

Egg Drop Calculations

Name: _____ Date: _____

Calculate the theoretical impact force of an egg structure impacting the ground. We will make some assumptions about a generalized egg structure for this calculation. Some of these assumptions are: the egg structure has a mass of 200g total. The structure is dropped from a height of 3.9 m. Upon impact the egg structure “crumples” by 5cm. The structure does not reach terminal velocity when it is dropped.

To calculate the impact force you will have to consider the impact speed, the deceleration at impact and the key point is that impact force is found by determining the net force on impact and subtracting the weight of the structure; a FBD is needed for this.