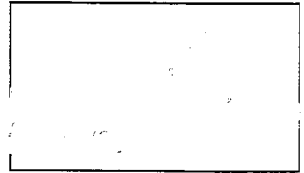


Background: magnets are very normal. They have been around for a very long time. Magnet is the middle part in a compass. Magnets attract not because they are sticky, they attract because of magnetism. The electrical basis for the magnetic properties of matter has been verified down to the atomic level. Because the electron has both an electric charge and a spin, it can be called a charge in motion. This charge in motion gives rise to a tiny magnetic field. In the case of many atoms, all the electrons are paired within energy levels, according to the exclusion principle, so that the electrons in each pair have opposite antiparallel spins and their magnetic fields cancel.

A magnet has an N and S. N = north, S = south. The north and north don't attract. South and south don't attract. The only way they attract is by south and north or north and south. (DK science pg. 154). The way they came up with the north and south are because the earth has a north and south poles. All magnetization is due to the macroscopic effect of microscopic "bound currents", also called "Ampèrian currents". For a uniformly magnetized bar magnet in the shape of a cylinder, with poles uniformly distributed on its ends, the net effect of the microscopic bound currents is to make the magnet behave as if there is a macroscopic sheet of current flowing around the cylinder, with local flow direction normal to the cylinder axis. Since scraping off the outer layer of a magnet will not destroy its magnetic properties, there are subtleties associated with this model as well as with the pole model. What happens is that you have only scraped off a relatively small number of atoms, whose bound currents do not contribute much to the net magnetic moment.

There are more things the earth and just plain old magnets is a magnetic field. The magnetic field is a vector field that is, a vector at every point of, with a direction and a magnitude that, in SI units is teslas. Can also depend on time. Its direction can be obtained from

Sound and Heart Rate



When you're in your car listening to the classical station on the radio, you feel happy and content. But when the guy in the car behind you gives you the "angry look" and sounds his horn, you suddenly feel sick to your stomach (or should I say, "your heart"). There are many different, unique sounds in the world. There are some that are wonderful, like a trickling stream in the woods, and there are some that can make people jump, like a loud bullhorn. But the loud noises are the ones that really boost your heart rate.

"Some sounds, such as music or laughter, can make us feel good. Others, such as a big crash or a loud bang, can make us feel scared" (Inseth, pg. 7). Sounds play a large and important part in our everyday lives, but when they are too loud, they can be harmful to people. Decibels are a measurement that scientists use to tell how loud any sound is. For example, whispers are only 15 decibels, classroom sounds are nearly 80, and a chainsaw is 120 decibels. That's a loud sound! Noises that are louder than 120 decibels can cause pain, and sometimes even permanent damage. If people hear sounds over 120 decibels for too long, they could lose their sense of hearing. This is noise pollution. Noise pollution can cause many problems for people, including headaches and loss of sleep. But the worst thing it can cause is loss of hearing. Loud sounds force air to hit the eardrum too hard. When this happens, it can damage the eardrum. Here's how hearing works: "When objects vibrate, they also move the air around them. Then the moving air hits other air, much like a bowling ball knocking down all the pins. Soon all the air between

Cricket eat milly worms

My project is about crickets. Whether they do better with live or dead milly worms. My research showed that crickets normally eat their food dead. Thus helping my hypothesis. My hypothesis is: if I give group B dead milly worms then that group will live longer.

My research also clarified that crickets do indeed eat other small insects. Also that cricket can't drink pure water. It makes it to where the drowned. So they normally get their water from the grass. So I had to buy this special jell water.

My materials were, 12 crickets, Two bin, Jello (jell) water milly worms.

My variables are: controlled- I kept every thing the same except the milly worms,

Background Information

Different types of abdominal exercises.

Basic crunch, Oblique crunch, Balance crunch, Reverse crunch, double crunch and Rock y abs. Where are your abs? Your abs are 3 separate muscles. Your abdominals run from the bottom of your ribs to your pelvis.

You feel more full when eating lesser meals. It controls your appetite. Lowers level of cholesterol. With good meals you get better results. Turkey meatloaf with good ingredients like tomatoes. Areas of your abdominals, External and Internal Obliques, Inguinal Ligament, serratus Anterior, Rectus Abdominis and Latissimus Muscles.

How do your muscles work. When you move your muscles pull and contract on the bone causing you to move. What are the movements of me and my test subjects exercise? My exercise is Rocky Abs.

Just like a normal sit up except you go far left and far right 25 times each. The oblique crunch is where you lay on your back and stick on of your hands up and do whatever...

Uncovering the Unseen

Lemons are a part of the Rutaceae family and are a citric fruit; their scientific name is *Citrus Limonia*. They consist of an outer pitted, bright yellow peel and an inner part divided into about eight to ten segments. Lemons help your body in many ways. Here are only some of the things lemons can do for you: cleanse the bloodstream, boost the immune system, help prevent heart disease and cancer, reduce fevers, soothe insect bites, get rid of toxic substances in your body, aid in digestion, and are useful in the treatment of influenza, gout, bronchitis, asthma, and heartburn. Fresh lemon juice contains high amounts of vitamin C and potassium. It also contains 5% to 6% citric acid. "Lemons are also rich in vitamin B and may be considered a good source of vitamin G." (Jensen, pg 160)

Vitamin C is also known as ascorbic acid. "It supplies electrons to enzymes that require metal ions." (Navarra, pg. 16) Vitamin C is very important because it helps your body in many ways. It helps form white blood cells that fight disease and is vital for wound repair, healthy gums, and preventing easy bruising. "It is a powerful antioxidant, important in preventing the cellular damage that occurs when the body burns oxygen." (Roberts, pg. 210) Some of the many things that vitamin C does for your body are: helps maintain blood vessels, boosts immunity, protects against pollution and cigarette smoke, plays a key roll in metabolism, involved in growth and repair of cells, involved in production of connective tissue, and it increases life expectancy. As you can see, vitamin C is very important to a persons diet.