Supporting Sense-making: Frames/Questions

Sentence Frames (to be used with and by students) and Probing Questions/Talk Moves (to be used to support student sense-making)

Engage - Generating Questions and Developing a Model

Sentence Frames:
- What might happen if _____?
- I think, _____ but now I wonder _____?
- When I (funds of knowledge) ____ I (saw, heard, smelled, learned) _____. That reminds me of _____
- I wonder if . . .

Probing Questions:
What questions does that bring up for you?
Why do you think _____ is happening?
What patterns do you notice?
How does this connect to/effect _____?
Do you notice any difference between __ and ___?
What new information did you add to what you already knew?

Explore/Explain - Collecting And Analyzing Data

Sentence Frames:
- I wonder if _____, then would _____
- I noticed that _____ and that makes me wonder
- This reminds me of _____ and makes me wonder
- I think that __ might be important because (if/when) __

Probing Questions:
What might the data we collect show us?
Why do you think __ would be/is an important part of the protocol?
How did the protocol allow _____?
How might this data inform our understanding of _____?
Does the data you recorded bring up any other questions?
How does knowing _____ help us understand _____

Explore/Explain - Explaining current understanding and Arguing from Evidence

Sentence Frames:
- At first I thought __ but now _____
- I agree with _____ when they said _____, however, have you thought about _____
- Based on ____ I think _____
- Why do you think _____ would happen when _____?

Probing Questions:
Why do you think that might be occurring?
What evidence do you have to support (claim)?
Do you think there might be an alternative explanation?
Do other sets of data back up your conclusion?
Has that been observed by anyone else?
What does the data show us?

Elaborate - Communicating and Sense-making

Sentence Frames:
- This is like/similar to _____ because _____
- What do you think would happen if _____?
- When we _____ I noticed that _ and that now makes me think __
- ____ makes sense to me now, but I still wonder _____

Probing Questions:
Do you think we need to make note _____ of __?
How will we remind ourselves about _____?
Who else might benefit from or want to learn about our findings?
What evidence do you have for that decision/idea?
How else might you test your idea?
What information do we still need?

Evaluate - Facilitating sense-making and respond to misconceptions

Sentence Frames:
- I noticed that _ had _ on their model. I think that would be an important addition to the model because _____
- I think we need to add ____ because _____
- A new question I now have is _____
- It is also important to represent _____

Creating a group consensus model based on student connections allows for deepening learning and adds to students' initial ideas. Remind students to make note of the use of any icons. Students may begin to model new ideas inconsistently. This may not necessarily mean a misconception, but a misunderstanding of the use of the icons. Have students reflect on changes they may want to make on their own model.

Probing Questions:
Can you say more about _____?
What do you mean when you say _____?
Can you give another example of when _____?
Tell me more about what you saw that made you think/think of that?
What would you expect to see if . . . ? . . if . . ?
Does anyone want to add on to or respond to ___'s idea?
Who can add on to the idea that _____ is building?
What might we expect to see if that were true? (give counter example)
In other words _____