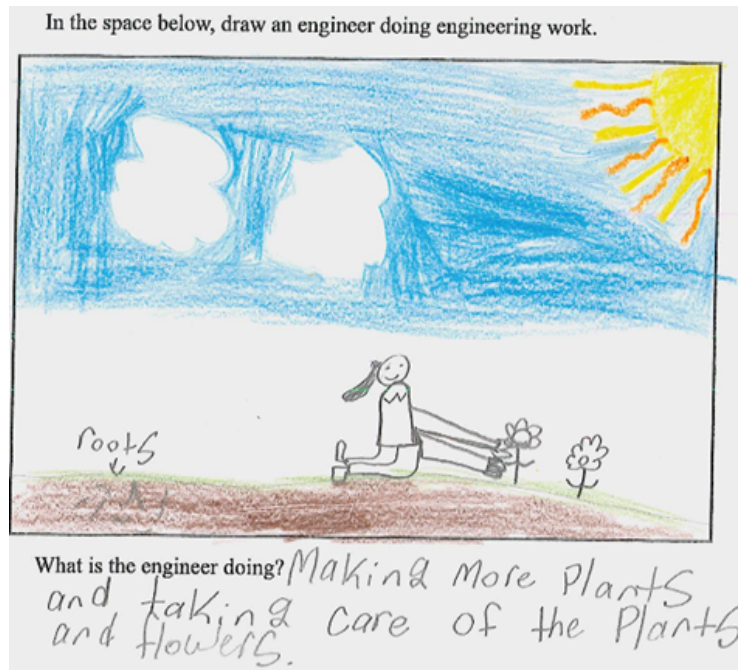


Engineering in the Elementary Classroom: How Teachers Understand and Communicate the Nature of Engineering



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With the growing adoption of the *Next Generation Science Standards*, engineering is being incorporated into K-12 science classrooms across the United States. One important outcome for K-12 engineering education is that students gain an accurate understanding of the nature of the engineering discipline (NOE): what engineering is, what engineers do, and how engineering relates to other disciplines. This is especially important as engineering is often being taught alongside science, and students need to understand the ways in which these disciplines differ. The goal of promoting students' understanding of the NOE is a challenging one, however, as teachers rarely have much preparation in the subject. This is particularly true for elementary teachers, the vast majority of whom have never taken an engineering course. I will present results from a professional development project that provides support for elementary teachers as they incorporate engineering into their classrooms. Participants in the project are teamed with engineering graduate students, who visit the classroom weekly to aid in the planning and implementation of engineering lessons. My investigations focus on project participants' knowledge of the NOE, the extent to which they prioritize the NOE as a learning goal, and the ways that they communicate the NOE to their students.