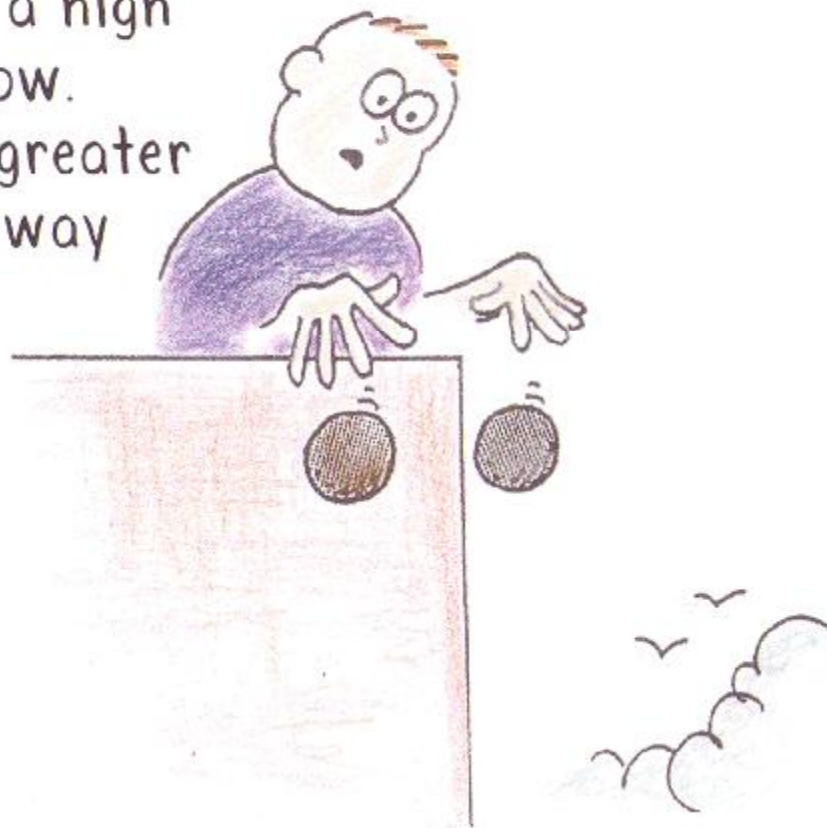


# NEXT-TIME QUESTION

Two smooth balls of exactly the same size, one made of wood and the other of iron, are dropped from a high building to the ground below. The ball to encounter the greater force of resistance on the way down is the

- a) wooden ball.
- b) iron ball.
- c) ... both the same.



Hewitt  
Drewitt!



# NEXT-TIME QUESTION

Two smooth balls of exactly the same size, one made of wood and the other of iron, are dropped from a high building to the ground below. The ball to encounter the greater force of air resistance on the way down is the

- a) wooden ball.
- b) iron ball.
- c) ... both the same.



Answer: b

Air resistance depends on both the size and speed of a falling object. Both balls have the same size, but the heavier iron ball falls faster through the air and encounters greater air resistance in its fall.



Be careful to distinguish between the *amount* of air drag and the *effect* of that air drag. If the greater air drag on the faster ball is small compared to the weight of the ball, it won't be very effective in reducing acceleration. Like 2 newtons of air drag on a 20-newton ball has less effect on fall than 1 newton of air drag on a 2-newton ball.

