

SAMPLING IN THE WILD

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In professional practice, scientific claims are made in light of how samples are constructed and how sampling variability is considered. Yet students are rarely invited to grapple with the complexities of these practices. This presentation describes a design research study in which, over the course of a three-week investigation of a local ecosystem, six classes of sixth-grade students constructed or appropriated measures, grappled with how variability in time and space affected samples of these measures, and made informal inferences about ecosystem functioning in light of the uncertainties involved in measure and sampling variability. Our methods include analyses of student's sampling plans, interviews with students about how their own investigations, and video recordings of students' planning sessions, fieldwork, and class "research meetings" wherein they contested claims about ecosystem relationships. We conclude by considering how practices of sampling in the wild influenced students' conceptions of data collection, samples and sampling variability, and ecosystem functioning.