

1125-P1-1554 **Ben Blum-Smith*** (ben@cims.nyu.edu), Courant Institute of Mathematical Sciences, 251
Mercer St., Room 607, New York, NY 10012. *Group theory for middle schoolers and inservice
teachers: close encounters with the abstract.*

We report on a pedagogical design paradigm, and several tasks based on it, used successfully to introduce group theory to middle school students and separately to inservice teachers. The paradigm consists of posing questions that can be engaged without much prior knowledge, but that force learners into a concrete encounter with the abstract. The tasks develop in an inquiry-based way the definitions of group and group isomorphism, and motivate cycle notation for computation in the symmetric group. Some of the tasks tap students' kinesthetic learning modality. (Received September 17, 2016)