

ENGAGEMENT

Using Physical Movement

THE **MARZANO COMPENDIUM** OF
INSTRUCTIONAL STRATEGIES



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INTRODUCTION

In 2007, Dr. Robert J. Marzano published *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*. The framework, composed of three lesson segments, ten design questions, and forty-one elements, was based on research showing that teacher quality is one of the strongest influences on student achievement—that is, an effective teacher can positively and significantly impact student learning. As such, *The Art and Science of Teaching* sought to identify specific action steps teachers could take to improve their effectiveness.

In 2015, Dr. Marzano updated *The Art and Science of Teaching* framework to reflect new insights and feedback. The Marzano Compendium of Instructional Strategies is based on this updated model, presenting forty-three elements of effective teaching in ten categories. Each folio in the series addresses one element and includes strategies, examples, and reproducible resources. The Compendium and its folios are designed to help teachers increase their effectiveness by focusing on professional growth. To that end, each folio includes a scoring scale teachers can use to determine their proficiency with the element, as well as numerous strategies that teachers can use to enact the element in their classrooms. Indeed, the bulk of each folio consists of these strategies and reproducibles for implementing and monitoring them, making the Compendium a practical, actionable resource for teachers, instructional coaches, teacher mentors, and administrators.

USING PHYSICAL MOVEMENT

This element involves the teacher engaging students in physical movement to maintain engagement. Research has shown that increased physical activity is associated with higher energy levels. Higher energy, in turn, allows students to pay more attention to what is happening in class. Additionally, physical movement increases blood flow to the brain, which facilitates thinking and learning.

Monitoring This Element

There are specific student responses that indicate this element is being effectively implemented. Before trying strategies for the element in the classroom, it is important that the teacher knows how to identify the types of student behaviors that indicate the strategy is producing the desired effects. General behaviors a teacher might look for include the following.

- Students engage in the physical activities the teacher designs.
- When asked, students can explain how the physical movement keeps their interest and helps them learn.

Desired behaviors such as these are listed for each strategy in this element.

Teachers often wonder how their mastery of specific strategies relates to their mastery of the element as a whole. Successful execution of an element does not depend on the use of every strategy within that element. Rather, multiple strategies are presented within each element to provide teachers with diverse options. Each strategy can be an effective means of implementing the goals of the element. If teachers attain success using a particular strategy, it is not always necessary to master the rest of the strategies within the same element. If a particular strategy proves difficult or ineffective, however, teachers are encouraged to experiment with various strategies to find the method that works best for them.

Scoring Scale

The following scoring scale can help teachers assess and monitor their progress with this element. The scale has five levels, from Not Using (0) to Innovating (4). A teacher at the Not Using (0) level is unaware of the strategies and behaviors associated with the element or is simply not using any of the strategies. At the Beginning (1) level, a teacher attempts to address the element by trying specific

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strategies, but does so in an incomplete or incorrect way. When a teacher reaches the Developing (2) level, he or she implements strategies for the element correctly and completely, but does not monitor their effects. At the Applying (3) level, a teacher implements strategies for the element and monitors their effectiveness with his or her students. Finally, a teacher at the Innovating (4) level is fluent with strategies for the element and can adapt them to unique student needs and situations, creating new strategies for the element as necessary.

Scale for Using Physical Movement

4 Innovating	3 Applying	2 Developing	1 Beginning	0 Not Using
I adapt behaviors and create new strategies for unique student needs and situations.	I use physical movement to maintain student engagement, and I monitor the extent to which these activities enhance student engagement.	I use physical movement to maintain student engagement, but I do not monitor the effect on students.	I use the strategies and behaviors associated with this element incorrectly or with parts missing.	I am unaware of strategies and behaviors associated with this element.

The following examples describe what each level of the scale might look like in the classroom.

Not Using (0): A teacher structures her lessons in such a way that students remain in their seats throughout the class period.

Beginning (1): A teacher uses physical movement strategies sporadically when it crosses his mind to do so.

Developing (2): A teacher uses physical movement with her students at the beginning of class and during breaks between lessons, but she does not monitor students' engagement levels during instruction.

Applying (3): A teacher pays attention to his class's level of engagement during lessons. When he notices that students seem to be tired, bored, or lacking energy, he uses physical movement strategies to re-engage them.

Innovating (4): A teacher has planned to use physical movement in her classes; in particular, she likes to incorporate body representations into her lessons as she finds that it increases student engagement and helps students remember the content better. In some of her classes, however, the body representations she usually uses are ineffective—some students have difficulty participating because of physical differences or because they feel uncomfortable with activities that require physical contact with others. In these classes, she invents new ways to physically represent content that work for all students.

STRATEGIES

Each of the following strategies describes specific actions that teachers can take to enact this element in their classrooms. Strategies can be used individually or in combination with each other. Each strategy includes a description, a list of teacher actions, a list of desired student responses, and suggestions for adapting the strategy to provide extra support or extensions. Extra support and extensions relate directly to the Innovating (4) level of the scale. Extra support involves steps teachers can take to ensure they are implementing the strategy effectively for all students, including English learners, special education students, students from low socioeconomic backgrounds, and reluctant learners. Extensions are ways that teachers can adapt the strategy for advanced students. In addition, some strategies include technology tips that detail ways teachers can use classroom technology to implement or enhance the strategy. Finally, each strategy includes further information, practical examples, or a reproducible designed to aid teachers' implementation of the strategy.

Stand Up and Stretch

Periodically, the teacher asks students to stand up and stretch. This activity is especially useful when students need to change their focus, concentration, or level of engagement, because it causes more blood and oxygen to flow to the brain. The teacher can also instruct students to stretch in their seats if they feel tired or unfocused during class.

Teacher Actions

- Asking students to stand up and stretch on a regular basis
- Asking students to stand up and stretch to change focus or re-engage

Desired Student Responses

- Stretching in a safe and orderly fashion when prompted by the teacher
- Stretching unobtrusively in their seats when their energy is low
- Increasing their level of energy

Extra Support

- Explaining the biological reasons for movement and stretching with students and encouraging them to stretch anytime they need to renew their focus

Extension

- Asking students to experiment by comparing their ability to focus when they take stretch breaks with their level of focus when they don't

Technology Tips

- Use a countdown timer to provide regularly timed movement breaks during class or to designate the length of the break itself.
- Find short aerobics or other fitness videos on the Internet and have the class follow along with the exercises.

Stretches

- **Side stretch:** Stand with feet slightly more than hip-width apart. Raise one arm above head and place other hand on hip. Lean torso toward the side where the hand is on the hip.
- **Hamstring stretch:** Stand with feet about six inches apart. Bend forward and reach arms down toward toes. Make sure head and neck are relaxed; look down toward toes or back through legs.
- **Quad stretch:** Place one hand on desk for balance. Stand on one leg and bend other leg at knee to raise the foot behind the body. Use hand to grasp top of foot or ankle and pull gently up and forward to increase stretch. Be sure to stand up straight throughout; do not bend at waist or hips.
- **Whole-body stretch:** Stand with feet hip-width apart. Raise both arms above head. Stand on tiptoes and try to touch the ceiling.

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- **Lunge:** Stand with feet hip-width apart. Take a medium to large step forward with one foot. Forward leg should bend at the knee, keeping the shin vertical, while the back leg stays straight. Keep the torso upright and place hands on hips or raise arms above head.
- **Triceps stretch:** Raise one arm above head. Bend arm at elbow so that the hand touches the back of the same shoulder. Use the opposite hand to grasp the elbow and gently push back to increase the stretch.
- **Deltoid stretch:** With arm straight at shoulder level, reach across body so that the upper arm touches the chest. Use opposite hand to grasp elbow and pull toward body to increase the stretch.
- **Neck stretch:** Stand or sit with good posture (back straight, not supported by chair). Tilt head slowly to each side. Nod head forward as if touching chin to chest.

Vote With Your Feet

The teacher posts a sign in each corner of the room identifying responses to a true/false or multiple-choice question or reactions to answers to a question (incorrect, partially correct, totally correct). For example, if the question is multiple choice, the teacher would post signs reading A, B, C, and D in various parts of the room. Choices might also be statements of various opinions or perspectives on a topic. Students move to the corner that has the sign with the answer they think is correct. Before discussing the correct answer, the teacher asks one student under each option to explain why he or she believes that answer is correct.

Teacher Actions

- Posting signs in various areas of the room that express different answers to a question or opinions on an issue
- Asking students to move to the area with the sign that expresses their answer or opinion
- Asking students to discuss with their peers why they think their answer or opinion is accurate

Desired Student Responses

- Moving in a safe and orderly fashion to the appropriate area of the room
- Explaining why they think their answer or opinion is accurate

Extra Support

- Providing background knowledge related to a question immediately before asking students to vote

Extension

- Using a vote-discuss-revote sequence before announcing the right answer and asking students who change their answer when they revote to explain why they changed it

Discussion Questions

- Why did you choose this answer?
- What evidence do you have that your choice is right?
- Under what circumstances might you choose a different answer?
- Why do you think or how did you determine that the other options are incorrect?
- (If not choosing is an option) Why are you unsure of the answer?
- (If using a vote-discuss-revote sequence) Why did you change your mind?

Corners Activities

The teacher splits the class into four groups, which then rotate to each of the four corners of the classroom to examine four different questions related to key content. The teacher assigns a recorder to stay in each corner to summarize students' comments about that corner's question. At the end, each recorder reads the summary from that corner.

Teacher Actions

- Displaying a content-related question in each corner of the room
- Assigning a recorder to stay in each corner of the room and record students' comments from that corner
- Asking students to rotate through the corners and discuss the question at each location with other students there

Desired Student Responses

- Moving in a safe and orderly fashion to the appropriate corner of the room
- Accurately summarizing students' comments when recorder
- Discussing each question respectfully and actively with peers

Extra Support

- Posting related background information with each corner question

Extension

- Asking students to select a corner question they would like to investigate further

Technology Tips

- Use a random group generator to create teams for this activity.

Corners Activity Procedure

If you are a recorder:

- Go to your assigned corner, bringing paper and a writing utensil with you.
- While groups discuss the question at your corner, write down the important things they say.
- At the end of the activity, when the teacher prompts you, read out some of the most important points that various groups made.

If you are in a group:

- Go with your assigned group to your first corner.
- Read and discuss the question there with your group.
- When prompted, rotate to the next corner and repeat the discussion process with a new question.
- When you have been to every corner, listen to the recorders read the key points.

Stand and Be Counted

After a lesson, students stand up based on their self-assessment of how well they understood the key ideas and concepts presented in the lesson. The teacher presents a self-assessment scale, gives students a moment to think, and then prompts students at each level of the scale to stand. For example, a teacher might present a 1–4 scale in which 1 indicates “I didn’t understand any of the concepts presented in this lesson” and 4 indicates “I clearly understand all the concepts presented in this lesson.” After giving students time to reflect and rate themselves, the teacher would say, “Okay, stand up if you gave yourself a 1 on the scale.” When students stand for a particular level, the teacher makes note of how many there are, asks them to sit back down, and then prompts students at the next level of the scale to stand up.

Teacher Actions

- Creating a scoring scale for students to self-assess their understanding of key ideas and concepts from a lesson
- Asking students to stand at different times based on how they scored themselves

Desired Student Responses

- Explaining their level of understanding of key ideas and concepts from a lesson using a teacher-generated scale
- Standing up in a safe and orderly fashion when appropriate

Extra Support

- Providing a list of the major ideas and concepts presented during the lesson before asking students to stand and be counted

Extension

- Asking students who score themselves high on the scale to make a generalization about the topic based on the major ideas and concepts presented in the lesson

Student Self-Assessment Scale

4 = I clearly understand all of the major ideas and concepts presented today.

3 = I understand most of the ideas and concepts presented today.

2 = I need help understanding many of the ideas and concepts presented today.

1 = I didn't get any of the ideas and concepts presented today.

4 = I clearly understand all of the major ideas and concepts presented today.

3 = I understand most of the ideas and concepts presented today.

2 = I need help understanding many of the ideas and concepts presented today.

1 = I didn't get any of the ideas and concepts presented today.

4 = I clearly understand all of the major ideas and concepts presented today.

3 = I understand most of the ideas and concepts presented today.

2 = I need help understanding many of the ideas and concepts presented today.

1 = I didn't get any of the ideas and concepts presented today.

4 = I clearly understand all of the major ideas and concepts presented today.

3 = I understand most of the ideas and concepts presented today.

2 = I need help understanding many of the ideas and concepts presented today.

1 = I didn't get any of the ideas and concepts presented today.

4 = I clearly understand all of the major ideas and concepts presented today.

3 = I understand most of the ideas and concepts presented today.

2 = I need help understanding many of the ideas and concepts presented today.

1 = I didn't get any of the ideas and concepts presented today.

Body Representations

Students create body representations in which they act out important content or critical aspects of a topic. For example, students could form cause-and-effect chains, physically act out key sequence elements, or represent vocabulary terms.

Teacher Actions

- Asking students to act out important content or critical aspects of a topic with their bodies
- Asking students to explain how their body representations express the target concept

Desired Student Responses

- Expressing important aspects of concepts when creating body representations
- Explaining how their body representations express the target concept

Extra Support

- Presenting students with a picture that represents a term or concept before asking students to create a body representation for it

Extension

- Asking students to invent body representations that illustrate a concept or term

Example Body Representations

- **Cause-and-effect chain:** Represent a chain of events that cause one another by assigning each event in the chain to one student. Students then line up in order and state their events. To further symbolize the causal relationship, students might hold hands and pass a gentle squeeze down the line as they say their individual events. Alternatively, students could pass a ball or other object down the line.
- **Mathematical operations:** Create a gesture or physical symbol that students learning and practicing various mathematical operations can use. For example, multiplication could be symbolized by crossing the arms in an X above one's head, division could be symbolized by drawing a slash in the air, and so on.
- **Vocabulary terms:** Designate gestures or movements that correspond with key vocabulary terms for a lesson or unit. These might be related fairly literally to the definition of the word—for example, the word *obliterate* could be associated with a gesture that looks like erasing or wiping away to remind students of its meaning. Gestures could also convey other information about the word; for example, a teacher might create gestures that denote the parts of speech and use them when introducing new terms.
- **Key people:** Design movements that go along with key people or historical figures. For example, the gesture for Betsy Ross could be placing one's right hand over the heart as if saying the Pledge of Allegiance to remind students that she sewed the first American flag.
- **Geographical locations:** Have students move around the classroom as if on a map when explaining where events took place. For example, a teacher could define cardinal directions (north, south, east, west) and important locations within the classroom and take students on a miniaturized version of Lewis and Clark's journey.

Drama-Related Activities

Students act out an event being studied, taking the roles of various participants in the event. This works especially well with historical situations, current events, and events in literature.

Teacher Actions

- Identifying events or concepts being studied that lend themselves to dramatic representation (historical situations, current events, literary events)
- Asking students to act out events being studied

Desired Student Responses

- Accurately portraying historical situations, current events, or literary events
- Acting in a safe and orderly fashion

Extra Support

- Showing students a video clip related to an event or situation before asking them to act it out

Extension

- Asking students to record and review their dramatic enactment of an event or situation to compare it to the original event or situation

Drama-Related Activity Planning Guide

Class: _____

Topic of lesson or unit: _____

Key pieces of content:

An event that students can act out:

Details of this event—time period, location, people involved, causes, effects, and so on:

How will students choose or be assigned roles?

How will I ensure they have enough background knowledge to act out the event accurately?

How will I debrief the re-enactment afterward to ensure learning?

REPRODUCIBLES

Teachers can use the following reproducibles to monitor their implementation of this element. The reproducible titled Tracking Progress Over Time helps teachers set goals related to their proficiency with this element and track their progress toward these goals over the course of a unit, semester, or year. Tracking Teacher Actions and Tracking Student Responses allow observers in classrooms to monitor specific teacher and student behavior related to this element. Teachers themselves can also use the Tracking Student Responses reproducible to document instances of student behaviors during class. The Strategy Reflection Log provides teachers a space to write down their thoughts and reflect on the implementation process for specific strategies related to this element. Finally, this section provides both a student survey and a teacher survey, the results of which provide feedback about teachers' proficiency with this element.

Tracking Progress Over Time

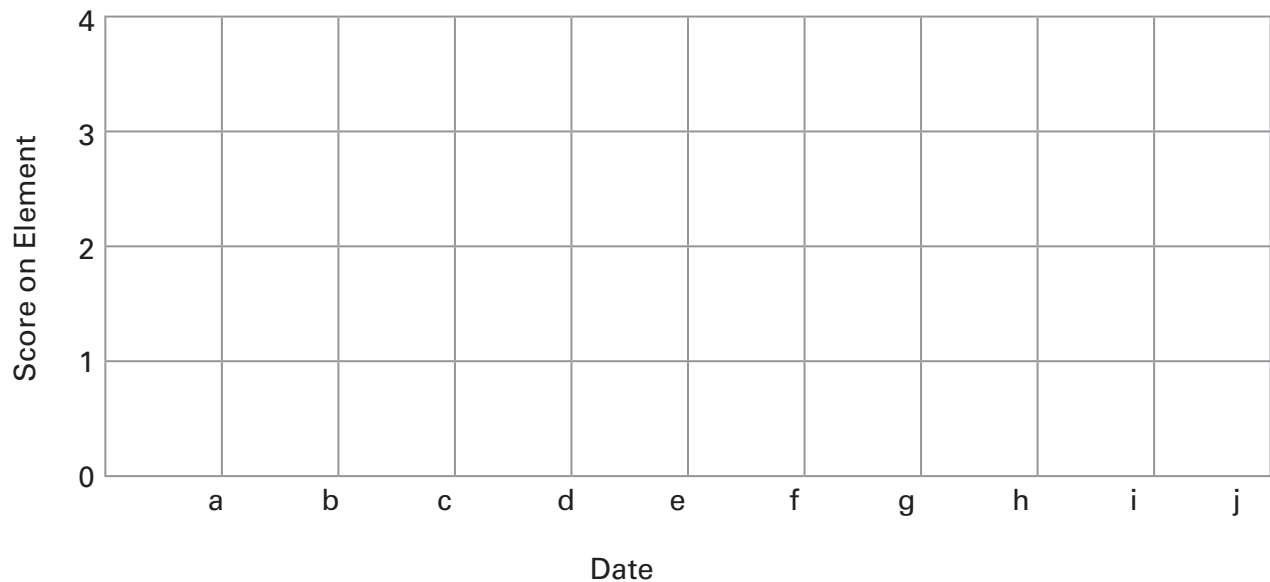
Use this worksheet to set a goal for your use of this element, make a plan for increasing your mastery, and chart your progress toward your goal.

Element: _____

Initial Score: _____

Goal Score: _____ by _____ (date)

Specific things I am going to do to improve: _____



a. _____

f. _____

b. _____

g. _____

c. _____

h. _____

d. _____

i. _____

e. _____

j. _____

Tracking Teacher Actions

During an observation, the observer can use this form to record the teacher's usage of strategies related to the element of using physical movement.

Observation Date and Time: _____ Length of Observation: _____

Check Strategies You Intend to Use	Strategies	Description of What Was Observed
	Stand Up and Stretch	
	Vote With Your Feet	
	Corners Activities	
	Stand and Be Counted	
	Body Representations	
	Drama-Related Activities	
	Other:	
	Other:	

Tracking Student Responses

A teacher or observer can use this worksheet to record instances of student behavior to inform planning and implementation of strategies associated with using physical movement. Any item followed by an asterisk is an example of undesirable behavior related to the element; the teacher should look for a decrease in the number of instances of these items.

Observation Date and Time: _____ Length of Observation: _____

Behavior	Number of Instances
Participating in physical movement activities	
Displaying increased engagement	
Moving in a safe and appropriate manner	
Moving in an unsafe or disorderly manner*	
Describing how movement contributes to their learning	
Other:	
Other:	

Strategy Reflection Log

Use this worksheet to select a strategy, set a goal, and reflect on your use of that strategy.

Element: _____

Strategy: _____

Goal: _____

Date	How did it go?

Student Survey for Using Physical Movement

1. My teacher asks me to move around during class.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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2. My teacher has us stretch our bodies so that we feel full of energy.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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3. My teacher asks me to act out what I am learning.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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4. I never stay in my seat for a whole class; the teacher always asks us to get up and move around at some point.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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5. I learn better when I get the chance to move around during class.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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6. Students in my class know how to move around without getting off task or noisy.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
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Teacher Survey for Using Physical Movement

1. I ask my students to stand up and stretch when their energy is low.

Often Sometimes Rarely Never I don't know

2. I have my students respond to questions physically (for example, by walking to certain areas of the room).

Often Sometimes Rarely Never I don't know

3. I have my students interact with each other in ways that require them to stand up and move around the room.

Often Sometimes Rarely Never I don't know

4. I have my students act out or physically model key pieces of content.

Often Sometimes Rarely Never I don't know

5. My students know the rules and procedures for physical movement and can move around without getting off task or rowdy.

Often Sometimes Rarely Never I don't know

6. My students are more engaged when I incorporate physical movement into my lessons.

Often Sometimes Rarely Never I don't know