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Cynthia J. Woodburn* (cwoodbur@pittstate.edu), Mathematics Dept., Pittsburg State University, 1701 S. Broadway, Pittsburg, KS 667662. *Using Colorings of Pascal's Triangle to Visualize Algebraic Concepts*. Preliminary report.

Computing Pascal's Triangle using modular addition (or any finite group operation) allows one to "color" Pascal's Triangle leading to beautiful patterns. These patterns can be explored to help students visualize algebraic concepts such as commutativity, closure, identity elements, inverses and even quotient groups. We will present some new activities that have been developed as part of the PascGalois project begun by Professors Michael Bardzell and Kathleen Shannon of Salisbury University that can be used with students ranging from high school students to pre-service elementary and secondary teachers to undergraduate abstract algebra students. We will also discuss results of field-testing the activities with different audiences. (Received September 08, 2005)