



## PIN AND DISC TRIBOLOGY TEST IN MICROGRAVITY



**SCHOOL:** MANCHESTER JR-SR HIGH SCHOOL

**LOCATION:** NORTH MANCHESTER, IN

**FLIGHT PROVIDER:** BLUE ORIGIN

**GRADES:** HIGH SCHOOL

### STUDENT EXPERIMENT DESCRIPTION

Lubricants are used in virtually all heavy machinery and will be essential as space travel becomes a normal part of life. We would like to test the efficacy of NASA lubricants in microgravity. Our experiment tests how the lubricant Krytox 240AC, changes the coefficient of friction. A disc will be rotated about a central shaft using a motor with pins on opposite faces of the disc. One pin is lubricated, and the other is not, to allow both lubrication and the effects of microgravity to be tested.