Collaborative Discussion Framework

The Collaborative Framework is direct application of SMP1 “Make Sense of Problems and Persevere in Problem Solving” and SMP3 “Students at all grades can listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.”

• What are you trying to do? (Do they have or understand the purpose?)
  1. What information is given/do you have? (SMP1)
  2. What information are you missing? (SMP1)
  3. What is/was your plan for solving this problem? (GMP 1.2)

• What have you tried already?
  (Restate in steps what they have already done and why.)
  1. Say the steps to the algorithm out loud. Draw it on paper. (SMP2)
  2. What did you start with? (SMP1&6)
3. Why did you choose that sequence, algorithm, block, operation etc.? (SMP6, GMP6.1)
4. Does that make sense? (SMP1)
5. Can you explain this part to me? (SMP1)

- What else do you think you can try? (GMP1.3 Try Different Approaches When Your Problem is Hard)
  (Brainstorm, encourage students to take a chance.)
  This is really about helping the student to decompose the problem, simplify, identify parts that do and don't work. "How might you solve a simpler task to help you with this problem?"
  
  1. How is this like another problem you have solved? (SMP1)
  2. Can you use your previous solution to help you solve this one? (SMP1)
  3. Is there a part that works? (SMP1) (GMP3.1)
  4. Where does the script stop working? (SMP1)
  5. Do you see any patterns that may help you? (SMP7)
  6. What would happen if you continued
the pattern? \((\text{SMP7})\)

- **What would happen if....?**
  
  (Come up with some possible solutions and hypothesize the outcomes. Test each hypothesis). \((\text{SMP3 }\))
  
  1. Is this the most efficient/simple solution? \((\text{SMP6})\)
  2. 

- **Celebrate & share!**

  (Take charge of celebrating one’s excitement)
  
  - Self recognition / realization (solution / different idea)
  - Recognition for other’s help? idea? solution? - Take 3