

STEM
teaching tools

Talk Science Resource Card

Sharing, Expanding and Clarifying Ideas

Why is this Practice Important?

- Students learning English are able to have more time to think through their ideas and express them more completely.
- The teacher's understanding of what students know is more complete and less is assumed, allowing for more accurate assessment of student learning.
- Students gain confidence that it is important for their ideas to be heard in the classroom and fully understood.

Other Notes

- Students can also be encouraged to use the talk options on the other side of this card among one another in group talk.

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Thinking With Each Other

Why is this Practice Important?

- Students learn that scientific knowledge development is a community process and does not occur with single individuals in isolation.
- Students learn to hear each others ideas and extend thinking through reasoning or clarification.
- The conversation becomes between students rather than fully authorized through the teacher. Students validate each others' ideas through taking up and extending their thinking.

Other Notes

- Students can also be encouraged to use the talk options on the other side of this card among one another in group talk.

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Listening Carefully to One Another

Why is this Practice Important?

- Hearing ideas in many ways, from both teachers and peers, helps students improve their learning.
- Students feel their ideas are respected and are more willing to take the risk of sharing their thinking, thus allowing them more opportunities to develop science talk practices.

Other Notes

- Students can also be encouraged to use the talk options on the other side of this card among one another in group talk.

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Deepening Reasoning

Why is this Practice Important?

- Evidence based reasoning is a basic scientific practice that all students should be encouraged to engage in but may need supports to begin using.
- Shifting the situation with counterexamples allows students to apply new understandings to novel situations, something that real life requires of us.

Other Notes

- Students can also be encouraged to use the talk options on the other side of this card among one another in group talk.

In the Classroom

1. Paraphrasing

- a. "Who can rephrase or repeat?"
- b. "Who can repeat what Javon just said or put it into their own words?"
- c. After partner talk: "What did your partner say?"

2. Agree/Disagree and Why?:

- a. "Do you agree/disagree? (And why?)"
- b. "Are you saying the same thing as Jelya or something different, and if it's different, how is it different?"
- c. "What do people think about what Vannia said?"
- d. "Does anyone want to respond to that idea?"

In the Classroom

1. Asking for Evidence or Reasoning:

- a. "Why do you think that?"
- b. "What's your evidence?"
- c. "How did you arrive at that conclusion?"
- d. "Is there anything in the text that made you think that?"

2. Challenge or Counterexamples:

- a. "Does it always work that way?"
- b. "How does that idea square with Sonia's example?"
- c. "What if it had been a copper cube instead?"

In the Classroom

1. Time to Think

- a. Give turn-and-talk partner time.
- b. Have students write individually prior to talking.
- c. Pause and wait for students to think.

2. Say More

- a. "Say more about that."
- b. "What do you mean by that?"
- c. "Give me an example of what you mean."

3. Paraphrase

- a. "Let me see if I've got what you are saying. Are you saying...?"
- b. "Who can repeat what Javon just said or put it into their own words?"
- c. After partner talk "What did your partner say?"

In the Classroom

1. Add On

- a. "Who can add onto the idea that Jamal is building?"
- b. "Can anyone take that suggestion and push it a little further?"

2. Explaining What Someone Else Means:

- a. "Who can explain what Aisha means when she says that?"
- b. "Who thinks they could explain in their own words why Simon came up with that answer?"
- c. "Why do you think he said that?"