

What exactly is antimatter, and how can scientists know of its existence?
What purpose does it serve?

What is Higgs Boson? How does it explain the world around us? Why is it so important for physicists?

What does the existence of the Higgs Boson mean for the future of high-energy particle physics and the theories that evolve from it?

What is dark matter/dark energy?

How are rogue planets formed outside of solar systems or how could they leave a system in which they formed?

Why is Newton's first law of motion true? that is, why is the preferred state of motion of a body to be either at rest, or moving at a constant velocity?

What are Lagrangians and Hamiltonians?

Why is it easier to go down the stairs than up the stairs based on physics?

Is it true that if one hits water from above a certain height, they might as well be hitting concrete? If so, what is the height/how does one find that height? And how does the viscosity of the liquid come into play, if it were instead molasses would it take less height to be lethal?

Why does a boomerang come back to you when you throw it? What would be the optimal angle of the boomerang itself and the angle that you throw it so that it will come right back to you?

How exactly do we keep a reactor's reaction controlled?

Why does a right handed hitter have an advantage over a left-handed pitcher and vice versa?

I realize that sound is a composition of vibrations translated into signals and then meanings by our brain and eardrums but how exactly does sound function and how is sound affected by objects. For example, why do some walls trap sound and how does the wind extend the range of sound if sound isn't really a tangible object?