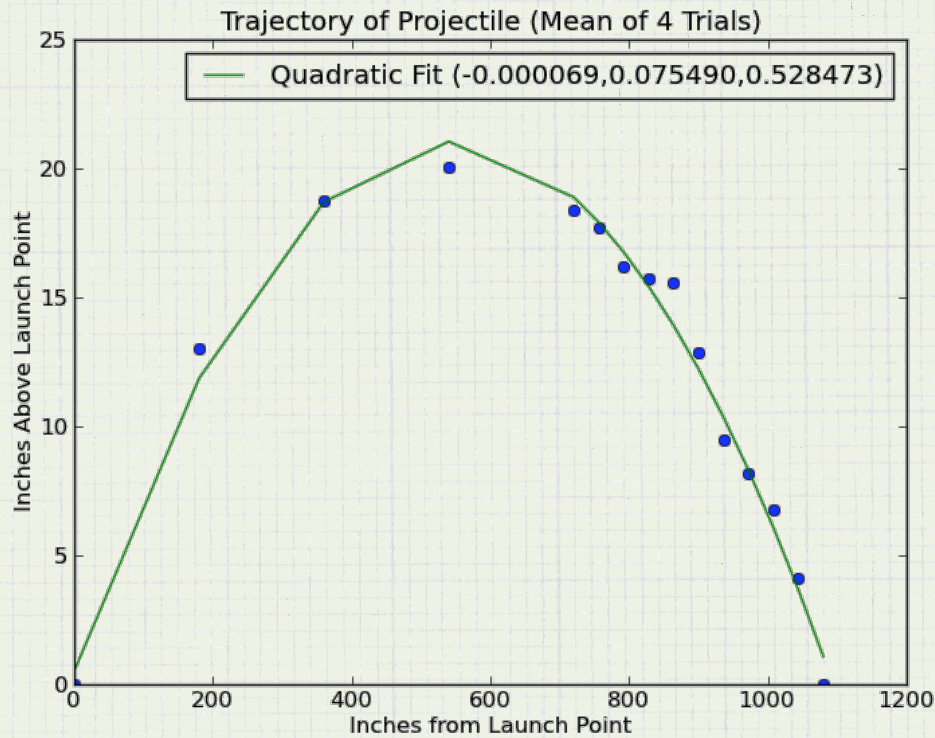# Using a model: How thick a shield?

Use the model to make predictions when experiments are impractical or inadvisable.

Want to know the speed of the arrow as it reaches the target.

Arrow speed when reaching target

Trajectory of Projectile (Mean of 4 Trials)

Quadratic Fit (-0.000069,0.075490,0.528473)

Inches Above Launch Point

Inches from Launch Point

$$y = (-.000069)x^2 + (.0755)x + .528$$