Levels for Questioning: Facilitate meaningful mathematical discourse

0	Teacher is only questioner. Questions serve to keep students listening to teacher. Students give short answers and respond to teacher only.
1	Teacher questions begin to focus on student thinking and less on answers. Only teacher asks questions.
2	Teacher asks probing questions and facilitates some student-to-student talk. Students ask questions of one another with prompting from teacher.
3	Student-to-student talk is student initiated. Students ask questions and listen to responses. Many questions ask "why" and call for justification. Teacher questions may still guide discourse.

Leinwand, S. Brahier, D., & Huinker, D. (2014). Principles to Actions: Ensuring Mathematical Success for All. Reston, VA: National Council of Teachers of Mathematics.

Question Types

Type	Description	Examples
Gathering Information	Students recall facts, definitions, or procedures.	• What does it mean to "add"? • What is the formula for finding the area of a rectangle? • How many got this answer?
Probing Thinking	Students explain, elaborate, or clarify their thinking, including articulating the steps in solution methods or the completion of a task.	• As you drew that number line, what decisions did you make so that you could represent 7 fourths on it? • It's not clear how you found your answer. Can you explain it another way? • Can you show and explain more about how you used a table to find the answer to the task?
Making the Mathematics Visible	Students discuss mathematical structures and make connections among mathematical ideas and relationships.	• How does that area model relate to multiplication and/or division? • What does your equation have to do with the problem situation?
Encouraging Reflection and Justification	Students reveal deeper understanding of their reasoning and actions, including making an argument for the validity of their work.	• How might you prove that 51 is the solution? • How do you know that the sum of two odd numbers will always be even?

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