by Jok Church

myQuestion@beakman.com

I CAN BEAKMAN JAX

Google: "space/time"

Dear Beakman,
What is matter?
Abigail Zuccari
Sanborn, New York

Beakman or Jax
1130 Walnut Street
Kansas City, MO 64106
Questions, name & address

Dear Abigail,
You're asking about physics (FIZ-ziks). Matter is stuff – stuff that is made from atoms, takes up space and has mass.

You are matter. The air around you is matter. The water you drink and the sandwich you eat are matter. Everything around you is matter.

So to answer your question, we need to look at 3 different things: atoms, space and mass.

Beakman

Beakman Place

ATOM

Atoms are building blocks of matter. Atoms are a cloud of electrons whirling around a dense core made of protons and neutrons, and about 88% of the mass of atoms is near that core in the center of the atom – the atom's nucleus (NOO-cle-us). Each element has different numbers of protons, neutrons and electrons.

SPACE

Space is where stuff is. Think of yourself pointing in every direction that is possible – you know, an infinite number of directions.

And it goes all cosmic when one works to measure space between any of those pointed-to places. The farther one looks, the farther back in time you see, and the distance between things is not just space – it's space/time.

MASS

Mass is a part of matter that fights against movement in any direction. Like, say, lifting something. But mass is not really weight.

On Earth you have both weight and mass. But out in outer space, where gravity is weaker, you'd weigh less, but have the same mass.

Neutrons and protons in atoms have most of the mass in matter.

One of the subatomic particles that they are made from is one that adds mass. It's called the Higgs boson, and without these in the universe, everything, all stuff, would be zooming everywhere all the time at the speed of light.

JOK CHURCH

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P.S. from Jax: Your question kind of shows us that a simple question can grow into something really big, really quickly.