

Video: Atoms (Bill Nye, 25 min.)

MASTER.

① general name for the "stuff" that the millions and millions of things on earth are made of is matter.

When you break down matter into its smallest possible pieces (ie. like the cheese), the pieces are called atoms.

The middle of the atom is called the nucleus.

The nucleus of an atom is made of protons and neutrons.

Electrons are "floating" around the atom, outside the nucleus.

Atoms are mostly empty space.

Electrons in the atom move extremely fast.

The electrons move so fast (ie. like a fan blade) that the atom becomes like a solid.

Atoms are the building blocks of all molecules (a.k.a. stuff).

Atoms are like the letters of the alphabet and molecules are like the words that the letters make up.

Water ( $H_2O$ ) is made of hydrogen and oxygen in a ratio of 2:1.

One atom is different from another atom due to the number of protons in the nucleus. (Also, the number of electrons and neutrons make an atom different.)

Atoms are organized in periods (rows) on the Periodic Table.

92 elements occur naturally.

⑬ Lots of interesting molecules are made of atoms.

⑭ Some examples are: sugar, nitroglycerine, etc.

⑮ What is the particle found to be inside of protons and neutrons? quarks

⑯ Atoms combine to form molecules.