

Questions for teams:

“Do all of you have the same question?” Here are two ways of dealing with the responses. If the response is "yes," ask a person who doesn't have his/her hand up, what the question is. If the response is "no," ask if they asked the other team members, and have the student ask them while you wait. Sometimes just repeating the question to another member students past a stumbling block. **“What have you tried?”** This could be followed by **“And why don't you think that worked?”** **“In your own words, what is the problem about?”** Insist on the students telling you in their own words rather than just reading the problem statement. **“Have you read the problem?”** If the student cannot tell you what the problem is about, it is worth asking this. At this point if it is clear that they haven't read the problem, it would be wise to have a student read the problem aloud to the team. If a student asks "Is this answer right?" the teacher can respond with **“What does the rest of the team have?”**, **“What does the rest of the team think?”**, **“What do you think?”**, or **“How can we check to see if it is?”** **“Does anyone have another way of doing or explaining the problem?”**

Asking Questions:

<p>Problem Comprehension: Can students understand, define, formulate, or explain the task?</p>	<ul style="list-style-type: none"> • What is this problem about? What can you tell me about it? • How do you interpret that? • Would you please explain in your own words? • What do you know about this part? • Do you need to define or set limits to this problem? • Is there something that can be eliminated or that is missing? • What assumptions do you need to make?
<p>Approaches and Strategies: Do students have an organized approach to the problem or task? Do they use tools appropriately? How are they recording?</p>	<ul style="list-style-type: none"> • Where could you find the needed information? • What have you tried? What steps did you take? • What did not work? • How did you organize the information? • Did you have a system, a strategy or a design? • Why did you decide to use this approach? • Have you tried.. (a picture, diagram, table...)? • How would it look if you used manipulatives...? • Where could you find information about that?



<p>Relationships: Do students see relationships or recognize the central idea? Do they relate the problem to a similar one?</p>	<ul style="list-style-type: none"> • Do students see relationships or recognize the central idea? • Do they relate the problem to a similar one? • What is the relationship of this to that? • What is the same? What is different? • Is there a pattern? • Let's see if we can break this down. What would the parts be? • What if you moved this part? • Can you write/find another problem similar to this?
<p>Flexibility: Can students vary the approach if one is not working? Do they persist?</p>	<ul style="list-style-type: none"> • Have you tried making a guess? • Would another method work better? • What else have you tried? • Show me another related problem. Is there an easier problem? • Is there another way to say, draw, explain that? something else? • Can you explain the pattern?
<p>Communication: Can students describe or depict the strategies that they are using? Do they articulate their thought processes? Can they display or demonstrate the situation?</p>	<ul style="list-style-type: none"> • Would you please reword that in simpler terms? • Could you explain what you think you know right now? • How would you explain this process to a younger child? • Can you write an explanation for next year's students? • Which words are most important? Why? • Does anyone else have the same answer but can explain a different method for finding it?
<p>Curiosity and Hypothesis: Is there evidence of conjecturing, thinking ahead, looking back?</p>	<ul style="list-style-type: none"> • Can you predict what will happen? • What was your estimate or prediction? • How do you feel about your answer? • What do you think comes next? • What else would you like to know?
<p>Equality and Equity: Do all students participate to the same degree? Is the quality of participation opportunities the same?</p>	<ul style="list-style-type: none"> • Did you work together? How? • Have you discussed this with your team? with others? • Where could you go for help? • How could you help another student without telling the answer? • Did everyone get an equal chance to talk?



<p>Solutions: Do students reach a result? Do they consider other possibilities?</p>	<ul style="list-style-type: none">• Is that the only possible answer?• How would you check your steps or your answer?• How can you determine if your answer is correct/appropriate?• Is there anything you could have overlooked?• Is the solution reasonable?• How did you know you were done?
<p>Examining Results: Can students generalize, prove their answers? Do they make connections to similar problems or real life situations?</p>	<ul style="list-style-type: none">• What made you think that was all you needed to do?• Is there a real life situation where this could be used?• Where else would this strategy be used?• What other problem does this seem to lead to?• Is there a general rule?• How did you know your answer was right?• How would your method work with another problem?• What questions does this raise for you?• Can you describe your method to us all?• Can you explain why it works?
<p>Mathematical Learning: Did students use or learn some math from this activity?</p>	<ul style="list-style-type: none">• What were the mathematical ideas in this problem?• What was one thing you learned? (or 2 or 3 things)• What are the variables in this problem? What are the constants?• What new vocabulary have you learned today? What do they mean? How are they spelled?
<p>Self Assessment: Do students evaluate their own processes, actions and progress?</p>	<ul style="list-style-type: none">• What do you need to do next?• What have you accomplished?• Was your team helpful? How?• What parts are still difficult for you?