



MARZANO

— Research —

Mission

To provide the best research, the most useful actions, and the highest level of services to educators

Lead Partner for Instruction

Broad Ripple Magnet School

John Marshall Community School

The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction

Marzano, R. J. (2012). *Becoming a reflective teacher*.
Bloomington, IN: Marzano Research Laboratory.

Marzano, R. J. (2007). *The art and science of teaching: A
comprehensive framework for effective instruction*.
Alexandria, VA: Association for Supervision and
Curriculum Development.

Scope of Work

- Conduct Audit of Instruction
- Create a Model of Instruction
- Conduct Evaluation Activities

Audit of Instruction

Triangulates data from
three sources

Provides a baseline

- Teacher observation
- Teacher self-report
- Student survey

Model of Instruction

- Unique to BRMS and to JMCS
 - Common language for planning and instruction
 - A way of thinking about planning and instruction
 - DOES NOT mean that all teachers must instruct in the same way
 - IS NOT a form of evaluation

Evaluation

- Document project activities and progress relative to goals



Summary of Work to Date

Identified schoolwide goals and the individual teacher's goals for instructional improvement provide the direction for the professional development.

Professional development is designed to help teachers identify strengths and weaknesses, set goals, and engage in focused practice to meet their goals for classroom instruction.

Date	Activity
November 2014	<ul style="list-style-type: none">• Initial site visits
December 2014	<ul style="list-style-type: none">• Data collection, analysis, and reports
January 2014	<ul style="list-style-type: none">• Review of reports with building leaders and teachers• Identification of schoolwide and individual teacher goals
February 2014	<ul style="list-style-type: none">• Professional development in PLC groups to support schoolwide learning goals of:<ul style="list-style-type: none">• Setting learning goals• Tracking student progress• Observations of teachers in classrooms and feedback• Model of instruction development with coaches

Successes and Challenges

- Successes

- Identification of goals based on audit of instruction
- Teachers positive about receiving feedback and reflecting on practice
- Group discussions about instruction

- Challenges

- Timeline
- Communication
- Classroom management
- Teacher frustration

Recommendations

- Improve communication
- Set expectations and check in

Thank you!

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Lead Partner for Instructional Improvement

**Broad Ripple Magnet High School and
John Marshall Community High School**

Update Prepared for the Indiana State Board of Education

March 3, 2015




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The report provides an update of the work Marzano Research has conducted to date with Broad Ripple Magnet School (BRMS) and John Marshall Community School (JMCS) in Indianapolis Public Schools (IPS).

Background

At the request of the Indiana Department Education in early October 2014, Marzano Research submitted proposals to work with BRMS and JMCS as lead partner with a focus on instruction. Marzano Research submitted two proposals for each school, one with a scope of work reflecting a \$150,000 budget and one with a scope of work reflecting a \$300,000 budget.

On November 6, 2014, the Indiana State Board of Education (SBOE) approved Marzano Research as the lead partner for instruction for BRMS and JMCS to carry out the scope of work defined in the \$150,000 option.

On November 11, 2014, Marzano Research discussed the work with staff at IPS and the school principals. Marzano Research conducted initial site visits at both schools on November 20 and 21. Marzano Research collected and analyzed data in December, 2014, and began professional development at both schools in January 2015. The contract ends August 31, 2015.

Key Players

Key players involved in the discussion of the work and in conducting the work itself include the following:

Indianapolis Public Schools

- Dr. Wanda Legrand, Deputy Superintendent for Academics
- Dr. Ve-Lecia S. Council, Academic Improvement Officer Eastern Area
- Greg Newlin, Academic Improvement Officer for the Magnet Learning Community
- Michael Akers, Principal, Broad Ripple Magnet High School
- Ashauna Short, Principal, John Marshall Community High School

Indiana Department of Education

- Teresa A. Brown, Assistant Superintendent of School Improvement

Marzano Research

- Dr. Robert J. Marzano, CEO
Oversees the project
- Jennifer S. Norford, Vice President of Development and Innovation
Serves as contact to the state and district
- Diane Paynter, Director of Curriculum Development
Serves as project director and professional development lead
- Sonny Magaña, Associate Vice President and Director of Educational Technology
Provides professional development

Scope of Work

Marzano Research is providing lead partner services to Broad Ripple Magnet School (BRMS) and John Marshall Community School (JMCS) to support effective classroom instruction. The scope of work includes three major activities:

1. Conduct an Audit of Instructional Effectiveness
2. Create a Model of Effective Instruction Unique to the School
3. Conduct Evaluation Activities

Taken together, these three activities are intended to support BRMS and JMCS in

- developing instructional profiles for teachers designed to support professional growth,
- establishing a model and language of instruction unique to each school, and
- monitoring and improving the program implementation.

Although the primary tasks are the same for each school, the audit provides data unique to each school and the developed model of instruction will be unique to each school. Using the audit data, Marzano Research worked with each school and individual teachers to identify schoolwide and individual strengths and weaknesses and to set goals for instructional improvement. The resulting professional development plan for each school and the specific activities that Marzano Research carries out in each school address the needs of each school as a whole and the individual teachers within the school.

The services to support effective instruction are based on the comprehensive framework of effective teaching described in *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction* (Marzano, 2007) and the in-depth exploration of the research-based instructional strategies in *Becoming a Reflective Teacher* (Marzano, 2012). The Art and Science of Teaching model balances the necessity of research-based data with the equally vital need to understand the strengths and weaknesses of individual students. Marzano articulates the framework in the form of 10 questions that represent a logical planning sequence for successful instructional design within three broad categories of lesson segments—those involving routine events, those addressing content, and those enacted on the spot. Within these categories for each design question, Marzano identifies specific elements that describe classroom strategies and behaviors. The framework includes 41 elements, commonly referred to as the *forty-one elements of effective instruction*. For a more detailed description of The Art and Science of Teaching framework, including a list of the 41 elements, see Appendix A.

The technical assistance and professional development services Marzano Research is providing to the schools are designed to help teachers identify strengths and weaknesses, set goals, and engage in focused practice to meet their goals for classroom instruction.

1. Conduct an Audit of Instructional Effectiveness

The purpose of this task is to provide teachers at each school with baseline data regarding their instructional profiles (i.e., those instructional strategies they use frequently and those they do not, and a measure of the effectiveness of the strategies they use frequently). Each teacher's profile will be kept completely confidential (administrators and supervisors will not be shown individual

teacher’s profiles) and intended solely for use by teachers for the purpose of enhancing the effectiveness of their classroom practices.

Data Sources

To establish a profile for each teacher, Marzano Research collected data from three sources:

- video observation of teachers delivering lessons in their classrooms,
- teacher self-audit on her/his use of instructional strategies and behaviors, and
- student survey of attitudes and behaviors and perceptions of teacher effectiveness.

The following section briefly describes each data source. Appendix B includes copies of the form Marzano Research used to analyze the videos of instruction, the teacher self-report instrument, and the student survey.

Video Observations of Teachers Instructing Students

Teachers were recorded for one class period (approximately 45 minutes) while providing instruction to students. A staff member from Marzano Research spent two days recording teachers. Video recorders were set up in ten different classrooms at one time for one class period. At the end of the class period, the recorders were moved to new classrooms.

Marzano Research then analyzed each teacher’s use of the forty-one elements of effective teaching in each recording (see Appendix A for a list of the forty-one elements). Each teacher’s video was reviewed and coded using the five-point scale presented in Table 1.

Table 1: Five-Point Scale Used to Score Each Element of Effective Instruction

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
The teacher adapts or creates new versions of strategies or behaviors associated with the element for unique student needs and situations.	The teacher uses strategies or behaviors associated with the element and monitors the extent to which the strategies or behaviors affect student outcomes.	The teacher uses strategies or behaviors associated with the element, but does so in a somewhat mechanistic way.	The teacher uses strategies or behaviors associated with the element incorrectly or with parts missing.	The teacher should use strategies or behaviors associated with the element but does not.

Note: Adapted from Marzano, 2012, p. 37.

Teacher Self-Report

The teachers at BRMS and JMCS each individually completed a self-report designed to measure their self-perceived use of the forty-one elements of effective teaching. Teachers responded to questions about their use of each of the forty-one elements using the five-point scale in Table 1.

Student Survey

The final piece of data came from student surveys. The students at BRMS and JMCS completed anonymous surveys that asked them to respond to twenty-one statements about their experiences in class. Students read a statement and provided their agreement with the statement using a 5-point Likert-scale: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The student survey and teacher instructions for administering the survey are provided in Appendix B.

Reports

Marzano Research created two reports for each school:

- An Anonymous Summary Report of Effective Teaching
- A Summary Report of Classroom Instruction and Recommendations for Improvement

This section describes the content and purpose of each report. Reports for each school are attached as Appendix C. The letter to teachers explaining the report, and which also served to provide the teacher's individual code, is also included in Appendix C.

An Anonymous Summary Report of Effective Teaching

This report presents an anonymous summary of data collected on classroom instruction as practiced at each school. For each data source, the report includes a table with data for each teacher who participated in the data collection process. Teachers are identified by number only. Each teacher received a copy of the anonymous summary report and a sealed envelope that contained her or his number. To ensure anonymity, only the individual teacher received the envelope that contained her or his number.

Summary tables of the video observation scores and the teacher self-report scores on each element of effective instruction provide data on each of the 41 elements of effective instruction and allow teachers and building leaders to compare outside observations to teacher self-perceptions.

Summary tables for the student survey data present mean scores that were calculated for each teacher from students' ratings of agreement with twenty-one statements pertaining to their experiences in class. The twenty-one survey questions addressed students' perceptions of selected teacher behaviors, as well as their own actions and beliefs in class.

A Summary Report of Classroom Instruction and Recommendations for Improvement

In addition to the summary report of data, each school principal and IPS staff received a summary report of the classroom instruction audit and recommendations for improvement. The report provided results for each data source, information about the process for analyzing data and presenting results, and recommendations regarding areas of focus for professional development.

For video observation results, the reports included a table that presented the total number of teachers for which a given element of effective instruction was observed and the mean score

across all teachers. Due to the time-sampling method of observation, not all of the elements for each teacher could be observed. For example, in one of the schools, only one teacher was observed on the element *Using academic games*, whereas 36 teachers were observed on the element *Establishing and maintaining classroom rules and procedures*.

To provide a more stable view of the effective teaching practices in each school, the report also included information on those elements of instruction that were observed with at least 10 teachers. A figure presented the elements of instruction with the three highest and three lowest means observed with at least 10 teachers.

For teacher self-report results, the report presented total teachers and mean scores for the 41 elements of effective teaching and also the three highest and three lowest means based on teacher self-reports.

For student surveys, the report presented the mean scores and standard deviations for each item across teachers, as well as the three highest and three lowest ranked items on the student survey.

To provide a comparison across all three sources of data, an aggregated mean score was computed.

Finally, the report provided an analysis of patterns that emerged from the observation data, the teacher self-reports, and the student surveys, and delivered a set of recommendations for schoolwide focus and a set of recommendations for individual teachers.

Professional Development

The audit process triangulates three data points—teacher perception, student perception, and outside observation—to create individual profiles for teachers. These profiles serve as a baseline data point for teachers and instruction in the school and provide the basis for the content and format for the professional development that Marzano Research will provide in each school for the entire staff and for individual teachers.

To provide continuity for the staff and work at both schools, Marzano Research assigned two staff to provide professional development (PD). Diane Paynter, Director of Curriculum Development, serves as the project lead, coordinates all project activity and communication with the school principals, and provides professional development. Sonny Magaña, Associate Vice President and Director of Education Technology, works closely with Diane to plan and deliver professional development at both schools. Diane and Sonny made the initial visits to each school together and then established a schedule where one would visit both schools one week during the month (two days at each school) and the other would visit both schools during a different week of the month (two days at each school). This schedule allows Marzano Research staff to be in each school at least twice per month.

At both BRMS and JMCS, Marzano Research provides professional development during professional learning community (PLC) time. This arrangement requires the PD associates to meet with small groups of teachers to provide professional development training that addresses the schoolwide goals. Depending on the preference of the principal, the second day at the school follows the same format as the first—providing professional development to groups in PLC

sessions—or the PD associates conduct classroom observations and provide feedback to individual teachers.

Diane Paynter and Sonny Magaña both went to each school on January 20 and 21. They met with teachers in PLC groups. They answered questions about the process, the ongoing work, and the reports. They worked with teachers to create individual professional development goals based on the data we collected and encouraged each teacher to choose one or two goals related to the 41 elements of effective instruction to focus on in the short term. The principal at each school also dropped in to at least one of the teacher sessions, and Diane and Sonny spoke with the principals to set the schoolwide goals and how the principals wanted them to work with teachers. They also set PD dates for the remainder of the school year.

See Appendix D for a copy of the materials Marzano Research used with schools during the first PD visit in January and Appendix E for the materials developed and used for the February professional development.

The identified schoolwide goals and the individual teacher’s goals for instructional improvement provide the direction for the professional development Marzano Research will develop and provide for the remainder of the project from February through May.

2. Create a Model of Effective Instruction

The purpose of the second primary activity is to create a framework of effective instructional practices that are specific to BRMS and to JMCS. It is important to note that this Model of Instruction will not be used for evaluation purposes, nor will the expectation be that all teachers have to use all elements of the model in their classes. Rather, the expectation will be that all faculty at each school will be able to discuss teaching using the *BRMS Model of Instruction* or the *JMCS Model of Instruction*. This common way of discussing teaching might be used when administrators and teachers interact about instruction, when department heads and teachers interact about instruction, and when teachers interact with each other about instruction. This qualification noted, there will be some aspects of the language of instruction which will be considered non-negotiable in terms of their use. Additionally, while some of the non-negotiable strategies will be identified in coordination with administrators and teachers at each school, Marzano Research will also have the right to independently identify some non-negotiable strategies. These strategies might include specific classroom management strategies, tracking of whole class and individual student progress for critical content, and use of high yield engagement strategies.

To create the model of instruction for each school Diane and Sonny will work with the instructional coaches and the behavioral coaches at each school. The teams will start with the *The Art and Science of Teaching* (Marzano, 2007; see Appendix A) as the basis for the model of instruction. The teams will work with Marzano Research staff to identify those elements in *The Art and Science of Teaching* model they wish to retain, elements they wish to delete, and elements they wish to add. For example, both schools have been working with a behavioral coach on specific classroom management strategies. The schools may decide to include these specific classroom management strategies and delete some of the classroom management strategies from base model.

Marzano Research will collect all input from the coaches and create a first draft of the model of instruction for each school. Diane and Sonny will work with the school coaches and building leadership to refine the model of instruction at each school over the duration of the project and will deliver the final model of instruction before the end of the contract.

The final model of instruction will serve as the basis for sustainability of the instructional practices within each school. Marzano Research will develop tools and protocols to support building administrators and coaches in maintaining the model of instruction with teachers after the contract ends.

3. Conduct Evaluation Activities

The Marzano Research evaluation team will conduct a formative and summative evaluation to track program implementation and outcomes, as well as to provide information for program improvements. Evaluation activities will support documentation of project activities and progress made throughout the project.

R. Marc Brodersen, a senior researcher at Marzano Research, is leading the evaluation efforts. He has worked with the project director, Diane Paynter, to create and use the following tools to collect required data:

- PD Attendance Form
- Form for Tracking Schoolwide and Individual Goals

Activities in the next few months include site visits in March and April/May to observe the school culture and climate, and teachers' use of schoolwide instructional strategies; document analysis of PD attendance forms, teacher reflection and goal tracking forms, PD materials, and observation forms; a follow-up teacher survey; and analysis of additional student data (academic and engagement).

Summary of Work to Date

Table 1 provides a summary of the work conducted to date by month. Please note that the work in each school follows the same basic structure and format but is tailored to each school based on the preferences of the principal, the schoolwide goals, and the individual teacher goals and needs. Marzano Research PD staff also coordinate with each school's instructional and behavioral coaches to ensure the efforts complement ongoing work.

Table 1. Summary of Work Conducted Monthly

Date	Activity
2014	
November	<p>Initial Site Visit A team from Marzano Research, including Dr. Robert Marzano, met with the building leadership and teachers at each school to discuss the work.</p>
Week of Dec. 1	<p>Data Collection Marzano Research videotaped teachers delivering an instructional lesson in one class period for each teacher.</p>
Week of Dec. 8	<p>Data Collection Teachers selected a class to administer student questionnaires related to instruction and their own learning. Teachers handed out and collected anonymous student questionnaires.</p>
Dec. 8–19	<p>Data Collection Marzano Research sent teachers an email with a link to a Survey Monkey questionnaire regarding instruction. Teachers completed this self-audit by rating themselves on their use of classroom strategies and behaviors associated with the forty-one elements of effective teaching defined in <i>The Art and Science of Teaching</i>.</p>
Dec. 15–31	<p>Data Analysis and Reporting A team at Marzano Research led by Dr. Marzano analyzed and coded the teacher videos. Our survey administrator pulled data the SurveyMonkey response, scanned student survey forms, and prepared data files for the research team. Led by Dr. Marzano, the research team analyzed data from all three sources and created reports. The Publications Department staff assisted with formatting and editing of reports.</p>
2015	
Jan. 8–9	<p>Reports Reports were delivered to each school.</p>
Jan. 20–21	<p>PD Session #1 Diane Paynter and Sonny Magaña spent one day at each school to meet with building administrators and teachers to</p> <ul style="list-style-type: none"> • Ensure that all staff has received the documents prepared by Marzano Research • Allow staff time to ask for any clarification on the data and information found in these documents • Determine the goals that will be the focus of the work between now and June (schoolwide goals and individual teacher goals)
Feb. 10–13	<p>PD Session #2 Diane Paynter spent two days at each school and</p> <ul style="list-style-type: none"> • Began work with instructional and behavioral coaches to create the school's model of instruction. • Provided training to teachers in PLC groups in selected schoolwide goals (setting learning goals and tracking student progress). • Conducted observations in individual teacher's classrooms and provided feedback with specific guidance on strategies to practice. • Provided instructional coaches with a list of teachers observed, each teacher's goals, and guidance to help coaches support those teachers over the next few weeks.

Date	Activity
Feb. 24–27	<p>PD Session #3</p> <p>Note: Sonny Magaña was sick and unable to travel. Marzano Research arranged for other highly qualified PD associates to work with each school in order to maintain continuity for the work.</p> <p>Cameron Raines at John Marshall</p> <ul style="list-style-type: none"> • Cameron arrived at John Marshall at 6:45 am, but John Marshall was unprepared for the Marzano Research work to continue on February 24 and 25, despite advance planning. • Principal Short advised teachers on Monday morning that they could work individually with Cameron on Monday, but told Cameron that no teachers would be available on Tuesday due to a field trip and ISTEP+ Test. <p>Salle Quackenboss at Broad Ripple</p> <ul style="list-style-type: none"> • On February 26, worked with teachers on establishing and communicating learning goals and the distinction between activities and learning goals. • One February 27, conducted observations of individual teachers and provided feedback to teachers and coaches on specific elements of strategies to practice.

Successes, Challenges, and Recommendations

Marzano Research has worked with Broad Ripple Magnet School and John Marshall Community School since December 2014. However, professional development only began in earnest in February 2015. From our work to date, we have identified the following successes, challenges, and recommendations for Broad Ripple Magnet School and John Marshall Community School.

Successes

Data collection and analysis efforts helped Marzano Research, the school leaders, and individual teachers identify strengths and weaknesses and develop goals for instructional improvement. This process helped Marzano Research refine our approach to the professional development at each school and provided each school and each teacher with a specific focus.

In general, teachers reacted positively to the results of the student surveys, and the PD associates have reported that students seem to like and respect teachers.

Bringing teachers together in PLC groups to discuss what they are teaching and how they are teaching has been a positive experience. In general, teachers have been positive about receiving feedback and reflecting on their practice.

Challenges

We have identified several challenges to the work with BRMS and JMCH, including the following:

- communication between Marzano Research and the principals and between the principals and teachers,
- timeline for the project,
- classroom management issues, and
- teacher frustration.

The school principals have difficult jobs and are challenged with coordinating multiple priorities and numerous activities within the schools, including dealing with unanticipated emergencies such as the wheels falling off a bus. We recognize the hectic schedule and pressing priorities the principals must deal with; however, scheduling professional development and coordinating with principals prior to delivering the professional development has hindered our ability to work with teachers. For example, on February 24 and 25, although professional development was scheduled at John Marshall, we were unable to provide any support to teachers.

The timeline for the work is a challenge. Marzano Research was only able to set goals for professional development in January, giving us approximately four months to work with teachers before the end of school. It is also difficult to come in mid-year and begin setting goals for instruction.

Despite the training and work with the behavioral coaches in the schools, many of the teachers continue to struggle a great deal with classroom management. These teachers might be more successful with classroom management issues if they practiced better follow through and implementation of the classroom management strategies they are learning from the behavioral coaches. Marzano Research recognizes that classroom management is a big issue in both schools, but, given the amount of resources already committed to classroom management in the schools, we are hesitant to focus additional time and resources on professional development targeting this area.

Some teachers have expressed frustration with several aspects of the Marzano Research lead partner work, including concerns that can be paraphrased and summarized as follows

- You are only here until the end of the school year and that is not enough time to make difference.
- You'll be gone in a few months and next year will be something different.
- We have so many outside organizations coming in with conflicting advice that we don't know what we are supposed to listen to.

In response to these concerns, we have done our best to provide support that coordinates with efforts we know are already ongoing in the schools (e.g., behavioral coaching), involve instructional coaches in the training and follow up with teachers to ensure continuity and build internal capacity, and assure teachers that we will work on a manageable set of goals within the timeframe designated for the work.

Recommendations

Based on the successes and challenges of the work to date, we recommend two action steps to support the work moving forward: (1) assure that principals prepare the schools and staff for the identified professional development dates, including reminding teachers of the dates for the work; and (2) assure that building leaders set expectations for staff to implement the practices they are learning in the professional development and check in to make sure teachers are following through on implementation.

References Cited

Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research Laboratory.

Marzano, R. J. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.

Appendix A Brief Overview of the Art and Science of Teaching

In the *Art and Science of Teaching: A Comprehensive Framework for Effective Instruction* (Marzano, 2007), Marzano presents 10 design questions to guide teachers in planning effective units and lessons within those units (see Figure 1).

1. What will I do to establish and communicate learning goals, track student progress, and celebrate success?
2. What will I do to help students effectively interact with new knowledge?
3. What will I do to help students practice and deepen their understanding of new knowledge?
4. What will I do to help students generate and test hypotheses about new knowledge?
5. What will I do to engage students?
6. What will I do to establish or maintain classroom rules and procedures?
7. What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?
8. What will I do to establish and maintain effective relationships with students?
9. What will I do to communicate high expectations for all students?
10. What will I do to develop effective lessons organized into a cohesive unit?

Figure 1. Design Questions for The Art and Science of Teaching

Relative to lesson planning, Marzano organizes the first nine questions to create a flexible form of lesson design that involves three elements: segments that will most likely be part of every lesson, segments that focus on content, and segments that address actions that must be taken on the spot. Figure 2 presents this categorization of design questions.

<p>Lesson Segments that Involve Routine Events that Might be Observed in Every Lesson</p> <p>Design Question 1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?</p> <p>Design Question 6: What will I do to establish or maintain classroom rules and procedures?</p>
<p>Lesson Segments that Address Content:</p> <p>Design Question 2: What will I do to help students effectively interact with new knowledge?</p> <p>Design Question 3: What will I do to help students practice and deepen their understanding of new knowledge?</p> <p>Design Question 4: What will I do to help students generate and test hypotheses about new knowledge?</p>
<p>Lesson Segments that Are Enacted on the Spot:</p> <p>Design Question 5: What will I do to engage students?</p> <p>Design Question 6: What will I do to establish or maintain classroom rules and procedures?</p> <p>Design Question 7: What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?</p> <p>Design Question 8: What will I do to establish and maintain effective relationships with students?</p> <p>Design Question 9: What will I do to communicate high expectations for all students?</p>

Figure 2. Design questions categorized by lesson segment

Design Question 10 is not included in the lesson segment categorization because it involves the organization of lessons into cohesive units.

Within these three lesson segment categories Marzano divides each question into individual elements that describe specific classroom strategies and behaviors. The framework includes 41 elements: five elements for lesson segments involving routine events, eighteen elements for lesson segments addressing content, and eighteen elements for lesson segments enacted on the spot (see Figure 3).

Routine Segments
Design Question #1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?
1. Providing clear learning goals and scales (rubrics)
2. Tracking student progress
3. Celebrating success
Design Question #6: What will I do to establish and maintain classroom rules and procedures?
4. Establishing classroom rules and procedures
5. Organizing the physical layout of the classroom
Content Segments
Design Question #2: What will I do to help students effectively interact with new knowledge?
6. Identifying critical information
7. Organizing students to interact with new knowledge
8. Previewing new content
9. Chunking content into “digestible bites”
10. Processing new information
11. Elaborating on new information
12. Recording and representing knowledge
13. Reflecting on learning
Design Question #3: What will I do to help student practice and deepen their understanding of new knowledge?
14. Reviewing content
15. Organizing students to practice and deepen knowledge
16. Using homework
17. Examining similarities and differences
18. Examining errors in reasoning
19. Practicing skills, strategies, and processes
20. Revising knowledge
Design Question #4: What will I do to help students generate and test hypotheses about new knowledge?
21. Organizing students for cognitively complex tasks
22. Engaging students in cognitively complex tasks involving hypothesis generation and testing
23. Providing resources and guidance
Segments Enacted on the Spot
Design Question #5: What will I do to engage students?
24. Noticing when students are not engaged
25. Using academic games
26. Managing response rates
27. Using physical movement
28. Maintaining a lively pace
29. Demonstrating intensity and enthusiasm
30. Using friendly controversy
31. Providing opportunities for students to talk about themselves
32. Presenting unusual or intriguing information

Design Question #7: What will I do to recognize and acknowledge adherence or lack of adherence to rules and procedures?

- 33. Demonstrating “withitness”
- 34. Applying consequences for lack of adherence to rules and procedures
- 35. Acknowledging adherence to rules and procedures

Design Question #8: What will I do to establish and maintain effective relationships with students?

- 36. Understanding students’ interests and background
- 37. Using verbal and nonverbal behaviors that indicate affection for students
- 38. Displaying objectivity and control

Design Question #9: What will I do to communicate high expectations for all students?

- 39. Demonstrating value and respect for low-expectancy students
- 40. Asking questions of low-expectancy students
- 41. Probing incorrect answers with low-expectancy students

Figure 3. Design questions categorized by lesson segment with specific strategies

As depicted in Figure A.3, lesson segments involving routine events include classroom strategies and behaviors that teachers should engage in on a regular basis, such as communicating learning goals, and establishing classroom rules and procedures. Lesson segments that address content include strategies and behaviors designed to help students interact with new knowledge, deepen their understanding, and generate and test hypotheses. Lesson segments that are enacted on the spot include classroom strategies and behaviors teachers use to engage students, set high expectations, acknowledge adherence to rules and procedures, and establish relationships with students.

Clearly, a teacher will not use 41 elements in one lesson. As Marzano described it, educational research

will never be able to identify instructional strategies that work with every student in every class. The best research can do is tell us which strategies have a good chance (i.e., high probability) of working well with students. Individual classroom teachers must determine which strategies to employ with the right students at the right time. In effect, a good part of effective teaching is an art—hence the title, *The Art and Science of Teaching*. (2007, p. 5)

The information and tools presented in *Becoming a Reflective Teacher* are designed to support teachers in setting specific goals, practice the strategies and behaviors associated with those goals, seek feedback specific to the goals, and observe and discuss teaching practices with others. These steps help teachers develop a reflective practice which can be an effective tool for professional growth.

Appendix B: Instruments

Form for Analyzing and Coding Videos of Classroom Instruction

Teacher Reflective Practice Self-Audit

Student Survey

Teacher Instructions for Administering the Student Survey

Analysis of Teacher Instruction Form

School: _____

Teacher: _____

1	1. Providing Clear Learning Goals and Scales (Rubrics)				
			2. Tracking Student Progress		
			3. Celebrating Success		
6	4. Establishing Classroom Routines				
			5. Organizing the Physical Layout of the Classroom		
2	*6. Identifying Critical Information				
			7. Organizing Students to Interact with New Knowledge		
	8. Previewing New Content				
			9. Chunking Content into “Digestible Bites”		
	10. Processing of New Information				
	11. Elaborating on New Information				
	12. Recording and Representing				
3	13. Reflecting on Learning				
	14. Reviewing Content				
				15. Organizing Students to Practice and Deepen Knowledge	
			16. Using Homework		
			17. Examining Similarities and Differences		
			18. Examining Errors in Reasoning		
4	19. Practicing Skills, Strategies, and Processes				
	20. Revising Knowledge				
				21. Organizing Students for Cognitively Complex Tasks	
				22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing	
			23. Providing Resources and Guidance		
5	24. Noticing When Students are Not Engaged				
				25. Using Academic Games	
	26. Managing Response Rates				
	27. Using Physical Movement				
	28. Maintaining a Lively Pace				
	29. Demonstrating Intensity and Enthusiasm				
				30. Using Friendly Controversy	
7				31. Providing Opportunities for Students to Talk about Themselves	
	33. Demonstrating “Withitness”				
	34. Applying Consequences for Lack of Adherence to Rules and Procedures				
8	35. Acknowledging Adherence to Rules and Procedures				
				32. Presenting Unusual or Intriguing Information	
	37. Using Verbal and Nonverbal Behaviors that Indicate Affection for Students				
9	38. Displaying Objectivity and Control				
				36. Understanding Students’ Interests and Backgrounds	
				39. Demonstrating Value and Respect for Low-Expectancy Students	
9				40. Asking Questions of Low-Expectancy Students	
				41. Probing Incorrect Answers with Low-Expectancy Students	

Major strength: _____

Major weakness: _____



The following 41 elements of effective teaching are from Marzano's (2007) *The Art and Science of Teaching* framework. As shown below, each has been phrased as a reflective question. As you consider each question, please rate yourself on each element using the following 5-point scale:

- Not Using (0): I should use strategies or behaviors associated with the element but I do not.
- Beginning (1): I use strategies or behaviors associated with the element incorrectly or with parts missing.
- Developing (2): I use strategies or behaviors associated with the element, but I do so in a somewhat mechanistic way.
- Applying (3): I use strategies or behaviors associated with the element and monitor the extent to which the strategies or behaviors affect student outcomes.
- Innovating (4): I adapt or create new versions of strategies or behaviors associated with the element for unique student needs and situations.

If you have questions about any of the 41 elements or the self-audit process, each is described in detail in Marzano's (2012) *Becoming a Reflective Teacher*, chapters 2 and 3.

Please note that you will be asked to provide your name. This information will be kept confidential and will only be used to facilitate professional development work with a Marzano Research associate.

Please provide the following information:

First Name

Last Name

Design Question: What will I do to establish and communicate learning goals, track student progress, and celebrate success?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
1. What do I typically do to provide clear learning goals and scales (rubrics)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. What do I typically do to track student progress?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. What do I typically do to celebrate success?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to establish and maintain classroom rules and procedures?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
4. What do I typically do to establish and maintain classroom rules and procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. What do I typically do to organize the physical layout of the classroom?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to help students effectively interact with new knowledge?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
6. What do I typically do to identify critical information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. What do I typically do to organize students to interact with new knowledge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. What do I typically do to preview new content?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. What do I typically do to chunk content into "digestible bites"?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. What do I typically do to help students process new information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. What do I typically do to help students elaborate on new information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. What do I typically do to help students record and represent knowledge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. What do I typically do to help students reflect on their learning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to help students practice and deepen their understanding of new knowledge?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
14. What do I typically do to review content?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. What do I typically do to organize students to practice and deepen knowledge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. What do I typically do to use homework?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. What do I typically do to help students examine similarities and differences?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. What do I typically do to help students examine errors in reasoning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. What do I typically do to help students practice skills, strategies, and processes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. What do I typically do to help students revise knowledge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to help students generate and test hypotheses about new knowledge?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
21. What do I typically do to organize students for cognitively complex tasks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. What do I typically do to engage students in cognitively complex tasks involving hypothesis generation and testing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. What do I typically do to provide resources and guidance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to engage students?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
24. What do I typically do to notice when students are not engaged?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. What do I typically do to use academic games?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. What do I typically do to manage response rates?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. What do I typically do to use physical movement?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. What do I typically do to maintain a lively pace?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. What do I typically do to demonstrate intensity and enthusiasm?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. What do I typically do to use friendly controversy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. What do I typically do to provide opportunities for students to talk about themselves?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. What do I typically do to present unusual or intriguing information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to recognize and acknowledge adherence or lack of adherence to rules and procedures?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
33. What do I typically do to demonstrate "withitness"?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. What do I typically do to apply consequences for lack of adherence to rules and procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. What do I typically do to acknowledge adherence to rules and procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to establish and maintain effective relationships with students?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
36. What do I typically do to understand students' interests and backgrounds?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. What do I typically do to use verbal and nonverbal behaviors that indicate affection for students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. What do I typically do to display objectivity and control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Design Question: What will I do to communicate high expectations for all students?

	Innovating (4)	Applying (3)	Developing (2)	Beginning (1)	Not Using (0)
39. What do I typically do to demonstrate value and respect for low-expectancy students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. What do I typically do to ask questions of low-expectancy students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. What do I typically do to probe incorrect answers with low-expectancy students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Mark as shown: Please use a ball-point pen or a thin felt tip. This form will be processed automatically.

Correction: Please follow the examples shown on the left hand side to help optimize the reading results.

1. Teacher

1.1 What is the name of your teacher in this class?

- | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.2 The teacher of this class is fair. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3 The teacher of this class cares about me. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4 I am recognized for my successes in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5 I am motivated to learn in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.6 Inappropriate behavior is not tolerated in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.7 I feel safe in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.8 I have many friends in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.9 The teacher in this class keeps reminding us what is most important to learn. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.10 I know what the teacher expects of me in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.11 Students in this class are generally respectful of each other. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.12 The teacher of this class regularly lets me know how I am doing. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.13 The teacher of this class grades me fairly. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.14 The teacher encourages me to learn as much as I can in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.15 The teacher makes lessons interesting in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.16 I try very hard to understand what is being taught in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.17 I have done my best work in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.18 The teacher of this class encourages me to do my best. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.19 The teacher doesn't let students give up when the work gets hard in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.20 I actively participate in this classroom's discussions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.21 I enjoy the work that I do in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.22 I pay attention when I am in this class. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



Teacher Instructions

Note: This survey should be administered to a class of your choice. In a study of this kind, it is important to have a standardized administration format so that procedures are consistent across the study. Therefore, we have provided *verbal instructions* below to follow. You may simplify language as needed.

Introductory Procedures: FOR STUDENT SURVEYS

- Students should be given about 15 minutes to complete the survey. Although many students may finish in less time, it is particularly important to allow students adequate time to complete the survey.

Please note: Student participation is strictly voluntary. The survey is not a test and their grades will not be affected if they choose not to participate. Non-participating students should be allowed to study quietly at their desk during the survey. Additionally, if students do choose to participate they may decline answering any survey question they choose.

1. Prior to handing out the surveys, read the following script:

Our school is involved in an important study of student attitudes and behaviors. The purpose of this study is to help the teachers and administrators in the school better understand your needs. By taking this survey seriously and by answering honestly, you play an important role in this effort.

*There are a couple of important things you need to know. The survey is filled out anonymously. This means there are no identification numbers on the survey and you should **not** put your name on the survey. No one will know which survey you filled out, and therefore no one can know how you answer these questions. Also, the survey is voluntary, which means you do not have to take it, and you may skip an item if you choose. This is not a test you take for school grades.*

I will now give each of you a survey form. Please do not start filling it out until I tell you to do so. Remember: The survey is not a test, and it is important that you answer the questions honestly.

2. Hand out a survey to each student, and then read the following to students:

Remember that your answers on this questionnaire will be kept strictly confidential. DO NOT put your name on this form. Our school will receive a report that combines many students' answers together. Therefore, no one will be able to connect your answers with your name.

This is not a test you take for school grades. You are just being asked to tell about yourself, your experiences, and your feelings. Please be as honest as you can.

3. When finished reading the paragraphs, continue by saying:

You will be given 15 minutes to complete your survey. At the end of this time period, I will ask you to place your survey in this envelope (hold up the envelope). Then I will seal the envelope. Neither I nor anyone else in this school will look at the surveys. They will be sent to an independent research firm. All of the surveys will be analyzed together to give an overall picture of our school. Then the surveys will be destroyed (please use age-appropriate language if necessary).

4. Please direct student's attention to the instructions at the top of the survey and read them aloud:
 - *Please use a ball-point pen or a thin felt tip.*
 - *Please follow the examples shown on the left hand side to help optimize results.*

Review with students how to mark their answers using an X, and how to change their answer (by completely filling in their old answer and putting an X on their new answer).

5. Then say:

If you have any questions during the survey, raise your hand, and I will try to answer them. You have 15 minutes to do the survey. If you finish early, remain in your seat and use your time to study. If you do not finish the survey, I will collect it anyway at the end of the period. You may begin.

6. Finally, we highly recommend that you personally let students know that this survey is designed to collect information from them that will help you improve your teaching practice and that you personally appreciate their help and honest responses. We also recommend that you personally assure students that you will not attempt to match surveys or responses to individual students and no student will suffer any consequences for responding honestly and openly to the survey items. For example, you might say, "I want to let you all know that I truly appreciate your help reflecting on your experience in this class. I want to make sure that my teaching helps you learn effectively. Once again, please respond honestly and openly; I will seal your responses in this envelope when you are done, so you can be sure that I will not know how each of you responded to the survey items. I want you to feel free to give me honest feedback about this class."

Additional Directions

1. If a student comes in late, you may let him or her take the survey if at least 10 minutes remain.
2. If a student does not want to take the survey, that is his or her right. Do not mandate participation.

Concluding Procedure

1. During the survey period, announce when there are 10 minutes remaining and when there are 5 minutes remaining.
2. Collect all surveys by the end of the period. At the end of the allotted time, all surveys should be collected and placed in the envelope provided. Seal the envelope in front of the students. Do not make special arrangements for students to finish later or on their own. The hard and fast rule is to collect all forms by the end of the period.
3. After you seal the envelope, thank the students for their help.
4. **Return the envelope to the location designated by the survey coordinator in your school.**

Appendix C: Reports

An Anonymous Summary Report of Effective Teaching at Broad Ripple Magnet School

Anonymous data report for each teacher's video observation data, self-rating data, and student survey data

A Summary Report of Classroom Instruction at Broad Ripple Magnet School and Recommendations for Improvement

Summarizes the data collected regarding the forty-one elements of effective teaching, provides some analysis and interpretation, and makes recommendations for the school level and for individual teachers.

An Anonymous Summary Report of Effective Teaching at John Marshall Community School

Anonymous data report for each teacher's video observation data, self-rating data, and student survey data

A Summary Report of Classroom Instruction at John Marshall Community School and Recommendations for Improvement

Summarizes the data collected regarding the forty-one elements of effective teaching, provides some analysis and interpretation, and makes recommendations for the school level and for individual teachers.

Letter to Teachers

Each teacher received an individual report with her/his data from the video, the self-analysis, and the student questionnaires. This letter describes the report and how teachers might use it.



An Anonymous Summary Report of Effective Teaching at Broad Ripple Magnet School

Prepared by Marzano Research

for

Broad Ripple Magnet School for the Arts and Humanities
Indianapolis, Indiana

January 2015



OUR MISSION

To provide the best research, the most useful actions, and the highest level of services to educators.

OUR VISION

To continuously develop tools that translate high quality educational research into practical applications educators can put to immediate use.

OUR GOAL

To be the place educators go for the latest information and data, synthesized into clear, concise resources that facilitate immediate action.

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Introduction

This report presents an anonymous summary of data collected on classroom instruction as practiced at Broad Ripple Magnet School. Data were collected from three sources: (1) videos of teachers instructing students, (2) teachers' ratings of their use of classroom strategies and behaviors associated with forty-one elements of effective teaching, and (3) students' ratings of their experiences in class.

The videos of teachers were scored on forty-one elements of effective teaching. Each video was scored independently by two observers. The scale used to score each element is described in table 1.

Table 1: Five-Point Scale Used to Score Each Element of Effective Instruction

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
The teacher adapts or creates new versions of strategies or behaviors associated with the element for unique student needs and situations.	The teacher uses strategies or behaviors associated with the element and monitors the extent to which the strategies or behaviors affect student outcomes.	The teacher uses strategies or behaviors associated with the element, but does so in a somewhat mechanistic way.	The teacher uses strategies or behaviors associated with the element incorrectly or with parts missing.	The teacher should use strategies or behaviors associated with the element but does not.

Note: Adapted from page 37 of Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research.

The scale in table 1 was used to score video recordings of teachers on the forty-one elements listed in table 2.

Table 2: Forty-One Elements of Effective Teaching

Element	Description
1. Providing clear learning goals and scales	The teacher provides a clearly-stated learning goal accompanied by a scale or rubric that describes levels of performance relative to the learning goal.
2. Tracking student progress	The teacher facilitates tracking of student progress on one or more learning goals using a formative approach to assessment.
3. Celebrating success	The teacher provides students with recognition of their current status and their knowledge gain relative to the learning goal.
4. Establishing and maintaining classroom rules and procedures	The teacher reviews expectations regarding rules and procedures to ensure their effective execution.
5. Organizing the physical layout of the classroom	The teacher organizes the physical layout of the classroom to facilitate movement and focus on learning.

Element	Description
6. Identifying critical information	The teacher identifies specific parts of a lesson as involving important information to which students should pay particular attention.
7. Organizing students to interact with new knowledge	The teacher organizes students into small groups to facilitate the processing of new information.
8. Previewing new content	The teacher engages students in activities that help them link what they already know to the new content about to be addressed and facilitates these linkages.
9. Chunking content into "digestible bites"	Based on student needs, the teacher breaks the content into small chunks (that is, digestible bites) of information that can be easily processed by students.
10. Helping students process new information	During breaks in the presentation of content, the teacher engages students in actively processing new information.
11. Helping students elaborate on new information	The teacher asks questions or engages students in activities that require elaborative inferences that go beyond what was explicitly taught.
12. Helping students record and represent knowledge	The teacher engages students in activities that help them record their understanding of new content in linguistic ways and/or represent the content in nonlinguistic ways.
13. Helping students reflect on their learning	The teacher engages students in activities that help them reflect on their learning and the learning process.
14. Reviewing content	The teacher engages students in a brief review of content that highlights the critical information.
15. Organizing students to practice and deepen knowledge	The teacher uses grouping in ways that facilitate practicing and deepening knowledge.
16. Using homework	When appropriate (as opposed to routinely), the teacher designs homework to deepen students' knowledge of informational content or practice a skill, strategy, or process.
17. Helping students to examine similarities and differences	When the content is informational, the teacher helps students deepen their knowledge by examining similarities and differences.
18. Helping students examine errors in reasoning	When content is informational, the teacher helps students deepen their knowledge by examining their own reasoning or the logic of the information as presented to them.
19. Helping students practice skills, strategies, and processes	When the content involves a skill, strategy, or process, the teacher engages students in practice activities that help them develop fluency.
20. Helping students revise knowledge	The teacher engages students in revision of previous knowledge about content addressed in previous lessons.
21. Organizing students for cognitively complex tasks	The teacher organizes the class in such a way as to facilitate students working on complex tasks that require them to generate and test hypotheses.
22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	The teacher engages students in complex tasks (for example, decision-making, problem-solving, experimental-inquiry, and investigation tasks) that require them to generate and test hypotheses.
23. Providing resources and guidance	The teacher acts as resource provider and guide as students engage in cognitively complex tasks.

Element	Description
24. Noticing when students are not engaged	The teacher scans the room, making note of when students are not engaged and taking overt action.
25. Using academic games	The teacher uses academic games and inconsequential competition to maintain student engagement.
26. Managing response rates	The teacher uses response-rate techniques to maintain student engagement in questions.
27. Using physical movement	The teacher uses physical movement to maintain student engagement.
28. Maintaining a lively pace	The teacher uses pacing techniques to maintain students' engagement.
29. Demonstrating intensity and enthusiasm	The teacher demonstrates intensity and enthusiasm for the content in a variety of ways.
30. Using friendly controversy	The teacher uses friendly controversy techniques to maintain student engagement.
31. Providing opportunities for students to talk about themselves	The teacher provides students with opportunities to relate what is being addressed in class to their personal interests.
32. Presenting unusual or intriguing information	The teacher uses unusual or intriguing information about the content in a manner that enhances student engagement.
33. Demonstrating "withitness"	The teacher uses behaviors associated with withitness to maintain adherence to rules and procedures.
34. Applying consequences for lack of adherence to rules and procedures	The teacher consistently and fairly applies consequences for not following rules and procedures.
35. Acknowledging adherence to rules and procedures	The teacher consistently and fairly acknowledges adherence to rules and procedures.
36. Understanding students' interests and background	The teacher uses students' interests and background to produce a climate of acceptance and community.
37. Using verbal and nonverbal behaviors that indicate affection for students	When appropriate, the teacher uses verbal and nonverbal behaviors that indicate affection for students.
38. Displaying objectivity and control	The teacher behaves in an objective and controlled manner.
39. Demonstrating value and respect for low-expectancy students	The teacher exhibits behaviors that demonstrate value and respect for low-expectancy students.
40. Asking questions of low-expectancy students	The teacher asks questions of low-expectancy students with the same frequency and depth as with high-expectancy students.
41. Probing incorrect answers with low-expectancy students	The teacher probes incorrect answers of low-expectancy students in the same manner as he or she does with high-expectancy students.

Source: Adapted from Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research.

Video Observation Data

Table 3 displays teachers' video observation scores on each element that was observable. That is, elements that were not evident in the recording appear without a score in table 3. This does not necessarily mean that the teacher should have used the element during the brief episode observed.

Table 3: Video Observation Scores on Forty-One Elements

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students									
1	1			2		3																																												
3			2	2		3								2									3	3									2	2	2	3	3													
4	3			3		3		3	2	3	2	3		3					2				2		3			3	3			1	3		2				2	2										
5	1					3		3	3		2			3	3				3			3		3	2			3				1	3		2				2	2										
7	1	1		1		2		1		2				1					2				1	3	2			1						1	3				2	2										
8	1			2		1								2									1		1			1						1	1				2	1										
9				2		1								2											1			1							1	1														
10	2			1		2								2									1		1			1	1										2	2										

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students			
12	3			3		3	3	3	2	2	2	2		3	3								2	2									2		3		3	2	2			2		
14	1			3	2	2													2				3	1					1				2	2	1		2	2						
15	2			2	2	3		2	2	3	3											2	2			1		2	2		2		2	2	2	3	2	2						
16	1			1		2								1					1				1		1		1	2					1	1	1		1	1						
18	1			2		2		2		2				2									1		1		2					1	1	1			2							
19	1			2		2								2	2								2					3			2		2				2							
20	1			2	2	1		1				2		1						2			1		1			2			1	1		2	2		2	2						
21	1			2	2	3		2	2			2		2					2	2		2	2		2		2	2	2			3	2	2	2		2	2						
22	2			1		2		2						2						3			2		2		1	1				2	1		1	2	2		2	2				
23				3		2													3			2																2						
25	1			1		2		2		1							1						1		2	2					2	2	2	1			2	2						
26	3		2	3	2	3		3	2					2					2				2		2		3	3				2		2		2		2	3					
27	1			2		2													2				2		2		2	2			2		2			2	2	2						
28	2			2		1								1					2				1		2		1	2	2			1	1		2	2	2							
29	1			1		2		1						1					3				1		1		1	1	2	2		1		2	1	1								
30	1			2		2		2	1	1		1		2								2		2		2		2	2			2		2		2	2							
31	2			2		2								2							2	3							2				2		2		2							

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students				
33	1			1	2	2		1			1			2					2					1		2		1	2				1	2	2										
35	1			1		1								2					2					1		2		1					1	1	2		1	2	1						
36	1			2		2								2					2					1		2		1	2				1	1	1		1	2	1						
37				2		3				1	1			2	1				3								2		2				1	1				1							
38	2			3		2		2	2					2										2		2		2	2			2	2				3	2							
41	1			2	1	2											1		2					1				1										2							
42	1		2	3	2	3													2				2						2				2	2				3	2		3	2	2		
43	2		2	2		2		2	1	2			2	2					2			1		1		3		1	2				2		2	2	2	2	2	2					
44				2		2								2	2					3				2		3				2				2	2	2	2	2	2						
45	2	2		2		3		1	2															1	2			2					2		2			1	2						
47	1			2		2	2	2	1			1		2					1					1		1		2	2		2			1	1	1	2	2	2						
48	2		2	2		2		2						2										2		3		2	2		1		2				2	3	2					1	
49	1			1	2	1	1	1		1				1										2		1		1			2			1			2	1	2						
50	2			2	1	1		2						2					2					2		1		1					2			1		2	2						
51	1			2		2					2			2										2		3		2	2				2					2	2						
52	1			2																				1				2						1		1		2	2						
53	2			3		3		2			2			2	3				3					2		1	3		2					2		1	1	2	2	3	3				

Teachers' Self-Rating Data

Table 4 displays teachers' self-rating scores on each element. These scores represent teachers' self-perceptions regarding their performance on the forty-one elements of effective instruction. To score themselves, teachers used the scale in table 1.

Table 4: Teachers' Self-Rating Scores on Forty-One Elements

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students								
1	4	4	4	4	3	4	4	4	4	4	4	4	3	4	4	3	3	3	4	4	3	3	4	3	3	3	3	4	3	4	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4				
4	3	3	3	3	4	3	3	2	3	3	3	3	3	3	2	3	3	3	2	2	3	4	3	2	3	2	3	4	3	4	3	4	2	3	3	3	3	3	3	3	3	3	3	3	3	3			
5	3	3	3	3	3	3	4	4	4	3	4	3	3	3	3	3	3	4	3	4	3	3	3	4	3	3	3	4	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
8	4	3	3	3	4	3	3	2	3	3	3	2	3	3	3	3	3	3	2	3	3	3	3	4	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
9	2	3	4	3	3	3	3	2	2	2	2	3	2	3	2	2	3	3	2	3	2	2	2	3	4	2	2	2	3	2	4	3	3	3	3	3	3	4	2	3	3	3	3	3	2	2	2		
15	2	1	3	3	2	2	2	3	1	2	2	3	2	2	2	3	3	1	2	3	2	1	3	2	2	3	2	1	3	2	3	2	2	2	2							3	3	3	3	3			
16	2	2	0	2	3	2	4	3	4	3	2	3	4	2	3	1	4	4	3	2	3	4	2	1	0	0	1	2	3	3	4	2	2	2	1	1	3	3	3	3	3	3	3	3	3	3	3	3	
17	1	1	2	2	2	2	2	1	1	1	2	2	1	2	2	1	2	3	2	2	2	2	4	2	3	1	4	3	4	3	4	3	3	3	2	3	4	4	4	3	3	3	3	3	3	3	2	2	2

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students			
18	1	2	3	3	3	3	3	3	4	4	3	2	2	3	3	2	2	3	2	1	1	3	3	0	2	1	2	3	3	2	2	1	2	2	4	2	2	3	2	2	2			
19	3	3	4	3	3	3	3	4	3	3	4	3	3	3	3	4	4	3	2	3	3	4	3	2	3	3	4	3	4	4	3	4	2	3	3	3	3	3	3	3	3	3		
22	2	2	2	3	3	3	2	3	3	3	2	2	3	3	2	2	3	2	3	2	3	0	2	2	0	2	2	3	2	3	3	2	3	3	3	3	3	3	3	3	2	2		
23	4	4	4	4	4	4	4	4	4	3	4	3	4	4	4	4	4	4	4	4	4	3	4	3	3	3	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
25	3	3	3	3	4	3	3	2	3	3	4	2	4	3	4	2	3	4	3	3	3	4	3	2	4	3	4	4	4	3	3	4	4	3	3	3	3	3	3	3	3	4	4	4
26	3	3	4	4	3	4	3	3	4	3	3	3	3	3	3	3	3	3	4	3	3	3	4	3	3	3	4	4	4	3	3	3	3	3	3	3	4	3	3	3	3	3	3	
27	3	3	4	4	4	3	4	4	4	4	4	3	3	3	0	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4	4
28	2	3	2	2	2	3	2	3	3	2	3	3	2	2	2	1	2	2	3	3	1	0	2	2	1	1	2	2	2	2	2	2	3	1	1	2	3	2	2	2	2	2	2	2
29	3	2	3	4	4	3	3	4	3	3	2	2	2	3	2	2	2	2	3	3	2	0	4	3	2	2	3	3	3	3	1	3	4	4	3	4	4	4	4	4	4	3	3	
32	2	3	3	3	2	3	2	2	3	2	3	2	2	3	2	2	2	3	3	3	2	2	3	2	0	2	2	2	2	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3
37	2	4	2	3	2	3	2	3	4	3	2	3	2	3	2	2	3	3	3	2	2	3	3	2	3	3	3	3	3	3	2	2	2	2	2	3	3	2	2	3	2	3	2	3
39	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	2	2	1	1	0	3	1	0	3	3	2	2	2	2	2	2	3	3	3	3
41	3	3	4	3	4	3	3	3	2	2	2	2	3	3	3	2	4	3	3	2	3	2	3	2	2	3	3	3	4	4	4	2	2	2	2	4	3	3	3	3	3	3	4	
42	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
43	3	2	3	4	4	4	3	3	4	3	3	4	4	4	2	4	4	4	4	3	3	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	3	3	3	3
45	1	3	0	2	2	3	2	2	3	4	4	1	4	3	2	1	0	2	4	3	1	0	1	3	4	2	3	3	4	0	0	3	3	3	4	2	3	3	3	3	3	4	4	4
48	4	3	3	4	4	4	4	3	4	3	3	3	2	3	3	3	3	2	3	4	4	3	3	2	2	2	3	3	3	3	3	4	3	4	3	4	3	4	4	4	3	4	4	4

Student Survey Data

Table 5 displays mean scores that were calculated for each teacher from students' ratings of agreement with twenty-one statements pertaining to their experiences in class. The twenty-one survey questions addressed students' perceptions of selected teacher behaviors, as well as their own actions and beliefs in class.

When considering the mean scores reported in table 5, it is important to note that the survey had five response choices ordered from greatest disagreement to greatest agreement (numeric values noted in parentheses): strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). Mean scores of 4.0 or greater indicate that more students agreed with the statement than disagreed. Conversely, mean scores of 2.0 or less indicate that more students disagreed with the statement than agreed. Mean scores close to 3.0 suggest: (1) the numbers of students who responded with ratings of agreement and disagreement were similar and/or (2) more students responded with a rating of neutral than with ratings of agreement or disagreement.

Table 5: Student Survey Mean Scores

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
1	10	4.50	4.80	4.20	4.50	4.90	4.50	3.70	4.80	4.70	3.80	4.70	4.60	4.60	4.00	4.00	4.70	4.90	4.90	3.80	3.90	4.40
2	12	4.36	4.17	4.17	4.08	3.92	3.92	4.08	4.00	4.25	3.00	3.75	4.17	4.00	3.75	3.75	4.08	3.92	4.27	4.08	4.18	4.00
3	1	4.00		3.00	1.00	5.00	1.00	3.00	4.00	2.00	3.00	4.00	1.00	4.00	3.00	1.00	3.00	4.00	1.00	3.00	2.00	4.00
4	14	4.43	4.43	4.15	4.50	4.36	4.57	4.43	4.38	4.43	3.50	4.38	4.31	4.64	4.36	4.36	4.50	4.64	4.43	4.08	4.43	4.00

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
5	7	5.00	4.71	4.43	4.43	4.57	4.86	4.43	4.29	4.29	4.71	4.57	5.00	4.43	4.57	5.00	4.71	4.57	4.57	4.86	4.71	5.00
7	20	3.65	4.00	3.84	3.63	4.35	4.00	4.37	4.00	4.30	2.85	3.80	3.90	4.10	3.80	4.05	3.90	4.05	4.30	3.85	3.40	3.55
8	26	4.23	3.73	3.58	3.65	4.24	4.00	3.72	3.83	4.29	3.83	3.00	3.79	3.58	2.83	3.96	3.71	3.67	3.33	3.63	2.75	3.83
9	13	4.08	4.15	3.92	3.54	3.08	3.62	3.54	3.54	4.08	2.58	3.67	3.92	3.83	3.00	3.92	3.77	3.69	3.00	3.62	2.92	3.31
10	13	3.46	4.00	3.69	3.46	3.46	3.92	4.15	4.00	3.62	3.38	3.38	3.77	3.92	2.85	4.38	3.77	3.85	3.38	3.69	2.77	3.92
11	25	3.28	3.28	2.76	3.33	3.61	3.40	3.50	3.17	3.58	3.25	2.88	3.26	3.38	3.32	3.52	3.48	3.54	3.58	3.46	3.54	3.58
13	3	3.50	4.00	2.67	3.67	4.00	3.67	3.67	4.00	3.33	4.00	3.33	3.67	3.00	3.00	3.33	3.33	4.00	4.00	3.67	3.33	3.00
14	13	4.15	3.92	3.62	4.08	4.15	4.38	4.38	4.25	4.33	4.17	4.15	4.31	4.15	4.08	4.38	4.31	4.31	4.00	4.08	4.46	4.46
15	9	3.78	4.11	4.11	4.11	4.56	3.78	4.44	4.67	4.44	3.89	3.56	3.75	4.50	3.38	4.88	4.63	4.38	4.63	3.75	3.38	4.29
18	20	3.75	3.80	2.90	3.05	3.55	3.85	3.58	3.58	4.05	3.16	3.20	3.55	3.53	2.84	3.60	3.25	3.44	3.50	3.15	2.89	3.53
19	13	4.08	4.00	4.08	4.00	3.92	4.08	3.77	3.85	4.54	3.31	4.33	4.54	4.15	4.38	4.15	4.23	4.50	4.23	3.92	4.23	3.92
20	30	4.60	4.45	4.03	4.10	3.63	4.10	3.93	4.43	4.38	3.00	3.86	4.47	4.37	4.07	4.17	4.07	4.37	4.13	3.87	3.57	3.93
21	15	4.80	4.40	4.21	4.20	4.47	4.13	3.57	4.57	4.67	4.27	3.67	4.71	4.46	3.93	4.50	4.50	4.36	4.29	3.83	4.43	4.50
22	26	3.81	3.85	3.54	3.60	4.00	3.46	3.54	3.62	3.96	2.62	3.35	3.46	3.80	3.46	3.72	3.56	3.65	3.84	3.35	3.21	3.67
23	6	4.67	5.00	4.50	4.50	4.67	5.00	4.83	4.67	4.83	4.50	4.67	4.83	4.67	4.50	4.67	4.17	4.83	4.67	4.60	4.83	4.67
25	19	4.94	4.67	4.33	4.72	4.06	4.28	4.00	4.67	4.56	4.28	4.50	4.78	4.71	4.67	4.50	4.44	4.44	4.50	4.22	4.33	4.61
26	25	4.04	4.46	3.79	3.96	4.38	4.25	3.83	4.42	4.42	3.96	3.83	4.08	4.09	3.74	3.83	4.00	4.42	4.21	3.42	4.25	3.79
27	10	4.30	4.40	4.20	4.40	3.90	4.50	4.40	4.40	4.40	4.60	4.00	4.40	4.50	4.50	4.20	4.40	4.50	4.30	4.30	4.20	4.70
28	23	4.55	4.39	4.23	4.32	3.50	3.95	3.58	4.52	4.43	3.00	4.20	4.43	4.38	4.00	4.20	4.25	4.26	4.05	3.70	4.15	4.30
29	19	3.84	3.89	3.74	3.84	4.11	4.11	4.11	4.16	4.33	3.28	3.78	4.22	4.17	3.82	3.69	3.94	4.31	3.93	3.81	4.00	3.75
30	13	3.54	3.46	3.15	3.92	4.00	3.69	3.50	3.38	3.92	2.85	2.54	3.92	3.46	3.00	4.08	3.77	3.38	3.00	3.62	3.38	3.77
31	16	4.50	4.13	3.75	3.63	3.75	3.94	4.06	4.13	4.19	3.88	3.47	4.40	3.93	3.93	4.06	3.56	3.88	3.50	3.31	3.50	3.63
32	8	4.38	4.13	3.75	3.75	4.25	3.75	4.13	4.25	4.38	2.88	4.00	4.13	4.25	3.88	4.13	4.25	4.57	3.88	4.67	3.88	4.13
33	23	3.74	3.70	3.43	3.61	3.96	3.96	3.39	3.86	4.22	3.00	3.13	3.78	3.87	2.83	4.13	3.91	3.74	3.57	3.78	3.00	3.78

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
35	4	4.75	4.75	4.50	4.50	5.00	4.50	5.00	4.50	5.00	4.75	5.00	4.75	4.75	4.50	4.75	5.00	4.75	4.25	4.75	4.75	4.75
36	12	2.08	2.58	3.17	2.64	3.00	3.18	3.36	3.36	3.55	2.60	2.64	3.18	3.09	2.42	4.17	4.00	2.58	2.75	3.42	2.55	3.82
37	24	4.00	3.74	3.54	3.50	4.04	4.04	3.50	3.91	4.29	3.71	3.54	3.70	3.92	2.96	4.21	3.79	4.04	3.92	3.38	2.92	4.13
38	26	4.85	4.62	4.35	4.35	4.35	4.58	3.88	4.58	4.54	4.35	4.04	4.62	4.62	4.73	4.27	4.50	4.54	4.48	4.12	4.08	4.38
41	11	4.27	4.36	3.82	4.00	4.64	4.27	3.55	4.18	4.45	4.36	3.82	4.64	4.00	4.00	4.27	3.82	4.30	3.64	3.82	3.55	4.36
42	5	3.80	4.25	4.25	4.50	3.33	3.75	3.50	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
43	17	3.76	3.94	3.75	3.82	4.29	3.94	4.41	3.94	4.25	2.88	3.06	4.25	4.19	3.44	4.35	4.00	4.18	3.53	3.44	3.41	3.94
44	17	4.53	4.53	4.06	4.35	4.29	4.65	4.00	4.12	4.71	3.59	3.59	4.82	4.12	4.12	4.41	4.24	4.24	4.29	4.29	4.47	4.18
45	7	4.17	4.17	3.83	4.17	4.17	4.33	3.60	4.00	4.33	4.17	4.00	4.33	4.33	4.33	4.00	4.33	4.33	4.33	4.33	4.33	4.33
47	6	4.17	4.17	4.33	4.00	4.50	4.67	4.80	4.17	4.33	5.00	4.00	4.50	4.50	4.17	4.33	3.83	4.33	4.17	4.17	3.83	4.17
48	11	3.82	4.09	3.91	3.73	4.45	4.00	3.91	4.18	4.27	3.82	4.09	4.00	4.00	3.18	4.36	4.18	4.09	4.09	3.45	3.36	3.82
49	28	4.11	3.70	3.54	3.71	4.14	4.00	4.07	3.64	4.21	3.30	3.46	4.32	3.82	3.79	4.04	4.00	3.89	3.61	3.61	3.64	4.07
50	17	3.65	3.75	3.47	3.93	4.18	3.94	3.69	4.25	4.06	2.82	3.50	3.76	3.88	2.88	4.12	3.53	3.88	3.81	3.38	3.59	3.71
51	23	3.18	3.41	3.52	3.77	3.82	3.67	4.18	3.65	3.77	2.30	2.78	3.25	3.43	3.30	4.14	4.14	3.50	3.48	3.65	3.30	3.83
52	7	4.86	4.71	4.43	4.57	4.71	4.57	4.43	5.00	4.86	5.00	4.57	5.00	5.00	4.86	5.00	5.00	5.00	5.00	4.71	4.86	5.00
54	29	5.00	4.97	4.52	4.83	4.69	4.96	4.55	4.83	4.86	4.62	4.43	4.76	5.00	4.83	4.69	4.62	4.90	4.69	4.21	4.62	4.86
55	18	4.17	3.94	3.28	3.67	4.22	4.00	3.56	4.11	4.44	3.94	3.00	3.78	3.89	3.17	3.72	3.39	3.83	4.06	3.72	3.28	4.00
57	12	4.83	4.75	4.75	4.75	4.58	4.92	4.50	4.91	4.75	4.67	4.67	4.58	4.83	4.50	4.92	4.58	4.83	4.83	4.50	4.58	4.67
58	9	3.44	3.67	3.33	3.88	3.89	3.67	4.22	4.13	4.11	3.44	4.11	4.00	4.11	3.22	3.89	4.22	3.88	3.88	3.33	3.78	4.22
59	21	3.19	3.10	3.00	2.95	4.00	3.62	3.71	3.19	3.57	4.00	2.62	3.35	3.10	2.24	3.62	3.48	3.05	3.00	3.29	2.62	3.48



A Summary Report of Classroom Instruction at Broad Ripple Magnet School and Recommendations for Improvement

Prepared by Marzano Research

for

Indiana Department of Education and
Broad Ripple Leadership Team
Indianapolis, Indiana

January 2015

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Introduction

Broad Ripple Magnet School (BRMS) is working with Marzano Research to identify strengths and areas to target for improvement as part of an effort to improve the school’s instruction and climate. The current report summarizes data collected regarding the forty-one elements of effective teaching, as described in *Becoming a Reflective Teacher* (Marzano, 2012), at BRMS.

Data Collection

During December 2014, data were collected from the following three sources:

- (1) video observations of teachers instructing students,
- (2) a teacher self-report, and
- (3) a student survey.

A brief description of the different sources of data is provided before results are presented.

Video Observations of Teachers Instructing Students

Teachers were recorded for one class period (approximately 45 minutes) while providing instruction to students. A staff member from Marzano Research spent two days recording teachers. Video recorders were set up in ten different classrooms at one time for one class period. At the end of the class period, the recorders were moved to new classrooms. Marzano Research then analyzed each teacher’s use of the forty-one elements of effective teaching in each recording (a list of the forty-one elements of effective teaching can be found in appendix A). Each teacher’s video was reviewed and coded using the five-point scale presented in table 1.

Table 1: Five-Point Scale Used to Score Each Element of Effective Instruction

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
The teacher adapts or creates new versions of strategies or behaviors associated with the element for unique student needs and situations.	The teacher uses strategies or behaviors associated with the element and monitors the extent to which the strategies or behaviors affect student outcomes.	The teacher uses strategies or behaviors associated with the element, but does so in a somewhat mechanistic way.	The teacher uses strategies or behaviors associated with the element incorrectly or with parts missing.	The teacher should use strategies or behaviors associated with the element but does not.

Note: Adapted from Marzano, 2012, p. 37.

Teacher Self-Report

The teachers at BRMS each individually completed a self-report designed to measure their self-perceived use of the forty-one elements of effective teaching. Teachers responded to questions about their use of each of the forty-one elements using the five-point scale in table 1.

Student Survey

The final piece of data came from student surveys. The students at BRMS completed anonymous surveys that asked them to respond to twenty-one statements about their experiences in class. Students read a statement and provided their agreement with the statement using a 5-point Likert-scale: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The rating scale is provided in appendix B.

Results

Video Observation Results

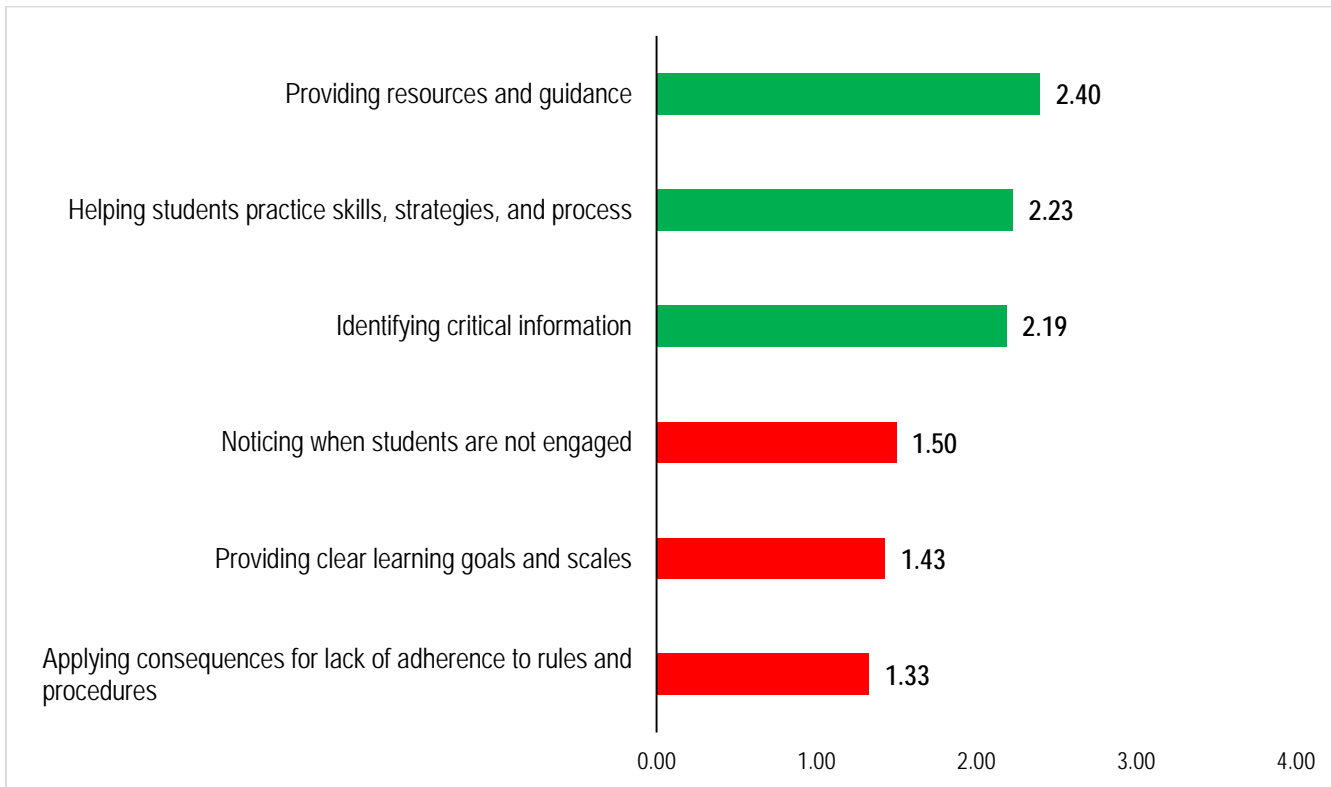
Of the 59 teachers at BRMS, 48 (81%) were recorded during an instructional period. Due to the time-sampling method of observation, not all of the elements for each teacher could be observed. For example, only 1 teacher was observed on the element *Using academic games*, whereas 47 teachers were observed on the element *Establishing and maintaining classroom rules and procedures*. Across all teachers, a mean score for each element was calculated. Table 2 presents the total number of teachers for which a given element was observed and the mean score across all 48 teachers.

To provide a more stable view of the effective teaching practices in BRMS, only those elements that were observed with at least 10 teachers are presented in figure 1. Twenty elements were observed during instruction with at least 10 teachers. The top three and lowest three of those 20 elements, based on the mean summaries across all teachers, are presented in figure 1.

Table 2: Total Teachers and Mean Scores for Elements of Effective Teaching from Video Observations

Element	Total Teachers	Mean
Using academic games	1	3.00
Using physical movement	6	2.50
Providing resources and guidance	10	2.40
Demonstrating value and respect for low-expectancy students	5	2.40
Organizing students to practice and deepen knowledge	6	2.33
Asking questions of low-expectancy students	4	2.25
Helping students practice skills, strategies, and processes	35	2.23
Identifying critical information	47	2.19
Using verbal and nonverbal behaviors that indicate affection for students	45	2.02
Establishing and maintaining classroom rules and procedures	47	2.00
Helping students reflect on their learning	1	2.00
Helping students revise knowledge	1	2.00
Organizing students for cognitively complex tasks	1	2.00
Engaging students in cognitively complex tasks involving hypothesis generation and testing	2	2.00
Using friendly controversy	1	2.00
Understanding students' interests and backgrounds	16	2.00
Reviewing content	36	1.94
Previewing new content	25	1.92
Displaying objectivity and control	33	1.91
Demonstrating intensity and enthusiasm	34	1.88
Celebrating success	8	1.88
Providing opportunities for students to talk about themselves	7	1.86
Helping students elaborate on new information	7	1.86
Helping students record and represent knowledge	7	1.86
Chunking content into "digestible bites"	13	1.85
Presenting unusual or intriguing information	6	1.83
Helping students process new information	12	1.83
Organizing the physical layout of the classroom	11	1.82
Managing response rates	36	1.81
Maintaining a lively pace	33	1.70
Probing incorrect answers with low-expectancy students	3	1.67
Acknowledging adherence to rules and procedures	18	1.67
Demonstrating "withitness"	42	1.62
Noticing when students are not engaged	40	1.50
Providing clear learning goals and scales (rubrics)	42	1.43
Applying consequences for lack of adherence to rules and procedures	21	1.33
Organizing students to interact with new knowledge	4	1.25
Tracking student progress	2	1.00
Helping students to examine similarities and differences	2	1.00
Using homework	0	-
Helping students examine errors in reasoning	0	-

Figure 1: The Three Highest and Three Lowest Means with at Least 10 Teachers Based on Video Observations



Note: The means in figure 1 are based on the elements with at least 10 teachers. Twenty elements were observed with at least 10 teachers. Of those 20, the three highest- and three lowest-rated elements are displayed.

Quality Control

To ensure accuracy of the video ratings, the videos were initially analyzed and coded by three different staff members. All of the ratings were then checked for accuracy by a senior staff member with over ten years of experience coding observations in relation to the elements of effective teaching. The senior staff member's ratings were used as the final ratings for the videos. The initial raters and the senior staff member agreed 54.6% of the time.

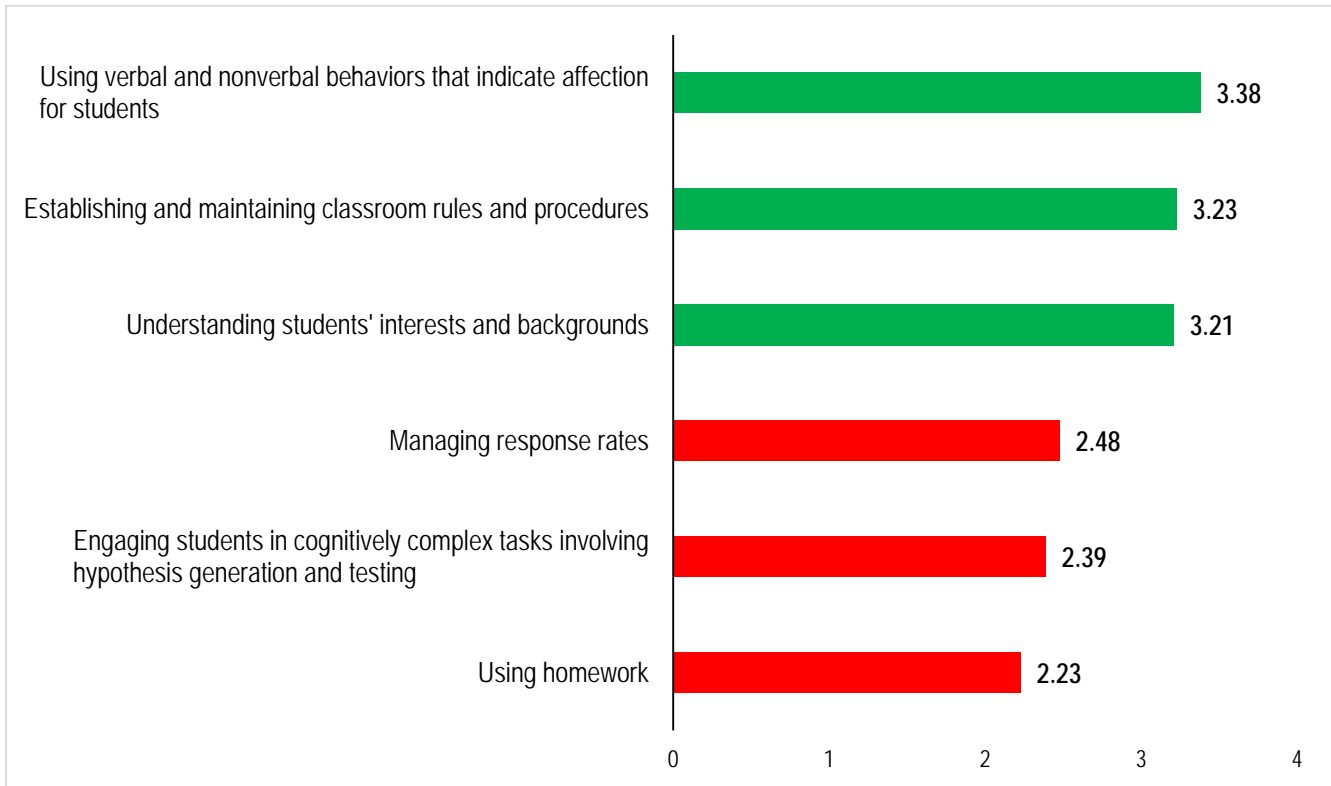
Teacher Self-Report Results

Of the 59 teachers at BRMS, 31 (52.5%) completed a self-report that measured the forty-one elements of effective teaching. As listed in table 3, the highest-rated element was *Using verbal and nonverbal behaviors that indicate affection for students* at 3.38. The lowest-rated element was *Using homework* at 2.23. Additionally, the three highest- and lowest-rated elements are displayed in figure 2.

Table 3: Total Teachers and Mean Scores for Elements of Effective Teaching from Teacher Self-Reports

Element	Total Teachers	Mean
Using verbal and nonverbal behaviors that indicate affection for students	29	3.38
Establishing and maintaining classroom rules and procedures	31	3.23
Understanding students' interests and backgrounds	29	3.21
Organizing the physical layout of the classroom	31	3.19
Helping students practice skills, strategies, and processes	31	3.19
Demonstrating intensity and enthusiasm	31	3.16
Displaying objectivity and control	29	3.14
Providing resources and guidance	31	3.10
Demonstrating value and respect for low-expectancy students	30	3.07
Chunking content into "digestible bites"	31	3.06
Providing opportunities for students to talk about themselves	31	3.06
Presenting unusual or intriguing information	31	3.06
Probing incorrect answers with low-expectancy students	30	3.03
Asking questions of low-expectancy students	30	3.03
Identifying critical information	31	3.03
Noticing when students are not engaged	31	3.03
Previewing new content	31	3.03
Helping students process new information	31	3.00
Reviewing content	31	3.00
Organizing students to interact with new knowledge	31	3.00
Helping students elaborate on new information	31	2.97
Celebrating success	31	2.97
Acknowledging adherence to rules and procedures	31	2.90
Organizing students to practice and deepen knowledge	31	2.90
Maintaining a lively pace	31	2.90
Demonstrating "withitness"	31	2.90
Tracking student progress	31	2.87
Using friendly controversy	31	2.87
Helping students examine errors in reasoning	31	2.84
Helping students revise knowledge	31	2.84
Applying consequences for lack of adherence to rules and procedures	31	2.84
Helping students record and represent knowledge	31	2.81
Helping students to examine similarities and differences	30	2.80
Helping students reflect on their learning	31	2.77
Providing clear learning goals and scales (rubrics)	31	2.71
Organizing students for cognitively complex tasks	31	2.68
Using physical movement	31	2.65
Using academic games	31	2.65
Managing response rates	31	2.48
Engaging students in cognitively complex tasks involving hypothesis generation and testing	31	2.39
Using homework	31	2.23

Figure 2: The Three Highest and Three Lowest Means Based on Teacher Self-Reports



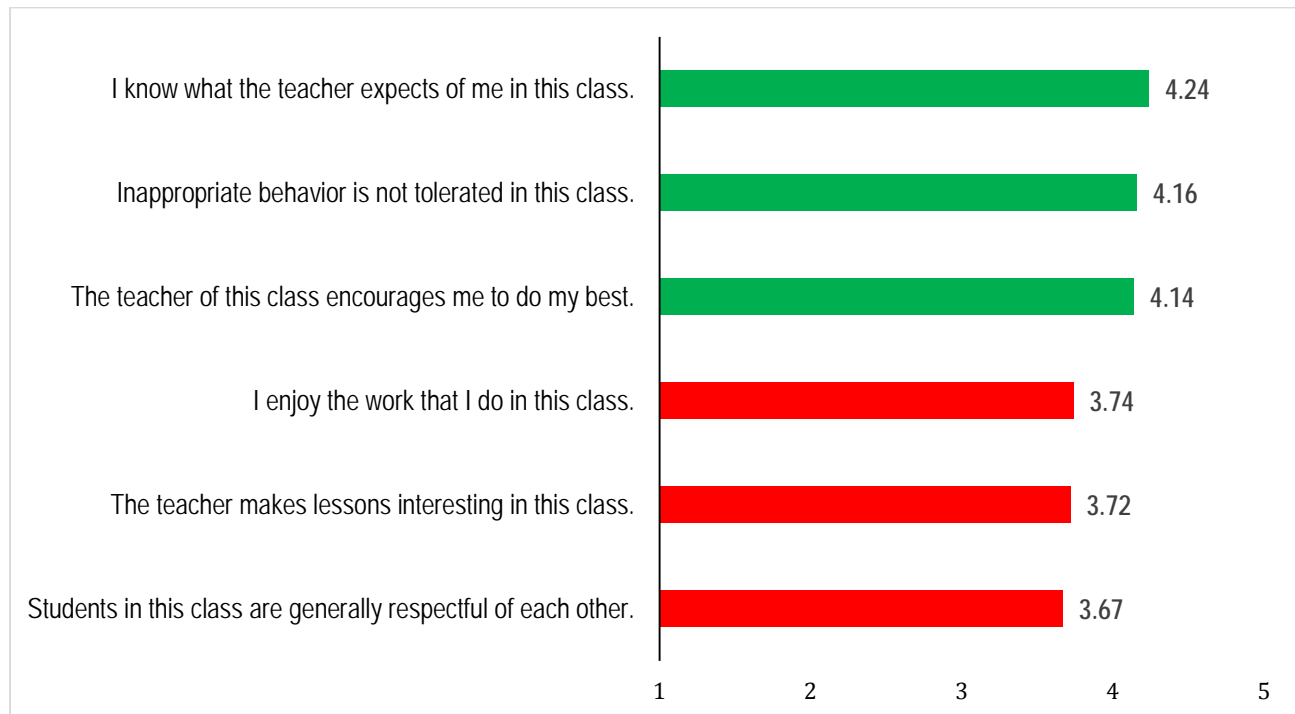
Student Survey

A total of 751 students completed surveys across 48 teachers, for an average of 15 surveys per teacher. The mean score and standard deviation for each item on the student survey are displayed in table 4. The highest-rated item was *I know what the teacher expects of me in this class* with an average score of 4.24, and the lowest-rated item was *Students in this class are generally respectful of each other* with an average score of 3.67. The three highest- and three lowest-rated items are displayed in figure 3.

Table 4: Mean Scores and Standard Deviations for Each Item Across Teachers on the Student Survey

Item	Mean	SD
I know what the teacher expects of me in this class.	4.24	0.49
Inappropriate behavior is not tolerated in this class.	4.14	0.46
The teacher of this class encourages me to do my best.	4.14	0.5
The teacher in this class keeps reminding us what is most important to learn.	4.13	0.44
I try very hard to understand what is being taught in this class.	4.12	0.60
The teacher of this class cares about me.	4.11	0.49
The teacher encourages me to learn as much as I can in this class.	4.11	0.48
The teacher of this class is fair.	4.10	0.58
The teacher of this class grades me fairly.	4.10	0.66
I pay attention when I am in this class.	4.08	0.44
I have done my best work in this class.	4.06	0.45
I feel safe in this class.	4.04	0.62
I have many friends in this class.	3.96	0.44
The teacher doesn't let students give up when the work gets hard in this class.	3.94	0.68
I am motivated to learn in this class.	3.90	0.64
I actively participate in this classroom's discussions.	3.85	0.45
I am recognized for my successes in this class.	3.82	0.50
The teacher of this class regularly lets me know how I am doing.	3.77	0.61
I enjoy the work that I do in this class.	3.74	0.69
The teacher makes lessons interesting in this class.	3.72	0.68
Students in this class are generally respectful of each other.	3.67	0.72

Figure 3: The Three Highest- and Three Lowest-Ranked Items on the Student Survey



To provide a comparison across all three sources of data, an aggregated mean score was computed. The descriptive statistics are presented in Table 5.

Table 5: Descriptive Statistics for All Three Sources of Data

Source	Mean	SD	Scale	Min	Max
Video Observations	1.82	.45	0-4	1.08	2.73
Teacher Self-Reports	2.92	.51	0-4	2.05	3.90
Student Survey	3.99	.46	1-5	2.80	4.82

Summary

In summary, data were collected across three methods: (1) video observations, (2) teacher self-reports, and (3) student surveys. Teachers rated themselves higher on the forty-one elements relative to the rating received from the video observations. Although this may be due to the difference in the number of elements observed during instruction compared to the number of elements rated on the teacher self-report, it is fairly common for people to rate their behavior more favorably than others view it (Whitcomb & Merrell, 2012).

A few patterns emerged from the observation data. The highest-rated items were those pertaining to helping students practice and providing support (e.g., *Using physical movement*, *Providing resources and guidance*). The lower-ranked items were related to engagement and instruction (e.g., *Providing clear learning goals*, *Noticing when students are not engaged*, *Probing incorrect answers with low-expectancy students*, and *Demonstrating “withitness”*). Additionally, elements related to pace, response rates, and previewing new content were rated under the mid-point of the scale (i.e., ≤ 2.0) and were observed in at least half of the teachers. Management of behavior emerged as a pattern too from the observations, as *Applying consequences for lack of adherence to rules or procedures* was one of the lowest-ranked items and *Acknowledging adherence to rules and procedures* was rated less than 2.0.

The data from the teacher self-report indicated that teachers viewed their understanding of and rapport with their students as strengths. The teachers rated items related to engagement and complex content as the lowest-rated items. Elements related to hypothesis generating and testing, organizing students for cognitively complex tasks, and examining similarities and differences were some of the lower-ranked items.

Overall, the students rated their teachers favorably. The higher-rated items were centered around expectations in class and feeling encouraged by the teacher. Students rated *I know what the teacher expects of me in this class* and *The teacher of this class encourages me to do my best* as two of the three

highest items. Where students reported needing improvement were related to the engagement in the classroom and the behavior of students towards each other. This matches the trends seen in the video observations in which engaging instruction and maintaining a lively pace were lower-rated elements.

Overall, the data indicates that the teachers and students viewed their relationships with each other favorably. High-paced, engaging instruction and management of misbehavior were factors rated lower.

Recommendations

The aggregate findings from the three sources of data indicate that two levels of recommendations are in order for BRMS, one set of recommendations for the school and another set of recommendations for individual teachers.

At the school level, BRMS should focus on:

- Providing more opportunities for students to explain and defend their answers
- Providing more opportunities for students to identify similarities and differences between topics
- Providing more clarity as to the focus of each lesson
- Fostering a sense of mutual respect in the classroom
- Making classes more engaging to students

In addition to the school-wide emphases above, a number of teachers had significant weaknesses in classroom management strategies, particularly at the middle school level. These teachers should be provided with extra support through:

- Focused professional development
- Frequent classroom visits by administrators and instructional coaches

Finally, every teacher should develop a personal instructional improvement plan and be supported through embedded professional development.

References

Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research.

Whitcomb, S. G., & Merrell, K. W. (2012). *Behavioral, social, and emotional assessment of children*. New York, NY: Routledge.

Appendix A: Forty-One Elements of Effective Teaching

1. Providing clear learning goals and scales
2. Tracking student progress
3. Celebrating success
4. Establishing and maintaining classroom rules and procedures
5. Organizing the physical layout of the classroom
6. Identifying critical information
7. Organizing students to interact with new knowledge
8. Previewing new content
9. Chunking content into "digestible bites"
10. Helping students process new information
11. Helping students elaborate on new information
12. Helping students record and represent knowledge
13. Helping students reflect on their learning
14. Reviewing content
15. Organizing students to practice and deepen knowledge
16. Using homework
17. Helping students to examine similarities and differences
18. Helping students examine errors in reasoning
19. Helping students practice skills, strategies, and processes
20. Helping students revise knowledge
21. Organizing students for cognitively complex tasks
22. Engaging students in cognitively complex tasks involving hypothesis generation and testing
23. Providing resources and guidance
24. Noticing when students are not engaged
25. Using academic games
26. Managing response rates
27. Using physical movement
28. Maintaining a lively pace
29. Demonstrating intensity and enthusiasm
30. Using friendly controversy
31. Providing opportunities for students to talk about themselves
32. Presenting unusual or intriguing information
33. Demonstrating "withitness"
34. Applying consequences for lack of adherence to rules and procedures
35. Acknowledging adherence to rules and procedures
36. Understanding students' interests and background
37. Using verbal and nonverbal behaviors that indicate affection for students
38. Displaying objectivity and control
39. Demonstrating value and respect for low-expectancy students
40. Asking questions of low-expectancy students
41. Probing incorrect answers with low-expectancy students

Appendix B: Student Survey

1.1 What is the name of your teacher in this class?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.2 The teacher of this class is fair.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 The teacher of this class cares about me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 I am recognized for my successes in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 I am motivated to learn in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Inappropriate behavior is not tolerated in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 I feel safe in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 I have many friends in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 The teacher in this class keeps reminding us what is most important to learn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 I know what the teacher expects of me in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Students in this class are generally respectful of each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 The teacher of this class regularly lets me know how I am doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 The teacher of this class grades me fairly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 The teacher encourages me to learn as much as I can in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15 The teacher makes lessons interesting in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16 I try very hard to understand what is being taught in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17 I have done my best work in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 The teacher of this class encourages me to do my best.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.19 The teacher doesn't let students give up when the work gets hard in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.20 I actively participate in this classroom's discussions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.21 I enjoy the work that I do in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.22 I pay attention when I am in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



An Anonymous Summary Report of Effective Teaching at John Marshall Community School

Prepared by Marzano Research

for

John Marshall Community School

Indianapolis, Indiana

January 2015



OUR MISSION

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Introduction

This report presents an anonymous summary of data collected on classroom instruction as practiced at John Marshall Community School. Data were collected from three sources: (1) videos of teachers instructing students, (2) teachers' ratings of their use of classroom strategies and behaviors associated with forty-one elements of effective teaching, and (3) students' ratings of their experiences in class.

The videos of teachers were scored on forty-one elements of effective teaching. Each video was scored independently by two observers. The scale used to score each element is described in table 1.

Table 1: Five-Point Scale Used to Score Each Element of Effective Instruction

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
The teacher adapts or creates new versions of strategies or behaviors associated with the element for unique student needs and situations.	The teacher uses strategies or behaviors associated with the element and monitors the extent to which the strategies or behaviors affect student outcomes.	The teacher uses strategies or behaviors associated with the element, but does so in a somewhat mechanistic way.	The teacher uses strategies or behaviors associated with the element incorrectly or with parts missing.	The teacher should use strategies or behaviors associated with the element but does not.

Note: Adapted from page 37 of Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research..

The scale in table 1 was used to score video recordings of teachers on the forty-one elements listed in table 2.

Table 2: Forty-One Elements of Effective Teaching

Element	Description
1. Providing clear learning goals and scales	The teacher provides a clearly-stated learning goal accompanied by a scale or rubric that describes levels of performance relative to the learning goal.
2. Tracking student progress	The teacher facilitates tracking of student progress on one or more learning goals using a formative approach to assessment.
3. Celebrating success	The teacher provides students with recognition of their current status and their knowledge gain relative to the learning goal.
4. Establishing and maintaining classroom rules and procedures	The teacher reviews expectations regarding rules and procedures to ensure their effective execution.
5. Organizing the physical layout of the classroom	The teacher organizes the physical layout of the classroom to facilitate movement and focus on learning.

Element	Description
6. Identifying critical information	The teacher identifies specific parts of a lesson as involving important information to which students should pay particular attention.
7. Organizing students to interact with new knowledge	The teacher organizes students into small groups to facilitate the processing of new information.
8. Previewing new content	The teacher engages students in activities that help them link what they already know to the new content about to be addressed and facilitates these linkages.
9. Chunking content into "digestible bites"	Based on student needs, the teacher breaks the content into small chunks (that is, digestible bites) of information that can be easily processed by students.
10. Helping students process new information	During breaks in the presentation of content, the teacher engages students in actively processing new information.
11. Helping students elaborate on new information	The teacher asks questions or engages students in activities that require elaborative inferences that go beyond what was explicitly taught.
12. Helping students record and represent knowledge	The teacher engages students in activities that help them record their understanding of new content in linguistic ways and/or represent the content in nonlinguistic ways.
13. Helping students reflect on their learning	The teacher engages students in activities that help them reflect on their learning and the learning process.
14. Reviewing content	The teacher engages students in a brief review of content that highlights the critical information.
15. Organizing students to practice and deepen knowledge	The teacher uses grouping in ways that facilitate practicing and deepening knowledge.
16. Using homework	When appropriate (as opposed to routinely), the teacher designs homework to deepen students' knowledge of informational content or practice a skill, strategy, or process.
17. Helping students to examine similarities and differences	When the content is informational, the teacher helps students deepen their knowledge by examining similarities and differences.
18. Helping students examine errors in reasoning	When content is informational, the teacher helps students deepen their knowledge by examining their own reasoning or the logic of the information as presented to them.
19. Helping students practice skills, strategies, and processes	When the content involves a skill, strategy, or process, the teacher engages students in practice activities that help them develop fluency.
20. Helping students revise knowledge	The teacher engages students in revision of previous knowledge about content addressed in previous lessons.
21. Organizing students for cognitively complex tasks	The teacher organizes the class in such a way as to facilitate students working on complex tasks that require them to generate and test hypotheses.
22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	The teacher engages students in complex tasks (for example, decision-making, problem-solving, experimental-inquiry, and investigation tasks) that require them to generate and test hypotheses.
23. Providing resources and guidance	The teacher acts as resource provider and guide as students engage in cognitively complex tasks.

Element	Description
24. Noticing when students are not engaged	The teacher scans the room, making note of when students are not engaged and taking overt action.
25. Using academic games	The teacher uses academic games and inconsequential competition to maintain student engagement.
26. Managing response rates	The teacher uses response-rate techniques to maintain student engagement in questions.
27. Using physical movement	The teacher uses physical movement to maintain student engagement.
28. Maintaining a lively pace	The teacher uses pacing techniques to maintain students' engagement.
29. Demonstrating intensity and enthusiasm	The teacher demonstrates intensity and enthusiasm for the content in a variety of ways.
30. Using friendly controversy	The teacher uses friendly controversy techniques to maintain student engagement.
31. Providing opportunities for students to talk about themselves	The teacher provides students with opportunities to relate what is being addressed in class to their personal interests.
32. Presenting unusual or intriguing information	The teacher uses unusual or intriguing information about the content in a manner that enhances student engagement.
33. Demonstrating "withitness"	The teacher uses behaviors associated with withitness to maintain adherence to rules and procedures.
34. Applying consequences for lack of adherence to rules and procedures	The teacher consistently and fairly applies consequences for not following rules and procedures.
35. Acknowledging adherence to rules and procedures	The teacher consistently and fairly acknowledges adherence to rules and procedures.
36. Understanding students' interests and background	The teacher uses students' interests and background to produce a climate of acceptance and community.
37. Using verbal and nonverbal behaviors that indicate affection for students	When appropriate, the teacher uses verbal and nonverbal behaviors that indicate affection for students.
38. Displaying objectivity and control	The teacher behaves in an objective and controlled manner.
39. Demonstrating value and respect for low-expectancy students	The teacher exhibits behaviors that demonstrate value and respect for low-expectancy students.
40. Asking questions of low-expectancy students	The teacher asks questions of low-expectancy students with the same frequency and depth as with high-expectancy students.
41. Probing incorrect answers with low-expectancy students	The teacher probes incorrect answers of low-expectancy students in the same manner as he or she does with high-expectancy students.

Source: Adapted from Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research.

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students			
7	1			2		1			1					2					2				2		1		1						2	2				2						
8	2			3		2			1					2					3				1		2	2	2	2						2	2				2					
9	2		2	3	2	2		2	1	1	2	2		2								2	2		2	2	3			3	3	3		2	2		2	3	3					
11	1			2		1				2				2	2								2		2		2	2						2	2				2					
13	2			1		2					1	2		2			2						2		2		2				2	2	2	2	2				1					
14	2	1		1		1		1		1													1		1		1		1					1	1	1				2				
16	2		3		2	3	2	2	2		2			3	3								2	3	3	3	2	3	3			3	3	3				3	3					
17	1			2		2	1		1	2	2	2		2					2							2			2								1	2						
20	2			3		2								2						2			2	1															2					
21	1			3		3		2			2			3	2				2				2		1			2											2	2				
22	1			1		2			1		1	1		1									2		1		1	1							2	1	1			2	2			
24				1		2								2									1			1		1						1	1									
27	1			3	2	3		2	2	2	2			2									1		1		1		2	2					2	2	2	2	2	2				
28	2			3	2	2	2	2	3	2	2	2		2									3	3		2	2	2	2			3			3	3		2	3	2	2			
29	1			1	2	2	1	1	1					2									1		1		1		1						2	2	2			2	2			
30	1			2	2	2	1	1	1	1	2	1		2									1	2	2	2		1	2						2	2	2			3	2			
32	1			2																			2											2	1					2				

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students				
33	1			2	2	2		1	1	1	1	2		2								2	2										2	2	2			2	3	3	1	1			
37	1			2	2	2								2	2				2					1	2			1	1					2	2	1			2	2					
38	2		2	3	2	3		2	2	2	2	2		2					2	2			3		3		2	3					3		2			2	2						
40	1	1		2	2	2			2					2					2	2		2	2	2	2	3	2	2						2				2	2						
41	1			1		2			2			2		2					2				1	1	2	1	2						1	1	1			1	1						
43 ^a	2			3	2	3			2			2		3					2	2		3	2		2		2	2	2	2	2		2		2	3	2			2	2				
47	1			2	2	2	2		2					2											2		2	2	2										3	2					
52	1			3	2	2	1		1		2			2	2				2				2	1		1		1	2					1	1				2	2					
54 ^b	2			2		2		2		2				2					2				2	2		2		2						3	3				2	2					
55	1			2		1	1	2		1	2			2									1		1		2	2						1	1	2			1	2					
56	2			2		2								2									2	2		1		2					1	2	2				2						
57	1			3	2	2		2	2		2			2									2	2		2		2	2				3	2	2				3	2					
58	1		1	2	2	2	1		1	2				2					3				2	1		3		2	2					2				2	2						
62				2	2	2			2					2					2				2					2	2						3	2			2	2		3			
63				2	2	2								1									1		1		1		1									2		2					

^aTeachers 43 and 51. ^bTeachers 54 and 37.

Teachers' Self-Rating Data

Table 4 displays teachers' self-rating scores on each element. These scores represent teachers' self-perceptions regarding their performance on the forty-one elements of effective instruction. To score themselves, teachers used the scale in table 1.

Table 4: Teachers' Self-Rating Scores on Forty-One Elements

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students				
2	3	3	4	4	4	2	3	3	2	3	3	3	4	3	4	2	3	4	3	2	2	4	3	4	2	4	4	4	2	2	3	2	3	2	4	4	3	4	3	3	3	3			
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TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students			
18	3	3	2	3	2	3	3	3	3	3	3	3	3	3	1	2	2	2	2	2	2	3	2	3	2	2	3	3	3	4	3	3	4	4	4	4	4	3	4	4	4			
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21	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	3	2	3	2	2	2	3	3	2	2	3	3	3	3	2	3	2	3	2	3	3		
23	3	3	3	4	4	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	2	2	3	2	3	3	4	4	4	4	3	3	2	3	3	3	3	3	3	3	3	3	3	
26	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
27	2	3	2	3	3	3	3	2	2	2	3	2	2	2	1	3	2	3	2	3	3	2	1	3	2	3	2	3	2	3	3	2	3	3	2	3	3	2	3	2	2	2	2	
30	3	3	2	3	2	3	2	2	2	2	2	2	2	3	2	1	2	2	3	2	2	2	2	3	2	2	1	1	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2
32	1	2	2	3	2	2	2	2	1	2	3	3	1	3	2	0	3	2	3	2	1	1	2	2	1	2	2	2	1	2	2	2	2	2	3	3	3	3	3	3	2	3	2	2
34	3	3	2	2	2	3	3	2	3	2	2	2	2	3	3	3	3	3	3	2	2	2	3	3	3	3	2	2	2	3	2	2	2	2	2	2	3	3	3	3	3	3	3	3
37	2	2	1	3	3	2	2	2	3	2	1	0	1	2	2	0	2	3	2	3	2	2	3	2	2	2	1	3	2	3	0	0	0	2	2	3	3	3	3	3	2	2	2	2
38	3	2	2	4	4	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	2	2	4	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
41	1	2	2	1	2	2	2	2	1	1	1	2	0	2	2	0	2	2	2	1	2	1	2	3	2	2	2	1	1	0	2	3	2	2	2	2	3	2	2	2	3	2	2	2
43	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
45	3	3	3	3	4	3	2	4	2	3	3	3	4	3	3	3	3	3	3	4	2	3	3	2	4	3	3	3	3	2	2	4	2	2	3	4	3	4	3	3	3	2	3	3
51	2	2	3	2	2	3	2	3	3	2	2	3	2	3	2	3	2	3	2	2	2	2	3	2	2	2	2	2	3	3	3	3	3	3	2	2	3	3	2	3	3	3	3	3
52	4	4	4	3	3	4	3	4	4	3	3	3	3	3	0	3	3	4	4	4	3	4	3	2	3	2	3	4	4	3	4	3	3	3	4	3	3	3	4	3	3	3	3	3
53	3	3	3	3	4	3	4	3	3	3	3	2	3	4	3	3	3	4	4	3	3	4	3	4	3	3	3	4	4	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3

TEACHER NUMBER	1. Providing clear learning goals and scales	2. Tracking student progress	3. Celebrating success	4. Establishing and maintaining classroom rules and procedures	5. Organizing the physical layout of the classroom	6. Identifying critical information	7. Organizing students to interact with new knowledge	8. Previewing new content	9. Chunking content into "digestible bites"	10. Helping students process new information	11. Helping students elaborate on new information	12. Helping students record and represent knowledge	13. Helping students reflect on their learning	14. Reviewing content	15. Organizing students to practice and deepen knowledge	16. Using homework	17. Helping students to examine similarities and differences	18. Helping students examine errors in reasoning	19. Helping students practice skills, strategies, and processes	20. Helping students revise knowledge	21. Organizing students for cognitively complex tasks	22. Engaging students in cognitively complex tasks involving hypothesis generation and testing	23. Providing resources and guidance	24. Noticing when students are not engaged	25. Using academic games	26. Managing response rates	27. Using physical movement	28. Maintaining a lively pace	29. Demonstrating intensity and enthusiasm	30. Using friendly controversy	31. Providing opportunities for students to talk about themselves	32. Presenting unusual or intriguing information	33. Demonstrating "withitness"	34. Applying consequences for lack of adherence to rules and procedures	35. Acknowledging adherence to rules and procedures	36. Understanding students' interests and background	37. Using verbal and nonverbal behaviors that indicate affection for students	38. Displaying objectivity and control	39. Demonstrating value and respect for low-expectancy students	40. Asking questions of low-expectancy students	41. Probing incorrect answers with low-expectancy students		
54	2	1	1	2	3	2	2	2	2	2	2	2	2	3	2	2	2	3	3	1	1	2	1	2	2	1	1	1	1	1	1	1	2	2	2	2	2	3	2	2	2		
56	4	3	3	4	4	4	3	3	3	3	4	3	3	4	3	3	3	4	4	4	4	4	3	3	3	3	3	4	3	4	3	4	3	3	4	3	3	3	3	3	4	4	4
57	3	2	4	4	3	3	3	3	3	2	3	3	2	2	0	3	2	3	2	2	1	2	4	3	3	3	3	3	4	4	3	4	2	3	3	4	4	4	3	3	3	3	
58	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	
61	1	3	3	3	3	3	3	3	3	3	3	1	1	2	2	0	2	1	3	2	1	1	1	3	3	2	3	3	2	2	3	3	2	2	2	3	3	3	3	3	3	3	3
62	2	3	3	3	3	3	4	3	4	3	3	2	2	2	3	0	2	3	3	2	3	3	3	4	4	3	3	3	4	3	3	3	3	3	4	4	4	4	4	4	4	4	
63	3	2	2	3	3	3	3	3	3	3	3	3	2	4	3	2	4	2	3	3	3	2	4	4	2	2	2	3	4	4	3	3	3	3	3	4	4	4	4	3	3	3	
64	3	3	4	2	2	0	2	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2	3	3	0	0	0	0	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2
65	4	2	4	0	0	2	3	0	2	3	2	2	4	3	4	2	2	4	2	0	0	4	2	0	2	2	0	0	4	4	4	4	2	2	2	4	4	2	2	4	4	4	2

Student Survey Data

Table 5 displays mean scores that were calculated for each teacher from students’ ratings of agreement with twenty-one statements pertaining to their experiences in class. The twenty-one survey questions addressed students’ perceptions of selected teacher behaviors, as well as their own actions and beliefs in class.

When considering the mean scores reported in table 5, it is important to note that the survey had five response choices ordered from greatest disagreement to greatest agreement (numeric values noted in parentheses): strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). Mean scores of 4.0 or greater indicate that more students agreed with the statement than disagreed. Conversely, mean scores of 2.0 or less indicate that more students disagreed with the statement than agreed. Mean scores close to 3.0 suggest: (1) the numbers of students who responded with ratings of agreement and disagreement were similar and/or (2) more students responded with a rating of neutral than with ratings of agreement or disagreement.

Table 5: Student Survey Mean Scores

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
1	17	4.47	4.47	4.47	4.41	4.65	4.41	4.25	4.50	4.53	4.12	4.13	4.53	4.56	4.53	4.13	4.53	4.59	4.60	4.21	4.38	4.56
2	16	4.38	4.31	3.81	4.38	4.73	3.88	3.13	4.31	4.44	3.69	4.38	4.25	4.47	3.75	4.19	3.94	4.53	4.13	4.00	4.00	4.40
6	22	4.18	4.05	4.18	3.86	3.91	3.90	3.77	4.10	4.10	3.14	3.57	4.09	4.23	3.55	3.86	4.00	3.86	3.95	3.73	3.82	4.05

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
8	8	3.71	3.13	3.00	2.86	3.63	3.63	2.50	2.63	3.63	3.75	3.13	3.38	3.00	2.38	3.88	3.50	3.50	3.13	3.13	2.75	3.63
9	10	3.80	3.90	3.90	3.90	3.80	3.80	3.70	4.10	4.20	3.70	3.90	4.20	4.20	4.10	4.00	4.30	4.20	3.80	4.00	3.80	4.00
10	26	4.25	4.08	4.16	3.88	3.32	3.65	3.62	3.68	3.80	3.35	3.58	3.85	3.80	3.65	3.85	3.81	3.88	4.08	3.85	3.88	4.12
11	21	3.95	3.81	3.52	4.00	3.95	3.60	3.67	3.76	4.05	2.76	3.35	3.81	4.05	3.86	3.67	3.81	3.81	3.76	3.38	3.76	3.76
12	17	3.71	3.59	3.59	3.88	3.81	3.47	2.88	4.00	4.35	3.06	3.29	4.12	4.19	3.65	3.71	3.88	3.76	3.47	3.59	3.59	3.69
13	12	4.58	4.64	4.33	4.25	3.58	4.42	3.82	4.67	4.83	2.25	4.27	4.17	4.58	4.42	4.58	4.25	4.50	4.08	3.67	4.00	3.92
14	6	3.67	3.67	3.67	4.17	3.83	3.67	3.83	4.20	4.40	3.40	4.00	4.60	4.40	4.40	4.00	3.60	4.40	4.20	3.80	3.60	3.80
17	12	4.67	4.42	4.00	3.92	3.92	4.25	3.75	4.33	4.58	4.33	4.17	4.58	4.09	3.92	4.09	4.42	4.17	4.08	4.17	3.75	4.50
18	10	4.40	4.30	3.90	4.20	4.30	4.33	4.22	4.30	4.30	3.67	3.56	4.30	4.11	3.70	4.20	4.20	4.10	4.30	4.00	4.20	3.90
20	10	4.30	4.60	3.90	4.30	4.50	4.40	3.70	4.40	4.70	4.00	4.10	4.60	4.70	4.10	4.20	4.10	4.60	4.20	4.30	4.40	4.20
21	6	4.33	4.67	4.17	4.67	4.83	4.67	4.67	4.67	4.50	3.83	4.20	4.67	4.60	4.67	4.33	4.33	4.50	4.33	4.00	4.33	4.33
22	8	3.00	2.63	2.88	3.38	3.00	3.50	3.71	3.00	3.63	2.75	2.71	3.25	3.25	2.88	3.50	3.25	3.38	3.00	3.13	2.63	4.00
24	18	3.94	4.17	3.35	2.94	3.56	3.33	3.78	3.72	3.94	2.00	3.50	3.59	3.50	2.83	3.44	3.56	3.72	3.39	3.11	2.83	3.17
26	8	4.25	4.38	4.38	4.13	3.13	4.00	3.25	4.38	4.50	2.75	4.00	4.38	4.29	3.63	4.38	4.13	4.29	4.13	3.75	3.88	4.13
27	18	4.28	4.06	3.67	4.00	3.94	3.94	3.33	4.12	4.06	3.83	4.00	4.06	4.00	3.94	3.94	3.72	4.12	3.67	3.56	3.28	3.78
28	10	3.80	3.70	3.20	3.50	4.30	3.70	3.10	3.56	3.90	3.20	3.00	3.40	3.50	3.20	3.30	3.10	3.20	3.22	3.30	3.20	3.90
30	10	4.60	4.10	4.00	4.11	4.56	4.33	4.10	4.00	4.10	3.00	4.10	4.20	4.20	3.80	3.90	4.22	4.40	4.20	4.10	3.50	3.90
32	9	4.89	4.67	4.89	4.63	4.33	4.38	4.33	4.56	4.44	4.33	4.78	4.44	4.44	4.78	4.78	4.67	4.44	4.67	4.22	4.33	4.44
33	13	4.00	4.31	3.38	4.08	3.91	3.25	3.75	3.91	4.15	2.77	4.00	4.50	3.50	3.67	4.00	4.23	3.77	3.75	3.92	4.00	4.38
34	10	3.60	3.50	3.50	3.44	3.50	4.00	4.00	3.70	4.40	2.70	3.50	4.20	3.50	3.20	3.60	3.90	3.50	3.40	3.70	2.50	3.70
35	19	3.63	4.00	3.39	3.32	3.50	3.89	3.79	3.71	3.83	2.94	3.61	3.59	4.00	3.56	3.61	3.78	3.89	3.69	3.67	3.33	3.83
37	25	3.60	3.76	3.56	3.84	3.79	3.42	3.17	4.13	3.96	2.24	3.17	3.29	3.71	2.72	3.72	3.67	3.64	3.79	3.00	2.92	3.32
38	14	4.50	4.14	4.07	4.21	4.29	4.43	3.64	4.31	4.43	3.00	3.85	4.50	4.50	4.00	4.36	4.00	4.43	4.14	3.50	3.64	3.64
39	6	4.50	4.33	4.00	3.50	4.80	4.50	3.83	4.33	4.50	4.20	3.67	4.00	4.33	4.00	4.33	4.00	4.00	4.33	3.60	3.40	3.83

TEACHER NUMBER	SURVEY COUNT	1. The teacher of this class is fair.	2. The teacher of this class cares about me.	3. I am recognized for my successes in this class.	4. I am motivated to learn in this class.	5. Inappropriate behavior is not tolerated in this class.	6. I feel safe in this class.	7. I have many friends in this class.	8. The teacher in this class keeps reminding us what is most important to learn.	9. I know what the teacher expects of me in this class.	10. Students in this class are generally respectful of each other.	11. The teacher of this class regularly lets me know how I am doing.	12. The teacher of this class grades me fairly.	13. The teacher encourages me to learn as much as I can in this class.	14. The teacher makes lessons interesting in this class.	15. I try very hard to understand what is being taught in this class.	16. I have done my best work in this class.	17. The teacher of this class encourages me to do my best.	18. The teacher doesn't let students give up when the work gets hard in this class.	19. I actively participate in this classroom's discussions.	20. I enjoy the work that I do in this class.	21. I pay attention when I am in this class.
40	7	4.50	4.57	4.14	4.14	4.14	4.57	4.33	4.71	4.57	3.29	4.20	4.17	4.33	3.86	3.86	4.00	4.43	4.71	4.00	3.57	4.00
41	13	4.77	4.54	4.38	4.54	4.62	4.77	4.00	4.62	5.00	4.08	4.31	4.75	4.67	4.33	4.46	4.31	4.77	4.62	4.46	4.31	4.08
43	13	4.42	4.31	4.23	4.38	4.15	3.92	3.46	4.15	4.15	3.77	3.85	4.23	4.15	3.92	4.38	4.00	4.17	4.15	3.92	3.85	4.23
44	24	3.52	3.67	3.44	3.50	3.39	3.63	3.19	3.14	3.33	2.83	3.26	3.50	3.40	3.45	3.39	3.52	3.38	3.29	3.05	3.09	2.95
47	10	4.80	4.70	4.30	4.30	4.50	4.67	3.67	4.60	4.90	4.70	4.40	4.60	4.56	4.30	4.10	4.20	4.40	4.11	4.20	3.60	4.30
52	25	3.88	3.32	3.58	3.60	3.48	3.50	3.79	3.87	3.76	2.92	3.48	3.56	3.71	3.20	3.83	3.71	3.83	3.57	3.21	3.43	3.67
53	2	4.00	4.50	4.00	4.00	4.00	5.00	4.50	5.00	4.00	3.50	4.00	4.00	4.50	4.00	3.50	3.50	4.50	4.50	3.00	3.50	3.00
55	25	3.13	3.28	3.29	3.87	3.71	3.76	3.44	3.32	3.52	2.33	3.04	3.21	3.29	2.87	3.91	3.77	3.38	3.17	3.35	2.88	3.67
56	23	2.86	2.82	3.00	3.33	3.00	2.68	3.50	3.23	3.48	2.10	2.48	3.32	3.05	2.43	4.09	3.52	3.00	2.55	3.09	3.00	3.77
57	20	4.10	3.95	3.45	3.67	4.20	4.11	2.65	3.80	4.40	3.70	3.68	4.25	3.80	3.68	4.20	3.80	3.80	4.00	3.10	3.35	3.90
58	29	4.00	3.83	4.29	4.23	3.96	4.04	3.96	4.14	4.19	3.75	3.93	4.03	4.10	3.89	4.22	4.29	4.17	4.00	4.07	4.00	4.14
59	17	3.59	3.82	3.71	3.65	3.75	3.47	3.31	3.88	4.24	2.41	3.29	4.25	3.71	3.24	4.00	3.76	3.75	3.63	3.63	3.06	3.76
63	7	5.00	5.00	4.86	4.86	4.86	4.86	4.14	5.00	5.00	4.57	5.00	5.00	5.00	5.00	5.00	4.71	5.00	5.00	4.86	5.00	4.71
66	20	3.90	4.05	3.50	4.10	4.11	3.79	3.53	3.88	3.94	2.68	3.26	3.68	3.84	3.53	3.94	3.84	3.74	3.56	3.89	3.67	4.05



A Summary Report of Classroom Instruction at John Marshall Community School and Recommendations for Improvement

Prepared by Marzano Research

for

Indiana Department of Education and
John Marshall Leadership Team
Indianapolis, Indiana

January 2015

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Introduction

John Marshall Community School (JMCS) is working with Marzano Research to identify strengths and areas to target for improvement as part of an effort to improve the school’s instruction and climate. The current report summarizes data collected regarding the forty-one elements of effective teaching, as described in *Becoming a Reflective Teacher* (Marzano, 2012), at JMCS.

Data Collection

During December 2014, data were collected from the following three sources:

- (1) video observations of teachers instructing students,
- (2) a teacher self-report, and
- (3) a student survey.

A brief description of the different sources of data is provided before results are presented.

Video Observations of Teachers Instructing Students

Teachers were recorded for one class period (approximately 45 minutes) while providing instruction to students. A staff member from Marzano Research spent two days recording teachers. Video recorders were set up in ten different classrooms at one time for one class period. At the end of the class period, the recorders were moved to new classrooms. Marzano Research then analyzed each teacher’s use of the forty-one elements of effective teaching in each recording (a list of the forty-one elements of effective teaching can be found in appendix A). Each teacher’s video was reviewed and coded using the five-point scale presented in table 1.

Table 1: Five-Point Scale Used to Score Each Element of Effective Instruction

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
The teacher adapts or creates new versions of strategies or behaviors associated with the element for unique student needs and situations.	The teacher uses strategies or behaviors associated with the element and monitors the extent to which the strategies or behaviors affect student outcomes.	The teacher uses strategies or behaviors associated with the element, but does so in a somewhat mechanistic way.	The teacher uses strategies or behaviors associated with the element incorrectly or with parts missing.	The teacher should use strategies or behaviors associated with the element but does not.

Note: Adapted from Marzano, 2012, p. 37.

Teacher Self-Report

The teachers at JMCS individually completed a self-report designed to measure their self-perceived use of the forty-one elements of effective teaching. Teachers responded to questions about their use of each of the forty-one elements using the five-point scale in table 1.

Student Survey

The final piece of data came from student surveys. The students at JMCS completed anonymous surveys that asked them to respond to twenty-one statements about their experiences in class. Students read a statement and provided their agreement with the statement using a 5-point Likert-scale: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The rating scale is provided in appendix B.

Results

Video Observation Results

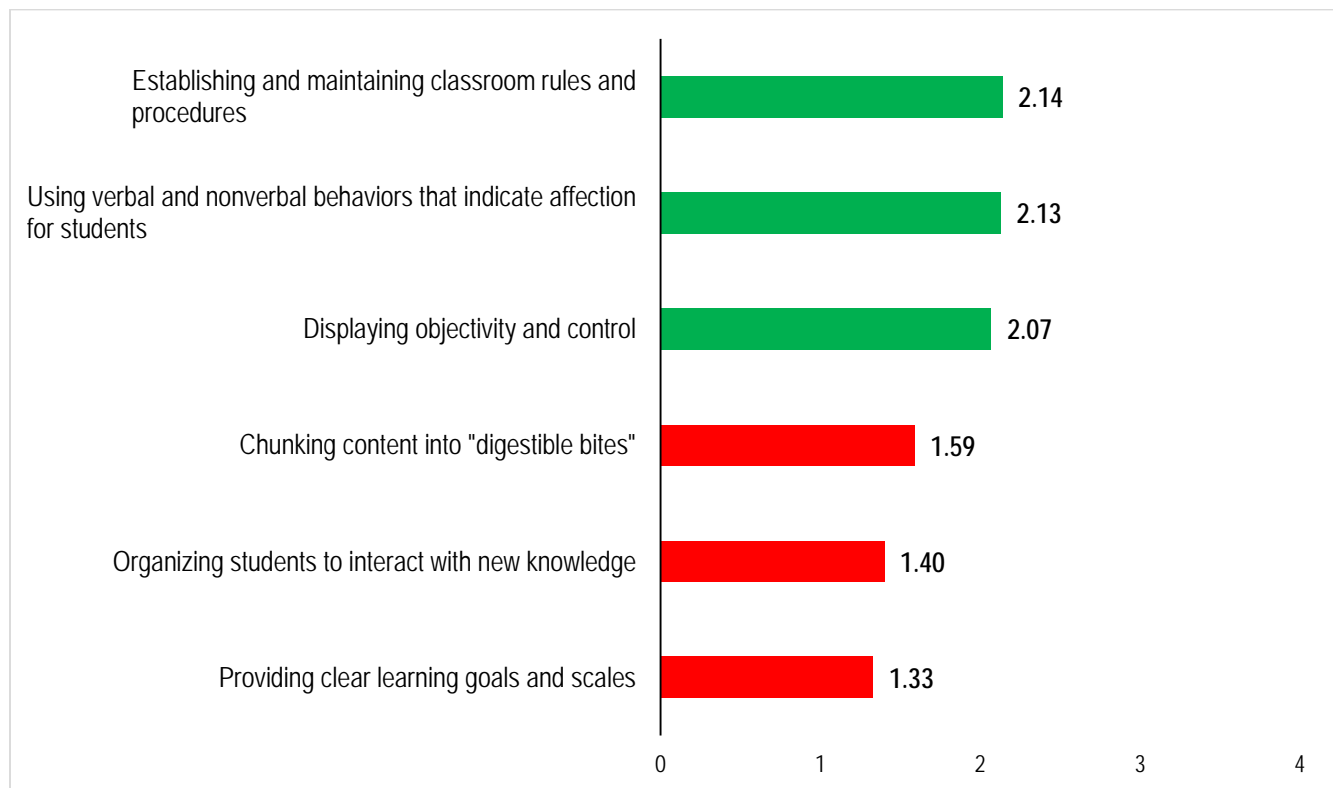
Of the 65 teachers at JMCS, 37 (57%) were recorded during an instructional period. Due to the time-sampling method of observation, not all of the elements for each teacher could be observed. For example, only 1 teacher was observed on the element *Probing incorrect answers with low-expectancy students*, whereas 36 teachers were observed on the element *Establishing and maintaining classroom rules and procedures*. Across all teachers, a mean score for each element was calculated. Table 2 presents the total number of teachers for which a given element was observed and the mean score across all 37 teachers.

To provide a more stable view of the effective teaching practices in JMCS, only those elements that were observed with at least 10 teachers are presented in figure 1. Twenty-two elements were observed during instruction with at least 10 teachers. The top three and lowest three of those 22 elements, based on the mean summaries across all teachers, are presented in figure 1.

Table 2: Total Teachers and Mean Scores for Elements of Effective Teaching from Video Observations

Element	Total Teachers	Mean
Providing opportunities for students to talk about themselves	3	2.67
Demonstrating value and respect for low-expectancy students	3	2.67
Presenting unusual or intriguing information	5	2.40
Organizing students to practice and deepen knowledge	6	2.17
Using physical movement	6	2.17
Establishing and maintaining classroom rules and procedures	36	2.14
Using verbal and nonverbal behaviors that indicate affection for students	30	2.13
Displaying objectivity and control	28	2.07
Providing resources and guidance	14	2.07
Identifying critical information	36	2.06
Helping students practice skills, strategies, and processes	24	2.04
Celebrating success	4	2.00
Organizing the physical layout of the classroom	17	2.00
Reviewing content	34	2.00
Helping students to examine similarities and differences	1	2.00
Organizing students for cognitively complex tasks	1	2.00
Using academic games	2	2.00
Understanding students' interests and backgrounds	5	2.00
Demonstrating "withitness"	36	1.97
Demonstrating intensity and enthusiasm	26	1.92
Helping students record and represent knowledge	11	1.82
Helping students revise knowledge	5	1.80
Helping students elaborate on new information	13	1.77
Maintaining a lively pace	28	1.75
Managing response rates	33	1.70
Applying consequences for lack of adherence to rules and procedures	23	1.70
Acknowledging adherence to rules and procedures	16	1.69
Noticing when students are not engaged	35	1.69
Previewing new content	14	1.64
Helping students process new information	14	1.64
Chunking content into "digestible bites"	22	1.59
Organizing students to interact with new knowledge	10	1.40
Providing clear learning goals and scales (rubrics)	33	1.33
Tracking student progress	2	1.00
Asking questions of low-expectancy students	1	1.00
Probing incorrect answers with low-expectancy students	1	1.00
Helping students reflect on their learning	0	-
Using homework	0	-
Helping students examine errors in reasoning	0	-
Engaging students in cognitively complex tasks involving hypothesis generation and testing	0	-
Using friendly controversy	0	-

Figure 1: The Three Highest and Three Lowest Means with at Least 10 Teachers Based on Video Observations



Note: The means in figure 1 are based on the elements in which at least 10 teachers were observed displaying that element. Twenty-two elements were observed with at least 10 teachers. Of those 22, the three highest- and three lowest-rated elements are displayed.

Quality Control

To ensure accuracy of the video ratings, the videos were initially analyzed and coded by three different staff members. All of the ratings were then checked for accuracy by a senior staff member with over ten years of experience coding observations in relation to the elements of effective teaching. The senior staff member's ratings were used as the final ratings for the videos. The initial raters and the senior staff member agreed 62.9% of the time.

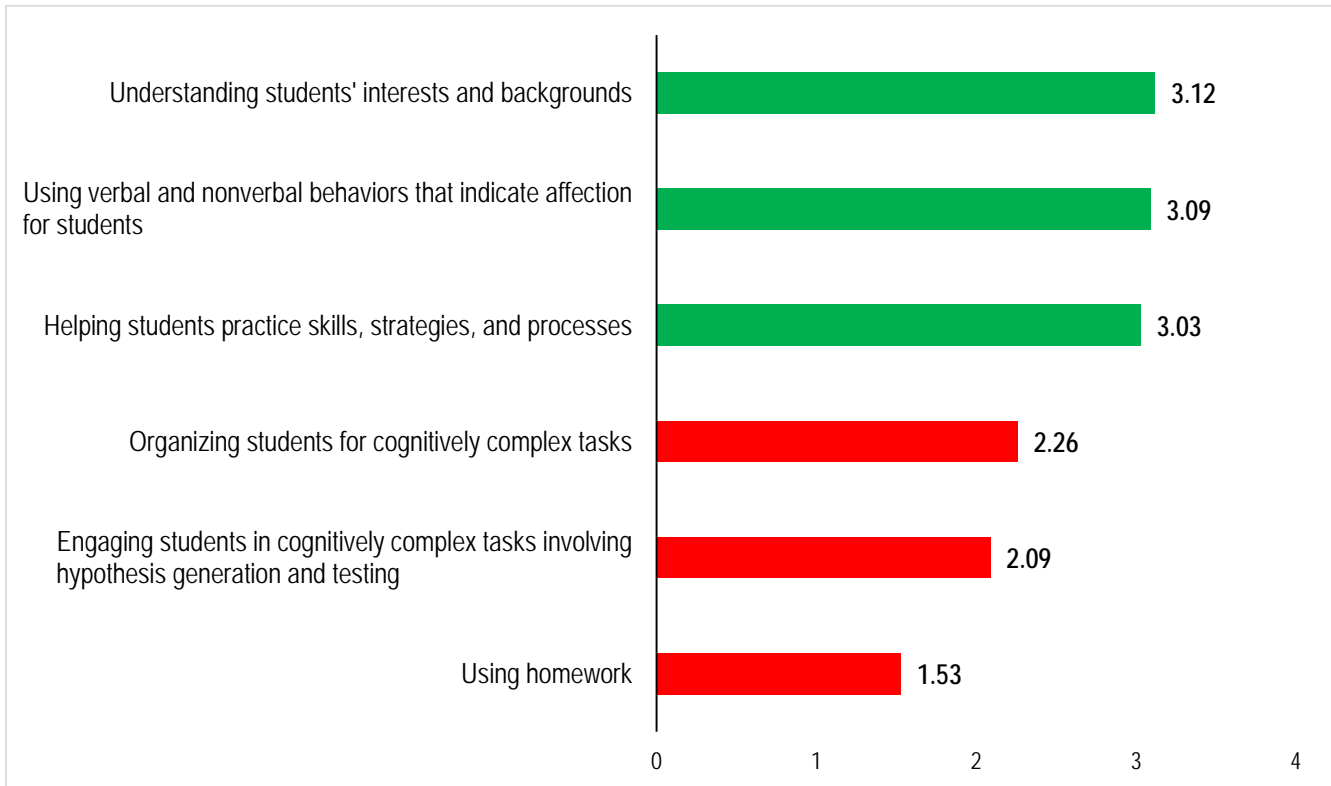
Teacher Self-Report Results

Of the 65 teachers at JMCS, 34 (52%) completed a self-report that measured the forty-one elements of effective teaching. As listed in table 3, the highest-rated element was *Understanding students' interests and backgrounds* at 3.12. The lowest-rated element was *Using homework* at 1.53. Additionally, the three highest- and three lowest-rated elements are displayed in figure 2.

Table 3: Total Teachers and Mean Scores for Elements of Effective Teaching from Teacher Self-Reports

Element	Total Teachers	Mean
Understanding students' interests and backgrounds	33	3.12
Using verbal and nonverbal behaviors that indicate affection for students	33	3.09
Helping students practice skills, strategies, and processes	34	3.03
Demonstrating value and respect for low-expectancy students	32	2.97
Organizing the physical layout of the classroom	34	2.94
Establishing and maintaining classroom rules and procedures	34	2.91
Displaying objectivity and control	33	2.91
Asking questions of low-expectancy students	32	2.91
Reviewing content	34	2.88
Acknowledging adherence to rules and procedures	33	2.88
Providing resources and guidance	33	2.82
Probing incorrect answers with low-expectancy students	32	2.81
Applying consequences for lack of adherence to rules and procedures	34	2.79
Celebrating success	34	2.76
Identifying critical information	34	2.76
Noticing when students are not engaged	34	2.76
Demonstrating intensity and enthusiasm	34	2.74
Tracking student progress	34	2.74
Organizing students to interact with new knowledge	34	2.74
Previewing new content	34	2.71
Using friendly controversy	34	2.71
Organizing students to practice and deepen knowledge	34	2.68
Using academic games	34	2.68
Helping students process new information	33	2.67
Helping students revise knowledge	34	2.65
Providing clear learning goals and scales (rubrics)	34	2.62
Chunking content into "digestible bites"	34	2.62
Helping students to examine similarities and differences	34	2.62
Providing opportunities for students to talk about themselves	34	2.59
Helping students elaborate on new information	34	2.59
Helping students record and represent knowledge	34	2.59
Maintaining a lively pace	33	2.58
Presenting unusual or intriguing information	34	2.56
Demonstrating "withitness"	34	2.56
Helping students examine errors in reasoning	34	2.50
Helping students reflect on their learning	34	2.50
Managing response rates	34	2.47
Using physical movement	34	2.32
Organizing students for cognitively complex tasks	34	2.26
Engaging students in cognitively complex tasks involving hypothesis generation and testing	34	2.09
Using homework	34	1.53

Figure 2: The Three Highest and Three Lowest Means Based on Teacher Self-Reports



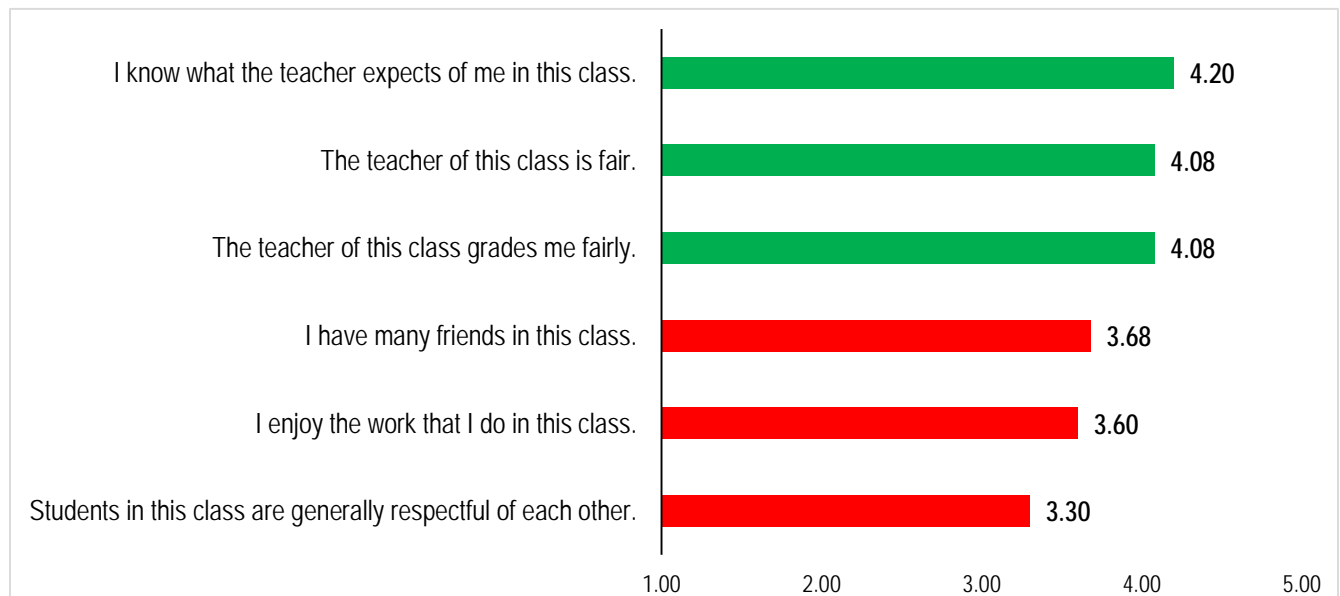
Student Survey Results

A total of 596 students completed surveys across 41 teachers, for an average of 15 surveys per teacher. The mean score and standard deviation for each item on the student survey are displayed in table 4. The highest-rated item was *I know what the teacher expects of me in this class* with an average score of 4.20, and the lowest-rated item was *Students in this class are generally respectful of each other* with an average score of 3.30. The three highest- and three lowest-rated items are displayed in figure 3.

Table 4: Mean Scores and Standard Deviations for Each Item Across Teachers on the Student Survey

Item	Mean	SD
I know what the teacher expects of me in this class.	4.20	.41
The teacher of this class is fair.	4.08	.50
The teacher of this class grades me fairly.	4.08	.47
The teacher in this class keeps reminding us what is most important to learn.	4.06	.52
The teacher encourages me to learn as much as I can in this class.	4.04	.49
The teacher of this class cares about me.	4.04	.52
The teacher of this class encourages me to do my best.	4.04	.46
I try very hard to understand what is being taught in this class.	4.01	.37
I feel safe in this class.	3.99	.50
Inappropriate behavior is not tolerated in this class.	3.98	.50
I am motivated to learn in this class.	3.95	.45
I have done my best work in this class.	3.95	.36
I pay attention when I am in this class.	3.93	.39
The teacher doesn't let students give up when the work gets hard in this class.	3.91	.52
I am recognized for my successes in this class.	3.83	.48
The teacher of this class regularly lets me know how I am doing.	3.74	.53
The teacher makes lessons interesting in this class.	3.72	.60
I actively participate in this classroom's discussions.	3.71	.44
I have many friends in this class.	3.68	.47
I enjoy the work that I do in this class.	3.60	.55
Students in this class are generally respectful of each other.	3.30	.71

Figure 3: The Three Highest- and Three Lowest-Ranked Items on the Student Survey



To provide a comparison across all three sources of data, an aggregated mean score was computed. The descriptive statistics are presented in table 5.

Table 5: Descriptive Statistics for All Three Sources of Data

Source	Mean	SD	Scale	Min	Max
Video Observations	1.85	.35	0-4	1.15	2.62
Teacher Self-Reports	2.68	.45	0-4	1.73	3.46
Student Surveys	3.90	.41	1-5	3.06	4.88

Summary

In summary, data were collected across three methods: (1) video observations, (2) teacher self-reports, and (3) student surveys. Teachers rated themselves higher on the forty-one elements relative to the rating received from the video observations. Although this may be due to the difference in the number of elements observed during instruction compared to the number of elements rated on the teacher self-report, it is fairly common for people to rate their behavior more favorably than others view it (Whitcomb & Merrell, 2012).

A few patterns emerged from the observation data. The higher-rated items were related to interactions with students and expectations, such as *Establishing and maintaining classroom rules*, *Demonstrating value and respect for low-expectancy students*, and *Using verbal and nonverbal behaviors that indicate affection for students*. The lower-ranked items were related to presenting content in a manageable way. For example, *Providing clear learning goals and scales*, *Chunking content into “digestible bites”*, *Organizing students to interact with new knowledge*, and *Helping students process new information* were some of the lower-ranked items. The pace and engagement of instruction was also rated low; elements such as *Maintaining a lively pace*, *Managing response rates*, and *Noticing when students are not engaged* were rated below 2.0 and were seen in at least half of the teachers observed.

The data from the teacher self-report mirrored the higher-ranked items from the video observations. Teachers reported elements such as *Understanding students’ interests and background*, *Using verbal and nonverbal behaviors that indicate affection for students*, and *Demonstrating value and respect for low-expectancy students* as their highest elements. There was a pattern with the cognitive complexity of the content, as the lowest-rated elements by the teachers were centered around organizing and engaging students in cognitively complex tasks and hypothesis generating.

Overall, the students rated their teachers favorably. The students reported that their teachers were fair and clear with expectations. The items that were rated the lowest by students were around social aspects

of the classroom (i.e., *Students in this class are generally respectful of each other, I have many friends in this class*) and their enjoyment and participation in the class.

Overall, the relationships and rapport between teachers and students were rated high on the measures. Areas for improvement appear to be increasing the complexity of the instructional tasks and the engagement of students in instructional tasks.

Recommendations

The aggregate findings from the three sources of data indicate that two levels of recommendations are in order for JMCS: a set of recommendations for the school as a whole and another set of recommendations for individual teachers.

At the whole school level, JMCS should focus on:

- Increasing the cognitive complexity of the tasks provided to students
- Providing more clarity as to the focus of each lesson
- Fostering a sense of mutual respect in the classroom
- Making classes more engaging to students

In addition to the school-wide emphases above, a number of teachers had significant weaknesses in classroom management strategies, particularly at the middle school level. These teachers should be provided with extra support through:

- Focused professional development
- Frequent classroom visits by administrators and instructional coaches

Finally, every teacher should develop a personal instructional improvement plan and be supported through embedded professional development.

References

Marzano, R. J. (2012). *Becoming a reflective teacher*. Bloomington, IN: Marzano Research.

Whitcomb, S. G., & Merrell, K. W. (2012). *Behavioral, social, and emotional assessment of children*. New York: Routledge.

Appendix A: Forty-One Elements of Effective Teaching

1. Providing clear learning goals and scales
2. Tracking student progress
3. Celebrating success
4. Establishing and maintaining classroom rules and procedures
5. Organizing the physical layout of the classroom
6. Identifying critical information
7. Organizing students to interact with new knowledge
8. Previewing new content
9. Chunking content into "digestible bites"
10. Helping students process new information
11. Helping students elaborate on new information
12. Helping students record and represent knowledge
13. Helping students reflect on their learning
14. Reviewing content
15. Organizing students to practice and deepen knowledge
16. Using homework
17. Helping students to examine similarities and differences
18. Helping students examine errors in reasoning
19. Helping students practice skills, strategies, and processes
20. Helping students revise knowledge
21. Organizing students for cognitively complex tasks
22. Engaging students in cognitively complex tasks involving hypothesis generation and testing
23. Providing resources and guidance
24. Noticing when students are not engaged
25. Using academic games
26. Managing response rates
27. Using physical movement
28. Maintaining a lively pace
29. Demonstrating intensity and enthusiasm
30. Using friendly controversy
31. Providing opportunities for students to talk about themselves
32. Presenting unusual or intriguing information
33. Demonstrating "withitness"
34. Applying consequences for lack of adherence to rules and procedures
35. Acknowledging adherence to rules and procedures
36. Understanding students' interests and background
37. Using verbal and nonverbal behaviors that indicate affection for students
38. Displaying objectivity and control
39. Demonstrating value and respect for low-expectancy students
40. Asking questions of low-expectancy students
41. Probing incorrect answers with low-expectancy students

Appendix B: Student Survey

1.1 What is the name of your teacher in this class?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.2 The teacher of this class is fair.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3 The teacher of this class cares about me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4 I am recognized for my successes in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5 I am motivated to learn in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.6 Inappropriate behavior is not tolerated in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.7 I feel safe in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 I have many friends in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.9 The teacher in this class keeps reminding us what is most important to learn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10 I know what the teacher expects of me in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11 Students in this class are generally respectful of each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.12 The teacher of this class regularly lets me know how I am doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13 The teacher of this class grades me fairly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.14 The teacher encourages me to learn as much as I can in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.15 The teacher makes lessons interesting in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.16 I try very hard to understand what is being taught in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.17 I have done my best work in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.18 The teacher of this class encourages me to do my best.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.19 The teacher doesn't let students give up when the work gets hard in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.20 I actively participate in this classroom's discussions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.21 I enjoy the work that I do in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.22 I pay attention when I am in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



MARZANO Research

12577 E. Caley Ave | Centennial, CO 80111

marzanoresearch.com | Phone: 303.766.9199 | Fax: 303.694.1778

January 12, 2015

Your teacher number: _____

Dear Teacher,

Thank you for participating in this study of the instructional practices in your school and the perceptions of those practices by students. The study included three sources of data:

1. A video recording of one of your class periods
2. A self-analysis conducted by you, regarding forty-one elements of effective instruction
3. A questionnaire administered to your students

You should have already received, or will soon receive, a report depicting the analysis of those data. The report not only details your scores on the three types of data, but also those of other teachers in your school. At the top of this letter you have been assigned a teacher number that only you have seen. This will allow you to find your scores for the three data sets.

Shortly, you will be asked to identify one or more instructional strategies on which you intend to focus and improve over the coming months. Use the report to identify the strategy or strategies you might focus on by comparing your scores with those of other teachers. Any areas for which your scores are generally lower than those of other teachers might be considered for focus. For the video-recording data and your self-reflection data, scores of 1 or 0 should be considered an area of focus.

Professional development experts from Marzano Research will help you identify areas on which you might focus and how you might improve in those areas. They will also present areas for school-wide attention.

Sincerely,

Robert J. Marzano, CEO, Marzano Research

Appendix D: January PD Materials

Handout for Broad Ripple Magnet School

Note: Separate presentations/handouts were developed for Broad Ripple and John Marshall. The presentation for each school included the school's data, but otherwise the documents are essentially the same. Therefore, we have included one handout as an example.

Form for Tracking School-wide and Individual Goals at Broad Ripple

Form for Tracking School-wide and Individual Goals at John Marshall

Note: The tracking form for each school includes the schoolwide goals and space for teachers to write their individual goals.



Broad Ripple Magnet School
January 21, 2015



GOALS FOR JANUARY VISIT

- To ensure that all Broad Ripple staff has received the documents prepared by Marzano Research
- To allow Broad Ripple staff time to ask for any clarification on the data and information found in these documents
- To determine the goals that will be the focus of the work between now and June (school-wide goals and individual teacher goals)

REPORT #1

An Anonymous Summary Report of Effective Teaching at Broad Ripple Magnet School

REPORT # 2

An Individual Teacher Report (Teacher is provided his/her number)

REPORT #3

A Summary Report of Classroom Instruction at Broad Ripple Magnet School and Recommendations for Improvement

Summary Data

- Teacher Observations (48 teachers)
- Teacher Self-reports (31 teachers)
- Student Surveys (751 students)



Three Highest Means with at Least 10 Teachers Based on Video Observations

23. Providing resources and guidance (mean 2.40)

19. Students practice skills, strategies, and processes (mean 2.23)

6. Identifying critical information (mean 2.19)



Three Lowest Means with at Least 10 Teachers Based on Video Observations

- 24. Noticing when students are not engaged (mean 1.50)
- 1. Providing clear learning goals and scales (mean 1.43)
- 34. Applying consequences for lack of adherence to rules and procedures (mean 1.33)



Three Highest Means on Teacher Self-Reports

- 37. Using Verbal and nonverbal behaviors that indicate affection for students (mean 3.38)
- 4. Establishing and maintaining classroom rules and procedures (mean 3.23)
- 36. Understanding students' interests and backgrounds (mean 3.21)



Three Lowest Means on Teacher Self-Reports

26. Managing response rates (mean 2.48)

22. Engaging students in cognitively complex tasks involving hypotheses generation and testing (mean 2.39)

16. Using homework (mean 2.23)

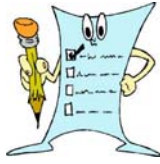


Three Highest Means Student Survey Results

I know what the teacher expects of me in this class (mean 4.24)

Inappropriate behavior is not tolerated in this class (mean 4.16)

The teacher of this class encourages me to do my best (mean 4.14)



Three Lowest Means Student Survey Results

I enjoy the work that I do in this class (mean 3.74)

The teacher makes lessons interesting in this class
(mean 3.72)

Students in this class are generally respectful of
each other (mean 3.67)



RECOMMENDATIONS

1. As a school, focus on

- Providing more opportunities for students to explain and defend their answers
- Providing more opportunities for students to identify similarities and differences between topics
- Providing more clarity as to the focus of the lesson
- Fostering a sense of mutual respect in the classroom
- Making classes more engaging to students

2. Individual teachers should develop a personal instructional improvement plan and be supported through focused professional development and visitations by administrators and instructional coaches.



Tracking School-wide and Individual Goals

Broad Ripple Magnet School

Teacher Name:
Subject Area:
Date:

Broad Ripple School-wide Strategies

- Providing more opportunities for students to explain and defend their answers
- Providing more opportunities for students to identify similarities and differences between topics
- Providing more clarity as to the focus of each lesson
- Fostering a sense of mutual respect in the classroom
- Making classes more engaging to students

Individual Teacher Goals

(Please write element number and description below for each selected goal. Then write down the score you would currently give yourself for this goal, along with the goal that you would like to achieve.)

**Current
Score**

Goal

	Current Score	Goal



Tracking School-wide and Individual Goals

Teacher Name:
Subject Area:
Date:

John Marshall School-wide Strategies		
Increasing the cognitive complexity of tasks provided to students		
Providing more clarity as to the focus of each lesson		
Fostering a sense of mutual respect in the classroom		
Making classes more engaging to students		
Individual Teacher Goals (Please write element number and description below for each selected goal. Then write down the score you would currently give yourself for this goal, along with the goal that you would like to achieve)	Current Score	Goal

Appendix E: February PD Materials

PowerPoint for John Marshall Community School

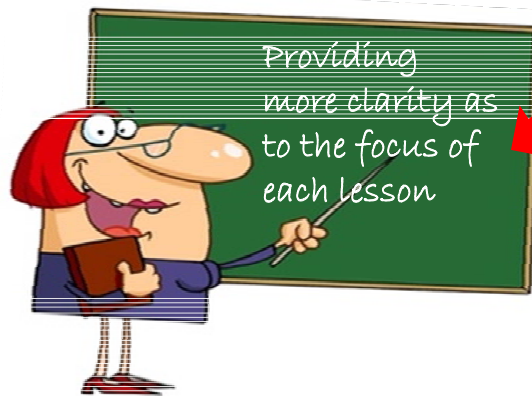
Teacher Resource Packet for John Marshall Community School

Note: PowerPoints and packets were customized with coversheets for each school. Otherwise the content of the documents was the same. Therefore, we have included one PowerPoint and one handout as an example.



Diane Paynter, Marzano Research
John Marshall Community School
February 10, 2015

Focus for Today's PLC Meeting

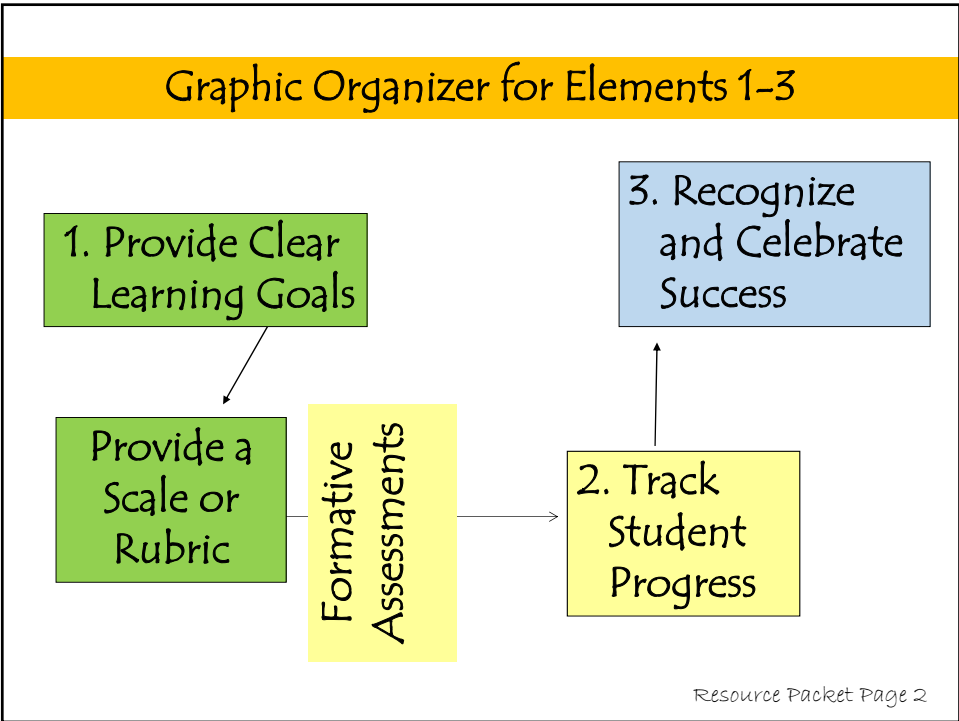
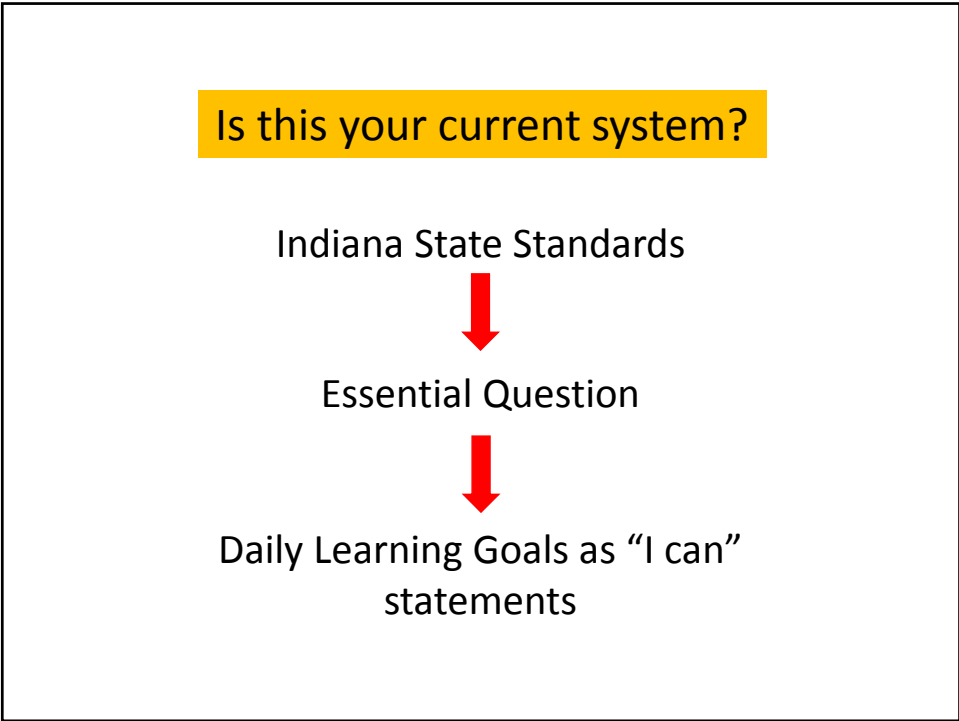


School-Wide Goal

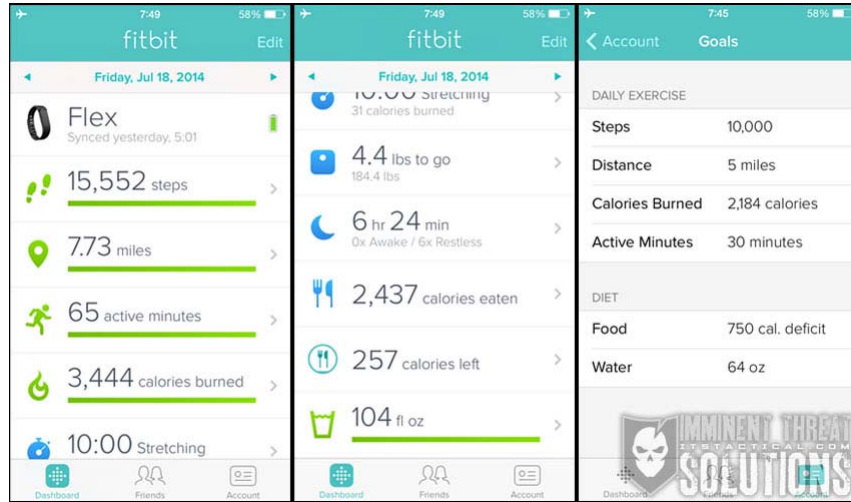
Elements from MR Compendium

- Element 1: Provide clear learning goals and rubric
- Element 2: Track Student Progress
- Element 3: Celebrate Success

3/41
elements



Analogy



Ms. Gong's
7th Grade
Science Class

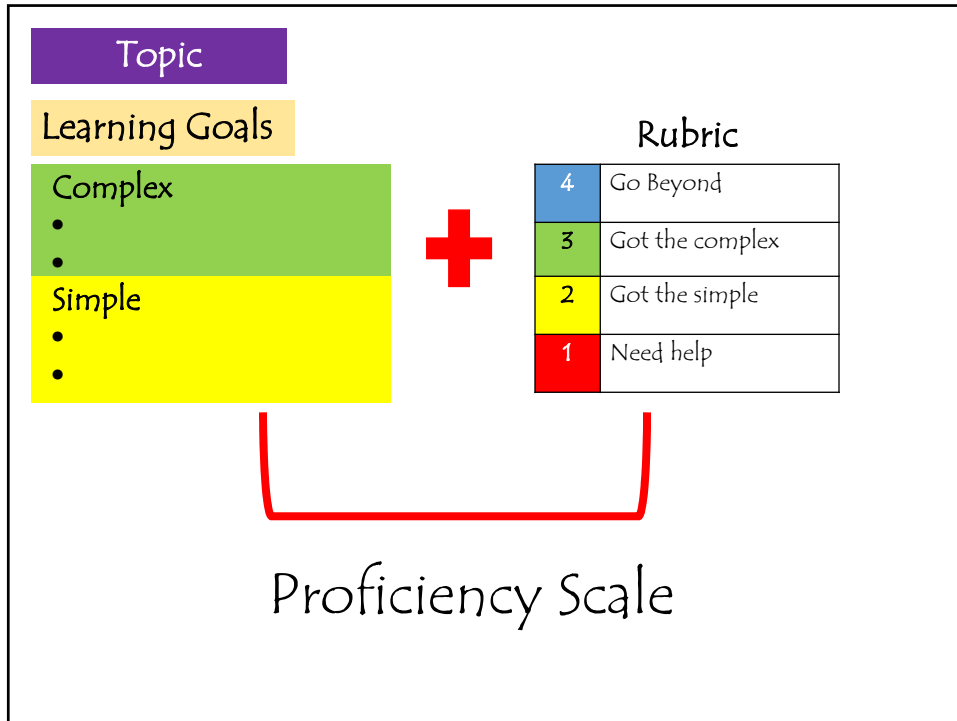
Earth History
Unit



Earth History Learning Goals	
Complex Learning Goals	(C1) I understand how fossils provide important evidence of how life and environmental conditions have changed (C2) I understand how a given area on the Earth might be changed during a catastrophic event.
Simple Learning Goals	(S1) I know how fossils are formed (S2) I know different types of fossils (S3) I know the major catastrophic events that have happened on the Earth over time and what caused them (S4) I know the following vocabulary terms and phrases: fossil, geologic time period, Law of Superposition, continental glaciation

Resource Packet Page 13

Earth History Rubric	
4	I made some connections or came to some conclusions beyond what I was taught
3 Complex	I have mastered all of the complex and simple learning goals
2 Simple	I have mastered all of the simple learning goals
1	I have mastered some of the simple learning goals but not all of them
0	I need help!



Earth History Proficiency Scale	
4	I made some connections or came to some conclusions beyond what I was taught
3 Complex	<p>I have mastered all of the complex and simple learning goals</p> <ul style="list-style-type: none"> <input type="checkbox"/> (C1) I understand how fossils provide important evidence of how life and environmental conditions have changed <input type="checkbox"/> (C2) I understand how a given area on the Earth might be changed during a catastrophic event.
2 Simple	<p>I have mastered all of the simple learning goals</p> <ul style="list-style-type: none"> <input type="checkbox"/> (S1) I know how fossils are formed <input type="checkbox"/> (S2) I know different types of fossils <input type="checkbox"/> (S3) I know the major catastrophic events that have happened on the Earth over time and what caused them <input type="checkbox"/> (S4) I know the following vocabulary terms and phrases: fossil, geologic time period, Law of Superposition, continental glaciation
1	I have mastered some of the simple learning goals but not all of them
0	I need help!

Unit: Earth History (3 weeks) Starting Monday November 4		7 th Grade Science Name: Watson Clair Jeune		
Monday	Tuesday	Wednesday	Thursday	Friday
LG S4 Activity <i>Vocabulary Templates</i>	LG S1 S2 Activity <i>Video Notes</i>	LG S1 Activity <i>Lab</i>	LG S3 Activity <i>Produce Timeline</i>	LG S3 Activity <i>Quiz</i>
LG S1 Activity <i>Review Partner Read Discuss Pg. 75-79</i>	LG S4 Activity <i>Vocabulary Templates</i>	LG C1 Activity <i>Comparison Task</i>	LG S3 Activity <i>Thinking Maps Activity</i>	LG Activity
LG Activity	LG Activity	LG Activity	LG Activity	LG Activity

	Earth History
4	I made some connections or came to some conclusions beyond what I was taught
3 Complex	I have mastered all of the complex and simple learning goals <input type="checkbox"/> (C1) I understand how fossils provide important evidence of how life and environmental conditions have changed <input type="checkbox"/> (C2) I understand how a given area on the Earth might be changed during a catastrophic event.
2 Simple	I have mastered all of the simple learning goals <input checked="" type="checkbox"/> (S1) I know how fossils are formed <input type="checkbox"/> (S2) I know different types of fossils <input type="checkbox"/> (S3) I know the major catastrophic events that have happened on the Earth over time and what caused them <input checked="" type="checkbox"/> (S4) I know the following vocabulary terms and phrases: fossil, geologic time period, Law of Superposition, continental glaciation
1	I have mastered some of the simple learning goals but not all of them
0	I need help!

Score	Scale for Scoring Assessments
4.0	In addition to Score 3.0 performance, in-depth inferences and applications that go beyond what was taught.
3.0	No major errors or omissions regarding any of the <u>complex information and/or processes</u> that were explicitly taught.
2.0	No major errors or omissions regarding the <u>simpler details and processes</u> but major errors or omissions regarding the more complex ideas and processes.
1.0	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
0.0	Even with help, no understanding or skill demonstrated.

4.0		In addition to Score 3.0 performance, in-depth inferences and application that go beyond what was taught.
	3.5	In addition to 3.0 performance, partial success at inferences and applications that go beyond what was taught.
3.0		No major errors or omissions regarding any of the information and/or processes (simple and complex) that were explicitly taught.
	2.5	No major errors or omissions regarding the simpler details and processes and partial knowledge of the more complex ideas and processes.
2.0		No major errors or omissions regarding the simpler details and processes but major errors and omissions regarding the more complex ideas and processes.
	1.5	Partial knowledge of the simpler details and processes but major errors and omissions regarding the more complex ideas and processes.
1.0		With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.
	0.5	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes.
0.0		Even with help, no understanding or skill demonstrated.

Record Keeping: Earth History Unit 7 th Grade Science Ms. Gong								
Student	S1 Fossils Formed	S2 Types of Fossils	S3 Catastrophic Events	S4 Vocab	C1 Fossil Evidence	C2 Effects of Catastrophe	Final Rubric Score	%
Hector	+							
Trudale	+							
Mykailah	+							
Rosie	+							
Dashnia	+							
Tavid	+							
Sabrina	-							
Tyrone	+							
Phillip	+							
Roberto	+							
Tamisha	+							

Resource Packet Page 13

Record Keeping: Earth History Unit 7 th Grade Science Ms. Gong								
Student	S1 Fossils Formed	S2 Types of Fossils	S3 Catastrophic Events	S4 Vocab	C1 Fossil Evidence	C2 Effects of Catastrophe	Final Rubric Score	%
Hector	+	+	+	+	+	+	3.0	
Trudale	+	-	-	+	-	-	1.5	
Mykailah	+	+	+	-	+	+	1.5	
Rosie	+	+	+	+	+	+	3.5	
Dashnia	+	-	+	-	+	+	1.5	
Tavid	+	-	+	+	-	-	1.5	
Sabrina	-	-	+	-	-	-	1.0	
Tyrone	+	+	+	+	-	-	2.0	
Phillip	+	+	+	+	+	+	3.0	
Roberto	+	+	+	+	+	+	4.0	
Tamisha	+	-	-	+	+	-	1.5	

Steps for Unpacking a Standard to Determine Learning Goals

1. Select an "essential" grade level or course level standards from a subject area that you will be or are currently teaching.
2. Look to see if there are other standards that focus on the same or similar concept or topic. Determine if you will unpack these standards together or separately.
3. Study the standards related to this concept or topic for the grade levels before and after your grade level to determine the progressions of learning.

Resource Packet Page 12

Steps for Unpacking a Standard to Determine Learning Goals

4. Create a chart that can be used to record the declarative and procedural learning goals
Resource Packet Page 8
5. Determine the declarative and procedural knowledge students need to learn to master the grade level standard. Write this knowledge as learning goals and place them in the chart in the designated learning goals. (as simple or complex)
Resource Packet Page 4-7
6. Create a label that represents these learning goals. This label can be used to track students' progress in the learning goals.

Resource Packet Page 12

Think in Terms of Two Types of Knowledge

Declarative knowledge...is informational.
It is what we want the
kids to know or
understand!



Information

Think in Terms of Two Types of Knowledge

Procedural knowledge... involves skills,
strategies, and processes.

It is what we want kids
to be able to do!



PROCESS

Standard	Complex and Simple Learning Goals	
Demonstrates knowledge of literary elements and how they effect the development of a literary work	Complex	<ul style="list-style-type: none"> • Analyzes how the plot, setting, and traits of the characters in the story effect the story line. • Understands how literary elements differ in from one story to the next • Understands how literary elements work together to create the story line
	Simple	<ul style="list-style-type: none"> • Knows that all fictional stories have the same elements • Knows the character's traits, motivations, and feelings from a story • Knows the meaning of the following vocabulary terms: plot, character, theme, setting

Criteria for Identifying Complex Learning Goals	
Information	Skills and Processes
<p>Learning goals represent understanding:</p> <ul style="list-style-type: none"> • General statements or more complex overarching ideas about the topic 	<p>Learning goals represent performing:</p> <ul style="list-style-type: none"> • More complex processes or skills related to the topic

Criteria for Identifying Simple Learning Goals	
Information	Skills and Processes
<p>Learning goals represent knowing:</p> <ul style="list-style-type: none"> • Simple sequence of events or cause/effect relationships • Some facts, characteristics, or key points about something or someone • The location, setting, time, place, and/or year of an event • The meaning of vocabulary related to the topic 	<p>Learning goals represent performing:</p> <ul style="list-style-type: none"> • Simple procedures related to the topic



Given what was presented today, what is one thing that you will do between now and our next visit?
(Action Plan)



Resource Packet

What will I do to

- Establish and communicate learning goals
- Track student progress

Diane Paynter, Marzano Research
John Marshall Community School
February 10-11, 2015



What will I do to establish and communicate learning goals, track student progress, and celebrate success?

Research has shown that setting learning goals or objectives is associated with a 16–41 percentile gain in student achievement. Not only is it important that students know what they should be learning, but they should be provided a scale or rubric that defines different levels of performance so they can determine if they have met or exceeded the expected level of performance and, if not, what they need to do to improve. If students track their own progress, they will be able to see their own growth over time and both the teacher and students can celebrate these successes.

Elements from Compendium

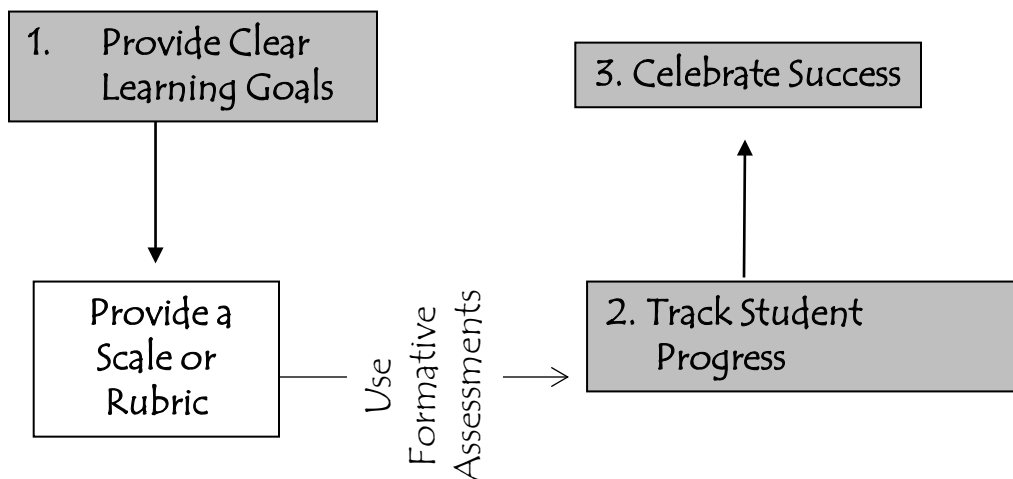
There are three elements found in the Compendium related to developing teacher expertise around Design Question 1.

Element 1. Provide clear learning goals and scales (rubrics)

Element 2. Track student progress

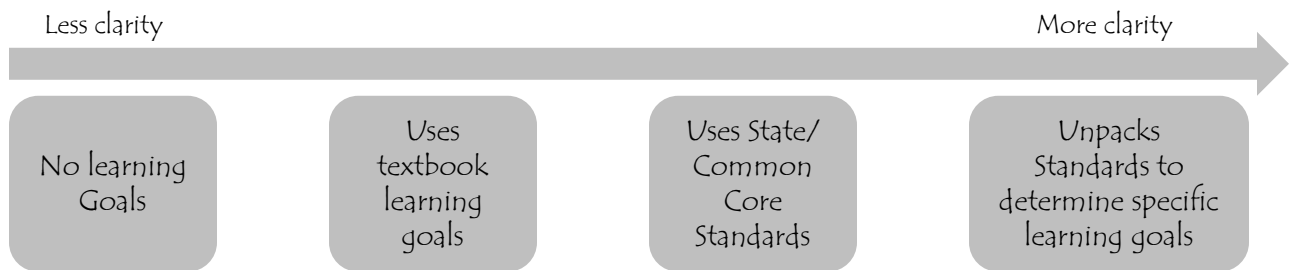
Element 3. Celebrate success

Graphic Organizer for Question



- ❑ Determine learning goals by unpacking the standard(s) that you will be teaching in a lesson or a unit. This requires you to differentiate between the knowledge and skills students will be learning (*a learning goal*) and the activities they will be engaged in to learn this knowledge (*a learning activity*). The clearer the learning goals, the more specific and focused the feedback can be for students as to their level of performance.

A Continuum of Clarity for Providing Feedback to Students



A learning goal is a statement of knowledge that identifies “what” students will be learning. This statement can represent either declarative knowledge (information) or procedural knowledge (skills, strategies, and processes). In general, specific learning goals have a more powerful effect on student achievement than do broad, general learning goals.

Examples

- ❑ Understands that various types of government exist throughout the regions and countries of Europe
- ❑ Understands how the earth’s layers interact and their impact on the earth
- ❑ Understands how character traits have an effect on the plot of a story
- ❑ Knows the Pythagorean Theorem can be expressed as an algorithm
- ❑ Knows that government should be protected by its citizens
- ❑ Solves equations with one variable
- ❑ Uses appropriate tools to estimate and measure length, width, and capacity
- ❑ Represents categorical data using labels and graphs
- ❑ Summarizes main idea and supporting details from extended oral presentations
- ❑ Creates simple graphic displays with appropriate labels
- ❑ Uses scientific notation to express numbers

A learning activity is the “means” by which the learning goals are to be accomplished. In other words, learning activities represent what students will be doing to master the learning goals. Learning activities should be completed with guidance and feedback from the teacher.

Examples

- ❑ Students write a description of what the United States might be like if it were based on the barter systems as opposed to a monetary system
- ❑ Students write a story that illustrates the conflict between good and evil
- ❑ Students classify the various powers of government as state and/or national responsibilities
- ❑ Students decide which development in technology has had the greatest impact on our current lifestyle
- ❑ Students construct support for whether or not they think that Napoleon was a great leader
- ❑ Students complete a graphic organizer that depicts the events that lead to the downfall of the Roman Empire
- ❑ Students compare and contrast the reactions of the characters in the story to the lottery in *The Hunger Games* and *The Lottery*

- ❑ To unpack standards to identify learning goals, it is helpful to understand the differences between declarative and procedural knowledge.

Declarative Knowledge

Declarative knowledge is the information that students need to know or understand. If the focus is on content, then it is the information students need to know or understand within that content area. Declarative knowledge can be more general knowledge (e.g., concepts and organizing ideas) or it can represent more specific knowledge (e.g., details and vocabulary terms).

Level	Definition	Example
Concept	A single word or phrase that labels an entire class or category of learning goals	Constitutional Power
Organizing Idea	The overarching general statement (e.g., generalization or principle) that defines a concept and for which examples can be given	<ul style="list-style-type: none"> • Understands how the framers of the US Constitution protected the distribution and abuse of power against tyranny • Understands that there is still conflict at times over who has the power
Details	The specific facts, time sequences, cause/effect patterns, and episodes associated with a specific person, place, event, or thing	<ul style="list-style-type: none"> • Knows what powers that federal and state governments share (fact) • Knows reasons why the constitution provides for segregation of power (fact) • Knows that the power in the federal and state governments is shared among the executive, legislative and judicial branches (fact) • Knows the events that lead up to the division of power in the US Constitution (sequence) • Knows how each branch of government has to check or limit the powers of other branches (Checks and Balances) (cause/effect) • Knows how the writers of the constitution came together to determine that power must be shared (episode)
Vocabulary	The terms and phrases related to the concept	<ul style="list-style-type: none"> • Knows the meaning of the following vocabulary terms and phrases: federalism, limited government, compromise

Patterns Associated with Declarative Knowledge

When unpacking standards to establish learning goals, teachers should consider both the more general and the more specific declarative knowledge students would need to learn to become proficient in the standard. There are patterns associated with various types of declarative knowledge that can guide teachers as they do this.

Organizing Ideas

Understands	<p>Importance of, significance of, relationship of</p> <p>Principles governing, role of</p> <p>Organizational structure of, interactions of, aspects of</p> <p>Difficulties, challenges, problems, precautions, benefits, distinctions between/among</p> <p>Influence of, effects of, consequences of, impact of, implications of</p> <p>Credibility of, validity of, reliability of</p> <p>Relationship between/among, basic values or beliefs held by, basic protections of</p>
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	This	Does This
Understands how or why	<p>Pattern, form</p> <p>Process</p> <p>Element, material, product</p> <p>Group, person, event</p> <p>Concept, principle</p> <p>Behavior, need, force</p> <p>Factor, perspective</p> <p>System, organization</p> <p>Structure, division, area</p>	<p>Affects, causes</p> <p>Impacts, leads to, shapes</p> <p>Influences, is influenced by</p> <p>Changes, depends on, relies on</p> <p>Promotes, improves</p> <p>Relates to, connects to</p> <p>Applies to, develops into</p> <p>Prevents, monitors, sustains</p> <p>Creates, contributes to</p> <p>Differs from, contradicts</p>

Details

Knows	<ul style="list-style-type: none"> - Location, setting, time, place, year - Characteristics, key points, features - Properties, functions, components, pieces - Reasons for, factors, causes of, signs - Outcomes, beliefs, achievements - Agencies, situations, people, groups - Methods, ways, sources - Examples of, general history of, effects of - Order of, sequence of
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Vocabulary

Knows	Specific terminology (e.g., academic vocabulary)
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Procedural Knowledge

Procedural knowledge is the knowledge exercised in the performance of some task. It is sometimes referred to as knowledge of “how to do” something. If the focus is on content, the procedural knowledge is the skills, strategies, and/or processes students need to learn to be proficient in that content area. Some types of procedural knowledge are not specific to a subject area but can be applied across all content areas (e.g., compare, analyze, justify, solve a problem, make a decision).

Level	Definition	Example
Processes	Robust procedural knowledge that consists of several component parts that interact with each other. Additionally, each component part consists of several sub-component parts.	<ul style="list-style-type: none"> • The reading process • The writing process • Playing basketball • Creating an original document using computer software • Playing the piano • Performing a dance
Strategies	A set of general rules governing an overall flow of execution of a single set of steps	<ul style="list-style-type: none"> • Reading a map or chart • Correcting errors in punctuation • Comprehending a text • Solving a word problem in math
Skills	A single set of steps to be performed in a fairly strict order, and ideally without much conscious thought	<ul style="list-style-type: none"> • Creating a line graph to represent data • Finding the volume of a cylinder given its circumference and height • Diagramming a sentence • Three place multiplication times two place multiplication • Using order of operations to solve algebra problems • Throwing a ball overhand • Executing a turn while skiing • Importing a table from a spreadsheet into word



Becoming proficient in procedural knowledge typically requires some declarative knowledge. That is, students need some conceptual understanding in order to perform and apply procedural knowledge. This might involve knowing the steps for a strategy, knowing the component parts of a process, or having sufficient conceptual understanding to apply the procedure in a new context or situation. Therefore, when unpacking for procedural knowledge, teachers must also consider what declarative knowledge or information students will need to learn to become proficient in the process, strategy, or skill.

Patterns Associated with Procedural Knowledge

Just as there are patterns that teachers can consider when identifying learning goals for different types of declarative knowledge, there are patterns that can be used to articulate learning goals for different types of procedural knowledge.

Processes, Strategies, Skills

	This	To Do This
Uses or Applies	Language, information, data Tools, devices, equipment, instruments Procedures, operations, algorithms Methods, techniques, measurements Strategies, skills, processes Structures, formats Observations, self-assessments Models, representations Services, sources Rules, conventions, criteria Laws, properties, principles	Read, write, communicate, sing Relate, respond, reflect Plan, draft, revise, edit Outline, organize, diagram, simulate Display, convey, represent, clarify Determine/identify how or when Solve, calibrate, construct, improvise Compile, record, chart Modify, adjust, improve, change Control, balance Locate, gather, collect Accomplish, perform, execute Summarize, predict
Performs or Executes	Basic or simple procedure (e.g., apply a rule, locate, record, design and conduct) sources, strategies, rules)	

Use sentence stems when writing learning goals.

Standard	Learning Goals Using Sentence Stems	Learning Activities
Grade Level Expectation	Declarative <ul style="list-style-type: none"> • Understands..... • Understands..... • Knows..... • Knows..... Procedural <ul style="list-style-type: none"> • (Verb)..... • (Verb)..... • (Verb)..... 	To learn this, the students will be engaged in the following activities: <ul style="list-style-type: none"> • • • • • •

Decide which of these learning goals are simple and which are more complex.

Complex and Simple Learning Goals	
Complex knowledge	<ul style="list-style-type: none"> • The complex skills, strategies, or processes students will be learning • The complex organizing ideas students will be learning
Simple Knowledge	<ul style="list-style-type: none"> • The simple processes, strategies, and/or skills students will be learning • The simple organizing ideas, details, and vocabulary students will be learning

Complex and Simple Learning Goals	
Complex Knowledge	<ul style="list-style-type: none"> • Analyzes how the plot, setting, and traits of the characters in the story effect the story line. • Understands how literary elements differ in from one story to the next • Understands how literary elements work together to create the story line
Simple Knowledge	<ul style="list-style-type: none"> • Knows that all fictional stories have the same elements • Knows the character's traits, motivations, and feelings from a story • Knows the meaning of the following vocabulary terms: plot, character, theme, setting

Learning Goals		Examples of Learning Activities
Complex Learning Goals	<ul style="list-style-type: none"> • Computes and interprets slope, midpoint, and distance given a set of ordered pairs • Graphs points on a line • Understands that slope is the ratio of vertical change to horizontal change between points on a graph 	<ul style="list-style-type: none"> • Students listen to a lecture on the meaning of positive and negative slopes and rise and run. • Students watch a slide presentation on how to find the slope of a line from an equation, two given points, a table, or a graph. • Using triangles, students measure and calculate the slope of one of the sides of the triangle. • Students complete a worksheet where they practice a set of steps for graphing and write the equation of a linear function given two points. They work with a partner to check accuracy in carrying out the steps. • Students create their own definitions and non-linguistic representations of the new vocabulary terms.
Simple Learning Goals	<ul style="list-style-type: none"> • Knows the formula for finding slope • Knows that the slope of a line measures steepness • Knows that you can express the slope of a line with the coordinated points on a line • Knows that points on a line are represented by X1, Y1 and X2, Y2 • Knows slopes can be +, -, zero, and undefined • Knows the meaning of the following vocabulary terms: slope, rise, run 	

Procedural Knowledge		Examples of Learning Activities
Complex Learning Goals	<ul style="list-style-type: none"> • Uses figurative language when writing fictional stories • Understands that figurative language uses words in an imaginative way to express something more than the usual (literal) meaning • Understands that figurative language is represented in different forms • Understands that authors use figurative language to portray specific images in the heads of the reader or to produce an emotional effect in the reader 	<ul style="list-style-type: none"> • Students create flip books for vocabulary terms. • Students read stories and share examples of how the author's used figurative language in the story. • Students complete a decision - making matrix to determine which type of figurative language they think is the most useful in fictional text. • Students use a pre-writing strategy that incorporates the use of figurative language when writing a fictional text. • Students create graphic organizers that identify the different types of figurative language, write a definition of the type in their own words, and put in an example they find from a text they are reading.
Simple Learning Goals	<ul style="list-style-type: none"> • Knows that as an author, you can use figurative language • Knows that figurative language is represented in both a language form and a sound form • Knows the different types and characteristics of figurative language found in each form • Knows the meaning of the following vocabulary terms: figurative, simile, metaphor, personification, literal 	

- ❑ Embed the learning goals in a proficiency scale or rubric to provide students with more effective feedback.

The Importance of Feedback



If goals provide clear targets for learning, then feedback may be thought of as information that facilitates the process of reaching those targets. Feedback is what helps the students understand where they are in relationship to the goal and what they need to do to improve.

“Setting specific goals for student achievement and then tracking progress regarding those goals is one of the most powerful actions a teacher, school, or district can take.”

Robert J. Marzano

“The most powerful single innovation that enhances achievement is feedback.”

John Hattie

Organizing Learning Goals into a Proficiency Scale or Rubric to Provide More Effective Feedback

Without clear learning goals, providing students with meaningful feedback is near impossible. Effective feedback should involve a variety of classroom formative assessments. This feedback should:

- Be directly tied to the learning goals,
- Help a student determine his or her current level of proficiency in each learning goal,
- Help a student understand what additional learning needs to occur in order to meet the targeted level of proficiency, and
- Be based on a common proficiency scale that identifies levels of performance.



Score	Proficiency Scale or Rubric
4.0	In addition to Score 3.0 performance, in-depth inferences and applications that go beyond what was taught
3.0	No major errors or omissions regarding any of the information and/or processes (simple or complex) that were explicitly taught
2.0	No major errors or omissions regarding the simpler details and processes but major errors or omissions regarding the more complex ideas and processes
1.0	With help, a partial understanding of some of the simpler details and processes but not the more complex ideas and processes
0.0	Even with help, no understanding or skill demonstrated



Formative classroom assessment is a means to collect evidence of a student's proficiency in the learning goals. Because it is done "along the way" it provides a means to give a student meaningful feedback on his/her current level of performance and what he or she needs to do to improve.

Learning Goals

Complex	<ul style="list-style-type: none"> • Creates a three dimensional object from a two dimensional representation of the object) ▪ Understands the use of geometric shapes and structures in the classroom and the environment (e.g., locate right angles in the room)
Simple	<ul style="list-style-type: none"> ▪ Knows the characteristics of right angles, lines, line segments, parallel lines, and perpendicular lines ▪ Knows various geometric shapes (e.g., pentagons, hexagons, octagons, rectangular solids, prisms, and cylinders) ▪ Knows the characteristics of right angles, lines, line segments, parallel lines, and perpendicular lines ▪ Knows the meaning of the following vocabulary terms: horizontal, vertical, oblique, right angle, parallel, perpendicular, line, line segment

Learning Goals housed within a scale or rubric

Lines, Angles, and Geometric Objects	
4.0	In addition to score 3.0 performance, the students demonstrates in-depth inferences and applications that go beyond what was explicitly taught in class.
3.0 Complex	<p>The student</p> <ul style="list-style-type: none"> ▪ Creates a three dimensional object from a two dimensional representation of the object) ▪ Understands the use of geometric shapes and structures in the classroom and the environment (e.g. locate right angles in the room) <p>The student exhibits no major errors or omissions.</p>
2.0 Simple	<p>The student</p> <ul style="list-style-type: none"> ▪ Knows the characteristics of right angles, lines, line segments, parallel lines, and perpendicular lines ▪ Knows various geometric shapes (e.g., pentagons, hexagons, octagons, rectangular solids, prisms, cylinders) ▪ Knows the characteristics of right angles, lines, line segments, parallel lines, and perpendicular lines ▪ Knows the meaning of the following vocabulary terms: horizontal, vertical, oblique, right angle, parallel, perpendicular, line, line segment <p>The student exhibits no major errors or omissions.</p>
1.0	With help, a partial understanding of some of the score 2.0 elements and some of the score 3.0 elements.
0.0	Even with help, no understanding or skill demonstrated.

Steps in a Process for Unpacking Standards

1.	Select an "essential" grade level or course level standard from a subject area that you will or are teaching
2.	Look to see if there are other standards that focus on the same or similar concept or topic. Determine if you will unpack these standards together or separately. If you are working with Common Core standards, read the standards within the cluster to determine if you will unpack the cluster as a whole, unpack combinations of standards, or unpack the standards individually.
3.	Study the standards related to this concept or topic for the grade levels before and after your grade level to determine the progressions of learning.
4.	Create a chart that can be used to record the declarative and procedural learning goals.
5.	<p>Determine the declarative and procedural knowledge students need to learn to master the grade level standard. Remember that there might not always be content specific procedural knowledge.</p> <p>Write this knowledge as learning goals and place them in the chart within the designated area. Make sure that you:</p> <ul style="list-style-type: none"> • Write them as statements of knowledge, not as learning activities. • Always include the declarative knowledge needed for developing proficiency in the procedure. If the learning goals represent procedural knowledge. • Start declarative learning goals with the word "knows" or "understands". • Start procedural learning goals with a verb.
6.	Create a label that represents these learning goals. This label should be just a few words that reflect the concept or topic (e.g., ecosystems; editing; lines, angles, and geometric objects; main idea). These labels can be used to track students' progress in the learning goals.

Earth History Unit 7th Grade Science Learning Goals

Complex Learning Goals	(C1) I understand how fossils provide important evidence of how life and environmental conditions have changed (C2) I understand how a given area on the Earth might be changed during a catastrophic event.
Simple Learning Goals	(S1) I know how fossils are formed (S2) I know different types of fossils (S3) I know the major catastrophic events that have happened on the Earth over time and what caused them (S4) I know the following vocabulary terms and phrases: fossil, geologic time period, Law of Superposition, continental glaciation

Record Keeping: Earth History Unit 7th Grade Science

Student	S1 Fossils Formed	S2 Types of Fossils	S3 Catastrophic Events	S4 Vocab	C1 Fossil Evidenc e	C2 Effects of Catastrophe
Hector	+	+	+	+	+	+
Trudale	+	-	-	+	-	-
Mykailah	+	+	+	-	+ ✓	+
Rosie	+	+	+	+	+ ✓	+
Dashnia	+	-	+	-	+	+
Tavid	+	-	+	+	-	-
Sabrina	-	-	+	-	-	-
Tyrone	+	+	+	+	-	-
Phillip	+	+	+	+	+	+
Roberto	+	+	+	+	+ ✓	+ ✓
Tamisha	+	-	-	+	+ ✓	-

- ❑ Celebrate increased knowledge gain relative to the established learning goals.

As students track their progress over time, they should be able to see increased knowledge related to specific learning goals. Focusing on this knowledge gain provides a legitimate way to recognize and celebrate growth. Teachers should celebrate the success of each individual student to promote self-regulation.

Celebrate Knowledge Gained



Examining the gradual increase in knowledge for specific learning goals throughout a lesson or unit is the heart of formative assessment. While some students may not yet have mastered grade level standards or met the expected level of proficiency in a standard, they can still see the progress they are making towards that goal and that success can be celebrated. Successes can be acknowledged by giving a certificate, a pat on the back or a handshake, or even a silent dance celebrating their progress. Celebrations should occur for the learning goals at the end of each lesson/unit or grading period.

Use Verbal Feedback to Acknowledge Effort and Growth



Give them a smile or a nod
Wink at them
Give them a "thumbs up"
Give them a "WOW" with your hands and mouth
Give them applause (celebrations)

- Fantastic – fan hand and say "fantastic"
- Thumbs up and say "cool"
- Firecracker – light it and let it explode
- Flea clap – thumb and forefinger
- Quiet shout out – twice
- Power claps
- Give your brain a kiss
- Roller coaster – chug up, "whee" down
- Super snake
- Give them a high five

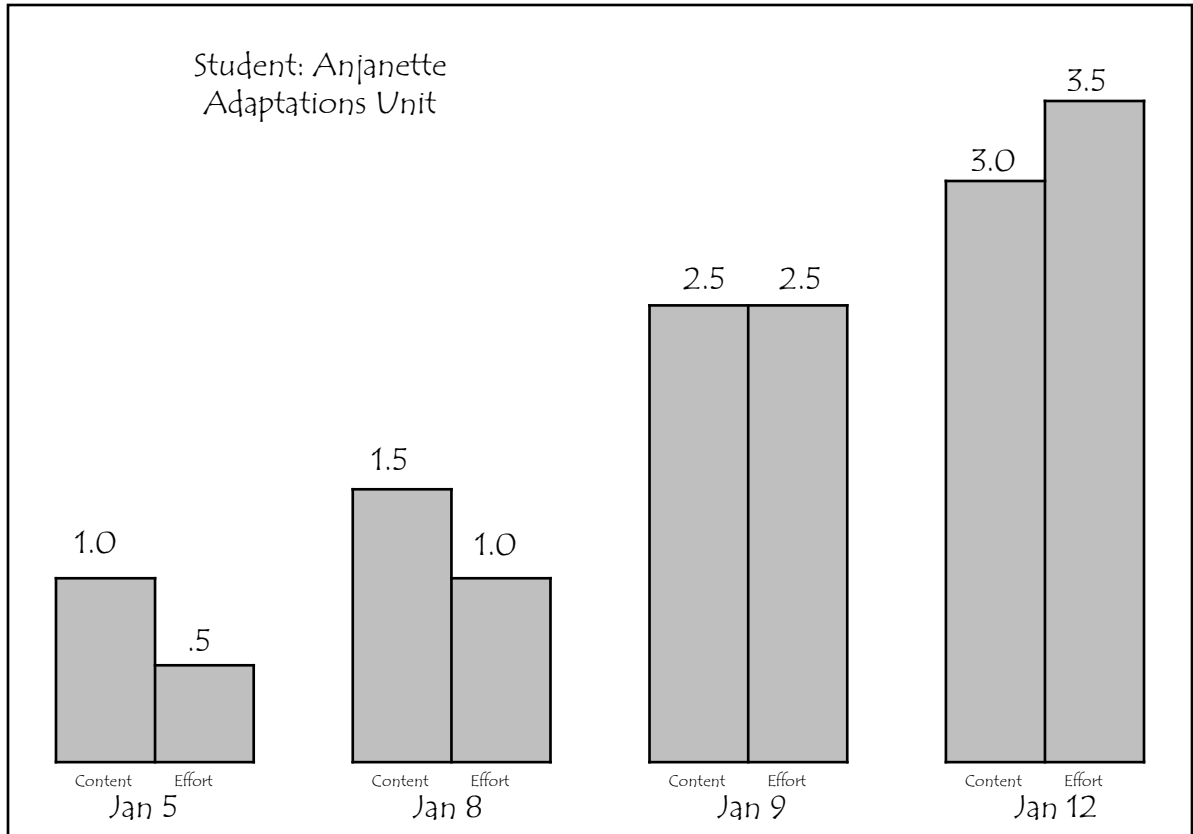
Celebrate with Parents/Others



Write a letter or note to parents
Call parents
Send parents an email
Invite the parents to the classroom for a celebration
Celebrate with the principal
Announce progress over the intercom

- Emphasize the relationship between hard work (effort) and achievement.

Not only can students track their progress, but they can also study causal relationship between their efforts and their overall performance to see that effort does count.



Scoring Rubric for Effort

	(4)	(3)	(2)	(1)	(0)
Effort	I adapt and change my behavior based on the results of my monitoring the effects.	I consistently put forth my best effort even when things are difficult, and I monitor the effect that my efforts are having on my achievement.	I consistently put forth effort in what I do in the classroom.	There are times when I put forth some effort, but I am inconsistent	I should be putting forth some effort but I am not.