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How Wing Design Affects Lift

The project is to test to see what wing design will work best for slow speed flight. It will be judged by which wing generates the most lift. This project has been chosen to be built upon in future projects with the ultimate goal of designing a new wing type. The hypothesis is that the wing with the most upper camber (which is the curve of the upper surface of the wing) will work best to generate the most lift. The plan is to make a wind tunnel and to make a frame to hold all the wings at fixed angles. When it is all together, the wing will be inverted and placed on a small scale, and the fan turned on. With the wind tunnel on, the aerodynamic forces on the wing will push down on the scale and will read the increased weight. With the known change in weight the amount of lift that the wing design will generate can be calculated.