

Reflect on Questioning Framework







30 minutes

Group Size: Individual and Full Group

Purpose: Note how different types of questions can play a role in exploring students' thinking

- Instructions :**
- 1) Inform teachers that in addition to posing problems in such a way as to assess and advance student thinking, they can foster geometric thinking with the questions they ask students throughout the problem-solving process. Explain that each of the question types described on the *Questioning Framework* handout plays a unique role in helping to foster students' geometric problem solving.
 - 2) Allow teachers some time to review the handout. (5 minutes)
 - 3) Display a key that defines each question type with a different highlighter color.
 - 4) Ask teachers to read the *Comparing Area with Tangrams Transcript from a 6th-Grade Classroom* and to use the appropriate highlighters to mark examples of each of the 3 question types. (15 minutes)
 - 5) In a full group discussion, have teachers share examples they found for the 3 question types. (10 minutes)



-  The Task Demand and Questioning Frameworks both aim to keep cognitive demand high. When teachers ask questions of their students, there should be a balance of assessing, orienting, and advancing questions to maintain or increase a high level of demand.
-  Without being able to interview the teacher about her/his intended purpose for each question, we can never be completely sure whether a question is an orienting, assessing or advancing question. It is not imperative that the entire group agrees on each question's type, as long as teachers can provide support for why they would categorize a question in a given way. It may also be useful to try to find some examples where there is virtually complete agreement.
-  As teachers volunteer examples of different question types, ask if they saw any evidence in the transcript that the question was effective in achieving its purpose (e.g., Did students explain their thinking when asked an assessing question?).
-  Teachers may also want to discuss this framework more generally. For example, teachers may want to discuss if one type of question is better than another, if they use one type more than another, or if there are questions that don't fit within this framework. Just be sure that the goal remains on teachers extending their ability to foster geometric thinking

through questioning.



An interesting discussion could begin by asking if one type of question seems more useful to achieve the goal of enhancing student understanding, and why. If teachers have strong feelings about this, you could also have them talk about what place the other type(s) have in a math classroom.