

Talk Science

Professional Development

Transcript for Talk Strategies: Goal 4 – Think With Others



1. Think With Others Overview

The hallmark of academically productive talk is when students build on and reason with the ideas of their peers — critiquing, challenging, and improving the thinking of the entire group. This kind of talk requires a solid foundation, one that has been built by using the other talk moves to help students share and explain, listen carefully, and dig deeper. By working with the previous steps, you’ve set the table, so to speak. Now students are in a position to use discussion to generate complex meaning with peers and take themselves to a new level of understanding. This is exhilarating for both students and teachers alike.

Teachers can encourage this kind of talk with moves such as:

“Do you agree or disagree...? And Why?”

“What do you think about that idea?”

Classroom Video Example 1:

Teacher: What are our thoughts on Johnny’s idea? Anyone want to tell him whether they agree or disagree with him? Who—who wants to talk to him about why they might agree with him? Kyla, can you tell Johnny why you agree with him?

Kyla: I agree with you because...

Classroom Video Example 2:

Teacher: Does someone disagree with that? And can explain why they might disagree with that? Johnny, why would you disagree with that idea?

Johnny: Because, um...

Another move that guides students to take other students’ ideas seriously, and build on them is the “Add on” move:

“Who can add on to the idea that Mathais is building?”

Classroom Video Example 3:

Teacher: OK how about one more person? Who wants to add on to Mathais’ and Jayda’s idea? They both said that they know that bugs are not made in factories. They’re not made by people. Who wants to add a little more to it?

Notes

Notes

Another move that presses students to engage with others' thinking is the move we might call **“Who can explain what Javon means in their own words?”** It's similar to the **“Who can rephrase or repeat?”** move, but it emphasizes the reasoning behind another student's contribution.

Classroom Video Example 4:

Teacher: I want us to think about what that means. What does Marcus mean when he says they all have the same volume? Javon?

Javon: I think what he meant was that they all have like the same...

Classroom Video Example 5:

Aisha: ...and sometimes hot weather, it causes physical breakdown of the rocks.

Teacher: What do we think that means? What do you think Aisha means when she says it causes physical breakdown? Wh--what does that make you think of or what do you picture happening right now? Mathais?

Student: Well, I—I think she means like the rocks, like after...

In the videos in the next segment, we show different teachers using these moves, and discuss some of things you'll have to keep in mind about the importance of building a culture of respect, when you allow students to disagree and critique one another's ideas.

2. Agree/Disagree and Why?

Scientists make progress by making their ideas public, so that others can critique and build on them. Likewise, in classrooms, students deepen their understanding and ability to argue for *their* positions when they have the opportunity to understand, build on, and critique the thinking of their peers. Notice that by asking students whether they agree or disagree, you are NOT telegraphing which answer is correct. This helps students think on their own. By using the talk move called **Agree/Disagree and Why**, you set the stage for them to engage with one another the way scientists do.

Classroom Video Example 6:

Teacher: Which one do you want to talk about, ten or two? Which one do you want to do?

Student: Ten.

Teacher: You think skip counting by ten?

Student: Yeah.

Teacher: All right. Does--just raise your hand if you agree or disagree, and just tell me why though. All right. You have to give me a reason why you agree or disagree. Will.

Will: I disagree because well, if you did ten, it would be, like 38...

One word of caution -- simply asking if everyone agrees, and getting a chorus of “yeses” is not the same move at all and will not achieve your learning goals. Students have to be prompted to explain the content of their reasoning, providing relevant data, examples, or reasons. Over time, students will begin to do this on their own spontaneously.

Classroom Video Example 7:

Student: Um, I actually want to say that I agree with Alicia.

Teacher: OK and can you explain why you agree with her?

Student: I agree with Alicia because, last time when...

When guided to voice their own positions, students naturally agree and disagree with one another. But you’ll want to ensure is that there is a classroom culture of trust and respect, that students know how to challenge ideas and not the person who offered them.

It’s helpful work with your students to develop ways of disagreeing respectfully. For example, in one classroom students talked about feeling bad when they used the phrase “I disagree with her”. They instead decided to use the phrase, “**I respectfully challenge her...**” As soon as this phrase was introduced and posted on a chart, students used it, enthusiastically and with ease. For this class, it took away the social problem of disagreeing with friends. You can discuss with your class the wording they feel comfortable using.

The “Agree/Disagree and Why” move — increases student motivation, participation, and the ability to reason with evidence.

3. Add On

Another strategy that encourages students to build on one another’s thinking uses the move “**Who can add on?**” It doesn’t ask students to agree or disagree, but it does ask them to expand on the idea a peer has contributed. It credits the first student and asks if someone can build on the idea that someone else is developing. This focuses the group on the specific idea that is on the table, and helps the group elaborate and deepen a single idea before critiquing it.

The “Who can add on?” move increases student participation and the ability to listen to and build on the ideas of their peers.

Notes

Notes

Classroom Video Example 8:

Teacher: OK. Anyone want to add to Kyla's idea? Javon, do you want to add to that?

Javon: Um I think that what earth materials mean to me is like...

Classroom Video Example 9:

Teacher: Tricky question. What do you think? Kyla, do you want to add to that, or?

Kyla: I want to say that um, I kind of, my idea was a little bit different...

Text on screen:

The “Who can add on?” move increases student motivation, participation and the ability to listen to and build on the ideas of their peers.

4. Explaining What Someone Else Means

Classroom Video Example 10:

Aisha: ...and sometimes hot weather, it causes physical breakdown of the rocks.

Teacher: What do we think that means? What do you think Aisha means when she says it causes physical breakdown?

“Who can explain what Aisha means?”

This move is similar to the “who can repeat” move but it puts more of the focus on the reasoning behind what someone said. It asks students to seriously engage with the scientific reasoning in a classmate's contribution, and make sense out of it. It doesn't require that the student agree or disagree, or critique the idea. It simply asks the student to attempt to explicate the idea for the group. Here is one teacher using this move in a variety of science discussions.

Classroom Video Example 11:

Lucas: ...and when you turn around mineral oil, it goes slow. And when you shake it, it makes bubbles. And water, usually like, it goes faster and doesn't – doesn't make bubbles when you shake it, it usually sp–spins.

Teacher: Ok, Who can kind of expand on that idea? What do you think Lucas means when he says it was slow? Is that what you were saying? Who can kind of explain what they think Lucas means when he says that? Mathais, what do you think he means when he says that?

Mathais: I think maybe, um because water might have more mass, like, but when like, when you pour it upside down it comes down faster ...

Notes

Classroom Video Example 12:

Teacher: They had the same volume. Can someone just, one last time, really, kind of explain what it means again to say that they had the same volume? I want to make sure everyone really understands what that idea means, because that's an important sentence to think about. And I want us to think about what that means. What does Marcus mean when he says that they all had the same volume? Javon?

Javon: I think what he meant was that they all had like the same, [pause] there's a word, but I forgot. Like the same [pause] measurement...

Classroom Video Example 13:

Teacher: What do we think about that idea? What do you think about that? Kyla, what do you think about Johnny's idea?

Kyla: I don't think that it- I don't really think that I really understand it, like it makes sense.

Teacher: You don't think you understand Johnny's idea? Can someone try maybe explaining what Johnny was just mentioning?

Text on Screen:

The “Who can explain what Aisha means” move increases student skill at listening carefully to their classmates, and increases their ability to reason with evidence.