



## UNDERSTANDING OUTGASSING DYNAMICS OF KAPTON POLYMER IN STRATOSPHERIC CONDITIONS: IMPLICATIONS FOR SPACEBORNE APPLICATIONS



**SCHOOL:** THE CHARTER SCHOOL OF WILMINGTON

**LOCATION:** WILMINGTON, DE

**FLIGHT PROVIDER:** WORLD VIEW

**GRADES:** HIGH SCHOOL

### STUDENT EXPERIMENT DESCRIPTION

Our experiment was built to test the outgassing dynamics of Kapton, a polyamide film, under stratospheric conditions. We hypothesize if the altitude increases and atmospheric pressure decreases, the tensile strength of the film will decrease, due to the fact that it outgasses abundant amounts of gases like CO, CO<sub>2</sub>, & HCHO. Our team aims to inspire other young scientists to conduct their own research by showing how the principles of polymer science can be applied to solve real world problems.