### **“Making Students’ Thinking Visible” (MSTV)**

This is a constellation of skills, not one skill. It is a cluster which, when assembled together, produce **robust student dialog**. One hears evidence-based student talk at high levels of thinking where students take responsibility for their own learning, listen to each other, and teach each other in a climate of mutual support and non-defensiveness. Students talk more than teachers do. This allows the teacher to figure out misconceptions and/or gaps in students’ understanding.

MSTV brings together six strands of successful teaching and learning at once. It’s the *combination* of these things that produce the results.

CLASSROOM CLIMATE

“Safe Intellectual Environment… Student Ownership of Learning

Promotes Belief that All Students Can Learn”

SOCIAL-EMOTIONAL LEARNING

”Develops Students Group and communication Skills…Collaboration skills

Environment in which students interactions with peers are friendly…caring”

HIGH LEVEL AND

CRITICAL THINKING

“Higher-Level Questioning Skills to Support Critical Thinking…Quality of Questions…Probing for Student Understanding…”

MSTV

STUDENT ENGAGEMENT

“High Student Engagement and Student Participation”

ACADEMIC VOCABULARY

“An intentional use of content vocabulary”

COMMON CORE

“Research-Based Strategies for Common Core Standards

…21st century skills”

***24 Operating Principles and the Verbal Behaviors that Go with Them***

**Cultivating Classroom Discourse to Make Student Thinking Visible**

When you lead classroom discussions, follow the principles below to create a talk environment of robust student-to-student discourse. This will shift the dynamic from teacher listening to and interacting with just one student at a time... to everyone listening to each other and contributing to each other’s thinking.

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| *Getting the conversation started...*  *Open the door for dialogue...* | |
| **1**  **ENGAGE STUDENT THINKING** | **Begin the dialogue with a planned question or statement designed to engage student thinking.**  *“Why do you suppose Fitzgerald always has Gatsby comment on the Ecleberg sign between East and West Egg?”*  *“What is the difference between an ionic and molecular compound?”*  *“How can you tell if two fractions are equivalent if their denominators are different?”*  *“What do you think Papa really wants when he says that to the children?”* |

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| *Laying the Foundations...*  *Create a safe and inclusive environment for discourse* | |
| **2**  **CALL ON ALL** | **Call on all students over time in large groups whether hands are raised or not.**  *Engage all students when it is a small group.*  *This sets the expectation for everyone to participate in the learning.* |
| **3**  **PAUSE**  **USE WAIT TIME** | **After posing a question or hearing a student’s response, allow a brief silence.**  *Give all students time to process a question or a student comment by pausing for a minimum of 3-5 seconds*   * *after posing a question and before calling a student* * *before calling on another student to answer* |
| **4**  **AVOID**  **JUDGMENT** | **Respond to students without judgment.**  *Replace the language of praise (or blame) with specific feedback, naming what the student did.*  *“You expressed an idea and gave an example which helps us understand your thinking.”*  *This affirms effort and reinforces visible thinking behaviors.* |
| **5**  **VALIDATE CONFUSION** | **Validate students who acknowledge confusion and give encouragement, expressing confidence in their ability.**  *“Strong students say when they are confused like you just did, Jasmine.*  *Let’s start by going back over what we know so far. I know you’ll get it.”* |

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| *Getting Started...*  *use these moves frequently when getting started on your journey with Making Students’ Thinking Visible* | |
| **6**  **EXPLAIN** | **Get students to explain or elaborate.**  *When a student responds to a question, stay with the student for several*  *exchanges, whether their response is right or wrong. This shifts the*  *dynamic from short answers to developing students’ stamina to engage in*  *complex conversations.*  *“Tell us why?”*  *“How did you arrive at that; what is your thinking?”*  *(Student responds.)*  *“So then what was different about his wife’s motivation?”* |
| **7**  **RESTATE** | **Get another student to paraphrase or restate what has been said to highlight an important idea (or to check listening).**  *“Marie, how would you restate what Josh just said?”*  *This sends the message that everyone’s voice has weight and sets the expectations that students need to listen to one another’s ideas, not just the teacher’s voice.* |
| **8**  **TURN & TALK** | **Use turn-and-talk often in large group settings.**  *“So what are the five criteria for a good pictograph? Turn and talk to a neighbor and see if you can come up with them all.”*  *“How was Scout’s opinion of Boo changing? Turn to a partner and talk about what you think the change was and why.”*  *This gets more active participation more of the time and promotes speaking and sharing openly and frequently. It also gives reticent students the opportunity to rehearse their ideas prior to speaking to the whole group.* |

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| *Helping with struggle...*  *when students are wrestling with concepts and problems* | |
| **9**  **ESTABLISH NORMS** | **Make norms of interaction explicit between students in groups.**  *“… and today please be sure to say “*because”*... after you say that you agree or disagree.”*  *“… and in your groups remember to make sure you check each person’s understanding before going on to the next problem.”* |
| **10**  **ACTIVE LISTEN** | **Paraphrase and use careful active listening to unpack student thinking, especially for a wrong or incomplete argument, until there is mutual understanding of what the student actually intended to say.**  *“You seem to be saying that Antigone really spurns her sister... has no respect for her at all. Is that right?”*  *“I think what you are saying is... am I understanding you?”* |
| **11**  **REVOICE** | **When students are grappling with an idea, or their explanations are vague, occasionally re-voice (paraphrase or extend) an answer, infusing academic language when appropriate.**  *“So, Mike, you’re saying that the combination of rising prices – inflation – and wages staying the same – wage stagnation – was hurting the middle class.”* |
| **12**  **SCAFFOLD** | **When students experience difficulty explaining their response, scaffold their thinking by asking questions that allow the pieces they *do* know to surface and then nudge them to build on it.**  *S: It’s a multiplication AND a division problem!*  *T: How did you figure that out?*  *S: Ummm..I just know.*  *T: Uh huh. So let’s see…How many boxes of notebooks did the school buy, Damian?”*  *S: Eight.*  *T: How did you know that?*  *S: Cause the delivery man could only carry 2 in each the 4 trips.*  *T: And how many classes needed notebooks?*  *S: Silence*  *T: If it’s not in the words, maybe it’s somewhere else.*  *S: Oh, the map of the school!”*  *T: And books in each box?”*  *S: 100.*  *T: So then what was your reasoning?”*  *S: Oh well first you had to….* |
| **13**  **PRESEVERE & RETURN** | **Return to a student whose answer was initially incomplete or incorrect. Ask him/her to put together the points that were produced in subsequent class discussion by others.**  *“So now, Ricardo, put it all together for us. What are natural resources?”* |

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| *Give-ups…*  *old habits we have to relinquish* | |
| **14**  **SLOW DOWN** | **Slow down the conversation to get repetitions and restatements of answers.**  *People need to hear things more than once and have the opportunity to put ideas into their own words in order to understand them.* |
| **15**  **ALLOW STRUGGLE** | **Allow students to struggle and stick with them, dwelling on their thinking.**    *Attend and listen without commenting as they talk through their ideas.* |
| **16**  **DON’T ANSWER YOURSELF** | **When a student asks you a question, see if another students can answer it rather than answering it yourself.**  *“Who would like to try answering Jason’s question?”*  *“Elaine, how would you answer that?”*  *“Jamil, what do you think would be the next step?” when Jason has asked for the next step.* |
| **17**  **LEAVE WITH CUES TO PUZZLE OVER** | **Leave a student with a puzzle to ponder and come back later to see what he came up with.**  *“Keep thinking about it. I think you are on to something we will be talking about later. So see if you can make a connection.”* |

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| *Getting students to interact with one another...* | |
| **18**  **AGREE**  **DISAGREE** | **Invite students to agree or disagree with an idea someone shares and require them to explain their thinking or reason why.**  *“What do you think, Jane? Agree? Disagree? Why?”*  *“Who agrees... who disagrees? Tell us why.”*  *“Show me a sign: agree? disagree? Why?”* |
| **19**  **ADD ON** | **Ask a student to comment on or add to another’s thinking.**  *“Let’s comment on what Mike said. Leo, what do you think about Mike’s interpretation?”*  *“Who has something to add on to what Tiffany is saying?”* |
| **20**  **COMPARE THINKING** | **Have students comment on the similarity or difference between two students’ ways of thinking or approach.**  *“You seem to be thinking about this with economic motives whereas Wanda was thinking more about people’s emotions driving them. Which helps us more at this point?”*  *“So Anthony made his rectangle 3 across and 4 down. Erika made hers 4 across and 3 down. Is one more correct than the other? Would either work? Why”* |
| **21**  **SURFACE DISCREPANCIES** | **Ask questions to surface discrepancies.**  *“How can that be if.... What do you think is going on there?”* |
| **22**  **REVISIT PREVIOUS THINKING** | **When, after reflection or struggle, a student changes her opinion or answer, ask her to compare the two lines of thought that led to a different answer.**  *“So what was different on this second try from the first way you did it?”* |

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| *Teaching and reinforcing academic vocabulary...* | |
| **23**  **INFUSE ACADEMIC VOCABULARY** | **Seize opportunities to infuse academic vocabulary and the language of thinking into dialogue and, ultimately, into the culture of the classroom.**  *“Yes, and what you just did, Brendan, is an example of analysis.”*  *“I see your point. That’s a generalization, and we’ll be looking for more of them later in the period.”* |
| **24**  **RECORD ACADEMIC VOCABULARY** | **Record and keep the emerging academic vocabulary visible so students have access to it when writing and speaking.**  *On board in the corner is this vertical list: proposition, thesis, antithesis, argument, evidence, contrary evidence* |

***Communicate “This is important; you can do it; and I won’t give up on you.”***

**Establish Norms for Effective Student-to-Student Dialogue when they are in Groups**

1. Listen carefully to every other students’ comments.
2. Look at the speaker and make eye contact.
3. Speak loud enough to be heard
4. Refrain from raising hands when someone else is speaking.
5. Use sentence frames to explain your thinking (I agree *because*, I disagree *because*)
6. Share the airtime. In small groups, make sure all student voices are heard.
7. Wait for the person to finish before talking.
8. Connect or piggyback on other students’ remarks.
9. Stop the group when you’re not following.
10. Check to see that everyone is understanding.
11. Acknowledge contributions or insights of other group members.
12. Ask others what they think of your reasoning.
13. Check what background information you have to help.
14. Clarify what we know already.

**Observable Student Behaviors when MTV is Working**

**Students...**

1. do the majority of the talking
2. elaborate their answers with explanations
3. show they are listening to one another
4. are willing to openly admit confusion or not knowing
5. challenge each other’s thinking non-judgmentally
6. take initiative to explain another student’s thinking, including how they might have made an error
7. take responsibility for helping those who don’t  get it yet

**MSTV Operating Principles**

1. Engage Student Thinking (good questions)
2. Call on All
3. Wait-Time
4. Avoid Judgment
5. Validate Confusion
6. Get Student(s) to Explain
7. Re-state
8. Turn and Talk
9. Establish Interaction Norms – Teach Skills and Prompts
10. Active-Listen
11. Re-Voice
12. Scaffold
13. Persevere and Return
14. Slow Down
15. Allow Struggle
16. Don’t Answer Yourself
17. Leave with Cues to Puzzle Over
18. Agree/Disagree
19. Add On
20. Compare Thinking
21. Surface Discrepancies
22. Revisit Previous Thinking [changing one’s mind based on reasons or evidence is good)
23. Infuse Academic Vocabulary
24. Record Academic Vocabulary