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The Mathematical Education of Teachers as an Application of Undergraduate Mathematics (META Math) project developed lessons connecting content from an undergraduate abstract algebra course to related secondary school content that prospective secondary mathematics teachers (PSMTs) may eventually teach. This explicit integration of applications to teaching on par with other applications (e.g. physics) responds to recommendations from the Conference Board of the Mathematical Sciences in its publications on the mathematical education of teachers. These recommendations call for PSMTs to experience and understand the underlying mathematical connections between advanced mathematical content required for their undergraduate degrees and content they will teach. META Math lessons integrate student-thinking tasks (STT) that require undergraduates to analyze and explain student work presented in the task. The STT have been field tested at several universities. We will outline the development and refinement of these types of tasks for an undergraduate abstract algebra course based upon participants' work and instructor and participant interviews. We will also discuss the effectiveness of the STTs as perceived by undergraduates who engaged in these tasks. (Received September 17, 2019)