



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Claire M. Boles	Project Number J0305
Project Title Know the Flow	
Abstract Objectives/Goals How does the size of different granular materials affects their mass flow rate through a funnel? I will compare materials with different dimensions and textures. Methods/Materials Stopwatch, millimeter ruler, scale, funnel, various sized materials (rice, beans etc.),platform to hold the material. Compare three different time trials to determine how long it take the different materials to flow though the funnel. Results The smaller the mass of the object the faster the mass flow rate. Objects with a smooth texture and small mass had an increased speed. Conclusions/Discussion Within the accuracy of the measurements, the smaller the mass and the smoother the texture of the granular materials allowed for the fastest mass flow rate. The three trials all proved the same data.	
Summary Statement I measured the size of different granular materials and compared their mass flow rate through a funnel.	
Help Received At school I got help with the scientific method. I designed the platform, and conducted the experiment by myself.	