

Assessing, Advancing, and Connection Questions

Sharing Math Authority with Students

Adapted from *Taking Action: Implementing Effective Mathematics Teaching Practices, Grades 6-8*, NCTM 2017

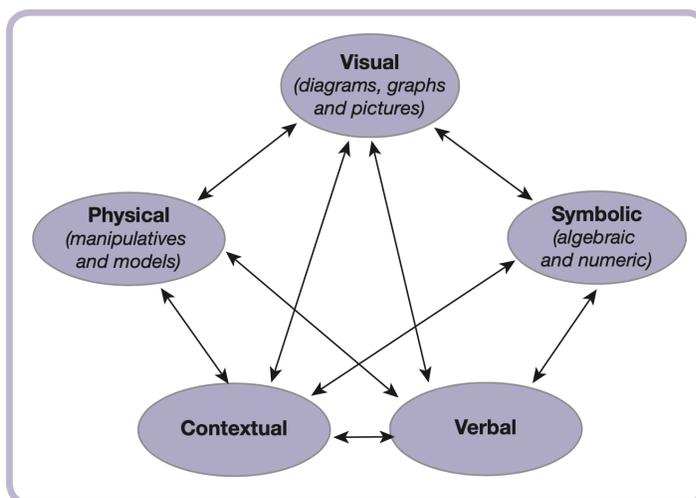
Used in CPM's Build on Discourse Learning Event

Assessing Questions	Advancing Questions
<p>Help clarify what the student has done and what the student understands. Use these questions to get information about student understanding.</p> <ul style="list-style-type: none"> • <i>Why did you decide to ...</i> • <i>Explain how you did...</i> • <i>What does _____ represent?</i> • <i>How do you know when ...</i> • <i>How did you predict your answer?</i> • <i>Why is your method (answer) correct? Convince me!</i> • <i>Why did you cross that out?</i> <p><i>You are using an assessing question if you need to hear the response from the student/team.</i></p>	<p>Move students beyond their current thinking. They guide students to extend what they know to a newer situation.</p> <ul style="list-style-type: none"> • <i>Can you make a model to show that?</i> • <i>What would happen if...</i> • <i>Does that always work?</i> • <i>Why is that true?</i> • <i>How is your answer the same as _____?</i> • <i>Is there another way to solve the problem?</i> • <i>Can you make a rule or generalization?</i> <p><i>You are using an advancing question if you can walk away from the student/team while they explore the question. Come back and check-in with the student/team.</i></p>

Connection Question Stems to Facilitate Meaningful Mathematical Discourse

- *Compare _____. How are they the same? How are they different?*
- *How does this relate to ...?*
- *What ideas have we learned before to help you tackle this task?*
- *Have you ever solved a problem like this before?*
- *Can you make a connection between...? (see visual).*

Use and Connect Multiple Representation



Visual from *Taking Action* (NCTM, 2017, p. 100,) (Adapted from NCTM, 2014, p. 25)

Assessing & Advancing Question Examples

TASK:

1. Put a star by 3-5 of the questions you use most frequently.
2. From the questions you selected, determine if it is an assessing or advancing question.
3. Use the spaces at the end of the list to add additional questions.

1. ____ What is this problem about? What can you tell me about it?
2. ____ Why did you decide to use this approach? ____
3. ____ Have you tried.. (a picture, diagram, table...)?
4. ____ Where could you find information about that?
5. ____ What is the relationship of this to that?
6. ____ What is the same? What is different?
7. ____ Would another method work better?
8. ____ Could you explain what you think you know right now?
9. ____ What was your estimate or prediction?
10. ____ What do you think comes next?
11. ____ What else would you like to know?
12. ____ Is that the only possible answer?
13. ____ What made you think that was all you needed to do?
14. ____ Where else would this strategy be used?
15. ____ What questions does this raise for you?
16. ____ Why does it work?
17. ____ What parts are still difficult for you?
18. ____ Can you think of a counterexample?
19. ____ What assumptions are you making?
20. ____ Why did you decide to use this method?
21. ____ Is there a more efficient strategy?
22. ____ What do you think about what ____ said?
23. ____ Do you agree? Why or why not?
24. ____ Does anyone have the same answer but a different way to explain it?
25. ____ Can you convince the rest of us that your answer makes sense?
26. ____ What would happen if...? What if not?
27. ____ Do you see a pattern? Can you explain the pattern?
28. ____ How would you describe the problem in your own words?
29. ____ What ideas that we have learned before were useful in solving this problem?
30. ____ What if you had started with... rather than...
31. ____ Is there anything missing or that could be eliminated?
32. ____ What was your first step? What are you thinking of doing next?
33. ____ What have you tried? What strategies are you using?
34. ____ What conclusion can you make?
35. ____ What would happen if...?

Your Question(s)