

Sample Data and Observations:

Drop Height (m)	Mass 1		Mass 2		Mass 3		Debris Observation for both height and mass
	Crater width (cm)	Crater depth (cm)	Crater width (cm)	Crater depth (cm)	Crater width (cm)	Crater depth (cm)	
0.5	0.5	0.9	0.8	1.3	2.8	2.3	Little splatter noticed
1.0	0.65	1.3	1.2	1.7	3.2	2.9	Wider debris field
2.0	0.8	1.5	1.55	2.1	4.4	3.9	Massive surface damage

Sample Responses to Go Figure:

1. Student responses should not vary much. The mass of the falling object is the most important for this activity, due to the small changes in dropping height.
2. Impact crater sizes (both depth and width) increased with height and increased with mass.
3. Students should look back upon their Debris Observation columns. Student answers will vary here, depending on the drop heights used and the mass of falling object. In general, debris fields will increase with both height and mass. The width and the extent of the rays will vary greatly. Hopefully this will be easily observed from the cocoa spread on the surface.
4. Since gravity is the driving 'force' behind the falling objects, mass does not matter for the speed it is going when it impacts the surface. The most important factor for speed in this lab will be the height (time allowed for acceleration). The acceleration will be that for gravity, 9.8 m/s^2 .