Rock Drop

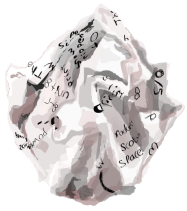
Newton's 2nd Law of Motion states that net force is equal to mass times acceleration.

What You Need:

- Small to medium sized rock
- Wadded up piece of notebook paper
- (2) bowls
- Flour or powdered sugar

Directions:

1) Gravity's acceleration is constant, all objects fall at the same rate regardless of their mass.
2) Let's test this by dropping both the rock and the wadded up piece of paper.
3) Place the rock and the wadded up paper in starting positions next to one another.
4) Knock them both off at the same time and watch them fall at the same speed.
5) Now, place (1) bowl with about ½ cup of powdered sugar or flour beneath the rock and drop the rock so it lands on the powder in the bowl.
6) Very carefully, so as not to disturb the powder, move the bowl to the side.
7) Next, place the other bowl with powder directly under the spot where the rock was dropped from. Now drop the paper from the same place so that it lands in the powder.
8) Compare the craters in the powder created by each impact.

	**Describe the crater left in the powder by the rock.**	
	**Describe the crater left in the powder by the paper ball.**	

Why are the craters different if they fell at the same speed?