Tell Me About . . .

Questions That Encourage Students to Think

Connecting to the Real World

My mantra to my students is, "Science is life and life is science!" Connecting to real-world experiences with questioning makes science relevant to students' lives and ensures there's no "book" answer. For example, while teaching a lesson on action potential and nerve transmission, I ask students what they should eat to enhance muscle contraction. The same question can be asked concerning athletes with muscle spasms. The possibilities are endless, just as long as the questions are of interest to students and compel them to connect the content with the real world.

—Ariel B. Lane, science educator, KIPP Atlanta Collegiate, Atlanta, Georgia

Learning from Mistakes

After the class has decided on the "right" answer, I will frequently ask, "Who can share with us where you made your mistake?" Students then feel successful in their ability to pinpoint what they need to do differently next time.

—Jaime Kazal, 7th grade math teacher, Western Sky Middle School, Goodyear, Arizona

What's Important About That?

When students raise an issue with me during school visits, I ask them to tell me "What's important about that?" I find they really have to dig deep to find their answers because there really is no "right" answer. This question always provides me with feedback that's meaningful, insightful, and very often, personalized to students' situations. It really gets to the heart of the matter.

—Anita Simpson, superintendent of program and innovation, Simcoe County District School Board, Barrie, Ontario, Canada

Ask Socratic Questions

My 7th grade advanced reading students participate in a Socratic discussion group about current literature and documents. They must write questions that have more than one answer, that cannot be answered yes or no, that cannot be answered with a number or date, that relate to the texts as well as our real world, and that generate discussion. In our study of the novel *Johnny Tremain* and the period before the Revolutionary War, one student asked, "How are the Sons of Liberty and ISIS the same and different?" Students definitely had to think deeply to answer that one!

—Barbara Livengood, gifted facilitator, USD305, Salina, Kansas

Think Between the Lines

I ask students to "Read or think between the lines. Look at the white space and tell me what it means." While my senior Literature of the Holocaust class was reading Elie Wiesel's *Dawn*, I asked questions that dealt with the theme of forgiveness. Where do we see a hint of forgiveness in Elisha's tone? Is this natural? Why or why not? How is this hint reflected again in Simon Wiesenthals's *The Sunflower*? Do the two pieces reflect the same theme?

—Christine Bonarrigo, English teacher, New Canaan High School, New Canaan, Connecticut

Small-Group Questioning

I don't accept the premise that I should ask the questions; to develop critical thinking, my students ask questions for discussion. I model the process first, so they learn to ask questions that cannot be answered by yes or no; that are not forced choice (usually using the word "or"); and that do not call for regurgitation of the material read. Then, in small groups, they share their questions, evaluate, respond to, and often combine them into the most interesting base

for discussion. They finish by reporting out on the question and the answer, sometimes with a minority response. They develop their questions, write them for submission, and come ready for active engagement each day.

—Charlotte Mendoza, professor, Education Department, Colorado College, Colorado Springs, Colorado

Think Globally

Every day, political shifts, catastrophic events, crises, and social issues happen worldwide. It is incumbent upon educators to connect our students to the world and expose them to different religions, cultures, and belief systems.

When a crisis happens in another part of the world, I have my students read about the event. I ask them to state the issues and discuss how those events will affect us, looking at both positive and negative possible consequences. Students then devise solutions that would attain the best possible outcome. The discussion sparks great debate, entices critical thinking, and develops problem-solving skills. My students feel empowered that their ideas were considered, and they feel more connected to the world around them.

—Michele Hill, world language teacher, Delsea Regional High School, Franklinville, New Jersey

Multiple Choices

On multiple-choice question reviews, I ask kids to tell me why their answer is correct and why the other choices are wrong.

—Mary Catherine Keating, teacher, Chantilly High School, Chantilly, Virginia

Where's the Proof?

How can you prove that? Where is the proof? Why? Those three questions are frequent utterances in my classroom designed to push student thinking beyond "the right answer." When students provide an answer—either verbally or in writing—follow-up questions usually begin with, "Why is that the answer?" Or, "Can you prove it? Where in the text/video/document/argument do you find support for this answer?" The old way of asking students to "explain" was never a clear enough instruction, but these questions have led to much deeper thinking!

—Angela Quiram, teacher/data coach, San Luis High School, San Luis, Arizona

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Read As Writers

When we're studying metaphors in English language arts, I ask students to explain how an author might have created a particular metaphor. The focus is still on understanding what a metaphor is, but rather than merely identifying it, the students are required to dig deeper by thinking about the author's craft and what might have influenced the creation of this metaphor. "Why did the author decide on a metaphor and not a simile?" "Can you create a simile that would work instead of the metaphor?" "If you removed this metaphor, is there another literary device you could use, and what would it be and why?"

This questioning approach encourages students to read as writers and then transfer this understanding to their own writing.

—Suzanne Herbert, middle school humanities teacher and English subject lead, American International School of Budapest, Hungary

Developing Research Questions

I guide students in the production of their own research questions. In my advanced placement biology class, we end the year with independent research projects in which students develop their own research questions, design their experiments, collect and analyze data, and answer their own initial questions. I take them through the entire process that research scientists go through, including dealing with financial considerations for materials.

—Mike Monteleone, teacher of biological science, Delsea High School, Franklinville, New Jersey

See upcoming questions and share your story at www.ascd.org/tellmeabout.