Helping our students think like mathematicians should be at the center of every class we teach. The particular topic will affect which parts of thinking mathematically we might address, but our should be to turn out students who can bring mathematical reasoning to bear in the context of the course material and beyond. In order to help our students think like mathematicians, we teachers must think deeply about what is going on in our students’ heads. But this also takes an unusual amount of self-reflection. We need to understand how we think about things. Unfortunately, thinking mathematically is often something that comes naturally to people who eventually get Ph.D.’s in mathematics. Thus we have no idea how we learned to think this way, and we are often not even aware of how much is really going on in our own heads when we attack a mathematical question. The talk will discuss several such conundrums and illustrate ways to help our students become more effective thinkers. (Received September 09, 2013)