QUESTIONING STRATEGIES TO PROMOTE STUDENT THINKING

Questions guide critical, higher level thinking.

• Maintain a Positive Climate for Thinking
  An emotionally safe and supportive learning environment is critical to higher level thinking and productive questioning. When students feel free to take risks, to venture guesses, and to ask substantive questions, their learning is increased.

• Ensure Students’ Willingness to Respond to Questions.
  Dignify students’ responses in a variety of ways to encourage them to continue to respond. This is especially important when student answers are incorrect or partially incorrect.

• Plan for Higher Level Questions
  Use the DIMENSIONS MATRIX as a cognitive tool for teachers and for students. As a tool for teachers, it guides in the development of higher level questions that are designed to promote a deeper understanding of the content. Students need opportunities to actively process the information they are learning by hooking it to familiar knowledge and by discovering new connections and relationships.

  When the DIMENSIONS MATRIX is used as a tool for students, they move into the “teacher” role by formulating challenging questions on significant topics or concepts. Students learn to pose and answer both lower and higher order questions. Practice developing questions “like the teacher might ask” helps students identify important points in the content they are learning. As students attend to these questions, they will also be demonstrating their ability to apply their content knowledge as well as to use critical and creative thinking. A important motivational benefit is gained when teachers select student questions to include on the “test.” (From Lyman and McTighe, Maryland Department of Education.)

• Frequently Ask “Why?”
  Routinely require students to support their responses with evidence (facts, passages, specifics, etc.). Constructing support is an important higher level thinking skill.

• Develop a Pattern of Ask-Pause-Call
  To encourage thinking by all students, one questioning technique is to not identify the student to respond when asking the question. Wait a moment before designating the student to respond. It is a simple technique, but when we identify the student to respond before asking the question, thinking by other students is decreased.

• Allow Students to Call On Someone
  During a recitation, after a student has responded to a question have that student identify a student to answer the next question. The one rule is to call on someone who has not yet answered. The students will ensure that all students participate.

• Use Wait Time I and Wait Time II
  Wait time I is providing an ample amount of time for students to prepare a response to a higher order question that requires thought or reflection. Wait time II is the time provided after a student has responded and before the teacher reacts to the response. Thoughtfully and appropriately using Wait Time I and II encourages all student to think and to answer in more
complete thoughts. It promotes a nonthreatening environment that communicates the value of student responses. (From Bellon, Bellon, & Blank, Teaching From A Research Knowledge Base.)

- **Use THINK-PAIR-SHARE—To Involve Everyone**
  This approach can be used at any point in a lesson to stimulate student thinking about an important piece of information or to check for understanding on a concept or topic. Students are seated as pairs (or as pairs within their teams). The teacher poses a question to the class. Each student thinks independently and constructs an answer. Students then pair with their partner to reach consensus on an answer. Finally, specific students are designated to share their agreed upon answer with the class. Signals/cues could be developed such as lights off to pair and lights on for silence and sharing. Try using it after a lecture to help students summarize key points or before a unit to allow students to share prior knowledge. (From Jay McTighe, Maryland SDE.)

- **Use NUMBERED HEADS TOGETHER—To Involve Everyone**
  This informal approach can enhance participation at appropriate points in the lesson. The purpose is to actively engage students in summarizing information or in coming to agreement on an answer. Students could be grouped in their regular teams of 4 or 5 or in ad hoc groups of 3. Individual accountability is incorporated by assigning each student within a group a number (e.g., 1 through 3, 1 through 4, 1 through 5). Sequence:
  1. Teacher poses question.*
  2. Students put heads together and come to agreement on the answer.*
  3. Teacher calls a number. Student with that number raises hand.
  4. Teacher calls on one student from one group or all students with that number from all groups.
  5. Points for correct responses can be awarded.

- **Use Cooperative Review—Make A Game of Questioning**
  To use as a review. Students in groups make up review questions. Groups take turns asking the other groups the questions. Groups should get the opportunity to respond in a specified order. The group asking the question gets a point for the question. The group initially called on gets a point if the answer is correct. Before the answer is identified as correct or incorrect, a second group has the opportunity to earn a point if they agree with the given answer (and it is correct) or if they disagree with the given answer (and it is incorrect) or if the second group can add important information. The teacher serves as the reference.
  * Variations: 1. Teacher can supply the questions. 2. Combine with numbered heads together. Students would agree on the answer, but the called on student would give the group’s response.

- **Follow Up Student Responses with Confirm or Deny**
  After a student has responded to a question have one or several students confirm or deny and correct the original response. A variation is to have all students respond using some designated signal such as thumbs up. This method will increase students’ opportunities to actively participate.

- **Encourage Students to Extend Their Responses**
  After a student has responded to a question, ask him/her to clarify the point (“What do you mean by that?” or “Is there an example you could share?”) or to elaborate (“Could you tell us more?”).

- **Instead of Asking “Any Questions?”—Find Out If They Understand**
  When you want a total group response to check for student understanding, try asking for “raised hands,” “stand-and-be-counted,” or “thumbs up/down” actions rather than asking, “Any questions?” Few students want to take the risk to be the only one who needs to ask a question! Ask direct questions to individual students, keep the interchanges short and weave
them into questions involving responses from the entire group.  (From Hunter in R. Fogerty, Designs for Cooperative Interactions.)

- **Avoid Asking Yes/No, Tugging, Guessing, and/or Leading Questions.**
  Yes/No questions are not diagnostic nor very helpful (unless they provide a way for some students to be involved). Tugging questions may be perceived as bullying or nagging. Guessing questions can be useful in “hooking” students and in helping students think about what they are learning, but generally are seen as pointless. Leading questions are usually rhetorical.