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Tom Asaki* (tasaki@wsu.edu), Department of Mathematics and Statistics, 103 Neill Hall, Washington State University, Pullman, WA 99164-3115, and **Marie Snipes, Chris Camfield** and **Heather A Moon**. *Application-Inspired Linear Algebra*.

A student's ability to engage in scientific research is becoming the norm for undergraduates. The classroom can be a significant stepping stone toward achieving necessary skills and relevance through research practices. In this talk, we show how we have introduced research-like practices and applications as the key motivator for discovering Linear Algebra concepts. Activities and questions are designed as open-ended explorations, training students to grapple with undefined concepts and the unknown. Current research topics for classroom use include limited view tomography, noise removal from images, and visually-pleasing image blending. While students gain new appreciation for the utility of linear algebra, they also gain confidence in their own skills and ability to address research questions. By the end of one semester, students are more confident in addressing research-like tasks and can view questions through a mathematically enlightened and critical lens. Modules for classroom use are being developed and tested as part of the NSF-funded IMAGE Math project which is developing materials for use in undergraduate Analysis, Linear Algebra, Differential Equations, and Mathematical Modeling. (Received February 26, 2017)