I am co-authoring (with Denise Spangler) a chapter for the forthcoming NCTM Handbook of Research on Mathematics Teaching and Learning. I will share our rationale for focusing on a critical, but narrow, slice of mathematics teaching—the interactions between teachers and students in which students’ thinking is central. This interactive work is challenging to enact because teachers’ responses are contingent on what students say and do. In the chapter, we join others in decomposing teaching into core practices that can be discussed and rehearsed, using a common professional language.

In this talk, I will introduce the idea of core practices by describing a multi-institutional, multidisciplinary collaboration in which teacher educators are engaging novice teachers with core practices. I will then focus on a particular core practice that has received increased attention in recent years: mathematics teacher noticing. Examples will be given for various conceptualizations of and methodologies for studying this construct.