Data Teams
Overview for Tiered Instruction

Anderson School District Two

Data Teams SnapShot

- **Students will take pre-assessment**
- **Teachers, coaches, and administrators will analyze results and make next-step decisions.**
- **Teachers will plan and create formative assessments.**
- **The Data Team will monitor progress and adjust units based on data from formative assessments.**
- **The Data Team will plan the timeline for summative assessments.**
- **After administering the summative assessments, the Data Team will reflect and make adjustments based on student data.**

Team Members: Grade level teachers, Coaches, Special Services(if needed), School Counselors and Administration

DATA TEAMS

Learning is our Purpose

In Anderson School District Two, we acknowledge that the fundamental purpose of our schools is to help all students achieve high levels of understanding. Therefore, we are willing to examine our practices and their impact on learning. We will develop and make use of highly effective Data Team communities to ensure the highest quality of instruction is provided to every student. Also, students will receive appropriate, research-based instructional strategies. Instruction will be monitored and adjusted, as needed, using a regular cycle of data analysis by each team.

Furthermore, to help us achieve this concept, schools will build shared knowledge on the SCCCR and develop and utilize common formative assessments, provide a system of Intervention and utilize data to adjust instruction to meet the needs of all students.

Building a Collaborative Culture Through High Performing Teams

We are devoted to working together to attain a high standard of learning for all. We will develop a collaborative culture through the development of high-performance teams. To help us realize this vision schools will ensure that collaborative teams meet regularly to work interdependently to clarify what students must learn, gather evidence of student learning, analyze the evidence, identify most effective instructional practices/strategies, develop the capability of all team members, and work to achieve their SMART goals.

Focus on Results

We assess our efficacy based on results rather than goals. Individuals, teams, and schools obtain essential data and information and use that information to encourage uninterrupted improvement. To achieve this, schools will frequently analyze data from common formative assessments in the cycle of inquiry to provide appropriate instruction and support for all students.

Adapted from Red Clay Consolidated School District

Data Teams Overview

Fundamental Assumptions:

1. We can make a difference: Our schools can be more effective.
2. Improving our people is the key to improving our schools.
3. Significant school improvement will impact teaching and learning.

Learning is the primary purpose of school.

The Big 3:

1. Focus on learning
2. Collaboration
3. Focus on results

What is Collaboration:

A **methodical** process in which we work together **interdependently** to evaluate and **influence** professional practice in order to improve our individual and collective results.

The myth about Collaboration:

People enjoy collaborating. People, in general, are agreeable to one another. This is not Collaboration. Collaboration is a challenging task and requires time, practice, and accountability. Effective Collaboration is not something people seek or enjoy. Leaders attempting to develop a collaborative environment in their school must understand that only giving people time will not create the environment they envision. In order to be successful, collaborative meetings need to be focused and result in quantifiable actions. Collaboration takes time, persistence, and coaching.

Simultaneous Loose-Tight Leadership and Culture

Simultaneous loose *and* tight cultures establish exact boundaries and significances that enable individuals to work within established boundaries creatively and autonomously.

- DuFour & DuFour (2012); Marzano & Waters (2009)

Empowerment:

Effective equality does not mean encouraging people to go off and do whatever they want. It means creating conditions that help people thrive. Those conditions include:

1. Establishing clear purpose, priorities, and boundaries allows people to be creative and autonomous within clearly established boundaries.
2. Providing teachers with access to the resources that enable them to make educated decisions rather than sharing opinions.
3. Engaging them in establishing clear, clear benchmarks so they can monitor their progress.
4. Guaranteeing they have relevant and timely data that informs their practice and allows them to make adjustments.
5. Building the capacity of teachers to be effective in what they are attempting to do by providing them with training, support, and resources that lead to success.

Empowerment means establishing a culture in which people are hungry for evidence and are willing to face the brutal facts when things do not go as hoped. (DuFour & Marzano, 2011)

Questions for DATA TEAMSs :

1. What do we want our students to know? What understanding, skills, must all students

obtain as a result of this grade this unit we are about to teach? What systems have we put in place to ensure we are providing every student with access to a viable curriculum regardless of the teacher to whom that student might be assigned?

   a. Identify standards in SCCCR which teams will work collaboratively to teach
   b. Identify the nature and breadth of standards
   c. Articulate levels of knowledge and learning progress for standards.

2. How will we know if our students are learning? How can we check for understanding on an ongoing basis in our classrooms? How will we gather evidence of each student's proficiency as a team? What measures will we establish to assess the quality of student work? How can we be confident we can apply the criteria consistently?

   a. Develop proficiency scales for each standard
   b. Develop common formative assessments using proficiency scales
   c. Employ the concept of unidimensionality (one standard assessed) when designing and scoring common formative assessments. We may use multidimensional (two or more standards) evaluations.

Make use of lesson study, action research, and instructional round tables (members participate) to monitor instructional effectiveness and make instructional adjustments.

3. How will we take action when students do not learn? What measures can we put in place for a student who struggles with additional support for learning in a way that is systematic rather than random? How can we provide students with many opportunities to validate learning?

   a. Differentiated instruction – flexible intervention groups
   b. School-wide RTI/MTSS based on standards

4. How will we improve and extend the learning for proficient students? How can we differentiate instruction so the needs of all students are being met?
   a. Provide enrichment activities in each lesson based on student proficiency.
   b. School-wide enrichment based on standards

5. How will we engage in instruction and professional development to ensure that we are collectively answering these questions?

   a. Job-embedded PD, research-based strategies
   b. develop shared knowledge before making decisions, make decisions based on research and evidence, not opinion.

Through the Data Teams' actions that are based on these questions, they will be better able to align their daily work and professional development needs with the specific needs of students. Through this collaborative inquiry process, the teachers gain a more in-depth knowledge of their students, pedagogy, and content. Professional development becomes job-embedded

rather than a stand-alone event and is closely connected to our students' specific needs as exhibited by their data. The benefit of this work, and how we evaluate our effectiveness, is the success of our students.

DATA TEAMS:

BUILDING SHARED KNOWLEDGE – participating in collective inquiry – LEARNING together. If people make decisions based on the collective study of the same pool of information, they increase the likelihood that they will arrive at the same decision (DuFour & DuFour, 2012, personal communication).

Characteristics of Effective DATA TEAMSs:

1. Shared Mission, Vision, and Goals: District-wide and school-wide
2. Collaborative Culture: We are professionals in a learning community that works in teams and share a common purpose. We learn from each other and create a momentum that drives improvement. We build within the organization the structure of collaborative work and learning effective and productive. There should be mutual accountability for student achievement among all team members.
3. Collective Inquiry: People in a learning community question the current practice, seek new techniques of teaching (research-based)and learning, test the methods, and reflect on the results
4. Action Orientation/Experimentation: We frequently turn our learning and insights into action. We recognize the importance of engagement and experience in learning and in testing new ideas.
5. Commitment to Continuous Improvement: We are not content with the status quo and continually seek ways to bring present reality to the future ideal.
6. Results Orientation: Professionals in a learning organization recognize that no matter how well-intentioned the efforts, the only valid judgment of improvement is observable and measurable results. Assessment and re-evaluation are the keys to continued improvement.
7. Authentic Assessment: Teachers in the community are collectively accountable for improving student achievement by using assessments that give feedback on student learning and teaching effectiveness. These assessments are appreciated because they are tools to improve student learning.
8. Self-Directed Reflection: Teams establish a feedback loop of goal-setting, planning, standards, and evaluation, driven by the needs of both teachers and students.
9. Stable Settings: The best teams cannot function within a dysfunctional school. Effective teams require dedicated time and space for their collaborative work to take place.
10. Strong Leadership Support: Successful teams are supported by their school leaders who build a climate of openness and trust in the school, empower teams to make decisions based on students' needs.

DATA  Classroom  Instruction Student Achievement

"Talking is not doing. Planning is not doing. Goal setting is not doing. Training is not doing. Even directing resources to support a plan is not doing. It is not until people are *doing differently* that any organization can expect different results." (Rick DuFour)

DATA TEAMS Structure Example

DATA TEAMS Components

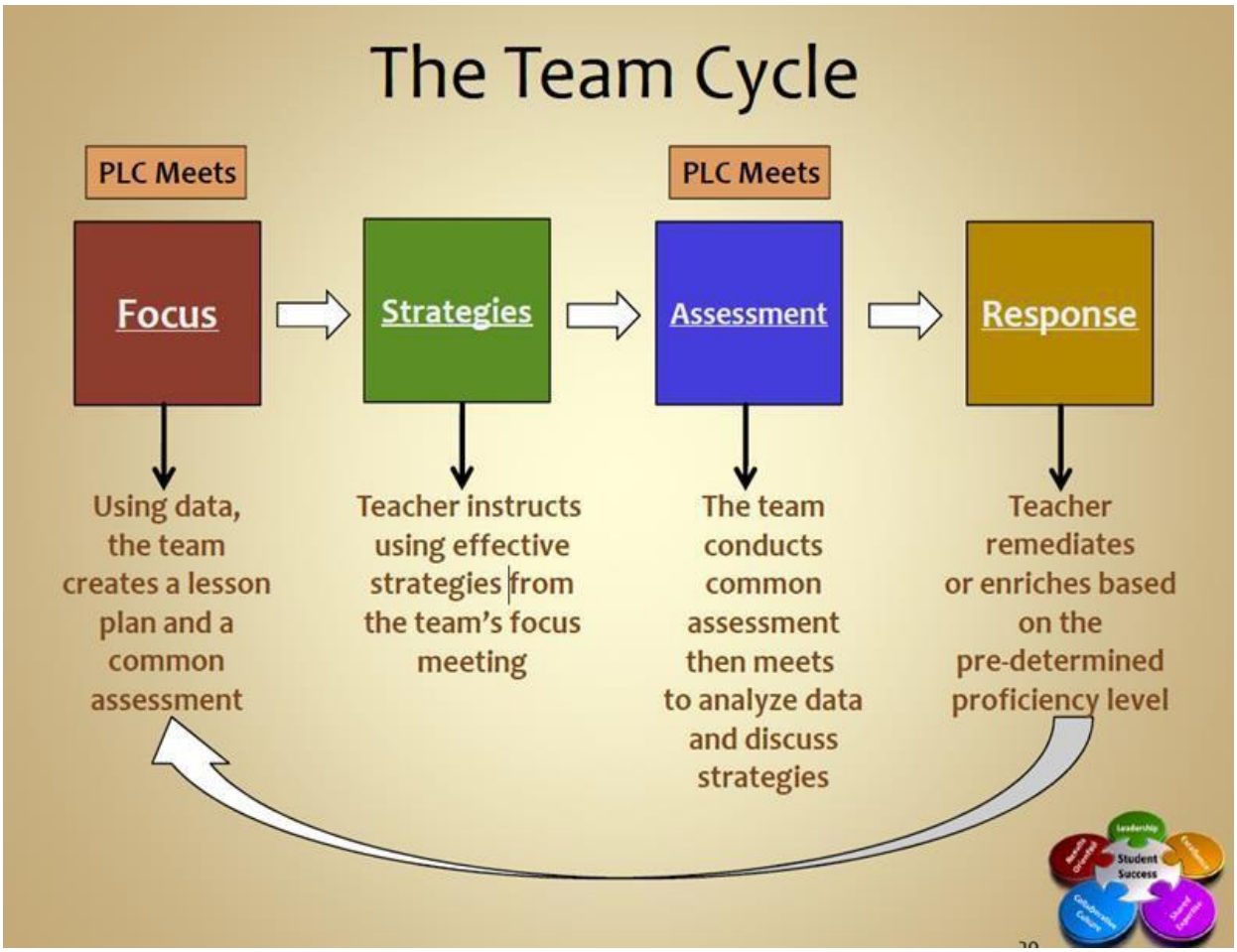
Component	Definition	Example
Group Norms	-Group expectations -Determine how decisions will be made.	Team Obligations 1. Consider All Viewpoints 2. Have a Positive Attitude 3. Be Supportive 4. Seek Feedback From Team Members 5. Be On Task and Be Prepared 6. Make decisions based on group consensus – 7. Use research to build new knowledge. 8. We are responsible for each other, and we will work together to help all students achieve

Outcomes (objectives)	Objectives are what we want students to know and be able to do at the end of the unit/marking period/class/grade. - ELA and Math. -Objectives are based on student data, standards -Some of the Objectives may be a unit long, may last a marking period, or last all year.	3rd Grade example: **Outcomes for Reading** *- Ongoing: Assess throughout the school year 1. Students will be able to summarize text using story elements. * *Assessment:* Students will write a summary of a story using a story map for story elements. 2. Students will be able to draw conclusions from the story * *Assessment:* Students will complete a graphic organizer to draw conclusions from a text that the student has read. 3. Students will be able to compare and contrast story elements. * *Assessment:* Students will compare and contrast items using a Venn diagram. **Outcomes for Math** *- Ongoing: Assess throughout the school year 1. Students will be able to convey their mathematical answers through pictures, number sentences, and words. (Standard 7) * *Assessment:* Unit 3 Students will be able to
		identify fractions as parts of wholes. *

Common Assessments	-The team determines how they will know whether students have met the goal of the Objectives and how they will monitor student improvement, make adjustments to instruction and provide additional support to ensure all students reach the targets.	-3rd-grade examples listed above Unit Quizzes and Unit **Assessments** -Formative Assessments are designed by the team, and types include – observation, verbal answers, paper-pencil, presentations.). These formative assessments are collaborative and align with an objective and be a good indicator of student progress/achievement
Analyze Data	-Analyze data to find the strengths and weaknesses of students and classrooms. -Identify what is going well and what is not working in the classrooms to enhance student achievement. -Analyze is centered on the team analysis of the data and research, make improvements to the lessons to better reach the students.	-If the goal is 90% of the students in the classroom and the overall student performance is 92%, the class met the target. However, some individual students did not meet the target. The Data Teams should ask: Why did we not meet the objective, and what will the team do differently to ensure they meet the objective? The students that met the target were some of them already able to meet the goal before the unit of study? Did the team pre-assess students, and how did the team help speed up and extend these students' learning and achievement?
Differentiate Instruction	-Students receive instruction based on their specific needs -Flexible grouping and intensive Intervention in the classroom provided by the classroom teacher is the norm (Walk- to Intervention) -Eventually, flexible grouping across classrooms for short periods (1-2 days) may be used. This is not a way to homogeneous group students	- Students receive small group, Intervention in the classroom for 15- 30 minutes of the class and then work with their peers for the remainder of the class time. - Similar to reading RtI/MTSS and can eventually branch into math RtI?MTSS

	and should be used carefully. This is small	
	Group/classroom instruction for students to receive detailed Intervention to ensure all students meet the objective. Struggling students would be in a classroom with the best teacher on the team for teaching that particular objective (standard)or Intervention and would have a smaller student-teacher ratio than the other classrooms.	

DATA TEAMS Flowchart/Cycle of Inquiry:



DATA TEAMS Procedures:

1. An agenda is created and supplied to all team members before the meeting.
2. Meeting minutes – recorded and given to the building principal and all team members.. Minutes should include

Meeting Minutes for (Date):		**Group:**	
In Attendance:			
SMART Goal:			
Summary of Meeting:			
NEXT STEPS CHART			
WHAT	WHO	WHEN	HOW

What are you going to do?	Who's responsible for doing what?	What's the timeline for the task?	How is it going to be done?

Pre-Assess students to identify where they are concerning the intended learning objective and determine whether students have the essential knowledge needed to be successful with the upcoming unit/topic. Students should typically be pre-assessed early enough to give the team time to collect the data, analyze the data during a team meeting to plan and implement strategies to build background knowledge of students before the unit is taught.

3. Differentiated instruction should be aligned with the students' specific needs. (MTSS) For instance, if a group of students needs extra support with fractions, the students would receive extra support in a small group setting in the classroom provided by the classroom teacher during the math period. Students would receive intensive, small group support for a specific amount of time provided by the classroom teacher and then work with their peers for the remainder of the class period (flexible grouping).
4. *Action Research is one element of Data Teams, and a limited amount of time may be devoted to doing action research during DATA TEAMS meetings.*
5. *Book studies are another element of DATA TEAMS, and a limited amount of time may be devoted to book studies during DATA TEAMS meetings. Before doing book studies during DATA TEAMS meetings, several factors should be considered:*
    a. *How does the book support students' needs? What data validates the need?*
    b. *The evidence to support the research must be considered as well. Are research studies rigorous? Have the studies behind the book been analyzed carefully?*
    c. *How will the DATA TEAMS use the content of the book (i.e., change in instructional practice)?*
    d. *What changes are we expecting to see in practices in the classroom? How will we evaluate these changes and their effectiveness?*
    e. *How will new knowledge from doing the book study be shared?*

6. *With book studies, a thorough process should be considered before doing professional development:*
    a. *How does the PD support students' needs? What data substantiates the need?*
    b. *Are the approaches gained from the PD research-based? Are the research studies rigorous? Have the studies behind the PD been examined thoroughly?*
    c. *How will the DATA TEAMS use these strategies to improve student achievement?*
    d. *What changes are we anticipating to see in the practices in the classroom? How will we evaluate these adjustments and their effectiveness?*
    e. *How will any new information from the PD be shared with others?*
    f. *Cost(time)-benefit analysis?*
7. Sharing data –Sharing specific teacher data within the team may be difficult for some teachers, since it may expose presumed difficulties. Revealing data too early may make it

more challenging to build confidence among the team members that are necessary for teachers to open up about their practices and take risks. Ultimately, once trust has been established within the group, the data should be presented for all and analyze within the team…make the data public within the school setting. Team data should be communicated, from the beginning, with the school and celebrate each team's successes. The principal/administrator monitors individual teacher data throughout the entire process, and conversations with individual teachers are conducted to ensure teachers receive encouragement but also receive a clear message about the importance of changing practices to ensure students improve.

8. The principal will meet with each team to review student data, the team's reflection on their practice, and their plan to improve student achievement further.
   Leadership is key to the success, and administrators should meet with teams regularly to review results, listen to the plans for improvement, offer support where necessary for the successful operation of instructional strategies**,** monitor the change in instructional practices during walk-throughs and observations, and regularly join meetings.

Artifacts generated from work done by DATA TEAMSs:

1. Group Norms
2. Outcomes
3. SMART Goals
4. Common Formative Assessment
5. Student Data
6. Differentiated Lesson Plans
7. DATA TEAMS Minutes

DATA TEAMS should <u>not</u> be used for…

- A faculty meeting.
- Planning field trips
- Discussion of policies
- grading papers
- Working on newsletters
- Meetings for IEPs or 504s
- School-wide or District-wide professional development initiatives, unless they are embedded and closely aligned with the DATA teams' outcomes

DATA TEAMS <u>may</u> be used for…

- Professional development that is job-embedded and closely aligned with results
- Development of common assessments or identification of existing assessments to be used as common assessments that align with objectives.
- Planning of common differentiated instruction lessons that are aligned with objectives.
- Further data analysis
- RtI Data team Meetings

The above lists are not all-inclusive

Teacher Input and Responsibility for DATA TEAMS Meetings:

Educators that are facilitating meetings should be mindful that teacher equality is a priority. Teachers have many chances for input and responsibility for the meetings through the development of group norms, outcomes, SMART goals, discussion of common assessments, student data, development and implementation of differentiated lesson plans, DATA TEAMS minutes, setting agendas, etc. Building administrators will monitor the progress by attending team meetings, drop-ins during team meetings, review of data (see the previous list), and walk-throughs in the classroom to see whether the team's work is developing into instructional practices in the classroom.

Strategies for using Specialists and Support Staff in DATA TEAMSs:

Support staff (Interventionists, Speech, etc.) may have their meetings or work with specific teams in the school. If the support staff is working in their team, they can review a list of students (students needing extra support – behaviorally, academically, socially, and/or emotionally), and they would generate interventions to help support the students and the teachers who are teaching their students. An additional strategy for support staff is to identify students on their caseload and work with the teachers who have these students. In this example, the support staff member is part of a grade-level or content team and works closely with the teachers on specific approaches to enhance the learning for the students.

Specialists (art, music, PE, etc.) may have their team. Each of the grade-level or content DATA TEAM would send their outcomes to the exploratory/specialist teacher team. The exploratory/specialist teacher team would review the results, identify where there is a natural overlap (where a core content concept could naturally be integrated into their lessons to develop further, reinforce, or extend the concept for students), and plan/implement lessons aligned with these results.

SMART Goals:

Specific - A particular goal has a much greater chance of being achieved than a general goal. To set a specific goal, you must answer the six "W" questions:

*Who: Who is involved?
*What: What do I want to accomplish?
*Where: Identify a location.
*When: Establish a time frame.
*Which: Identify requirements and constraints.
*Why: Specific reasons, purpose or benefits of accomplishing the goal.

Measurable - Establish concrete criteria for measuring progress toward the attainment of each goal you set. When you measure your progress, you stay on track, reach your target dates, and experience the exhilaration of achievement that spurs you on to continued effort required to reach your goal. To determine if your goal is measurable, ask questions such as. How much? How many? How will I know when it is accomplished?

Attainable - When you identify goals that are most important to you, you begin to figure out ways you can make them come true. You develop the attitudes, abilities, skills, and financial capacity to reach them. You begin seeing previously overlooked opportunities to bring yourself closer to the achievement of your goals.

You can attain most any goal you set when you plan your steps wisely and establish a time frame that allows you to carry out those steps. Goals that may have seemed far away and out of reach eventually move closer and become attainable, not because your goals shrink, but because you grow and expand to match them. When you list your goals, you build your self-image. You see yourself as worthy of these goals and develop the traits and personality that allow you to possess them.

Realistic - To be realistic, a goal must represent an objective toward which you are both *willing* and *able* to work. A goal can be both high and realistic; you are the only one who can decide just how high your goal should be. Nevertheless, be sure that every goal represents substantial progress. A high goal is frequently easier to reach than a low one because a low goal exerts a low motivational force. Some of the most challenging jobs you ever accomplished seem easy simply because they were a labor of love.

Your goal is probably realistic if you truly *believe* that it can be accomplished. Additional ways to know if your goal is realistic is to determine if you have accomplished anything similar in the past or ask yourself what conditions would have to exist to accomplish this goal.

Timely - A goal should be grounded within a time frame. With no time frame tied to it, there's no sense of urgency. If you want to lose 10 lbs, when do you want to lose it by? "Someday" won't work. But if you anchor it within a timeframe, "by May 1st", then you have set your unconscious mind into motion to begin working on the goal.

T can also stand for **Tangible** - A goal is tangible when you can experience it with one of the senses, that is, taste, touch, smell, sight, or hearing. When your goal is tangible, you have a better chance of making it specific and measurable and thus attainable.

Key Priorities and Results

Key Priorities (school-wide goals/initiatives) are set by the BLT and are aligned with school-level data, and the District's Strategic Plan.

Outcomes are grade-level/content-specific and set by the team (Note: there may be overlap between the school's priorities and team's outcomes since both are based on student data; however, DATA TEAMS will have additional goals that reflect grade-level specific outcomes).

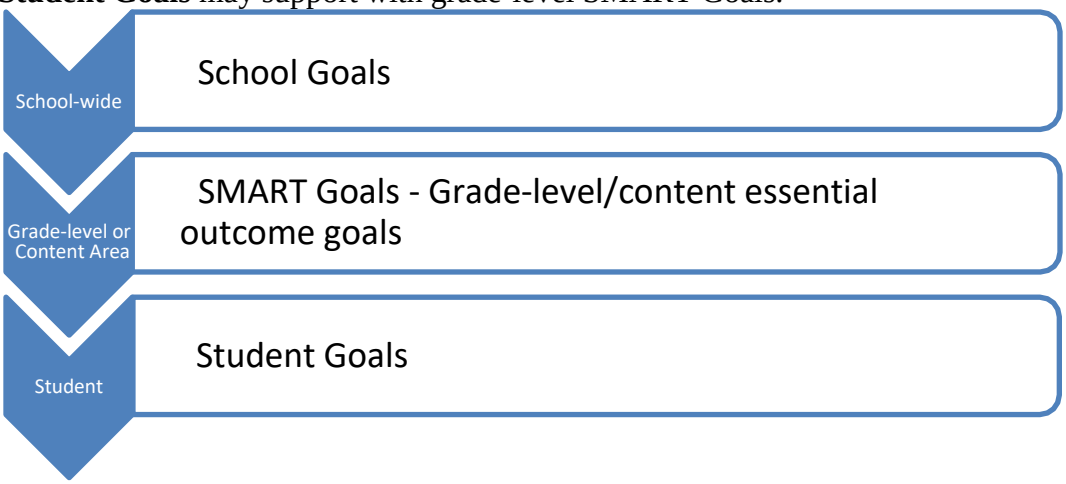
Establishing Goals

School goals are the overarching goals for the school and align with the school improvement plan (District Strategic Plan). Some of the Grade- level goals(and grade-levels goals will align

with school goals.

Grade-level goals will be the basis for grade-level **SMART Goals**. Note: Grade-levels or content areas may have additional goals that are specific only to their area and not the entire school.

Student Goals may support with grade-level SMART Goals.



Professional Development

A thoughtful process should be considered before doing professional development:

1. How does the PD support students' needs? What data confirms the need?
2. Are approaches gained from the PD research-based. Are the research studies rigorous? Have the studies behind the PD been analyzed thoroughly?
3. How will the team use these strategies to improve student achievement?
4. What changes are we anticipating to see in the teachers' systems in the classroom? How will we evaluate these changes and efficiency?
5. How will any new information from the PD be shared with others?
6. Cost-benefit evaluation?

The school's goals will help guide school-wide professional development (occur during faculty meetings, some DATA TEAM meetings due to alignment, teachers attend conferences, schools contract with external experts, etc.) Grade-level specific outcomes are grade-level professional development (occur during DATA TEAM meetings, book studies, action research, lesson study)

Protocols:

Below are protocols to help teams through the collaborative work in their Professional Learning Community. Protocols are a structured process or a set of guidelines to promote meaningful and efficient communication, problem-solving, and learning. Protocols give time for active listening and reflection, so all voices in the group are heard and honored (NSRF,

n.d.).

Building Consensus

Decisions are made based on data and research. Research-based, data-driven decision making- This is an excellent opportunity to gain new knowledge that is aligned with the most effective and proven instructional strategies.

Make **decisions through consensus** whenever possible.

a. Consensus means that:
    i. I can live with the decision
    ii. I will support my colleagues in executing the decision
    iii. I will do certainly do nothing to impede the implementation of the decision
b. Everyone has an opportunity to be heard
c. It is the will of the group.
d. After the team thoroughly investigates the plan and all concerns have been addressed, double-check for consensus questioning:
    i. Are there any other questions, issues, or concerns concerning this plan?
        1. If no one speaks, then the initiator calls for an affirmation of this arrangement to officially recognize that a decision has been made.
        2. If an agreement cannot be achieved, the people who are not in consensus are responsible for meeting with the proposing group to present their concerns.
e. Once consensus has been made, the team will decide how and whom to communicate the decision to.
f. Note: It is essential to understand that "agreement" does not mean majority rules. It means that "the will of the group" is to take action on the proposal and that everyone in the group has had an opportunity to be heard and their concerns addressed. It does not mean that every person in the group has to be convinced and change their mind for the group to move forward. This goes back to (a).

Identify Outcomes and Objectives

a. Criteria for identifying the objectives, apply these three criteria to each standard:
    i. **Endurance**: Are students expected to retain the skills or knowledge long after the test is completed?
    ii. **Leverage**: Is this skill or knowledge applicable to many academic disciplines?
    iii. **Readiness for the next level of learning**: Is this skill or knowledge preparing the student for success in the next grade or course?

(Ainsworth, 2003)

b. 8 – 10 Common Objectives for ELA and 8 – 10 Objectives for Math per

semester at the elementary level if classrooms are self-contained (the classroom teacher teaches all subjects). At the secondary level, select 8 – 10 Objectives for each content area per semester. Objectives are the **skills, knowledge, and/or dispositions** we want students to have.

c. After analyzing data and reviewing content standards, each person writes down the ten most important things they believe, based on the data and standards, students should know and be able to do.
d. Create a chart listing each team member's Objectives.
e. Find the common Objectives from the team and determine through consensus if everyone agrees the Objectives listed are the most important things they want students to know and be able to do.
f. If the team does not have at least 8 Objectives for ELA and 8 Objectives for Math, continue to review the data and standards and, as a group, determines the additional Objectives for each content area.
g. Another procedure to conduct at the start of the process for identifying Objectives as a team is:
    i. Ask the next grade-level team to list the 8 – 10 most important things they want their students to know and be able to do when they enter that grade. For example, the 3rd-grade team would ask the 4th-grade teachers to list the prerequisite skills and knowledge that they want students to have when they enter 4th grade.
    ii. The current grade-level team can use the list created by the next grade-level team as a starting point for discussion after reviewing the data and standards. For example, after the 3rd-grade team reviews the student data and content standards and develop their list, they can use the 4th-grade list to help fill in any gaps within the Objectives.

Goal Setting

a. Prepare: Access data
b. Inquire:
    iii. How does this data compare with our Outcomes?
    iv. Are there any trends in the data? Areas where students are struggling? Areas of strength?
    v. Are there other objectives that we need to consider based on the data?
    vi. If data validates students are doing well in that area associated with a particular objective, how will we accelerate and extend their learning?
    vii. What are the instructional concerns connected with the areas that students struggle?
    viii. Are there any barriers? If so, what will we need to do in order to lessen the obstacles?
    ix. Does the group have more than a shallow understanding of the

reasons behind students' areas of low performance?

x. Does it make sense in how and why the team arrived at the specific problem identified?
xi. Are there various sources of data to support the discovered area of concern?

c. Act:

xii. Develop a SMART Goal(s) to monitor student progress along the learning continuum.
xiii. What is the research? What instructional strategies will we need to use to improve student performance?
xiv. What are the values (common assessments) that we will use to monitor student progress?
xv. How will we know if the approaches are having the desired impact?
xvi. How will we know the approaches are being successfully implemented?
xvii. What are the indications of strategy use?

Lesson Planning

Lesson Planning Protocol – Mike Schmoker

1) FOCUS (3-5 minutes): Recognize the particular learning objective. Display for all participants to see. (on an anchor chart)

2) CREATE a Formative ASSESSMENT aligned with the standard/learning objective.

3) QUIET WRITE (1 minute): Write independently and quietly: privately brainstorm, on paper, for elements, steps, or strategies that might go into an effective lesson for that particular standard/objective.

4) BRAINSTORM (4-7 minutes): As a team and obtain 12-14 ideas on an anchor chart.

5) SELECT (3-8minutes): As a team, select the best strategies, steps, elements--those which would combine most effectively to encourage student success on your assessment.

6) OUTLINE LESSON (5-15 minutes): As a team, use the best ideas (which you selected) to construct an outline of the lesson.

7) Execute the lesson in the coming days/weeks--and assess results: literally the number/percentage of students who succeeded on the assessment.

8) NEXT MEETING: Discuss results--i.e., how many students succeeded ("62 out of 80 students" or "76% of students succeeded")--as well as areas of strength or weakness.

Then discuss adjustments to instruction--relative to the area of strength or weakness.

Common Assessments Formative and review of Summative

a. What is the best indicator of whether our students have mastered the outcome (summative)? How will we know when the students know?
b. What are the best indicators of whether the students are appropriately progressing towards the outcome (formative)?
c. Assessments may be any format; however, they are agreed upon and used by every member of the team to determine student progress. Formats include but are not limited to teacher observation, student presentations, student responses, paper-pencil, etc. Common assessments do not need to be lengthy to be effective.
d. Common assessment data will be collected and recorded before DATA TEAM meetings.
e. Analyze common assessment data during DATA TEAM meetings to determine appropriate instructional strategies and/or adjustments to ensure all students improve.
f. Assessment ideas to support intervention

The table below illustrates possible areas to examine for select academic and behavioral areas of concern. Many times, this information is already available at the younger grade levels due to the discrete nature of many screening assessments. At the upper grade levels, when a student is struggling with grade level content, schools may wish to examine the areas below through administration of additional assessments that are typically used for students at lower grade levels. However information is gathered for a diagnostic process, the team should keep in mind that multiple pieces of data should be used to accurately identify why a problem is occurring. Diagnostic can include formal or informal assessments.

Reading	Writing	Mathematics	Behavior/Social Emotional Skills
▪ Phonemic Awareness ▪ Alphabetic Principle ▪ Basic & Advanced Phonics ▪ Fluency ▪ Vocabulary ▪ Comprehension	▪ Organization ▪ Cohesion ▪ Mechanics ▪ Conventions	▪ Number Knowledge ▪ Base Ten ▪ Number line visualization ▪ Quantity and Magnitude ▪ Numeration ▪ Form of a number ▪ Equality ▪ Proportional Reasoning ▪ Algebraic Reasoning ▪ Geometry	▪ Turn taking ▪ Empathy ▪ Managing emotions ▪ Self monitoring ▪ Work completion ▪ On-task behavior ▪ Following directions

Lesson Study (Teaching)

a. PROBLEM IDENTIFICATION AND ANALYSIS – Identify a common research theme (sometimes a school-wide theme) based upon student performance data
b. COORDINATE the SUPPORT of an external expert (Curriculum and Instruction Department) to support your team's lesson study cycle.
c. Review current educational research and COLLABORATIVELY PLAN LESSON(s) aligned with standards that clearly define expected outcomes in

terms of student learning

d. IMPLEMENT the planned lesson. Videotape the lesson or utilize peer observation (along with specific protocols) to record data about what students were thinking and doing throughout the lesson, as well as student performance outcomes
e. EVALUATE effectiveness. Reflect upon, analyze, and discuss the lesson and student data collected and then synthesize your team's findings.
f. Define NEXT STEPS based upon what the teams have learned.
g. REPEAT the process using a new or revised lesson plan with the same research theme.

Problem-solving Action-Research

Introduction

Action research is a model of professional development that promotes collaborative inquiry, reflection, and dialogue. "Within the action research process, educators study student learning related to their teaching. It is a process that allows educators to learn about their instructional practices and to continue to monitor improved student learning" (Rawlinson & Little, 2004). "The idea of action research is that educational problems and issues are best identified and investigated where the action is: at the classroom and school level. By integrating research into these settings and engaging those who work at this level in research activities, the finding can be applied immediately, and problems solved more quickly" (Guskey, 2000).

Therefore action research is a continuous and reflective process where educators make instructional decisions in their classrooms based on student needs reflected by classroom data.

Action research includes four phases:

1. Identifying a classroom problem
2. Developing and implementing an action research plan
3. Collecting and analyzing data
4. Using and sharing results

Action research provides teachers and administrators with an opportunity to understand better what happens in their school. This process establishes a decision-making cycle that guides instructional planning for the school and individual classrooms.

Within the action research process, teachers may choose to focus their study on one student, a small group of students, a class or several classes, or a whole school. The focus and level of participation among school and district colleagues depend on the level of support, needs, and interests of the teacher(s) and school. Emily Calhoun (1993) described three approaches to action research: individual teacher research, collaborative action research, and school-wide action research. Even though the environments are different, the process of action research

remains the same. This process uses data to identify classroom/school problems, creates and implements a plan of action, collects and analyzes data, uses and shares the results, and makes instructional decisions to improve student learning continuously.

Individual teacher research focuses on studying a problem or issue within a single classroom. The teacher who engages in individual teacher research may or may not have support from colleagues and administration to share, brainstorm, and discuss the topic of action research. Although just one teacher may become directly involved in action research, support from knowledgeable educators at the school or district site is still essential for successful teacher research to occur. Also, universities, educational agencies, and districts may encourage teacher action research by providing ongoing professional development related to the needs of the individual teacher-researcher. These resources may also provide different venues for sharing the successes of action research.

Collaborative action research focuses on studying a problem or issue within one or more classrooms. Teachers may collaborate and work together to study a particular problem in many different ways.

- co-teachers in one classroom studying a specific group of students
- a team of teachers focusing on a grade-level issue (DATA TEAMS)
- a teacher and district, educational agency, or university personnel learning and studying a particular instructional practice
- a group of teachers in the same school studying the same instructional concern.

This collaborative action research approach fosters a joint effort because more than one teacher is involved in a specific area of study. Opportunities for sharing and dialogue are more likely to occur.

School-wide action research is a school reform initiative. Every faculty member of the school is involved in studying a specific issue identified from school data. This approach requires a great deal of support from the administrators and lead teachers/personnel, but the results can lead to school-wide change. Successful school-wide action research is directly related to initiatives contained within the school improvement plan.

Please refer to the chart on the following page to read examples of research questions that were studied using the different approaches of action research.

Different Approaches to Action Research

Approaches	Level of Focus	Level of Participation	Example of Research Questions

Individual	Single classroom	Individual teacher	1. What impact can daily phonemic awareness activities have on my kindergarten students' oral language development? (kindergarten teacher) 2. How can using concrete objects (manipulatives) improve my students' ability to identify and extend patterns in mathematics? (third-grade teacher)
Collaborative	One or more classrooms	Co-Teachers, teams, departments, educational agencies & teachers, university faculty & teachers, teachers within a district, etc.	1. How can students with disabilities experience deficits in phonemic awareness show improvement in those skills by participating in additional and intensive instruction in phonemic awareness activities at least four times per week? How will it affect their overall reading ability? (exceptional student education (ESE) teacher & literacy coach) 2. How can implementing "Organizing Together," a Strategic Instruction Model curriculum, improve students' abilities to come to class organized and prepared? (grade 6 teachers in a middle school team)
School-Wide	School Improvement	Whole faculty	1. How can we teach our students to organize, analyze, synthesize, and interpret what they read? (school-wide questions) ● How can modeling through read-aloud improve students' abilities to organize, analyze, synthesize, and interpret what they read? ● There are several action research teams within the school. The above example is one question being studied by one action research team. 2. How can implementing a school-wide positive behavior support program improve students' safety and increase appropriate student

			behaviors within the school? (all faculty)

Action research is a process in which teachers systematically investigate instructional practices and techniques in order to improve their teaching. The impact of a specific instructional practice on student learning is measured, and the results become the basis for educational planning and decision-making.

Teachers need to work together to plan what instructional practices and techniques need to be implemented, what changes can occur, and how to evaluate their instruction. The more teachers learn, the more likely they will think of changes to implement to enhance student learning.

Teachers must look at action research and ask

- What do we want our students to achieve related to the curriculum standards and student needs?
- Which instructional practices and techniques are we using which have a research base?
- What instructional practices, programs, and materials should we investigate to verify the effects on student learning?
- How will we know that all students are mastering the established goals and objectives?

In order to provide effective instruction, teacher administrators and all staff must maintain a reflective practice and problem solving spirt to reach all students regardless of academic background effectively. Action research provides a reflective framework to promote student success.

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