

1154-20-1876 **Meghan M. De Witt*** (mdewitt@stac.edu), Sparkill, NY 10976. *Using group-like interactions to motivate undergraduate research projects.* Preliminary report.

We explore several recent group theory based and group-like research projects accessible to undergraduate students. This includes studying the interactions of the symmetry groups of hypercubes, the group-like structure of swarms, and the group-like interactions that create the magnetosphere of the earth. These projects are designed for under-prepared students to have easy access and are inspired by scientific phenomenon. We explain how we were able to find and create such interdisciplinary problems for students to be able to tackle with little to no background knowledge. (Received September 16, 2019)