

ASKING THE RIGHT QUESTIONS

The art of questioning and responding to questions requires you to understand the purpose of your questions. If you just want to know what the students know then ask straightforward questions that ask them to recall information. If you want to promote student thinking and discussion you should try to frame questions to encourage students to examine and reflect on issues. Good questions invite, not command, students to respond. The art of questioning also requires that you listen carefully to students' responses in order frame questions that encourage continued, thoughtful examination of ideas. The most important thing to remember is that it takes practice to become a good questioner and discussion leader. Don't discouraged if you don't get it right immediately!

Non-productive questions...	Productive questions...
<p>look for single correct answers.</p> <p>are too broad to be answered intelligently with a short answer ("What is biology?").</p> <p>are too abstract or beyond students' level of experience ("Why do some African-Americans gravitate towards Islam?").</p> <p>contain multiple questions ("How would you describe ____ and how is it related to ____?")</p> <p>often begin with <i>did, are, is, can, what is</i>.</p> <p>are answered before the students have a chance to respond ("What do you think causes ____? No one? Well, it's because ____.")</p>	<p>are rooted in uncertainty and allow for the possibility of other responses ("What is your understanding of _____?")</p> <p>are more narrow in focus requiring some thought before answering ("Tell us about some of the things Olympic athletes do everyday.")</p> <p>may be phrased as requests for hypotheses or ideas about how to approach something ("Good, so you said a good picture makes your eye move around the page. How can draw a picture so someone's eye moves around it?")</p> <p>contain a single focus.</p> <p>begin with <i>why do you think, how might we find out, what can you do to make, what ways can you, which do you think, what do you think will happen if</i>.</p> <p>allow lots of 'wait time' (5-20 sec).</p>

Guidelines for productive questioning:

1. Prepare your questions in advance and use simple direct language. Soon, you'll get good at this.
2. Talk to your SA about what questioning and discussion styles the students are use to.
3. Use questions that ask students to think more deeply involve such mental processes as observing, comparing, classifying, hypothesizing, evaluating, deciding, etc.

4. Questions with a clear focus help students to respond more productively. ("What body language would you use to create a feeling of tension in this scene? Any ideas?")
5. Questions that invite, not challenge, make it safe for students to share their thoughts. (Ask yourself, "Am I inviting the students to join me in the exploration of this issue?")
6. The challenge or threat of 'why' questions can be reduced by narrowing their focus. Instead of asking "Why do you think so?", consider, "Tell us more about that." or "Do you have any examples?"
7. In some cases, you may wish to pose a problem or questions to the whole class, ask the students to discuss them for a minute or two, and then ask groups to respond. This may give the students confidence in their answers or predictions as well as encourage discussion.
8. Praise 'thinking' rather than 'right' answers. Neutral responses imply that more than one answer is possible, and even expected, from students. ("Thanks for sharing your idea.")
9. Practice your questions. These types of questions sound awkward at first. Saying them out loud will make seem less clumsy. Practice on a suitably aged child (nephew, daughter).

Non-productive responses...	Productive responses...
<p>Responses that bring closure: Agree or disagree with student's idea Evaluative responses Overreacting to responses may cause others to think their responses may not be as valuable Do not give student time to think Tell students what you think Explain it your way Cut off student questions or responses Put down student ideas</p> <p>Responses that limit student thinking: Repeating your question Focus on your dialogue with students Lead student to "correct" answer ("When we boil it, will it vapourize?") Tell student what to do Give more information</p>	<p>Responses that encourage discussion: Neutral reply ("I see." "Thank you.") Praising thinking rather than responses encourages all ideas to be valued Allow lots of 'wait time' (5-20 sec) Ask another student what they think Ask other students to add more details Allow time to complete hesitant questions/replies Accept all ideas</p> <p>Responses that encourage student thinking: Ask students to repeat if necessary Encourage student-student dialogues "How would you test that?" "Does anyone else have an idea to add?" "Can you give us an example?" "What do you think will happen if...?" Brainstorm ideas for what to do Ask for more information from group.</p> <p>Remember: Respond to responses</p>

Adapted by Bruce Gurney, Eric Hanson, and Sandy Wohl from *Asking the right question: The essence of teaching* by Selma Wassermann (1992).

Guidelines on the Art of Good Questioning

- Look at the broad selection of Bloom's verbs when composing your questions
- Consider asking questions from a range of Blooms levels
- *Plan* the important questions. Write them out in advance.
- Make the wording of your questions clear and specific
- Keep your goals in focus. Ask questions with a purposeful answer in your mind
- Allow sufficient wait time before selecting a student to answer. Students need time to think, remember, and compose an answer
- Ask the question *before* selecting the student. If you ask "Bruce, what is the difference between convection and conduction?", Bruce is the only student who needs to think of an answer. The rest of the students are not accountable.
- Be respectful of the student.
 - Invite rather than intimidate.
 - Reduce the risk of being wrong.
 - Find something right in a wrong answer.
 - Be gentle. Give hints
 - Acknowledge and thank. Try not to be too critical or evaluative
- Follow up on responses. Ask for further elaboration. "Tell me more", "what do you mean by...". "What is the reasoning behind your statement?"
 - Paraphrase, repeat the response back to the student
 - Ask for further information
 - Ask for evidence, support or justification
 - (Look at the "Probing Phrases" for more suggestions)
- Look for ways to encourage interaction between students: e.g., "Do you agree with--?" "State in your own words what -- said". "How is -- answer different from --,"
- Don't answer the question yourself until it is time to do so.
- Allow the student to finish speaking before beginning to speak yourself
- Remain neutral, then ask another student to give their own answer. Seek a variety of responses to your questions
- Ask for multiple perspectives
- *Listen* to the student. What are they trying to say?
- Be encouraging
- Try to involve most students. Involve the girls.
- Organize the sequence of your questioning
 - Begin with simple concepts before asking more complex questions
 - Begin with familiar concepts before exploring new ideas
 - Begin with concrete concepts before exploring abstract ideas
- Ask interesting questions
- Wrap questions around a story, analogy, personal story, or a novel context
- Encourage students to *ask* questions

- If no one volunteers an answer to a question it is either too difficult or not clearly understood:
 - Rephrase or reword
 - Clarify any of the complex or ambiguous terms
 - Give a hint
 - Set the context for the question. Put it in a story.
 - Ask a simpler, more fundamental question that leads to the answer
 - Reduce the risk (“write down the answer” or “tell your answer to a classmate”)
 - Ask for consensus. “Raise your hand if you agree/disagree”

Be respectful of the student, recognizing that it puts them at risk to respond in a public setting

- Allow a student to ‘pass’ if they do not know the answer
- Preserve a student who gives a wrong answer
- Thank a student for trying

Ask lots of questions! It encourages students to think, remember, and make meaningful connections