

Baby Huey—Freefall

Baby Huey is a classic cartoon from the 1950s created by Paramount Studios. In this clip, Baby Huey jumps on a diving board, goes up in the air, and lands in a small pool. Use this clip to illustrate several points about freefall motion:

- 1) The speed of the object goes to zero at the top of the trajectory. This fact is accentuated here, so the clip, while not truthfully depicting the motion, is useful for students to see this.
- 2) The up and down motion of the object is symmetrical. Disregarding air resistance, the object should require the same amount of time to go upwards as it does to fall back to the starting position. In this clip, Baby Huey is ascending for about 10 seconds, but only requires 2 seconds for the full descent.
- 3) What is the effect of air resistance on the motion of Baby Huey? As the object is travelling upwards, the forces due to gravity and air resistance are both towards the ground. When the object is travelling down, the force due to gravity is still down, but the air resistance is up, opposing the motion. Then, if we consider air resistance, the time required for Baby Huey to come down should actually be longer than the ascent time because his acceleration is less; this is the opposite of what is shown in the clip.

