**SCIENCE TALK PROMPTS**

Scientists who work together often agree – except when they don’t! In science **DISCOURSE** is an important part of developing understanding.

In this class this year, you will be expected to participate in a lot of science discourse. As we go through the year, we will be learning and practicing ways to talk with one another that are respectful and supportive and that move discussion forward, whether or not we initially agree on ideas or concepts. Below is a starter list of “talk prompts.” They are sentence starters that can help you talk to each other in a positive and productive way. Keep this list! Add to it! We will be using and improving or skills in “talk science” all year.

### Listen Carefully

**General**
- “So what I think you’re saying is this:… Is that correct?”
- “If I listened to you correctly, were you saying…”
- “Do you mean that…”?
- “Who can rephrase ___’s answer in their own words?”
- “So the question you are answering with your experiment is[…]? Did I understand you correctly?”
- “I’m not sure I understand this part of your answer. Can you explain it to me again?”
- “I am not sure how to say what I am thinking – can you listen and see if we can get some words to go with my idea?”

### Dig Deeper, Support Claims

**General**
- “What evidence are you using to support that claim/model/conclusion?”
- “Why do you think so?”
- “I’m still not convinced. Can you elaborate?”
- “Can you give a counterexample to this claim?”
- “What is a similar example (from another lab or from outside of class)?”
- “You seem to have two different ideas. Which (the __ or the ___) is the more important idea?”
- “Have you had an experience/observation before (like this/not like this) that is influencing your idea?”
- “Which aspect of your answer are you still not comfortable with?/ do you feel needs to be improved the most?”

### Challenge or Disagree

**General**
- “From my interpretation of the data, I see…”
- “I agree with your initial idea, but what about in this case…”?
- “I like what you presented, but did you consider/ have you considered/have you thought about…”?
- “Does this piece of data/example/evidence support your conclusion as well?”
- “Does your idea support [this observation]?”
- “Doesn’t this go against what we observed/agreed on in [this other activity]?”
- “What about this scenario?”
- “Did you consider…?”
- “What if we changed this aspect of your answer…would that still be in agreement with your idea?”

### Build Together

**General**
- “We agree on this point. Why do you feel your second point is more correct than mine?”
- “Who can build on this idea?”
- “Can you give an example that takes this further?”
- “Do you feel like the two answers are in agreement?”
- “What are the design aspects that we agree on?”
- “___, do you agree with _____’s idea? Why or why not?”
- “What is the most important difference between these two ideas? What is making you decide that this one is better than the other?”
- “Would doing it this way accomplish the same goal as your idea?”
- “What if we try it this way?”

### “Talk Prompts” Primer

Name: ___________________ Initials: _____
Date: ___________________ Hour: _____

### Other suggested prompts? (Write your own, or today’s favorite)
In the first part of the year, I provided my students with “science talk prompts” like the ones on the reverse of this page. These sentence starters offered a model of how to communicate during our class discussions (argumentation). To first introduce the prompts, I put a few samples on the board. I had students repeat the prompts after me and then practice saying the sentence starters by to each other. (Practicing them with different intonations helped to engage them.) All students were given printed list (like below) to staple in their notebooks. As we utilized “science talk” in subsequent lessons, I offered rewards for students who used prompts appropriately during discussion. During one lesson I had every student preselect a prompt they might like to use during the day. I also modeled my own use of teacher prompts and pointed out to students when I did so. As some enthusiastic personalities in the class became proficient, they in turn helped model behavior as well. Gradually, we have built a culture that naturally includes this type of talk. Discussions have become richer and through this practice as students are focusing on evidence and listening. It has also taught them respectful language to use when they disagree with each other’s ideas.

Quick additional resources in this and related pedagogies …

If you like to read about it
Talk Science Primer - The Inquiry Project - TERC
https://inquiryproject.terc.edu/shared/pd/TalkScience_Primer.pdf
This is a lower level (K-5) focus, but easily adaptable. Lots of examples. Free download.

If you like to watch it in action
Tools for Ambitious Science Teaching
https://ambitiousscienceteaching.org/
There are some very good videos within this site showing teachers using this process with students at all stages of the idea development.

And for another chemistry-specific adaptation
Using the Talk Science Primer in a Chemistry Classroom
https://www.chemedx.org/blog/using-talk-science-primer-chemistry-classroom