Once you're clear about your big question, post it, highlight it, publish it. Keep it in front of kids' eyes to unify their thinking and their work. Kids who are raised on big questions learn to evaluate every idea that's presented, every discussion point, every document to see if it helps them toward a big answer. They actively scrutinize information instead of being passive observers of the learning landscape.

Questions Across the Curriculum

Let's look at some questions that could be jumping-off points for inquiry lessons. You can use them as is, or modify them to suit your particular work. I just find it easier to improvise from models than to stare at a blank sheet.

History/Social Science

- Why do you think people invented language? What problems do you think they encountered?
- How do you think people invented the wheel?
- Why do you think people leave their homeland?
- Why do people go exploring?
- What does it take to sustain people in a city?
- What systems need to be invented to make a city work?
- How is city life different from county life? What are the advantages and challenges of each?
- Why do you think some colonists preferred having a king to independence?
- What are the first things you would need to do if you were setting up a new country?
- Who should be allowed to lead our country? Who should be allowed to vote?
- Why might the United States make reparations to Native Americans for treaty violations?
- When might the invasion of another country be justified?
- How is your life different from life during the Civil War?
- What is your reaction to the fact that Thomas Jefferson owned slaves?
- Is slavery ever justified?
- What do you think the government should do about homelessness in our city?

Science

- What do you think computers will be like in the year 2050?
- Why do you think certain birds don't migrate?
- What do you think is the explanation for crop circles?
- What do you think people can do to reduce pollution?
- Do you think product testing on animals is ever justified? Why?
- What problems should science tackle in the next fifty years?
- What would be an effective way to prevent the extinction of certain African mammals?
- What can be done to protect homes from annual flooding?
- What would be a way to reduce traffic accidents during snowstorms?
- What do you know about trees?
- What is similar about ants and bees?
- What kind of shelter could you invent for people living in the desert to protect them from extreme heat and cold?
- What ideas do you have for reducing famine?
- What are some uses for buildings that are going to be demolished?

Literature

- Which poem do you think captured the feeling of being in a battle best? Why?
- What experiences have you had that are similar to the main character?
- If you could meet any character in this book, who would it be and why?
- If you could be any character in this book, who would you be and why?
- How would it change this story if it had been set in the mountains?
- Why do you think the author set this story at sea?
- How does the author let you know what the characters are feeling?
- If you were in this story, how would you have handled the conflict?
- What do you think will happen to the characters after the story ends?
- How would the story be different if the author told it from the bully's point of view?
- If the main character enrolled in our school, do you think you'd become friends?
- What advice would you give the underdog?
- How could you improve this story?

The Arts

- What does that music remind you of in your own life?
- What feelings do you think the composer was trying to convey?
- How would this composition be different if it was played on a piano instead of a violin?
- What images do you see in your mind when you listen to this music?
- What kind of tools might an artist use to make a painting like this?
- Why do artists take photographs?
- Describe what's happening in this painting.
- How are buildings and sculptures similar? Different?
- How is a sculpture different from a painting?
- What textures do you see in this sculpture?
- How would you describe the lines in this painting?
- Why do you think artists paint portraits—pictures of people?
- What patterns can you find in this painting?
- How would you describe what the colors are doing in this painting?
- What do you think gave this artist the idea for this sculpture?
- What story do you think the artist is trying to tell?
- If this sculpture could make sounds, what would you hear?

Math

- What are some ways we can measure the length of the soccer field?
- Why do you think people invented numbers?
- What's the easiest way to add four numbers?
- Why do you think we use commas in big numbers?
- How can you tell this division problem in words?
- How can you show it in pictures?
- What do you notice about the four basic shapes?
- What are some rules you would teach a student just starting to learn the multiplication tables?

An Inquiry-Based Unit: The Rise of Civilization

The year I was teaching humanities in a multiage class of ten-, eleven-, and twelve-year-olds, the focus of our curriculum was ancient civilizations, with a particular focus on the invention of democracy. We would be looking at cities

and societies, past and present, starting with life in Mesopotamia about six thousand years ago. Initially I wanted to explore the concept that when people decided to abandon nomadic and agrarian life for permanent settlements that became cities, there were preexisting conditions that allowed that to happen in one place as opposed to another. Specifically, this area was in the Fertile Crescent between the Tigris and Euphrates rivers. In addition to certain environmental conditions, people would have to develop tools and systems that would allow the permanent concentration of a large population in one area. I wanted my students to think their way through the stages from nomad to reading-writing-law-abiding city dweller. It was my goal to pry out of them anything they knew about civilizations by asking a series of strategically sequenced questions.

Here are a few of the big ideas that they raised and fleshed out in those discussions: that there are advantages to living in settlements rather than being nomads; that once people began to live together in large concentrations, they created a demand for certain agencies, systems, and services. New jobs evolved. Institutions sprang up that needed to be housed in structures tailored to a specific purpose, thus they had differentiated architecture—temples, courts, housing, palaces, storage facilities, and markets. The resulting division of labor created free time and a need for entertainment, which begot music, dance, and drama.

The questions I used to guide these discussions were based on my own research and reading. I built each lesson around two or three questions that would prod my kids to think. Only after pumping them dry of any relevant ideas would we plunge into the actual historic materials—books, primary source documents, artifacts, novels, and simulations that revealed the fine details of life in Mesopotamia. The following are the questions I used as a skeleton for our inquiry unit on early civilizations.

- Why might people want to live together in cities or towns rather than being nomads or farmers?
- What conditions would be necessary to support large groups of people living together in a city/town?
- What are the advantages of city living? What are the disadvantages?
- What knowledge or developments would be necessary to build a civilization versus nomadic hunter/gatherer lifestyle?
- How do humans organize their existence when they live together in large numbers?
- What would you consider sufficient evidence to indicate the presence of a city?
- Looking at this Sumerian frieze, what can you infer about their society?

- What jobs might be created in such a society?
- What would have been the main building materials in the Sumerian cities?
- What buildings would they need?
- How would the rise of cities create enemies or conditions for war?
- How would that influence city building and architecture?
- What conditions would stimulate trade?
- Why did the Sumerians need to invent writing?
- What are the challenges in inventing a writing system?
- How would writing change their society or civilization?
- Why would a set of laws like the Code of Hammurabi be necessary?
- What categories of laws would the Sumerians need to have an orderly society?

As you can see, all of these questions stimulate multiple answers, which spawn questions of their own. One or two questions would be enough for a morning's romp in Mesopotamia. I would ask a question followed by What else? What else? In addition to asking questions, I was the note taker or scribe, making visual models on the board to document the ideas and facts we were accumulating. Students kept notes of their own in any format that would help with recall and assist them with their own research projects and assessments. Some made annotated drawings, others favored lists, phrases, or diagrams. Soon we had a board full of notes and sketches representing their collective knowledge. Then we'd flesh out the tantalizing details with slides from the local art museum, replicas of artifacts, floor plans of palaces, cuneiform tablets, read-aloud novels, trade books, and guest speakers.

We hit the jackpot when we discovered a scholar at the local university who was fluent in cuneiform. She spent a morning reading old clay shards and stone etchings to my kids—deeds for houses, wedding contracts, and business deals, all carefully recorded in symbols that resembled bird footprints. This was a primary source document bonanza that let us witness daily life in the Fertile Crescent. Take a look at the text from a rental agreement on a wagon that was used for traveling between Babylonia and Palestine. The contract protects the owner's wagon from being driven the long route along the coast, rather like a mileage limit when you rent a U-Haul truck.

> A wagon from Mannum-balum-Shamash, of Shelibia, Shabilkinum, son of Appani[bi], on a lease for 1 year has hired. As a yearly rental 2/3 of a shekel of silver he will pay. As the first of the rent 1/6 of a shekel of silver he has received. Unto the land of Kittim he shall not drive it.

For the big finish that day, my kids learned to write their own cuneiform messages in damp clay using sharp sticks.

Later in the year we laid the Code of Hammurabi alongside our own municipal codes and marveled at the similarities. We attended city council meetings and monitored local elections to see how far we've strayed from the Greek's invention of democracy. By the end of the year, my students had attended 246 public meetings, testified before the Landmarks Commission, the Pier Restoration Corporation, and the City Council. They dissected an environmental impact study about restoring the breakwater in our bay and trooped into a public meeting with the Army Corps of Engineers with a long list of—you guessed it—questions. The startled corpsmen were clearly unprepared to debate their report line-by-line with thirty citizens too young to vote and too fired up to be intimidated by a six-foot colonel listing ever so slightly to the left from the weight of his medals. That year my kids didn't just learn about democracy. They reinvented it before the wondering eyes of their parents and one very proud teacher. And they did it by mastering the art of asking good questions.

Inquiry and Classroom Culture

If you use the inquiry method consistently, the culture in your classroom slowly but perceptibly shifts. There's no Designated Answerer because kids discover that they're all capable of high-level thinking and together they can create new knowledge. Individual students become the recognized experts on various subjects, so their peers go to them when they need the definitive answer on Edison, or Elizabeth the First, or edible mushrooms. It's a powerful feeling to be an expert, and it gives kids a tiny glimpse of what they can do with their brains. Perhaps the most important development is that your students become experts on the subject of learning. They've learned how to learn. That's a portable skill that will serve them for life.

As you get more comfortable with this back-and-forth rhythm of teaching, your kids will get excited because they realize they're sharing the driver's seat in this mental road trip. They consciously, even viscerally experience themselves learning, and at the same time they have the thrill of teaching. They see the lightbulbs going on in their peers' eyes, and enjoy the heady feeling of being one of the "smart" kids, maybe for the first time in their career. Or they notice the way the topic lurches in a whole new direction when they make an insightful comment. They get a rush of pure adrenaline when they ask a challenging question that hasn't occurred to anyone in the room, including the teacher! When learning looks like this, it's not only a contact sport, it's addicting. Even better than recess or snacks!

Beyond the obvious notion that inquiry discussions strengthen critical thinking, there are plenty of other academic benefits you can reap without any extra effort. Inquiry sharpens speaking and writing skills; it promotes vigorous, motivated reading of adult-level material, as kids pursue their own questions. The research center in your room will be the in place to be. Inquiry provides greater access to the curriculum for more students with longer lasting effects. In an inquiry-based classroom, kids no longer *do* school. They don't take deliveries. They create knowledge by thinking together, and that knowledge is more potent than anything found in a textbook.

> *I cannot teach anybody anything.*
> *I can only make them think.*
> —Socrates

One fine day, dialogue will break out among your students. They'll shoot questions directly at each other, and for as long as it lasts, you're out of a job. This is the highest compliment you can receive from your kids. Cherish it and then go out and do something really nice for yourself. You're a new-age Socrates, and you didn't even have to sip the hemlock.

Resources

Cecil, Nancy. 1995. *The Art of Inquiry Teaching: Questioning Strategies for K–6 Classrooms.* Manitoba: Peguin Publishers.

Whitin, Phyllis, and David Whitin. 1997. *Inquiry at the Window: Pursuing the Wonders of Learners.* Portsmouth, NH: Heinemann.