of this protocol. If the presenter has brought student work, educator work, or other "artifacts," there is a pause here to silently examine the work/ documents. The focus of the group's conversation is on the dilemma. (5-10 minutes)

2. The Consultancy group asks clarifying questions of the presenter — that is, questions that have brief, factual answers. (5 minutes)

3. The group asks probing questions of the presenter. These questions should be worded so that they help the presenter clarify and expand his/her thinking about the dilemma presented to the Consultancy group. The goal here is for the presenter to learn more about the question s/he framed or to do some analysis of the dilemma presented. The presenter may respond to the group's questions, but there is no discussion by the Consultancy group of the presenter's responses. At the end of the ten minutes, the facilitator asks the presenter to re-state his/her question for the group. (10 minutes)

4. The group talks with each other about the dilemma presented. (15 minutes) Possible questions to frame the discussion:

What did we hear?

What didn't we hear that they think might be relevant? What assumptions seem to be operating?

What questions does the dilemma raise for us? What do we think about the dilemma?

What might we do or try if faced with a similar dilemma? What have we done in similar situations?

Protocols are most powerful and effective when used within an ongoing professional learning community such as a Critical Friends Group® and facilitated by a skilled coach. To learn more about professional learning communities and seminars for new or experienced coaches, please visit the National School Reform Faculty website at www.nsrfharmony.org.

Members of the group sometimes suggest actions the presenter might consider taking. Most often, however, they work to define the issues more thoroughly and objectively. The presenter doesn't speak during this discussion, but instead listens and takes notes.

5. The presenter reflects on what s/he heard and on what s/he is now thinking, sharing with the group anything that particularly resonated for him or her during any part of the Consultancy. (5 minutes)

6. The facilitator leads a brief conversation about the group's observation of the Consultancy process. (5 minutes)

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Consultancy Protocol
Facilitation Tips

Step 1

The success of the Consultancy often depends on the quality of the presenter's reflection in Step 1 as well as on the quality and authenticity of the question framed for the Consultancy group. However, it is not uncommon for the presenter, at the end of a Consultancy, to say, "Now I know what my real question is." That is fine, too. It is sometimes helpful for the presenter to prepare ahead of time a brief (one-two page) written description of the dilemma and the issues related to it for the Consultancy group to read as part of Step 1.

Step 2

Clarifying questions are for the person asking them. They ask the presenter "who, what, where, when, and how." These are not "why" questions. They can be answered quickly and succinctly, often with a phrase or two.

Step 3

Probing questions are for the person answering them. They ask the presenter "why" (among other things), and are open-ended. They take longer to answer, and often require deep thought on the part of the presenter before s/he speaks.

Step 4

When the group talks while the presenter listens, it is helpful for the presenter to pull his/her chair back slightly away from the group. This protocol asks the Consultancy group to talk about the presenter in the third person, almost as if s/he is not there. As awkward as this may feel at first, it often opens up a rich conversation, and it gives the presenter an opportunity to listen and take notes, without having to respond to the group in any way. Remember that it is the group's job to offer an analysis of the dilemma or question presented. It is not necessary to solve the dilemma or to offer a definitive answer.

It is important for the presenter to listen in a non-defensive manner. Listen for new ideas, perspectives, and approaches. Listen to the group's analysis of your question/issues. Listen for assumptions — both your own and the group's — implicit in the conversation. Don't listen for judgment of you by the group. This is not supposed to be about you, but about a question you have raised. Remember that you asked the group to help you with this dilemma.

Step 5

The point of this time period is not for the presenter to give a "blow by blow" response to the group's conversation, nor is it to defend or further explain. Rather, this is a time for the presenter to talk about what were, for him/her, the most significant comments, ideas and questions s/he heard. The presenter can also share any new thoughts or questions s/he had while listening to the Consultancy group.

Step 6

Debriefing the process is key. Don't short-change this step.

Success Analysis Protocol
For Individuals

Developed in the field by educators affiliated with NSRF.

Roles

A timekeeper/facilitator

The facilitator's role is to help the group to keep focused on how this practice is different from your typical. The analysis of what makes this practice so successful is the purpose of the protocol.

"Best Practice" is defined as a process that proved to be highly effective in achieving the intended outcome.

1. Reflect on and write a short description of the one "Best Practice" of your work within the last year. Note what it is about the practice that made it so successful. Be sure to answer the question, "What made this work different from other experiences?" (10 minutes)

2. In mixed groups of 3, the first person shares their "Best Practice" and why it was so successful. (10 minutes)

3. The rest of the group asks clarifying questions about the details of the "best practice". (5 minutes)

4. The group does an analysis of what they heard about the presenter's success and offers additional insights about how this practice is different than other practices. Probing questions are appropriate and the presenter's participation in the conversation is encouraged. (10-15 minutes)

5. The presenter responds to the group's analysis of what made this experience so successful. (3 minutes)

6. Take a moment to celebrate the success of the presenter.

7. Each of the other members of the group takes turns sharing their "Best Practice" and what made it is so successful, followed by clarifying questions and the group discussion analyzing how this practice differs from other practices. (Each round takes about 30 minutes for groups of 3.)

8. Debrief the protocol as a whole group. Possible questions: What worked well? How might we apply what we learned to other work? How might students use this process to reflect on their work? What adaptations to this protocol might improve the process? (5 minutes)

Standards in Practice
Standards and Looking at Student Work

Developed by Ruth Mitchell, The Education Trust.

Get prepared
Select a chair, timekeeper, and recorder. Read and discuss the protocol. Make sure there is a batch of student work that the group will look at in using the protocol. Review the following ground rules:

1. Behavior is professional throughout — no outbursts, no personal attacks
2. Everyone listens to everyone else and does not interrupt or talk over others
3. Praise where possible, but express critical opinions candidly
4. Accept criticism as if it were intended to help improve student achievement
5. Be brief, so that everyone gets lots of chances to talk

Do the assignment yourselves
Every member of the team does the assignment as given to the students.

Make a scoring guide
The group generates a rough scoring guide from the standards and the assignment.

Score the student work
The group scores the student papers, using the guide.

See what students know and can do
The recorder writes the group's answers to the following questions:

1. What does this student work tell us about student learning?
2. What do students know, and what are they able to do?
3. Was the assignment well designed to help students acquire knowledge and exercise skills?

Do something about it
The recorder writes the group's answers to the following question: What needs to happen on the classroom, school, and district so that all students can do this and similar tasks well?

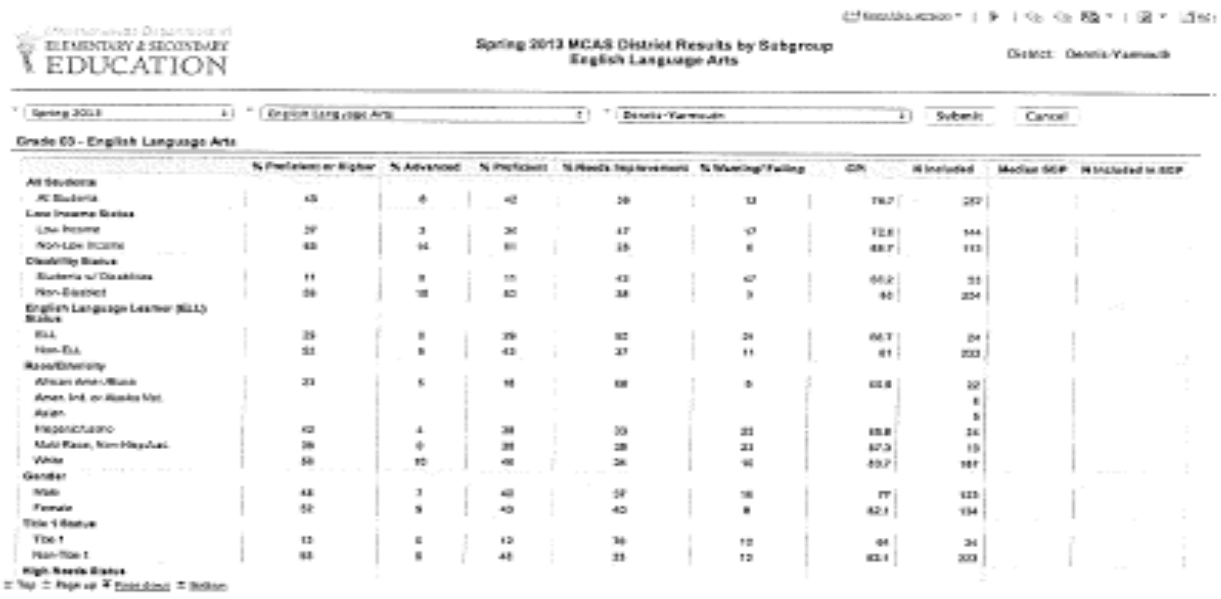
Develop and carry out an action plan
The group plans and carries out action to improve student learning.

Protocols are most powerful and effective when used within an ongoing professional learning community such as a Critical Friends Group® and facilitated by a skilled coach. To learn more about professional learning communities and seminars for new or experienced coaches, please visit the National School Reform Faculty website at www.nsrfharmony.org.

PE304: District Results by Subgroup

or (PE404: School Results by Subgroup)

This report is by subject. Report will automatically run for each grade, and All Grades (use page down at bottom left of screen to view full report).
Run this report for each subject area testes (ELA, Math, Sci/Tech) for each of the last three years.



ELEMENTARY & SECONDARY EDUCATION

Spring 2013 MCAS District Results by Subgroup
English Language Arts

Grade 03 - English Language Arts

	% Proficient or Higher	% Advanced	% Proficient	% Needs Improvement	% Warning/Failing	GPI	# Included	Median SGP	# Included in SGP
All Students									
Low Income Status									
Disability Status									
English Language Learner (ELL) Status									
Race/Ethnicity									
Gender									
Title I Status									
High Needs Status									

= Top = Page up = Print down = Bottom

Guiding Questions [Factual Observations]

1. How does the performance of each subgroup reported compare to ALL students?

2. How does the performance compare between:
   a) Low Income and Non-Low Income students?

   b) Students w/Disabilities to Non-Disabled students?

   c) ELL to Non-ELL students?

   d) High-Needs students to Non-High Needs students?

3. Answer questions 1 and 2 above, comparing CPI.

4. Answer questions 1 and 2 above, comparing Median SGP.

Begin to Develop Hypotheses [I wonder...]

5. How do the CPI results compare to the annual CPI accountability report targets in each subject area?

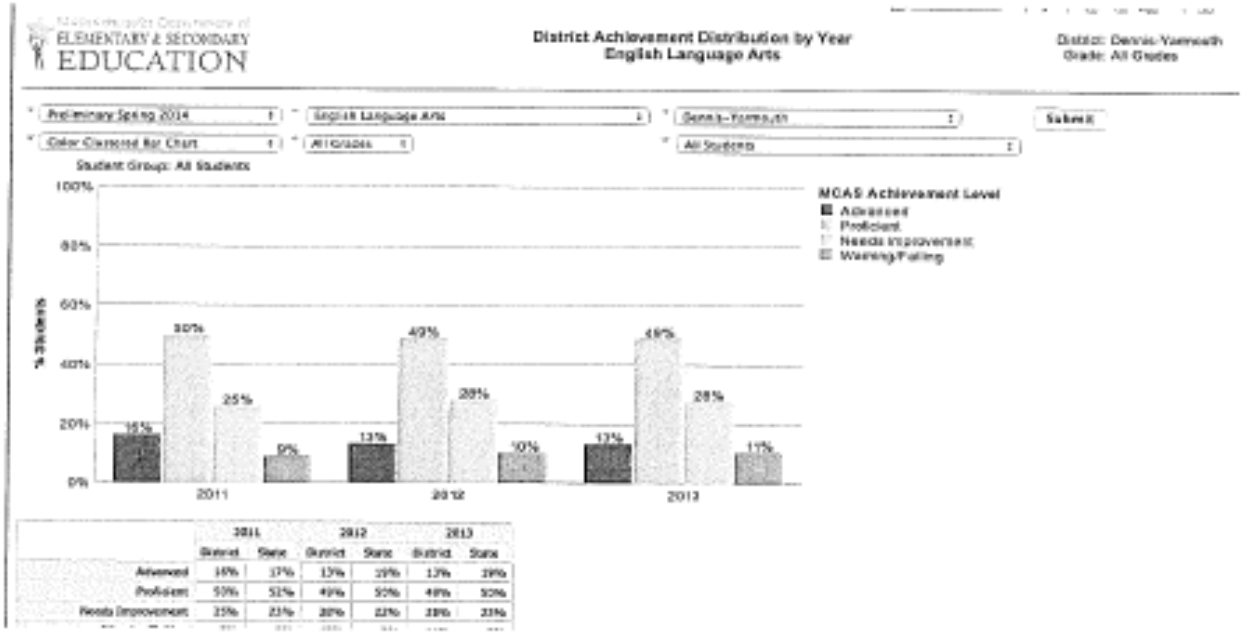
6. How do SGP results compare to annual accountability report student growth targets?

7. What are the possible reasons for these trends? What do you think would happen if...?

PE305: District Achievement Distribution by Year

or (PE405: School Achievement Distribution by Year)

This report is by grade level and subject.
Run a report for each grade level and subject area tested- ALL STUDENTS, HIGH NEEDS, and any subgroup large enough to be reported (e.g.: ELL, Students with Disabilities).



	2011		2012		2013	
	District	State	District	State	District	State
Advanced	16%	17%	13%	15%	13%	29%
Proficient	50%	51%	49%	50%	48%	50%
Needs Improvement	25%	23%	28%	22%	28%	23%

Guiding Questions [Factual Observations]

1. How does the current year compare to the previous three years?

2. How do the District results compare to State results this year?

3. What are the trends over the four years:
   a) of the District?

   b) in comparison to the State?

4. In the last year, what % has increased/decreased in:
   a) Advanced
   b) Proficient
   c) Needs Improvement
   d) Warning/Failing?

5. How have performance (CPI) and Median SGP improved and/or declined?

Begin to Develop Hypotheses [I wonder...]

6. What are the possible reasons for these trends?

7. Are the results consistent with other evidence?

CU406: School Results by Standards

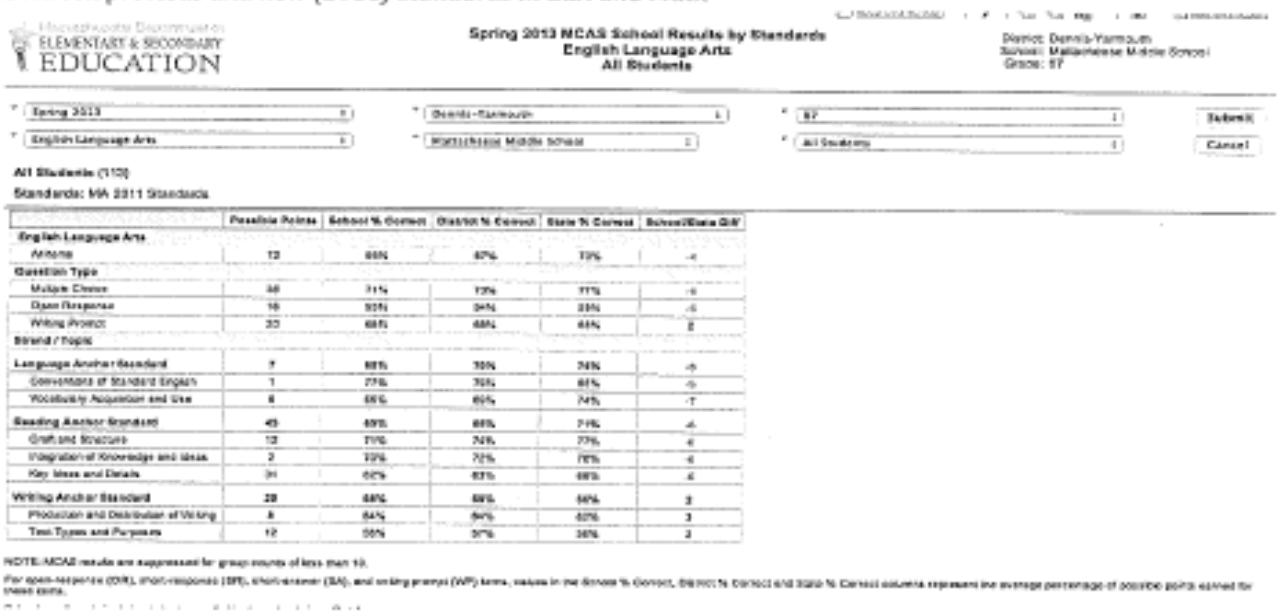
or (CU306: District Results by Standards)

Run a report for each grade level and subject area tested for the following (may also want to compare previous years):

- *All Students*
- *High Needs (High Needs v Non-High Needs)**
- *Low Income (Low-Income vs. Non-Low Income)**
- *Disability Status (Students w/Disabilities vs. Non-Disabled Students)**
- *ELL Status (ELL Students vs. Non-ELL Students)**

** Use the "page down" button at bottom left hand corner to view both groups*

<u>Reminder</u>: When running this report in previous years-results can be sorted to correlate between previous and new (2011) standards in ELA and Math



Massachusetts Department of Elementary & Secondary Education

Spring 2013 MCAS School Results by Standards
English Language Arts
All Students

District: Dennis-Yarmouth
School: Mattacheese Middle School
Grade: 07

Spring 2013 | Dennis-Yarmouth | 07 | Submit
English Language Arts | Mattacheese Middle School | All Students | Cancel

All Students (110)

Standards: MA 2011 Standards

	Possible Points	School % Correct	District % Correct	State % Correct	School/State Diff
English Language Arts					
Overall	72	69%	67%	73%	-4
Question Type					
Multiple Choice	48	71%	73%	77%	-6
Open Response	16	63%	64%	69%	-6
Writing Prompt	30	68%	68%	66%	2
Strand / Topic					
Language Anchor Standard	7	68%	70%	74%	-6
Conventions of Standard English	1	77%	76%	84%	-7
Vocabulary Acquisition and Use	6	66%	69%	74%	-7
Reading Anchor Standard	45	69%	68%	71%	-4
Craft and Structure	13	71%	74%	77%	-6
Integration of Knowledge and Ideas	2	72%	72%	78%	-6
Key Ideas and Details	31	68%	67%	69%	-2
Writing Anchor Standard	20	68%	68%	66%	3
Production and Distribution of Writing	8	64%	64%	62%	3
Text Types and Purposes	12	69%	67%	66%	3

NOTE: MCAS results are suppressed for groups counts of less than 10.

For open-response (OR), short-response (SR), short-answer (SA), and writing prompt (WP) items, values in the School % Correct, District % Correct and State % Correct columns represent the average percentage of possible points earned for these items.

<u>Guiding Questions</u> [Factual Observations]

1. Identify areas of strength and/or weakness comparing school and state results.

2. What are the weights of possible points in identified strengths and/or weaknesses?

3. What are the trends in areas of strength and/or weakness over the past few years (in the same grade)?

4. What are the trends in areas of strength and/or weakness over the past few years (looking at the grade before and after you)?

<u>Begin to Develop Hypotheses</u> [I wonder...]

5. What are the possible reasons for strengths/weaknesses?

6. Are the results consistent with other evidence?

DATA – DRIVEN DIALOGUE

Time

Data-Driven Dialogue is a tool that is used throughout the indicated tasks, and time allocations can be found in each task's activity table.

Materials

Materials listed are for use when first introducing Data-Driven Dialogue to the Data Team.

PowerPoint Slides

TS1—Data-Driven Dialogue: Detail
TS2—Go Visual

Resource

TR1—No-Because Sign

Handout

TH1—Data-Driven Dialogue: Detail

Data

Data for the team to analyze

General

Card stock
Chart paper
Marking pens
Masking tape
LCD projector

Purpose

To provide the Data Team with a process for analyzing data in a respectful, thoughtful manner that creates shared meaning of the data.

Overview

Data-Driven Dialogue (Wellman & Lipton, 2004) is a structured process that enables a Data Team to explore predictions, go visual, make observations, and generate inferences and questions of the data before offering solutions. Data-Driven Dialogue involves four phases: *predict* what the data will indicate; *go visual* by making a chart or graph of the data; *observe* what the data indicate; and *infer* why the data are what they are and identify questions that might require further investigation. This dialogue is used throughout the Using Data Process to help a Data Team analyze their data, come to sound conclusions, and build the team's capacity to learn together.

Audience

Data Team.

Use

Primary Tasks: Tasks 2, 6 - 11, 14, and 19.

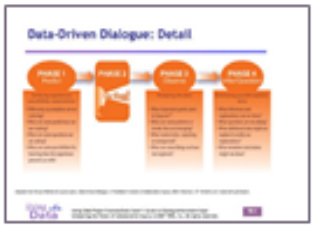
Advance Preparation

1. Make one copy for the team, on card stock (suggested), of Resource TR1 (No-Because Sign).
2. Make one copy for each team member of Handout TH1 (Data-Driven Dialogue: Detail).
3. Data-Driven Dialogue is first introduced in Task 2 using demographic data and is subsequently used in a variety of tasks when the Data Team is looking at student-learning data (aggregated, disaggregated, strand, item-level, or student work, discussed in Tasks 6-11) and data about curriculum, instruction, assessment, and other classroom and school practices (Task 14). Gather data for the team to analyze according to the Data Preparation steps specified in the tasks.

Procedure

1. Introduce Data-Driven Dialogue as a structured process that the Data Team will use to examine and discuss data.

2. Display Slide TS1 (Data-Driven Dialogue: Detail) and distribute Handout TH1 (Data-Driven Dialogue: Detail). Introduce the four phases of Data-Driven Dialogue: Phase 1: Predict; Phase 2: Go Visual (by charting/ graphing the data); Phase 3: Observe; Phase 4: Infer/Question.



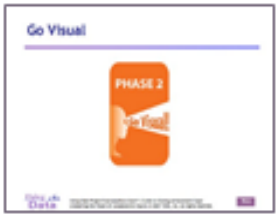
3. Refer to Phase 1 on the slide and explain that this phase occurs before the Data Team looks at the data. It focuses on generating predictions about what the data might show. This phase serves a variety of purposes: accessing prior knowledge of working with data; making predictions about what to expect when looking at the data; and getting concerns and assumptions on the table.

Facilitation Note

Phase 1 is when individual assumptions, perceptions, and beliefs are raised and is often when the Data Coach will want to directly address issues of equity and cultural proficiency.

4. Explain the type of data set the team will be analyzing: What kind of data is it? What does it measure? What does it quantify? What grade level does it cover? Ask the Data Team to predict what the data may show. Have them discuss their predictions, record them on chart paper, and tape them to the Data Wall.

5. Display Slide TS2 (Go Visual) and distribute your data set. Explain that the team should now chart/graph the data so that the whole team can see it. Remind the team of the importance of creating big charts/graphs:
   - the thinking of the group is shared publicly;
   - it keeps the data over "there" and not between team members;
   - everyone on the team focuses together on the same data set at the same time; and
   - the graphs can be used later to share with other audiences.



Facilitation Note

If you are using a data analysis computer program that makes graphs, we still recommend drawing the graph, especially when teams are new to using data. A majority of Using Data Process participants have expressed deep personal and group learning when they had to graph the data rather than use a pre-made graph. If you choose to use a pre-made graph, enlarge it so that it can be posted.

6. Re-display Slide TS1 (Data-Driven Dialogue: Detail) and explain that the team will now make observations of the data. Ask the Data Team to document their observations on chart paper and add it to their Data Wall.

Facilitation Note

Make sure the team understands that an observation is something that can be made using the five senses and contains no explanations (inferences). For example, when reading a thermometer, "It's 52 degrees" is an observation; "52 degrees is cold" is an inference. Or, "75 percent of fifth-grade students are below proficiency in geometry" is an observation; "teachers aren't teaching geometry very well" is an inference.

7. Distribute Resource TR1 (No-Because Sign). Explain that this sign will be used as a signal to the Data Team when they are moving into making inferences (i.e., using "because" statements) during the observation phase. The dialogue monitor (see Toolkit: Group Roles) will take primary responsibility for alerting the team to inferences that are made during the observation phase by placing the sign on the table. However, all Data Team members should feel free to support the role of the dialogue monitor and place this sign on the table when they see inferences being made during the observation phase.
8. Re-display Slide TS1 (Data-Driven Dialogue: Detail) and explain that the team will now move to the last phase: generating inferences and asking questions. Explain that in this phase the team is encouraged to make "because" or explanation statements that directly relate to their observations. During this phase the team is looking for possible causes for and inferences about what the data show and generating questions that are prompted by the data.

Facilitation Note

This is another phase in which the Data Coach will want to pay close attention to "blaming statements" and engage the Data Team in dialogue to explore those statements more fully (see Toolkit: Why? Why? Why?).

9. Ask the Data Team to make inferences, record them on chart paper, and post the chart on the Data Wall. Help teams understand that inferences should be matched to their observations. One way to do this is to write their inferences in a different colored pen and underneath or to the side of their observations.
10. If this is the introduction to Data-Driven Dialogue, debrief the process: What was an "aha" members had about using the process? What questions do they still have?

TR1

No-Because Sign

Data-Driven Dialogue: Detail

Adapted from Bruce Wellman & Laura Lipton, *Data-Driven Dialogue: A Facilitator's Guide to Collaborative Inquiry*, 2004, Sherman, CT: MiraVia LLC. Used with permission.

STOPLIGHT HIGHLIGHTING

Time

10-15 minutes with each data set.

Materials

Resources

TR1—Example of a Stoplight Highlighting Criteria Table

TR2—Stoplight Highlighting Vertical Plot Example

Data

Tables or graphs representing aggregated, disaggregated, strand, or item-level student-learning data

General

Chart paper

Highlighters (green, yellow, red)

Masking tape

Purpose

To focus the Data Team on data that indicate a need for urgent attention.

Overview

Stoplight Highlighting helps Data Teams analyze data they have represented in the Go Visual phase of Data-Driven Dialogue. Based on relevant criteria, Data Teams use highlighters to mark positive data as a "green light," data that represent caution as a "yellow light," and data that demand immediate attention as a "red light."

Audience

Data Team.

Use

Primary Tasks: Tasks 6–9 and 11.

Advance Preparation

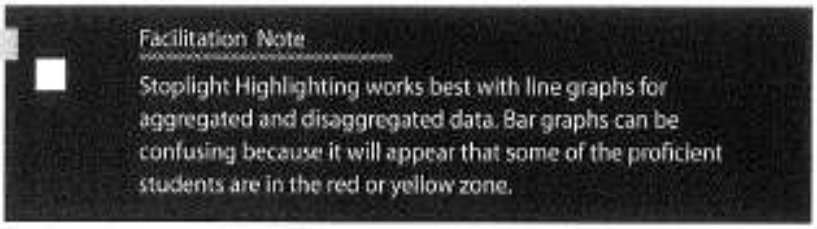
1. In addition to the data noted above, gather information about the Data Team's, school's, or district's student-learning and achievement criteria for growth and improvement. Examples include your Data Team's vision of a great school; any national, state, or local criteria already established for expected percentage of students reaching proficiency, of items correct, or of annual improvement.

Procedure

1. Direct the Data Team's attention to the data on the chart they have created for Phase 2: Go Visual. Depending on the task, this chart may focus on aggregated, disaggregated, strand, or item-level data.
2. Introduce Stoplight Highlighting as a process that enables the Data Team to highlight student-learning needs and successes. Explain the analogy of a stoplight: some of the data is "good to go" and is noted as green; some represents "caution" and is noted as yellow; some is in need of "immediate attention" and is noted in red. Stoplight Highlighting is a tool to guide and inform the team's observations.
3. Share the school/district criteria for student learning and achievement growth and improvement. Facilitate a discussion about realistic criteria and bring the group to consensus about which criteria they will use. Write this information on a wall chart similar to Resource TR1 (Example of a Stoplight Highlighting Criteria Table). (Note that aggregated and disaggregated data are often reported as a percentage in each proficiency

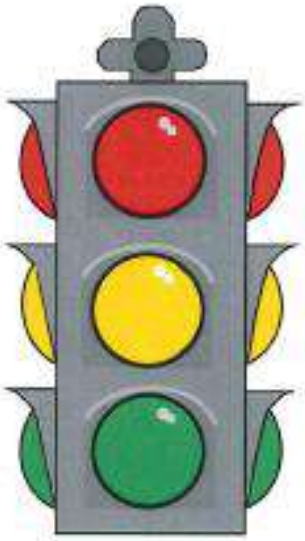
level, while strand or item-level data may be reported as a percentage correct; adjust your criteria accordingly.)

4. Ask team members to use the criteria to highlight their data. What is the range for "green," for "yellow," and for "red"?
5. Ask the team members to continue in their Data-Driven Dialogue, making observations and inferences about the highlighted data. In what areas can they celebrate student progress? What areas are in need of improvement?
6. If there are several "red" areas, have members discuss/determine a priority for addressing these areas. Do some naturally align themselves with others? If some were addressed, would others fall into place?
7. Use the "red" areas to target areas of focus for use in subsequent tasks and data sets. For example, if the Data Team is engaged with aggregated data and sixth-grade science is in the "red" zone, home in on disaggregated sixth-grade science in the next task.



Example of a Stoplight Highlighting Criteria Table: CRT Aggregated and Disaggregated Data

Highlight color	Meaning	Proficiency level
Green	Go! Meets expectations	Above 70%
Yellow	Caution! Below expectations	Between 60% and 69%
Red	Urgent! In immediate need of improvement	Below 60%



DATA WALL

Time

Continuous during each task in which the Data Team analyzes data.

Materials

Resource

TR1—Examples of a Data Wall

General

Chart paper
Marking pens
Masking tape

Purpose

To provide a visual focus for the Data Team's collaborative inquiry and display of data.

Overview

Data Walls are "built" by Data Teams as they work with their school data. The Data Team begins construction of the Data Wall in the first phase of Data-Driven Dialogue (making predictions) and continues the construction throughout the collaborative inquiry process. The Data Wall should be large enough that all members of the group can see it. An advantage of the Data Wall is that it physically separates the data from the team members; this helps to reduce defensiveness and keeps the conversation focused on the "data" and not on "us."

Audience

Data Team.

Use

Primary Tasks: Tasks 6–11.

Advance Preparation

1. Use this tool in conjunction with the Data-Driven Dialogue tool.
2. Locate a wall space that can accommodate at least 5 sheets of chart paper across by 3 sheets of chart paper high. If possible, locate this space in an area that will be undisturbed for the duration of the Data Team sessions so that the Data Wall can be a "work in progress." Refer to Resource TR1 (Examples of a Data Wall) for some pictures of this layout.

Procedure

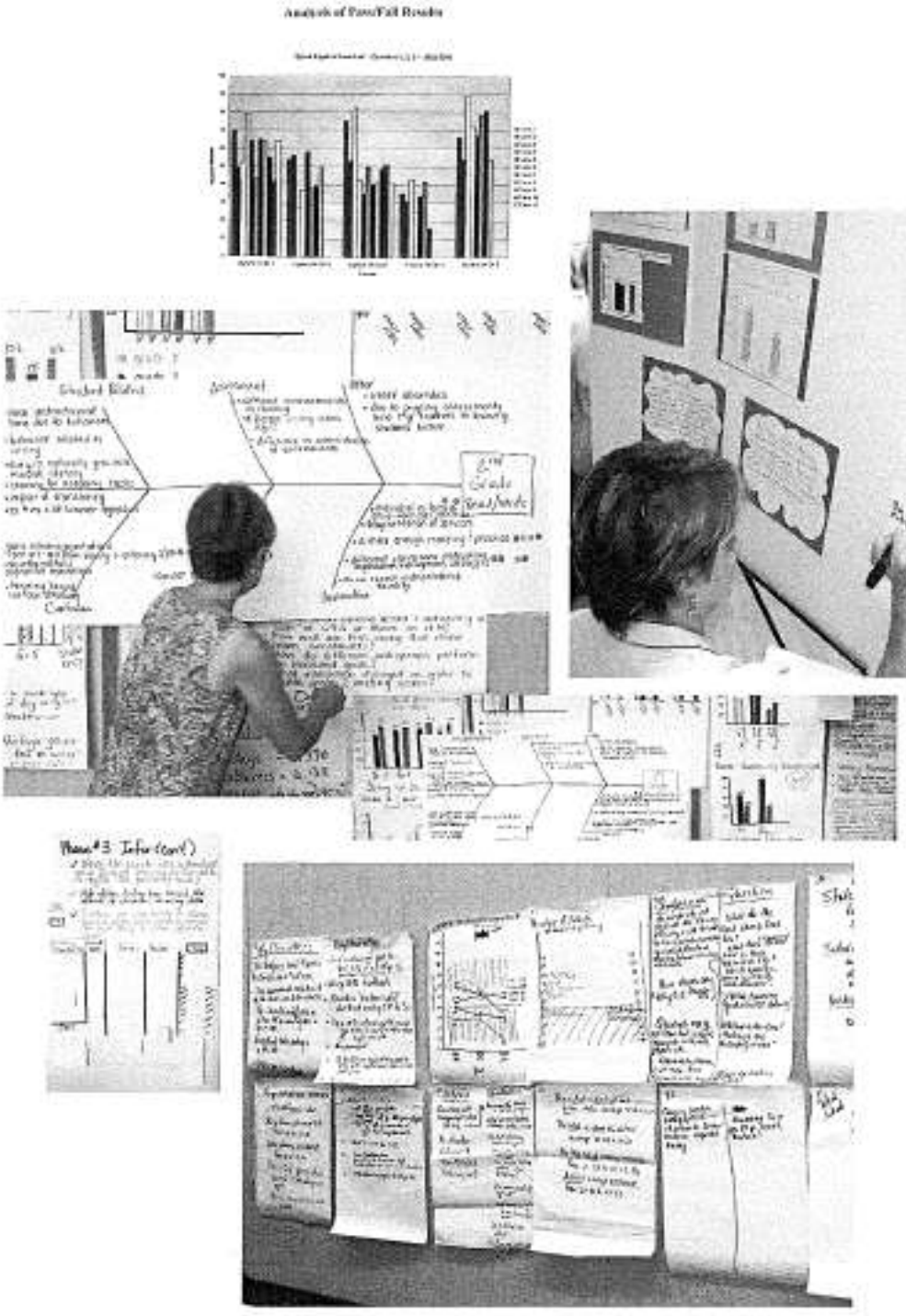
1. When the Data Team is ready to look at data, begin the process by asking them to predict what the data will indicate. Ask team members to write their predictions on a sheet of chart paper.
2. Ask the team to post their predictions (Phase 1 of Data-Driven Dialogue) as the first part of their Data Wall.
3. Ask the Data Team to collaboratively construct a large graph or chart of the data they are processing and post this graphic on their Data Wall. This is known as "going visual" with the data and is Phase 2 of Data-Driven Dialogue.

4. Ask the team to conduct Phase 3 of Data-Driven Dialogue by making observations from the graph/chart and recording the observations on another sheet of chart paper. Have the team post their observations on the Data Wall.
5. Ask the team to conduct Phase 4 of Data-Driven Dialogue by discussing inferences the team is making about the data. Have the team record their inferences on another sheet of chart paper and post it to the Data Wall.
6. Ask the team to continue building their Data Wall as they drill down through the student data, recording predictions, graphs/charts of the data, observations, and inferences for each type of data (e.g., aggregated, disaggregated, strand, item, and student work).

Facilitation Note

The Data Wall should be continually referenced as the team moves through the Using Data Process tasks. A new Data Wall can be constructed to capture non-student data (e.g., teacher preparation, classroom observations, etc.).

Examples of a Data Wall

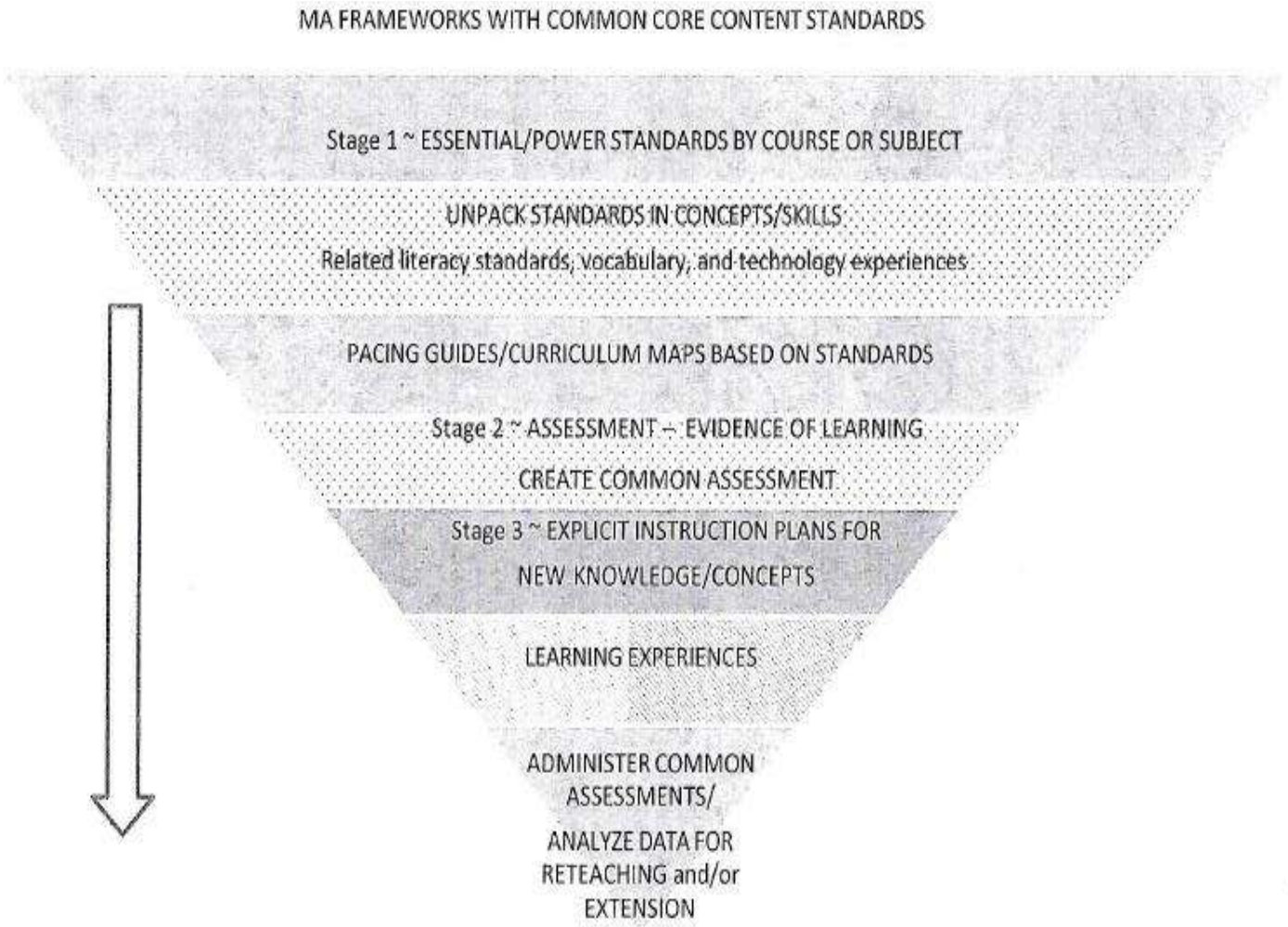


Photographs taken by Chris Demers and Jennifer Unger.

Appendix C

Tools & Resources

GUARANTEED AND VIABLE CURRICULUM



Guaranteed and Viable Curriculum Action Plan

G&V Process Steps	Document	Person(s) Responsible	Time Frame	Target Completion Date
COMMON CORE STANDARDS/CONTENT STANDARDS & COMPETENCIES				
ESSENTIAL/POWER STANDARDS BY COURSE				
UNPACK COURSE OBJECTIVES IN SKILLS/CONCEPT FORMAT				
PACING GUIDES/CURRICULUM MAPS BASED ON STANDARDS				
PLANNING GUIDE CREATE COMMON ASSESSMENT				
EXPLICIT INSTRUCTION PLANS FOR NEW KNOWLEDGE/ CONCEPTS				
DAILY EXPERIENCES				
ADMINISTER COMMON ASSESSMENTS/ANALYZE DATA FOR RETEACHING and/or EXTENSION				

Elements on Curriculum Maps

ESSENTIAL QUESTIONS

Definition: Overarching questions that provide focus for the unit and are aligned to the "Big Ideas," concepts, or themes

Criteria:
- Encourage higher level thinking
- Help students make connections beyond content being studied
- Focus on "Why is this important?"
- Include different levels of questions (fundamental, situational, authentic)
- Written in question form

CONCEPT/CONTENT

Definition: Key concept, targeted facts, and core content

Criteria:
- Start with key concept, "Big Idea" or Enduring Understanding
- Can be discipline, interdisciplinary, student-centered
- Written in noun form—targeted facts and information points

SKILLS

Definition: What students need to know or be able to do in order to demonstrate mastery or understanding of the content

Criteria:
- Begin with action verbs
- Are specific ,observable, and measurable--precise, not generic
- Include benchmark and critical skills
- Reflect an expectation of higher levels of thinking
- Include integrated skills included in teaching of the concept
- Include additional skills that support the teaching of the content

ASSESSMENTS

Definition: Evidence of Learning

Criteria:
- Are demonstrations of learning
- Include integration of multiple skills
- Are tangible products or observable performances
- Include multiple types of assessments to give a more complete picture of learning
- Written in noun form

ACTIVITIES

Definition: Practice opportunities to master skills

Criteria:
- Hands on
- Engaging
- Incorporate different learning styles
- Included in lesson plans on mapping software

Template with Design Questions for Teachers

Understanding by Design 2nd Edition

Stage 1—Desired Results

Established Goals: G

- What relevant goals (e.g., content standards, course or program objectives, learning outcomes) will this design address?

Understandings: U

Students will understand that . . .

- What are the big ideas?
- What specific understandings about them are desired?
- What misunderstandings are predictable?

Essential Questions: Q

- What provocative questions will foster inquiry, understanding, and transfer of learning?

Students will know . . . K

- What key knowledge and skills will students acquire as a result of this unit?
- What should they eventually be able to do as a result of such knowledge and skills?

Students will be able to . . . S

Stage 2—Assessment Evidence

Performance Tasks: T

- Through what authentic performance tasks will students demonstrate the desired understandings?
- By what criteria will performances of understanding be judged?

Other Evidence: OE

- Through what other evidence (e.g., quizzes, tests, academic prompts, observations, homework, journals) will students demonstrate achievement of the desired results?
- How will students reflect upon and self-assess their learning?

Stage 3—Learning Plan

Learning Activities: L

What learning experiences and instruction will enable students to achieve the desired results? How will the design

W = Help the students know Where the unit is going and What is expected? Help the teacher know Where the students are coming from (prior knowledge, interests)?

H = Hook all students and Hold their interest?

E = Equip students, help them Experience the key ideas and Explore the issues?

R = Provide opportunities to Rethink and Revise their understandings and work?

E = Allow students to Evaluate their work and its implications?

T = Be Tailored (personalized) to the different needs, interests, and abilities of learners?

O = Be Organized to maximize initial and sustained engagement as well as effective learning?

Massachusetts Transfer Goals

ELEMENTARY & SECONDARY EDUCATION

*Massachusetts transfer goals were written to provide an explicit connection between the standards-based Model Curriculum Units and College and Career Readiness. These are long range goals that a student will work towards over the course of their PK-12 academic experience.**

ELA

Students will be able to independently use their learning to:

- Understand the power of words and images to transform lives and provide insight into the experiences of others and understanding of cultures and historical periods.
- Read and comprehend a range of increasingly complex texts and media written for various audiences and purposes.
- Generate open ended questions and seek answers through critical analysis of text, media, interviews, and/or observations.
- Communicate ideas effectively in writing to suit a particular audience and purpose.
- Communicate ideas effectively in discourse and oral presentations to suit various audiences and purposes.
- Expand their vocabulary and knowledge of English conventions in order to learn and convey precise understandings of concepts.
- Develop the habit of reading for enjoyment.

History & Social Science

Students will be able to independently use their learning to:

- Understand how recurring patterns in history can inform judgments about current events and other issues.
- Analyze and resolve conflicts in order to work and live in an inter-connected world society.
- Understand how physical and human geography can inform responsible interactions with environment.
- Apply knowledge of political and social systems to participate actively as an informed citizen of a democracy.
- Critically appraise historical and contemporary claims/decisions.
- Apply concepts and systems of economics to participate productively in a world economy.
- Integrate and evaluate multiple sources of information presented in diverse formats and media in order to address a question, form an opinion, or to solve a problem
- Write to inform and explain a topic, concept, or process to a variety of audiences.
- Research and evaluate the credibility of sources and develop and/or defend an argument, or claim.

Mathematics

Students will be able to independently use their learning to:

- Interpret and persevere in solving complex mathematical problems using strategic thinking and expressing answers with a degree of precision appropriate for the problem context.
- Express appropriate mathematical reasoning by constructing viable arguments, critiquing the reasoning of others, and attending to precision when making mathematical statements.
- Apply mathematical knowledge to analyze and model mathematical relationships in the context of a situation in order to make decisions, draw conclusions, and solve problems.

Science, Technology & Engineering

Students will independently be able to use their learning to:

- Engage in sustained, complex and successful scientific inquiry.

- Engage in public discourse of scientific and technical issues in the news or the community.
- Use principles of the physical world and genetic programming to analyze living systems. (ls)
- Analyze mechanisms of cause and effect in natural and designed systems based on physical and chemical principles. (ps)
- Analyze the implications of earth as a set of interconnected systems -- atmosphere, hydrosphere, geosphere, and biosphere -- when making personal and civic decisions. (ess)
- Use principles of the physical world to assess designed products and systems based on social needs and wants. (t/e)
- Argue for and act on the importance of energy to life. (ls)
- Assess the energy use of biological and physical systems. (ls)
- Make personal and civic decisions that respect how living systems maintain balance and stability, minimizing impact on factors that disturb stability. (ls)
- Make informed decisions about personal and societal use of energy. (ps)
- Interpret and critique claims about the use of energy from public and private sources. (ps)

These refer to the 5 different science disciplines - Life science/Biology (LS), Physical science (Chemistry and Physics)(ps), Earth & Space Science(ess), and Technology/Engineering(t/e).

It is not recommend that educators use these goals as a checklist, evaluation tool, or as an assessment tool. We encourage use of these goals as a connection reminder to educators of the "big picture" of preparing students for college, careers, and citizenship.

Massachusetts Model Curriculum Unit Template

Stage 1 Desired Results				
ESTABLISHED GOALS <type here>	G	*Transfer* *Students will be able to independently use their learning to...*		T
		Meaning		
		UNDERSTANDINGS *Students will understand that...* <type here>	U	ESSENTIAL QUESTIONS <type here> Q
		Acquisition		
		Students will know... <type here>	K	*Students will be skilled at...* <type here> S

Stage 2 - Evidence		
Evaluative Criteria	Assessment Evidence	
<type here>	CURRICULUM EMBEDDED PERFORMANCE ASSESSMENT (PERFORMANCE TASKS) <type here>	PT
<type here>	OTHER EVIDENCE: <type here>	OE

Stage 3 – Learning Plan
Summary of Key Learning Events and Instruction <type here>

Table 2: *Stage One*

Stage 1 Desired Results		
ESTABLISHED GOALS - #1 (Standards- numbered and unpacked)	***Transfer***	
	Students will be able to independently use their learning to...	
	Meaning	
	UNDERSTANDINGS- #3 (U) *Students will understand that...*	ESSENTIAL QUESTIONS *Students will keep considering...* (Q)
	Acquisition	
	KNOWLEDGE- #4 *Students will know...* (K)	OBJECTIVE/SKILL- #2 *Students will be skilled at...* (S)

Table 3: *Stage Two*

Stage 2 – Evidence		
Standards	**Evaluative Criteria**	**Assessment Evidence**
		PERFORMANCE TASK(S):
		OTHER EVIDENCE:

Stage 3 Learning Plan
Learning Activites

Pausing

Using Data

Pausing

- Waiting several seconds before speaking and/or responding to others
- Waiting until others have completed what they have to say
- Providing time for individuals to thinking and process information

Paraphrasing

Using Data

Paraphrasing

- Using a "starter" to signal intent (e.g., "So you are thinking…," "If I heard you correctly, you are suggesting…," or "So you believe that…") and recast or summarize what the speaker has said
- Using nonverbal matching of gestures, expressions, etc.
- Summarizing and organizing statements (e.g., "so we all seem to be thinking that…" or "can we all agree that we…")
- Shifting the conversation to another level of abstraction (e.g., "It seems that a key problem we have identified is about…")

Probing

Using Data

Probing

- Asking questions to understand the meaning of vague or general terms (e.g., they, it, all, etc.)
- Asking questions to explore thinking, explanations, ideas (e.g., Can you tell me what you mean when you say…")
- Inquiring to gain additional information needed for understanding another's perspective (e.g., I would like to hear more about why you believe that we must do this.)

Putting ideas on the Table

Using Data

Putting Ideas on the Table

- Using a "starter" to signal intent (e.g., "Here is something that I have been thinking about…," "Here is another possibility…," or "Here is something that I learned the other day that might help us…," etc.)
- Identifying an idea that is blocking group progress but is not critical, and taking it off the table (e.g., "Now that I have heard what Zina said, I really don't think we should pursue my idea any further.")

Paying Attention to Self and Others

Using Data

Paying Attention to Self and Others

- Being aware of our own behavior in the group, e.g., how much we are talking, our feelings, energy level, etc.
- Being aware of the behavior of others, e.g., how they are responding to me and to others, their energy level, the tone of the group, etc.
- Making statements and observations to assist the group in being effective, e.g., "My observations seem to suggest that we might want to take a break," or "Franklin, I don't know if you have anything to say about this, but I thought we should provide you with an opportunity here."

Presuming Positive Intent

Using Data

Presuming Positive Intent

- Continuously assuming and acting on the idea that everyone is putting their best foot forward and that no one is trying to be subversive
- Believing that everyone is listening, everyone cares, everyone is doing his/her best all of the time
- Believing that no one has any malicious or negative intent
- Acting with positive intent and having no agenda other than the group's agenda to understand each other deeply and respect each other's ideas, values, perspectives and concerns

Pursuing a Balance Between Advocacy & Inquiry

Using Data

Pursuing a Balance Between Advocacy and Inquiry

- Supporting ideas that we believe are the best thinking of the group based on the premise that we fully understand the ideas and options on the table
- Seeking to understand and being open to hearing about how others may see our reasoning about something as being illogical or flawed
- Being willing to say whether or not we agree with an idea or not and why
- Asking others to help us understand their perspective, logic and reasoning
- This norm is utilized effectively in the discussion phase of a conversation, i.e., as the group is moving toward decision making.

No Because

NO BECAUSE

Explain that this sign will be used as a signal to the Team when they are moving into making inferences (i.e., using "because" statements) during the observation phase.

(Averil Coxhead's) High-Incidence Academic Word List (AWL) – Alphabetical Order

Words of highest frequency are followed by the number 1

abandon	8	bias	8	constitute	1	distinct	2	fee	6
abstract	6	bond	6	constrain	3	distort	9	file	7
academy	5	brief	6	construct	2	distribute	1	final	2
access	4	bulk	9	consult	5	diverse	6	finance	1
accommodate	9	capable	6	consume	2	document	3	finite	7
accompany	8	capacity	5	contact	5	domain	6	flexible	6
accumulate	8	category	2	contemporary	8	domestic	4	fluctuate	8
accurate	6	cease	9	context	1	dominate	3	focus	2
achieve	2	challenge	5	contract	1	draft	5	format	9
acknowledge	6	channel	7	contradict	8	drama	8	formula	1
acquire	2	chapter	2	contrary	7	duration	9	forthcoming	10
adapt	7	chart	8	contrast	4	dynamic	7	foundation	7
adequate	4	chemical	7	contribute	3	economy	1	found	9
adjacent	10	circumstance	3	controversy	9	edit	6	framework	3
adjust	5	cite	6	convene	3	element	2	function	1
administrate	2	civil	4	converse	9	eliminate	7	fund	3
adult	7	clarify	8	convert	7	emerge	4	fundamental	5
advocate	7	classic	7	convince	10	emphasis	3	furthermore	6
affect	2	clause	5	cooperate	6	empirical	7	gender	6
aggregate	6	code	4	coordinate	3	enable	5	generate	5
aid	7	coherent	9	core	3	encounter	10	generation	5
albeit	10	coincide	9	corporate	3	energy	5	globe	7
allocate	6	collapse	10	correspond	3	enforce	5	goal	4
alter	5	colleague	10	couple	7	enhance	6	grade	7
alternative	3	commence	9	create	1	enormous	10	grant	4
ambiguous	8	comment	3	credit	2	ensure	3	guarantee	7
amend	5	commission	2	criteria	3	entity	5	guideline	8
analogy	9	commit	4	crucial	8	environment	1	hence	4
analyse	1	commodity	8	culture	2	equate	2	hierarchy	7
annual	4	communicate	4	currency	8	equip	7	highlight	8
anticipate	9	community	2	cycle	4	equivalent	5	hypothesis	4
apparent	4	compatible	9	data	1	erode	9	identical	7
append	8	compensate	3	debate	4	error	4	identify	1
appreciate	8	compile	10	decade	7	establish	1	ideology	7
approach	1	complement	8	decline	5	estate	6	ignorance	6
appropriate	2	complex	2	deduce	3	estimate	1	illustrate	3
approximate	4	component	3	define	1	ethic	9	image	5
arbitrary	8	compound	5	definite	7	ethnic	4	immigrate	3
area	1	comprehensive	7	demonstrate	3	evaluate	2	impact	2
aspect	2	comprise	7	denote	8	eventual	8	implement	4
assemble	10	compute	2	deny	7	evident	1	implicate	4
assess	1	conceive	10	depress	10	evolve	5	implicit	8
assign	6	concentrate	4	derive	1	exceed	6	imply	3
assist	2	concept	1	design	2	exclude	3	impose	4
assume	1	conclude	2	despite	4	exhibit	8	incentive	6
assure	9	concurrent	9	detect	8	expand	5	incidence	6
attach	6	conduct	2	deviate	8	expert	6	incline	10
attain	9	confer	4	device	9	explicit	6	income	1
attitude	4	confine	9	devote	9	exploit	8	incorporate	6
attribute	4	confirm	7	differentiate	7	export	1	index	6
author	6	conflict	5	dimension	4	expose	5	indicate	1
authority	1	conform	8	diminish	9	external	5	individual	1
automate	8	consent	3	discrete	5	extract	7	induce	8
available	1	consequent	2	discriminate	6	facilitate	5	inevitable	8
aware	5	considerable	3	displace	8	factor	1	infer	7
behalf	9	consist	1	display	6	feature	2	infrastructure	8
benefit	1	constant	3	dispose	7	federal	6	inherent	9

Academic Word List – Alphabetical

inhibit	6	migrate	6	precede	6	reverse	7	tense	8
initial	3	military	9	precise	5	revise	8	terminate	8
initiate	6	minimal	9	predict	4	revolution	9	text	2
injure	2	minimise	8	predominant	8	rigid	9	theme	8
innovate	7	minimum	6	preliminary	9	role	1	theory	1
input	6	ministry	6	presume	6	route	9	thereby	8
insert	7	minor	3	previous	2	scenario	9	thesis	7
insight	9	mode	7	primary	2	schedule	8	topic	7
inspect	8	modify	5	prime	5	scheme	3	trace	6
instance	3	monitor	5	principal	4	scope	6	tradition	2
institute	2	motive	6	principle	1	section	1	transfer	2
instruct	6	mutual	9	prior	4	sector	1	transform	6
integral	9	negate	3	priority	7	secure	2	transit	5
integrate	4	network	5	proceed	1	seek	2	transmit	7
integrity	10	neutral	6	process	1	select	2	transport	6
intelligence	6	nevertheless	6	professional	4	sequence	3	trend	5
intense	8	nonetheless	10	prohibit	7	series	4	trigger	9
interact	3	norm	9	project	4	sex	3	ultimate	7
intermediate	9	normal	2	promote	4	shift	3	undergo	10
internal	4	notion	5	proportion	3	significant	1	underlie	6
interpret	1	notwithstanding	10	prospect	8	similar	1	undertake	4
interval	6	nuclear	8	protocol	9	simulate	7	uniform	8
intervene	7	objective	5	psychology	5	site	2	unify	9
intrinsic	10	obtain	2	publication	7	so-called	10	unique	7
invest	2	obvious	4	publish	3	sole	7	utilise	6
investigate	4	occupy	4	purchase	2	somewhat	7	valid	3
invoke	10	occur	1	pursue	5	source	1	vary	1
involve	1	odd	10	qualitative	9	specific	1	vehicle	8
isolate	7	offset	8	quote	7	specify	3	version	5
issue	1	ongoing	10	radical	8	sphere	9	via	8
item	2	option	4	random	8	stable	5	violate	9
job	4	orient	5	range	2	statistic	4	virtual	8
journal	2	outcome	3	ratio	5	status	4	visible	7
justify	3	output	4	rational	6	straightforward	10	vision	9
label	4	overall	4	react	3	strategy	2	visual	8
labour	1	overlap	9	recover	6	stress	4	volume	3
layer	3	overseas	6	refine	9	structure	1	voluntary	7
lecture	6	panel	10	regime	4	style	5	welfare	5
legal	1	paradigm	7	region	2	submit	7	whereas	5
legislate	1	paragraph	8	register	3	subordinate	9	whereby	10
levy	10	parallel	4	regulate	2	subsequent	4	widespread	8
liberal	5	parameter	4	reinforce	8	subsidy	6		
licence	5	participate	2	reject	5	substitute	5		
likewise	10	partner	3	relax	9	successor	7		
link	3	passive	9	release	7	sufficient	3		
locate	3	perceive	2	relevant	2	sum	4		
logic	5	percent	1	reluctance	10	summary	4		
maintain	2	period	1	rely	3	supplement	9		
major	1	persist	10	remove	3	survey	2		
manipulate	8	perspective	5	require	1	survive	7		
manual	9	phase	4	research	1	suspend	9		
margin	5	phenomenon	7	reside	2	sustain	5		
mature	9	philosophy	3	resolve	4	symbol	5		
maximise	3	physical	3	resource	2	tape	6		
mechanism	4	plus	8	respond	1	target	5		
media	7	policy	1	restore	8	task	3		
mediate	9	portion	9	restrain	9	team	9		
medical	5	pose	10	restrict	2	technical	3		
medium	9	positive	2	retain	4	technique	3		
mental	5	potential	2	reveal	6	technology	3		
method	1	practitioner	8	revenue	5	temporary	9		

Principles of Assessment

1) **Assessments are grounded in a thoughtful, standards-based curriculum and are managed as part of an integrated system** of standards, curriculum, assessment, instruction, and teacher development. Curriculum and assessments are organized around a set of learning progressions1 along multiple dimensions within subject areas. These guide teaching decisions, classroom-based assessment, and external assessment.

2) **Assessments include evidence of student performance** on challenging tasks that evaluate Common Core Standards of 21st century learning. Instruction and assessments seek to teach and evaluate knowledge and skills that generalize and can transfer to higher education and multiple work domains. They emphasize deep knowledge of core concepts and ideas within and across the disciplines, along with analysis, synthesis, problem solving, communication, and critical thinking. This kind of learning and teaching requires a focus on complex performances as well as the testing of specific concepts, facts, and skills.

3) **Teachers are integrally involved in the development and scoring of assessments.** While many assessment components can and will be efficiently and effectively scored with computer assistance, teachers will also be involved in the interim/benchmark, formative, and summative assessment systems so that they deeply understand and can teach the standards.

4) **Assessments are structured to continuously improve teaching and learning.** Assessment *as*, *of*, and *for* learning is designed to develop understanding of what learning standards are, what high-quality work looks like, what growth is occurring, and what is needed for student learning. This includes:
   - Developing assessments around learning progressions that allow teachers to see what students know and can do on multiple dimensions of learning and to strategically support their progress;
   - Using computer-based technologies to adapt assessments to student levels to more effectively measure what they know, so that teachers can target instruction more carefully and can evaluate growth over time;
   - Creating opportunities for students and teachers to get feedback on student learning throughout the school year, in forms that are actionable for improving success;
   - Providing curriculum-embedded assessments that offer models of good curriculum and assessment practice, enhance curriculum equity within and across schools, and allow teachers to see and evaluate student learning in ways that can feed back into instructional and curriculum decisions; and
   - Allowing close examination of student work and moderated teacher scoring as sources of ongoing professional development.

5) **Assessment, reporting, and accountability systems provide useful information on multiple measures that is educative for all stakeholders.** Reporting of assessment results is timely, specific, and vivid—offering specific information about areas of performance and examples of student responses along with illustrative benchmarks, so that teachers and students can follow up with targeted instruction. Multiple assessment opportunities (formative and interim/benchmark, as well as summative) offer ongoing information about learning and

improvement. Reports to stakeholders beyond the school provide specific data, examples, and illustrations so that administrators and policymakers can more fully understand what students know in order to guide curriculum and professional development decisions.

(Darling-Hammond, 2010)

1 Empirically-based learning progressions can visually and verbally articulate a hypothesis, or an anticipated path, of how student learning will typically move toward increased understanding over time with good instruction (Hess, Kurizaki, & Holt, 2009).

Unwrapping Standards

Step 1: Select the standard for the "unwrapping" process.

Standard:

Step 2: Concepts—Underline the key concepts, the important nouns or noun phrases
Step 3: Skills—Circle or use CAPITAL LETTERS to identify verbs.

Step 4: Create a Graphic Organizer
Next to each verb, list the approximate level of Bloom's Taxonomy of thinking skills.

Concepts (What Students need to know):	**Skills** (What student must be able to do):

Bloom's Level	**Graphic Organizer of "Unwrapped" Concepts and Skills**

Step 5: Determine Big Ideas—These are enduring understandings students will remember long after the unit of study.

1.
2.
3.

Step 6: Write Essential Questions—These Guide instruction and assessment for all tasks, and the big ideas are answers to the essential questions.

1.
2.
3.

From: Peery, et. al. ***Navigating the English Language Ares Common Core State Standards***. — Englewood, CO : Lead & Learn Press, 2011, p.9

Common Formative Assessments – What are they?

A. Lareau

- CFAs are teacher-created teacher owned assessments that are collaboratively scored and that provide immediate feedback to teachers and students.
- Formative: given before and during the teaching and learning process.
- CFAs are diagnostic intended to be used as a guide to improve teaching and learning
- CFAs are assessments for learning administered to all students in a grade level or course several times during a semester, trimester, or year.
- Items are collaboratively designed by participating teachers.
- Items are aligned to district and state tests and standards.
- Results of the CFAs are analyzed in collaborative teams.
- CFAs are collaboratively scored but not used to assign grades.
- Provides teachers with information they need to create appropriate work for groups of learners or individual students.
- Provides timely, specific, ongoing feedback to teachers.
- Allows teachers to assess their instruction.
- Increases the predictive value of how students will perform on the summative assessment.

Balanced Assessment System

By Purpose

	To plan learning *(prior to instruction)*	To support learning *(during instruction)*	To monitor learning *(between instruction)*	To verify learning *(after instruction)*
Formative Data *to quickly inform instruction*	Student learning goals, or student self-assessment	Feedback that informs both student and teacher in order to make real-time adjustments to teaching and learning	Feedback that allows teacher to see what progress has been made since last check-in	Feedback that confirms what the student knows and can do
Examples:	*-Teacher/Student discussion* *-First day observations*	*- Teacher/Student portfolio* *-Class blog; student journal*	*-Open questioning* *-Running records*	*-Exit activities* *-Portfolios*
Benchmark Data *to benchmark and monitor progress*	Data that shows a teacher the instructional starting point for a chapter, unit, semester, or year	Data that shows teacher what learning objectives have been mastered; what needs to be addressed next instructionally for individual students	Data that tracks student progress over time, providing periodic and multiple data points against benchmarks throughout the year. Can be used to promote program improvement in the short-term; instructional change; monitor student progress	Data that is used, along with other data points, to establish a grade or score. Can be used to make decisions about instruction, curriculum, and to make program adjustments
Examples:	*-Screener* *-Chapter pre-tests*	*-Graded class work* *-Curriculum based measures (CBM)* *-Running records*	*-Portfolios* *-Office discipline referrals* *-Curriculum based measures (CBM)*	*-Progress report* *-Interim assessment (post-test)*
Summative Data *to evaluate cumulative learning*	Data that aids teacher in planning future instruction; reflecting on general patterns; or establishing the big picture within a class of students	Data that informs classroom decisions such as groupings, alterations to curriculum maps, etc.	Data provides a snapshot (one point in time) of what students know and can do. Can be used to promote program improvement, curricular changes, instructional PD needs at school or classroom level	Standardized data is used to make decisions, typically on annual basis, at macro levels, about subgroups, schools, districts, states
Examples:	*-Prior year's AP Exams* *-Prior end of year scores*	*-Item analysis of prior summative test* *-End of unit assessments/grades*	*-Benchmark test scores* *-End of semester grades*	*- AYP reports* *-Suspension rates*

Please note: the examples are not an exhaustive list; also examples serve multiple purposes, not just those indicated in the above boxes.

Formative (Informal) Assessment Strategies

Most of these actives can also be thought of as engagement strategies in addition to assessing what students know and can do.

ACTIVITY	DESCRIPTION
Quick Write	Student writes for 2-3 minutes about what he heard from a lecture or explanation/read/learned. Could be an open ended question from teacher
12 Word Summary	In 12 words or less, have students summarize important aspects of a particular chunk of instruction or reading.
3-2-1	Students jot down 3 ideas, concepts, or issues presented. Students jot down 2 examples or uses of idea or concept. Students write down 1 unresolved question or a possible confusion.
Muddiest Point	Students are asked to write down the muddiest point in the lesson (up to that point, what was unclear)
Quick class check	Give students paper plates, index cards, whiteboard, or large sheets of paper when they enter. When asking a question have ALL students write the answer and at your signal, have ALL students hold up the plate (or whatever) so that you can see who/ how many got the answer. Discussion to elaborate can follow.
Class vote	Present several possible answers or solutions to a question or problem and have students vote on what they think is best.
Idea Wave	Each student lists 3-5 ideas about the assigned topic. One volunteer begins the "idea wave" by sharing his idea. The student to the right of the volunteer shares one idea; the next student to rights shares one idea. Teacher directs the idea wave until several different ideas have been shared. At the end of the formal idea wave, a few volunteers who were not included may contribute.
Tickets to enter and exit	Teacher asks students a specific question about the lesson. Students then respond on the ticket and gives to teacher, either on their way out or on their way in the next day. Teacher can then evaluate the need to re-teach or questions that need to be answered.
Four Corners	Teacher posts questions, concepts, or vocabulary words in each of the corners of the room. Each student is assigned a corner. Once in the corner, the students discuss the focus of the lesson in relation to the question, concept, or words. Students may report out or move to another corner and repeat. After students have moved, as a writing assignment they should be encouraged to reflect on changes in opinion or what they have learned.
Give One/Get One	Students are given papers and asked to list 3-5 ideas about the learning. Students draw a line after their last idea to separate his/her ideas from classmate's lists. Students get up and interact with one classmate at a time. Exchange papers, read your partner's list, and then ask questions about new or confusing ideas.
Concept Mapping	Explain/ model a concept map. After lecture, explanation, or reading, have students fill in concept map (partner or individually). Report out.
Flash Cards	After 10 minutes into a lecture or concept presentation, have students create a flash card that contains the key concept or idea. Toward the end of the class, have students work in pairs to exchange ideas and review the material.

Learning Cell	Students develop questions and answers on their own (possibly using the Q-Matrix). Working in pairs the first student asks a question and the partner answers and vice versa. Each student can correct the other until a satisfactory answer is reached. (Good way to encourage students to go back to the text book).
One Minute Paper	Teacher decides what the focus of the paper should be. Ask students "What was the most important thing you learned? What important question remains unanswered? Set aside 5-10 minutes of next class to discuss the results. May be used in the middle of a class also.
Signal Cards/thumbs up-thumbs down	Create cards to check for understanding. green means "I got it", yellow means "I'm not sure, Maybe", and blue means "I'm lost. I have questions"
Transfer and Apply	Students list what they have learned and how they might apply it to their real lives. Students list interesting ideas, strategies, concepts learned in class or chunk of class. They then write some possible way to apply this learning in their lives, another class, or in their community.
Circular check	Students in groups are given a problem with a definite answer (good for math & science). First students completes first step without contribution from others in group and passes it to the next student. Second student corrects any mistakes and completes next step, again with out input from the group. Problem gets passed to next student and the process continues until the group has the correct answer.

Data Teams

Tools for the 5 Steps

Data Team Process: Start to Finish

1. **Examine expectations.** Begin with a small time element: a month, unit, chapter, or quarter.
   a. Examine the specific expectations for that specific time period (unit, quarter, month, etc.) by referring to curriculum guide, state framework, and standards documents.
   b. Formulate questions.
      i. What concepts and skills must students master as a result of your teaching during this time period (quarter, month, chapter, etc.)?

2. **Develop curriculum map.**
   a. What does your year-long map look like?
   b. How will you strategically place/schedule content and concepts during the year so that students will have optimal time to understand concepts and apply skills?

3. **Create a common post-assessment.** This will be administered at the conclusion of the teaching time (unit, quarter, month) based on what students must master (Power Standards).

4. **Administer the common post-assessment BEFORE teaching.** At this time it acts as a pre-assessment.
   a. What foundation do students already have?
   b. What knowledge, understanding, and skills do students already have about the topic that they are about to study?
   c. Which students are starting absolutely at square one in terms of understanding the concepts and/or applying the skills?
   d. Send pre-assessment data to Data Team leader.

5. **Go through the five formal and definitive steps of the Data Team process:**
   a. *Step 1—Collect and chart data.*
      This data is generated from the pre-assessment. Data Team leader prepares a simple graph with pre-assessment data, including total number of students, students who are proficient or higher, students who are not proficient, and percentage of students who are proficient or higher.

Teachers' names	# students who took assessment	# students proficient and higher	% students proficient and higher	# students not proficient	# and names of students likely to be proficient at end of instructional time—*students already close*	# and names of students likely to be proficient at end of instructional time—	# and names of students not likely to be proficient—*intervention group in need of extensive support*
Manuel	26	7	27%	19			
Marie	29	4	14%	25			
Thomas	32	3	9%	29			
Angela	31	8	26%	23			
Totals	118	22	19%	96			

   b. *Step 2—Analyze strengths and obstacles.*
      With actual student papers in hand, examine papers for what students are able to do, as well as for what is missing. What is present becomes strengths. What is missing becomes obstacles or challenges, which then become the priority—the FOCUS—for the teaching unit.

Strengths of student work (evidence)	Obstacles/challenges (content/skills in which students have little or no foundation)
[This information becomes the basis of your celebration.]	[This information determines your priorities or focus.]

c. *Step 3—Establish goals: set, review, revise.*
Use an exact form of goal statement to include all parts of the information needed in a SMART (Specific, Measurable, Achievable, Relevant, and Timely) goal.

Example:
% of Grade 7 students scoring proficient and higher in **Mathematics** will increase from **28%** to **73%** by the **end of October** as measured by a **team-created assessment** administered on **October 30 (31 make-up date)**.

d. *Step 4—Select instructional strategies (what will you do for YOUR students?)*
i. What concepts are the focus of the specific time period (unit, quarter, month, etc.)?
ii. What are student intervention needs? Drastic measures requiring drastic action?
iii. What strategies will you implement that will have greater impact student achievement?
iv. Keeping in mind the effective teaching strategies, which techniques will you select to focus on? Which strategies will help the most students and maximize learning?

Techniques:

Comparing
Classifying
Creating Metaphors
Creating Analogies
Summarizing
Note-Taking
Effort
Recognition
Homework
Practice
Nonlinguistic Representation
Cooperative Groups
Setting Objectives
Providing Feedback
Generating Hypotheses
Testing Hypotheses
Cueing
Questioning
Advance Organizers (graphic organizers)
Writing

e. *Step 5—Determine results indicators.*
i. "When WE implement the strategies/techniques identified in step 4, then WE expect the following in terms of what students will demonstrate":

Students will demonstrate:
- Understanding of concepts and skills (e.g., math)
- *Increased confidence*
- Increased application when using the comparing strategy in all subjects
- Improved ability to think in more complex ways

Teach and then assess (using formative assessment techniques; part or all of the pre-/post-assessment is appropriate to see students' learning in relation to proficiency of expected outcomes). Using a variety of instructional techniques and learning activities for students, begin the instructional cycle again.

1. **Administer and score post-assessment** created before instruction took place.
2. **Submit data to Data Team leader** to prepare for Data Team meeting.
3. **Meet as a team/department** to determine if goal was met, and next steps.
4. **Examine curriculum map** for next unit, month, quarter, etc. Begin cycle again; see step 1 and repeat steps.

Data Team Meeting Steps and Structure

Step 1: Collect and Chart Data

Example: **Team meeting examining pre-assessment data prior to focused teaching**

Teachers' names	# students who took assessment	# students proficient and higher	% students proficient and higher	# students not proficient	# and names of students likely to be proficient at end of instructional time—*students already close*	# and names of students likely to be proficient at end of instructional time—	# and names of students not likely to be proficient—*intervention group in need of extensive support*
Betty	25	19	76%	6			
Tom	27	15	55%	12			
Susan	25	12	48%	13			
Diane	26	16	61%	10			
Totals	103	62	60%	41			

Teachers must come prepared for the 60–90 minute meeting, complete with:

- Student papers
- Scoring guide or measurement scale
- Papers arranged from most proficient to least proficient
- Ideas about students who are proficient and higher (strengths)
- Ideas about students who are not proficient (what are their obstacles, misconceptions?)

Data Team leader will:

- Provide table or graph with submitted data entered, complete with team totals, %

Steps for entering data:

- Enter names
- Enter # of students who participated in assessment
- Enter # of students who are proficient and higher
- Enter % of students who are proficient and higher
- Compute totals

Data Team leader will ask the following questions:

- What is the total percentage of [grade 6] students who are proficient and higher? (60%)
- What is the total percentage of [grade 6] students who are not proficient? (40%)
- Convert the 40% to actual number of students. (41)

Data Team Meeting Steps and Structure

Step 1: Collect and Chart Data (Continued)

5 4 3-0

Teachers' names	# students who took assessment	# students proficient and higher	% students proficient and higher	# students not proficient	# and names of students likely to be proficient at end of instructional time—*students already close*	# and names of students likely to be proficient at end of instructional time—	# and names of students not likely to be proficient—*intervention group in need of extensive support*
Totals							

Enter data points:

- Percentage of group proficient and higher _____
- Percentage of group not proficient _____
- Actual number of students proficient and higher _____
- Actual number of students not proficient _____

Data Team Meeting Steps and Structure

Step 2: Analyze Strengths and Obstacles

Example:

Strengths	Obstacles
Clearly articulated steps	Inability to organize ideas and steps
Multiple problem-solving strategies used	Inability to write and verify choice of problem-solving strategies
Vocabulary/math terms concise	Lack of vocabulary/math terms
	Confusion about problem-solving strategies

Examine student work that is proficient and higher. Consider:

- Strengths
- Consistent skills
- Anything that stands out

Examine student work that is not proficient. Consider:

- Weaknesses
- Inconsistent skills
- Trends, patterns of failure to apply certain skills
- Misconceptions about problem-solving processes
- Issues related to certain subgroups, such as ELL, gender, ethnicity
- Students consistently rated not proficient

List findings on T-chart.

Examine student work to identify strengths and obstacles.

- List strengths of students who were proficient and higher by examining student work.
- List obstacles or reasons why students did not achieve proficiency. Where were there errors? Is there a trend? Are there common errors? What is preventing these students from becoming proficient? Are there misconceptions about concepts or skills?

Strengths	Obstacles

Data Team Meeting Steps and Structure

Step 3: Establish Goals: Set, Review, Revise

Example:

Goal Statement: The percentage of grade 6 students proficient and higher in math problem solving will increase from 32% to 75% as measured by a math performance assessment focusing on short-constructed response, administered on February 15 or 16.

Goal percent 75%

Current results 68%

At this point, the goal has been set.

- What are the ramifications if the goal is changed to reflect a higher or lower outcome?
- Is the goal still relevant and necessary?
- Is this skill still considered very important?
- Are there other urgent needs to focus on?
- Is it possible to reset the goal higher? If so, is it achievable?
- Is the time frame too short, just right, or too long?
- Which students are consistently not proficient?

SMART Goal Statement:

Percentage of [student group] scoring proficient and higher in [content area] will increase from [current reality %] to [goal %] by the end of [month or quarter] as measured by [assessment tool] administered on [specific date—two consecutive days].

Example:

Percentage of grade 6 students scoring proficient and higher in writing will increase from 13% to 58% by October 30 as measured by a teacher-created writing prompt assessment administered on October 30 or 31.

SMART Goal #1:

Percentage of _____ scoring proficient and higher in _____

will increase from _____% to _____% by _____

as measured by _____ administered on _____ .

Data Team Meeting Steps and Structure

Step 3: Establish Goals: Set, Review, Revise (Continued)

SMART Goal #2:

Percentage of _____ scoring proficient and higher in _____

will increase from _____% to _____% by the end of _____

as measured by _____ administered on _____.

A new goal is set only if the original goals were not met.

Met Goal: ☐ Yes ☐ No

If the goal was not met, record margin short of goal = _____

Ask questions:

- What are the ramifications if the goal is changed to reflect a higher or lower outcome?
- Is the goal still relevant and necessary?
- Is this skill still considered very important?
- Are there other urgent needs to focus on?
- Is it possible to reset the goal higher? If so, is it achievable?
- Is the time frame too short, just right, or too long?
- Which students are consistently not proficient?

Data Team Meeting Steps and Structure

Step 4: Select Instructional Strategies

Example:

Possible Instructional Strategies
X Teachers will use a graphic organizer to help students show how to solve a multistep word problem using computation and graphic representation.
Post the performance assessment scoring guide in the classroom.
X Teachers will help students improve their ability to solve multistep word problems by having them practice at home the processes they learn in school.
X Break the steps down into smaller steps and focus on each small step. Reinforce this as focused practice in class and plan homework that will require students to focus on brevity and specificity of correct response.
X Compare other problem-solving strategies step by step to identify the critical point or points at which the written responses are similar or different.
Present each math problem-solving strategy to students (one at a time) and have them write about each strategy.

X = Instructional strategy selected by Data Team

Brainstorm and discuss possible strategies using this process:

- Team members brainstorm and examine effective teaching strategies and techniques (experience- and research-based) and determine which techniques, when implemented appropriately, will have the desired outcome.
- Refer to the list of effective teaching techniques (Marzano's *Classroom Instruction That Works*), to be selected from on the basis of meeting specific objectives related to student understanding of concepts and application of skills.
- Analyze each possible or suggested strategy in terms of impact on student learning.
- Consider what other teachers are implementing to cause a high degree of success; replicate effective practices.
- Only select strategies that teachers are responsible for.
- Avoid considering strategies outside your sphere of influence or immediate accountability, such as "Parent needs to become more involved" or "Students will be enrolled in after-school program."

Agreement:

- Have team members collaborate on choosing the one or two strategies that they all agree to implement during the next teaching period.
- Mark the chosen strategies with an *X* and give team members copies of those strategies.
- Model *all* strategies that the team has agreed upon. So that the task of modeling does not always fall to the Data Team leader, ask other team members to demonstrate a particular strategy. What will the teacher do as he or she uses this strategy?

Data Team Meeting Steps and Structure

Step 4: Select Instructional Strategies (Continued)

Possible Instructional Strategies

Brainstorm and discuss possible strategies:

- Analyze each possible or suggested strategy in terms of impact on student learning.
- Consider what other teachers are implementing to cause a high degree of success; replicate effective practices.
- Only select strategies that teachers are responsible for.
- Avoid considering strategies outside your sphere of influence or immediate accountability, such as "Parent needs to become more involved" or "Students will be enrolled in after-school program."

Agreement:

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- Mark the chosen strategies with an *X* and give team members copies of those strategies.
- Model *all* strategies that the team has agreed upon. So that the task of modeling does not always fall to the Data Team leader, ask other team members to demonstrate a particular strategy. What will the teacher do as he or she uses this strategy?

Effective Instructional Strategies

Category:	Achievement Gain (Percentiles):
1. Identifying similarities and differences	45
2. Summarizing and note-taking	34
3. Reinforcing effort and providing recognition	29
4. Homework and practice	28
5. Nonlinguistic representations	27
6. Cooperative learning	27
7. Setting objectives and providing feedback	23
8. Generating and testing hypotheses	23
9. Questions, cues, and advance organizers	22

Source: Marzano, Pickering, & Pollock, *Classroom Instruction That Works* (2001).

Effective Professional Practices

- More writing, thinking, analysis, and reading in every content area
- More frequent feedback (associated with improved student work ethic, motivation, and performance)
- Collaborative structures for analysis of data
- Creation and use of data teams
- Discussion of, review of, and focus on actual student work (helps close the learning gap for all cohort groups)

Source: White, *Show Me the Proof!* (2005b), p. 3.

Data Team Meeting Steps and Structure

Step 5: Determine Results Indicators

Results indicators complete the statement: "When this strategy or these strategies are implemented, we expect to see the following evidence . . . and students will be able to . . ."
OR "If we do _____, then we expect to see _____ in student achievement."

When establishing the results indicators for the chosen strategies, keep in mind:

1. Whether the strategy is actually being implemented.
2. If the strategy is having the intended effect on student learning and improved performance.

Examples:

Selected instructional strategies from step 4:

X Teachers will use a graphic organizer to help students show how to solve a multistep word problem using computation and graphic representation.

X Teachers will help students improve their ability to solve multistep word problems by having students practice at home the processes they learn in school.

Suggested results indicators for these strategies:

- More students will be proficient/meet instructional goal.
- More students will understand how to solve a multistep word problem.
- More students will be able to write a short-constructed-response that includes correct process steps and a correct explanation.
- Planning for math instruction includes a daily modeling step.
- Modeling of short-constructed responses in mathematics, using graphic organizers, is done on a daily basis by each team teacher.
- Students are able to recite each of the steps in writing a short-constructed response.
- Students apply a graphic organizer to short-constructed responses on independent work.
- Students are able to write each of the steps in a short-constructed response.

Suggested results indicators—Other content-area/grade-level examples:

- % increase of students appropriately applying reading comprehension skills
- Addition of reading intervention program for K–2 students
- Time devoted to math instruction increased by 15 minutes per day
- Students responsible for completing one science performance assessment per semester
- At least 10% increase in the total number of grade 7 students proficient and higher as measured by a state writing assessment

Step 5: Determine Results Indicators (Continued)

Results indicators complete the statement: "When this strategy is implemented, we expect to see the following evidence . . . ."

Strategy selected in step 4:

Results indicators (what your team expects to see as a result of implementing the chosen strategy; two or three are suggested):

Strategy selected in step 4:

Results indicators (what your team expects to see as a result of implementing the chosen strategy; two or three are suggested):

Effective Teaching Strategies (ETS) Learning Tracker

Instructional Strategy	*Seminar Example*	*Ideas for Classroom Applications*
Identifying Similarities and Differences		
Summarizing and Notetaking		
Reinforcing Effort and Providing Recognition		
Homework and Practice		
Nonlinguistic Representations		
Cooperative Learning		
Setting Objectives and Providing Feedback		
Generating and Testing Hypotheses		
Questions, Cues, and Advanced Organizers		
Purposeful Non-Fiction Writing		

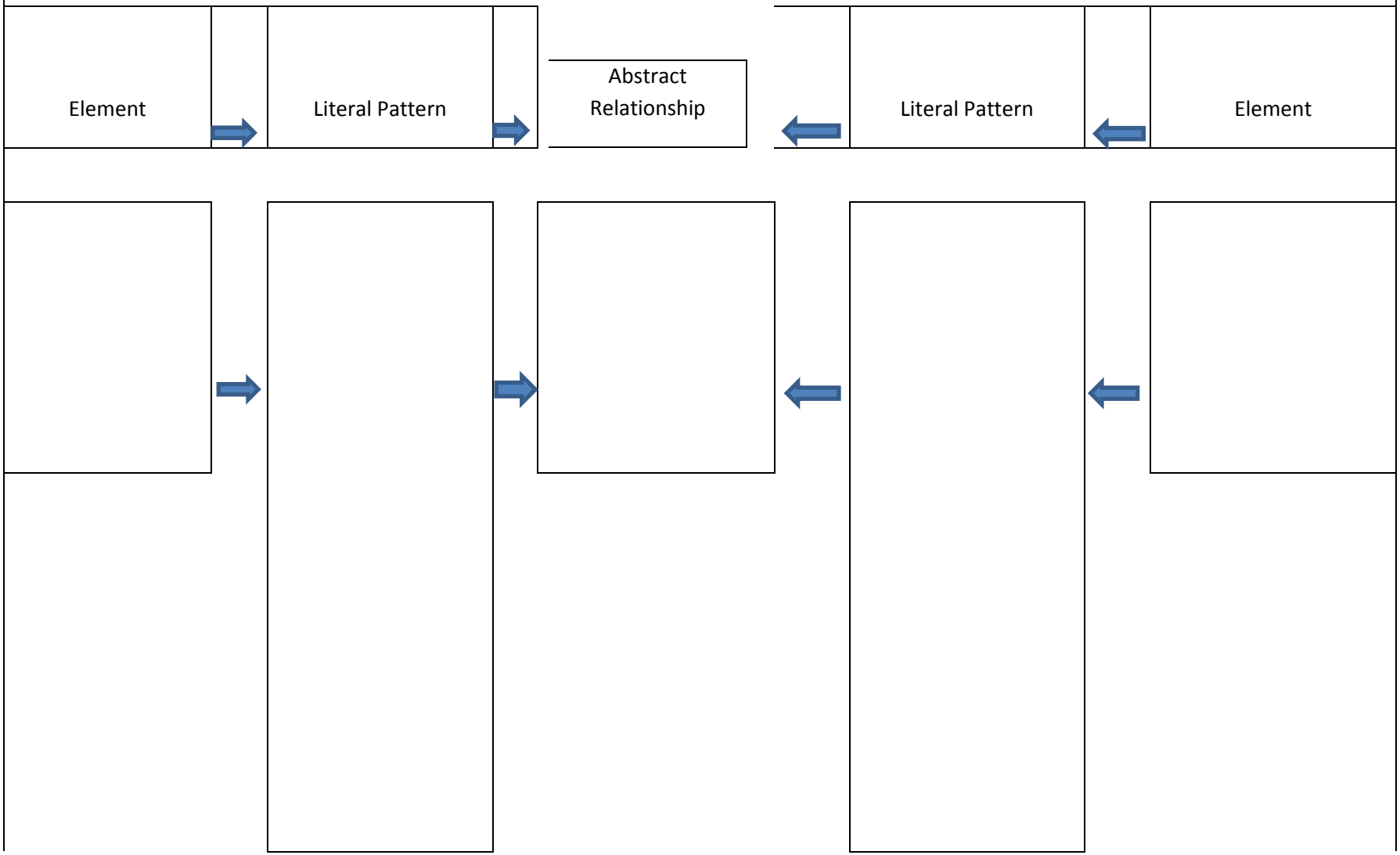
Blackline Master 2
Comparing Organizer

Items to be compared				
Characteristics	A.	B.	C.	
1				☐ Similarities ☐ Differences
2				☐ Similarities ☐ Differences
3				☐ Similarities ☐ Differences
4				☐ Similarities ☐ Differences
5				☐ Similarities ☐ Differences
6				☐ Similarities ☐ Differences
Conclusions				

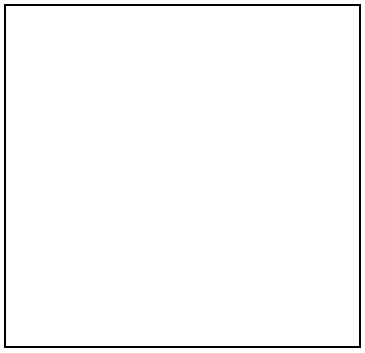
Physical Education Matrix

	Baseball	Soccer	Tennis	Basketball	Football
# on Team					
Equipment needed					
Time for game					
Scoring System					
Season					

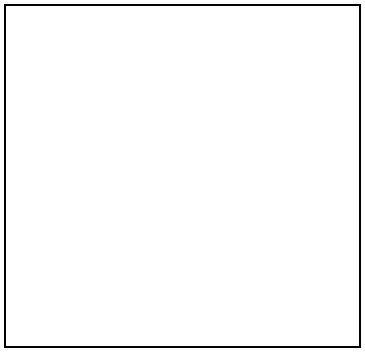
Blackline Master 5
Metaphor Diagram



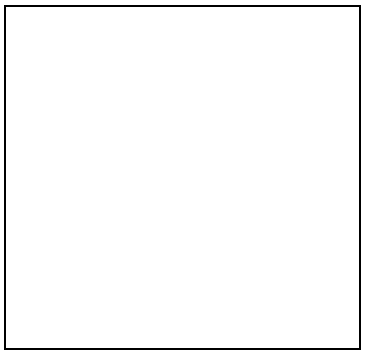
Graphic Organizers for Analogies



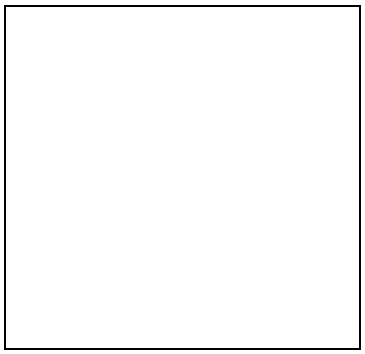
Is to



Relationship _____



Is to



Common Analogy Forms

Category	Sample Analogy
Synonyms	End: terminate as
Antonyms	Artificial: real as
Worker and Tool Used	Photographer: camera as
Tool/Object Used on	Scissors: cloth as
Worker/Objects Created	Author: book as
Cause and Effect	Negligence: accident as
Effect and Cause	Tsunami: earthquake as
Material Used/End Product	Lumber: house as
Function of a Tool	Shovel: dig as
Part to Whole	Stem: plant as
Whole to Part	Salad: lettuce as
Person/What s/he looks for	Mineralogist: ore as
Person/What s/he avoids	Student: failure as
Masculine/Feminine	Host: hostess as
Age	Infant; adolescent as
Person/Characteristic	Louis: friendly as
Symbol/ What it Stands for	Rose: love as
Mathematical Relationship	Seven: forth-nice as
Measurement	Mile: distance as
Classification/Type	Dog: Border Collie as
Degree of Intensity	Cold: pneumonia as

Identify three concepts, vocabulary words, or other content from your curriculum. Create analogies that you can use in your classroom.

Type	Content	Example of Analogy
Mathematical	Fractions	
_____	_____	1: 4 as 1/4 is to _____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Adapted from www.ocde.k12.ct

Figure 3.3
Summarizing Strategy: Sample Passage

Why Does Studying Solar Wind Tell Us About the Origin of Our Solar System?

Most scientists believe our solar system was formed 4.6 billion years ago with the gravitational collapse of the solar nebula, a cloud of interstellar gas, dust, and ice created from previous generations of stars. As time went on the grains of ice and dust bumped into and stuck to one another, eventually forming the planets, moons, comets, and asteroids as we know them today.

How this transition from the solar nebula to planets took place has both fascinated and mystified scientist. Why did some planets, like Venus, develop thick, poisonous atmospheres, while others, like Earth, became hospitable to life? Partial answers are available from the chemical composition of the solar system bodies, which scientist find are significantly different from one another. This information helps them model various processes for planet formation, but they are still hampered by one major question:

What was the original solar nebula made of?

Our sun may contain the answer. It contains over 99 percent of all the material in the solar system and, while its interior has been modified by nuclear reactions, its outer layers are believed to be composed of the same material as the original solar nebula. By collecting and studying solar wind, the material flung from the sun, scientist may find more answers to this mysterious puzzle.

FIGURE 7.4
Effort and Achievement Chart

Student: Gabriela Azabo	Assignment	Effort	Achievement
Fri,. Oct. 20	Homework Practice solving linear functions	2	1
Wed., Oct. 25	Quiz: Graphs of linear functions	4	2
Thurs., Oct. 26	In-class practice: solving linear equations	4	3
Tues,. Oct. 31	Quiz: Solving linear equations	4	4
Wed., Nov. 1	Homework Properties of linear equations	3	2
Fri., Nov. 3	In-Class assignment: Properties of linear equations	2	2
Tues., Nov 7	Homework Solving linear equations	2	2

Getting Acquainted With the Essential Nine

Laura Varlas

Researchers at Mid-continent Research for Education and Learning (McREL) have identified nine instructional strategies that are most likely to improve student achievement across all content areas and across all grade levels. These strategies are explained in the book Classroom Instruction That Works by Robert Marzano, Debra Pickering, and Jane Pollock.

1. Identifying similarities and differences
2. Summarizing and note taking
3. Reinforcing effort and providing recognition
4. Homework and practice
5. Nonlinguistic representations
6. Cooperative learning
7. Setting objectives and providing feedback
8. Generating and testing hypotheses
9. Cues, questions, and advance organizers

The following is an overview of the research behind these strategies as well as some practical applications for the classroom.

1. Identifying Similarities and Differences

The ability to break a concept into its similar and dissimilar characteristics allows students to understand (and often solve) complex problems by analyzing them in a more simple way. Teachers can either directly present similarities and differences, accompanied by deep discussion and inquiry, or simply ask students to identify similarities and differences on their own. While teacher-directed activities focus on identifying specific items, student-directed activities encourage variation and broaden understanding, research shows. Research also notes that graphic forms are a good way to represent similarities and differences.

Applications:

- Use Venn diagrams or charts to compare and classify items.
- Engage students in comparing, classifying, and creating metaphors and analogies.

2. Summarizing and Note Taking

These skills promote greater comprehension by asking students to analyze a subject to expose what's essential and then put it in their own words. According to research, this requires substituting, deleting, and keeping some things and having an awareness of the basic structure of the information presented.

Applications:

- Provide a set of rules for creating a summary.
- When summarizing, ask students to question what is unclear, clarify those questions, and then predict what will happen next in the text.

Research shows that taking more notes is better than fewer notes, though verbatim note taking is ineffective because it does not allow time to process the information. Teachers should encourage and give time for review and revision of notes; notes can be the best study guides for tests.

Applications:

- Use teacher-prepared notes.
- Stick to a consistent format for notes, although students can refine the notes as necessary.

3. Reinforcing Effort and Providing Recognition

Effort and recognition speak to the attitudes and beliefs of students, and teachers must show the connection between effort and achievement. Research shows that although not all students realize the importance of effort, they can learn to change their beliefs to emphasize effort.

Applications:

- Share stories about people who succeeded by not giving up.
- Have students keep a log of their weekly efforts and achievements, reflect on it periodically, and even mathematically analyze the data.

According to research, recognition is most effective if it is contingent on the achievement of a certain standard. Also, symbolic recognition works better than tangible rewards.

Applications:

- Find ways to personalize recognition. Give awards for individual accomplishments.
- “Pause, Prompt, Praise.” If a student is struggling, pause to discuss the problem, then prompt with specific suggestions to help her improve. If the student's performance improves as a result, offer praise.

4. Homework and Practice

Homework provides students with the opportunity to extend their learning outside the classroom. However, research shows that the amount of homework assigned should vary by grade level and that parent involvement should be minimal. Teachers should explain the purpose of homework to both the student and the parent or guardian, and teachers should try to give feedback on all homework assigned.

Applications:

- Establish a homework policy with advice—such as keeping a consistent schedule, setting, and time limit—that parents and students may not have considered.
- Tell students if homework is for practice or preparation for upcoming units.

- Maximize the effectiveness of feedback by varying the way it is delivered.

  Research shows that students should adapt skills while they're learning them. Speed and accuracy are key indicators of the effectiveness of practice.

  Applications:

- Assign timed quizzes for homework and have students report on their speed and accuracy.
- Focus practice on difficult concepts and set aside time to accommodate practice periods.

5. Nonlinguistic Representations

According to research, knowledge is stored in two forms: linguistic and visual. The more students use both forms in the classroom, the more opportunity they have to achieve. Recently, use of nonlinguistic representation has proven to not only stimulate but also increase brain activity.

Applications:

- Incorporate words and images using symbols to represent relationships.
- Use physical models and physical movement to represent information.

6. Cooperative Learning

Research shows that organizing students into cooperative groups yields a positive effect on overall learning. When applying cooperative learning strategies, keep groups small and don't overuse this strategy—be systematic and consistent in your approach.

Applications:

- When grouping students, consider a variety of criteria, such as common experiences or interests.
- Vary group sizes and objectives.
- Design group work around the core components of cooperative learning—positive interdependence, group processing, appropriate use of social skills, face-to-face interaction, and individual and group accountability.

7. Setting Objectives and Providing Feedback

Setting objectives can provide students with a direction for their learning. Goals should not be too specific; they should be easily adaptable to students' own objectives.

Applications:

- Set a core goal for a unit, and then encourage students to personalize that goal by identifying areas of interest to them. Questions like “I want to know” and “I want to know more about . . .” get students thinking about their interests and actively involved in the goal-setting process.
- Use contracts to outline the specific goals that students must attain and the grade they will receive if they meet those goals.

Research shows that feedback generally produces positive results. Teachers can never give too much; however, they should manage the form that feedback takes.

Applications:

- Make sure feedback is corrective in nature; tell students how they did in relation to specific levels of knowledge. Rubrics are a great way to do this.
- Keep feedback timely and specific.
- Encourage students to lead feedback sessions.

8. Generating and Testing Hypotheses

Research shows that a deductive approach (using a general rule to make a prediction) to this strategy works best. Whether a hypothesis is induced or deduced, students should clearly explain their hypotheses and conclusions.

Applications:

- Ask students to predict what would happen if an aspect of a familiar system, such as the government or transportation, were changed.
- Ask students to build something using limited resources. This task generates questions and hypotheses about what may or may not work.

9. Cues, Questions, and Advance Organizers

Cues, questions, and advance organizers help students use what they already know about a topic to enhance further learning. Research shows that these tools should be highly analytical, should focus on what is important, and are most effective when presented before a learning experience.

Applications:

- Pause briefly after asking a question. Doing so will increase the depth of your students' answers.
- Vary the style of advance organizer used: Tell a story, skim a text, or create a graphic image. There are many ways to expose students to information before they “learn” it.

Source: Adapted from *Classroom Instruction That Works* by R. J. Marzano, D. J. Pickering, and J. E. Pollock, 2001, Alexandria, VA: ASCD.