

Abstract Submitted  
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**Becoming Galileo in the Classroom** ELIZABETH CAVICCHI, Edgerton Center, MIT, Cambridge MA — Galileo's contributions are so familiar as to be taken for granted, obscuring the exploratory process by which his discoveries arose. The wonder that Galileo experienced comes alive for undergraduates and teachers that I teach, when they find themselves taking Galileo's role by means of their own explorations. These classroom journeys include: sighting through picture frames to understand perspective, watching the night sky, experimenting with lenses and motion, and responding to Galileo's story. In teaching, I use critical exploration, the research pedagogy developed by Eleanor Duckworth that arose historically from both the clinical interviewing of Jean Piaget and Bärbel Inhelder and the Elementary Science Study of the 1960s. During critical explorations, the teacher supports students' investigations by posing provocative experiences while interactively following students' emergent understandings. In the context of Galileo, students learned to observe carefully, trust their observations, notice things they had never noticed before, and extend their understanding in the midst of pervasive confusion. Personal investment moved students to question assumptions that they had never critically evaluated. By becoming Galileo in today's classroom, we found the ordinary world no less intriguing and unsettling to explore, as the historical world of protagonists in Galileo's *Dialogue*.

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