Rehumanizing mathematics requires that we cultivate the development of mathematics communities in which the unique and varied lived relationships and experiences that individual people have with mathematics are fully valued. This research report will describe a theoretical framework for Equitable Mathematics Instruction by first briefly describing important aspects of the foundational concepts of mathematics identity, sense of belonging in mathematics, and robust mathematics identity, and then describing the core features of the framework including the nature, role and impact of active and student-centered instructional practices, asset orientations and sociopolitical awareness. The central focus of this report will be on the ways this framework supports and calls for a broadening of what is considered mathematical including (but not limited to) increased opportunities for students to be creative when doing mathematics. Firsthand experience from using instructional practices aligned with this framework will be shared. These experiences suggest that valuing creativity in mathematics could contribute to the creation of a rehumanized mathematics with expanded views of what mathematics is, how mathematics is done and what mathematics is used for. (Received September 17, 2019)