The goal of this study is to investigate the role mathematics coach played at Tabaka (pseudonym) middle School GA as they implemented the Georgia Performance Standards (GPS), using Connected Mathematics Project (CMP) materials as a vehicle. CMP is judged to be a middle grade curriculum consistent with the GPS. Several themes emerged in relationship to the implementation process. The presence of the mathematics coach on site—running the in-school professional development, attending lessons of some teachers and giving them feedback—did support teachers in dealing with new content to teach, adapting to new methods of teaching, working in groups, adapting to multiple ways of assessing students, and learning how to use new curriculum materials. The study suggests that in dealing with teacher beliefs and practices, teachers benefit from a long-term professional development that targets content and pedagogical knowledge. The study underscored the importance of teamwork, collaboration and having the mathematics coach on site in bringing about a new vision of the school mathematics program. (Received September 25, 2006)