

by jok church

**YOU CAN**

myQuestion@beakman.com

With **beakman & jax**  
Google gravity mass Earth

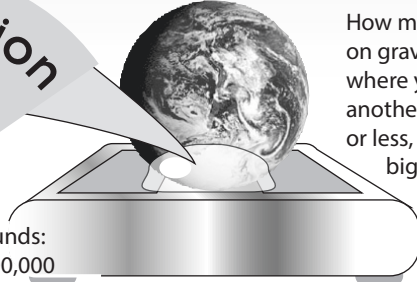
Dear Beakman,  
If we keep building houses and condos and malls, won't we add enough weight to slow the Earth's spin and its trip around the sun?  
Andrea Sacchitiello  
Mississauga, Ontario

Beakman or Jax  
P.O. Box 30177  
Kansas City, MO 64112  
Questions, name & address

## How Much Does Earth Weigh?

10 septillion

A septillion is a 1 with 24 zeros behind it. The Earth weighs about this much in pounds:  
10,000,000,000,000,000,000,000,000



How much a thing weighs depends on gravity. That means it depends on where you do the weighing. On another planet you would weigh more or less, depending on if the planet was bigger or smaller than the Earth.

That makes weighing the whole planet kind of a brain exercise. To weigh the Earth,

it would need to be weighed on the Earth. And the Earth isn't on the Earth; it is the Earth. So you can see this gets pretty deep, pretty quickly.

As the Earth and moon travel around the sun, they get hit by meteors and space dust.

Dear Andrea,  
Your question reminds me of an old joke that wonders if the Earth's speed is changed by the fact that just about every person in the world has been junk-mailed at least 6 America On Line computer disks. Heavy stuff, all those CD-ROMs.

Condos, malls and even AOL disks do not add weight to Earth. They just move it around.

*Beakman*  
Beakman Place

New weight added to the planet comes from meteors, also known as shooting stars, that hit the Earth. Every day about 6,612,000 pounds of dusty space stuff, such as meteors, is added to the planet. I know that sounds like a lot of new weight. But compared to 10 septillion pounds, it's not worth worrying about.

P.S. from Jax: There is a force that's slowing down the rotation of the Earth. That's the friction of the ocean water as the tides go up and down. But that slowing down will take billions of years to stop the planet.

