

Falling

Object	Mass (g)	Depth of crater in sand (cm)	Average depth of crater (cm)
Ping-Pong ball			
Raquet ball			
Tennis ball			
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Golf ball			
Billiard ball			
Baseball			

Students complete the data table for either the hollow or the solid balls. While space for three trials is included in this example, you may want students to complete additional trials.

Parachuting

	Surface area of parachute (cm <sup>2</sup> )	Drop height (cm)	Depth of crater in sand (cm)	Average (cm)
Your data				
Classmate's data #1				
Classmate's data #2				
Classmate's data #3				
Classmate's data #4				
Classmate's data #5				

### Gliding

Layers of newspaper	Mass (g)	Surface area of plane (cm <sup>2</sup> )	Time (s)	Average time (s)
0				
2				
4				
6				
8				
10				

Analyzing their own data will allow students to assess the affect of mass on flight time, while comparisons of class data sets will enable students to assess the impact of surface area.