

INVESTIGATION QUESTION

Does the mass of an object affect how fast gravity pulls it down?

HYPOTHESIS

Hint: try writing it as "If _____, then _____, because _____."

Results Table

Trial	Object 1	Object 2	Which landed first?	Why?
1 -- flat vs. crumpled paper				
2 -- full vs. half-full bottle				

PhET: Gravity and Orbits (phet.colorado.edu)

Change Made	What Happened to the Orbit?
Double the Sun's mass	
Move Earth twice as far away	
Remove the Sun entirely	

ANALYSIS

Why did the two bottles land at the same time even though one was heavier? Why did the flat and crumpled paper NOT land at the same time?

CONCLUSION

Was your hypothesis correct? Explain the difference between gravity and air resistance in your own words.

THINK FURTHER

Galileo supposedly dropped two cannonballs of different sizes from the Leaning Tower of Pisa. What did he discover, and why did people find it so hard to believe at the time?