

Student Engagement and Checking for Understanding Techniques Math Matters



Positive Reinforcement of Behavior

Phrases that positively reinforce behavior:

- "John has his pencil and paper on his desk. I like that."
- "Melissa is sitting in her seat quietly. I like that."
- "Mary is ready, Hector is ready..."
- "Connie has a quiet hand, Laura has a quiet hand, Thank you."

Mode of Response

Teachers should always give students a mode of response with built in wait time. With a mode of response students know that they are accountable, that the teacher will wait and they will be engaged!

Examples:

- raise a quiet hand -write on your whiteboard
- show on your fingers -tell a neighbor -go to the board
- talk it over with your group

Arm and Hand Signals

Signals are used to allow students a consistent way of responding. These silent modes allow everyone to participate without distracting from the lesson.

Examples:

- agreement: hands or thumbs up
- disagreement: hands waved across each other
- important question not related to subject: raise a "pinkie finger"
- I don't know: hand moving back and forth over head
- display answers (show me on your fingers)
 - digit answers • operational symbols • letters from the alphabet • fractions/negative numbers

Space

A teacher must use full space of the classroom in the facilitating of the active involvement of as many children as possible. As one proceeds through a lesson, one moves to various parts of the room.

Benefits:

- Students have more, close contact with teacher.
- Less likely for students to hide in the back of the room than when teacher stays at overhead or desk.
- Less likely for two students to carry on an unnecessary conversation.
- Difficult for non-involved students to stay uninvolved given the proximity of the teacher.

Involvement of Visitors

It is important that the children relate visitors in conjunction with the teacher and then the transition from teacher to visitor is smooth. This technique

allows you to include all visitors in the lesson by asking them to ask questions of your students.

Examples:

- "Ms. _____, would you check the first two rows and see if you see any answers that you like?"
- "Mr. _____, would you call on a quiet hand to answer my question"

Do You Hear an Echo?

Examples:

- "Would you please repeat your answer, but first let me go over to the opposite side of the room."
- "Raise your hand if you heard Peter."
- "Who can repeat what Sara said?"
- "If you heard it, whisper it to a neighbor who didn't hear it."
- "How many students understood Martha's answer?"
- "Who can give another explanation in their own words?"

Specific Questions

In class, students should never have to guess at what the teacher is asking, yet oftentimes teachers ask questions that are vague, but in the teacher's mind require a specific answer. Teachers should try to phrase questions that led to deeper understanding of the concept or helps the teacher know how much of the teaching objective, the student is developing.

Deliberate Mistakes

The techniques of deliberate "mistakes" sets the tone that allows the children to see that it is not bad to make a mistake.

Examples:

- Mistakes can be made in •spelling •answers •operations •symbols and •facts.

Circulation/ Rapid with Hints

When the mode of response given is "on your paper," then the teacher will invariably check to see what the children are writing. This technique can be accomplished with the students showing the teacher through a mode of response or by quickly walking around the room.

Procedures:

Rapid check of all or sample of papers.

Verbal hints given to the entire class:

- helps students with the incorrect answer to refocus.
- keeps students with the correct answer listening and involved.