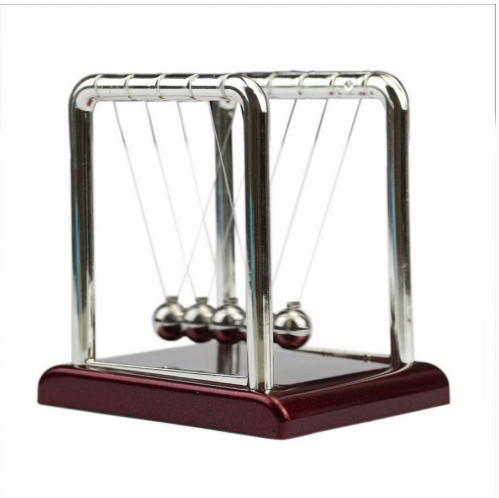
BITS

01

S.T.E.M LABS

"THE CRADLE"



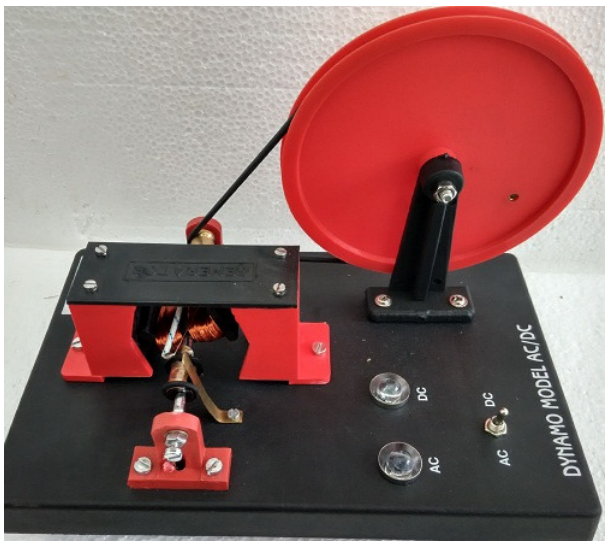
PRODUCT DESCRIPTION

Newton's cradle is a device that demonstrates conservation of momentum and energy using a series of swinging spheres. When one sphere at the end is lifted and released, it strikes the stationary spheres, transmitting a force through the stationary spheres that pushes the last sphere upward. The last sphere swings back and strikes the still nearly stationary spheres, repeating the effect in the opposite direction. The device is named after 17th-century English scientist Sir Isaac Newton. It is also known as Newton's Balls or Executive Ball Clicker.

"THE AC & DC DYNAMO"

PRODUCT DESCRIPTION

Dynamo AC/DC have carved a niche in the field of providing Demonstration Dynamo. These dynamos have splendid quality and give the quality performance for long period of time. The light emitting diode facility is provided to this demonstration dynamo which acts as simple output indicators. The entire dynamo could be operated on 4 to 8 volts DC supply. Last but not the least, these demonstration dynamos are available at cost effective prices.



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02 S.T.E.M LABS

"THE EYE MODEL 1"

PRODUCT DESCRIPTION

The model is suitable for high school or college students, or ages 13 to 21.Science education products incorporate applied math and science principles into classroom and homeschool-based projects. STEM concepts and real-world applications through hands-on activities. Science education projects include a broad range of activities, such as practical experiments in engineering, aeronautics, robotics, energy, chemistry, physics, biology

"THE EYE MODEL 2"

PRODUCT DESCRIPTION

The Human Eye Anatomy Model is a three times life-size anatomy model from 3B Scientific and manufactured in Germany. This large anatomical human eye model shows the optic nerve in its natural position in the bony orbit of the eye (floor and medial wall). This eye model is great for anatomical demonstrations. The human eyeball can be dissected into: * Both halves of sclera with cornea and eye muscle attachments * Both halves of the choroid with iris and retina * Eye lens * Vitreous humor. This high quality model is great for studying the anatomy of the human eye

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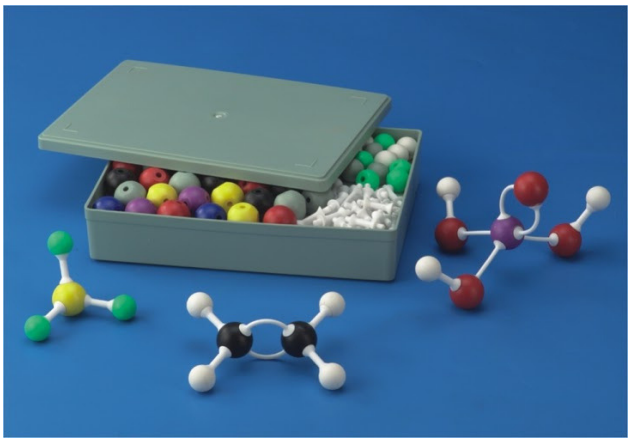
03 S.T.E.M LABS

"THE ATOMIC MODEL"



PRODUCT DESCRIPTION

This set includes 136 pieces of durable and fine quality plastic components, virtually indestructible, and come in a sturdy plastic case for storage.

"THE WORKING BIO GAS"

PRODUCT DESCRIPTION

BIO Gas Plant Working Model - Ready Project. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste. Biogas is a renewable energy source.... It can also be used in a gas engine to convert the energy in the gas into electricity and heat. HOW IT WORKS This water may be poured over your plants to help them grow. Biogas systems make use of a relatively simple, well-known, and mature technology. The main part of a biogas system is a large tank, or digester. Inside this tank, bacteria convert organic waste into methane gas through the process of anaerobic digestion.

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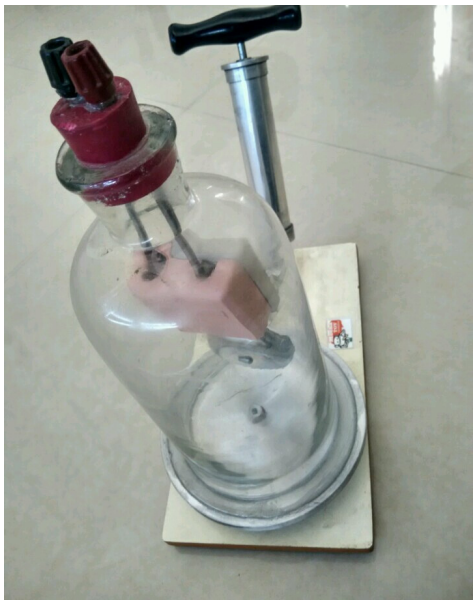
04 S.T.E.M LABS

"THE BELL IN JAR"



PRODUCT DESCRIPTION

A bell jar is a glass jar, similar in shape to a bell, and can be manufactured from a variety of materials (ranging from glass to different types of metals). Bell jars are often used in laboratories to form and contain a vacuum; they may also serve as display cases or transparent dust covers.

"THE CONDUCTIVITY RING"

PRODUCT DESCRIPTION

The CONDUCTIVITY RING is designed for use in the classroom. It is a simple demonstration of the differences in heat conductivity between different metals. Four strips, iron, brass, copper and aluminium, are fixed to an aluminium ring.

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05 S.T.E.M LABS

"THE CROOK'S RADIOMETER"

PRODUCT DESCRIPTION

The Crookes radiometer consists of an airtight glass bulb containing a partial zcuum, with a .... across each vane, from the concave side to the convex side, as
shown by the researchers' Direct Simulation Monte Carlo (DSMC) modeling.

"THE BASIC ELECTRIC CIRCUIT"

PRODUCT DESCRIPTION

This is the perfect kit for introducing someone to electricity. The first activity is the classic how to make a light bulb illuminate followed by activities built to demonstrate Series and Parallel circuits once the fundamental concept of electricity is understood.

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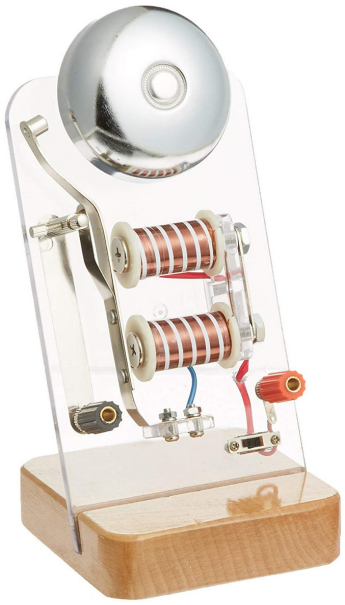
06 S.T.E.M LABS

"THE ELECTRIC BELL"



PRODUCT DESCRIPTION

An electric bell is a mechanical bell that functions by means of an electromagnet. When an electric current is applied, it produces a repetitive buzzing or clanging sound. Electric bells have been widely used at railroad crossings, in telephones, fire and burglar alarms, as school bells, doorbells, and alarms in industrial plants, since the late 1800s, but they are now being widely replaced with electronic sounders.

"THE EQUILIBRIUM TUBE"

PRODUCT DESCRIPTION

This is a homemade unit filled with colored water. It is large enough to show to the audience that the fluid level in all the connected tubes is the same regardless of the shape.

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07 S.T.E.M LABS

"THE FARADAY'S LAW"

PRODUCT DESCRIPTION

Faraday's law states that the EMF is also given by the rate of change of the magnetic flux: where is the electromotive force (EMF) and ΦB is the magnetic flux. The direction of the electromotive force is given by Lenz's law.

"THE FLOATING MAGNET "

PRODUCT DESCRIPTION

Magnetic levitation, maglev, or magnetic suspension is a method by which an object is suspended with no support other than magnetic fields. Magnetic force is used to counteract the effects of the gravitationalacceleration and any other zaccelerations.

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08 S.T.E.M LABS

"THE FREE FALL APPARATUR"

PRODUCT DESCRIPTION

Apparatus for measuring the time it takes for a ball to fall a certain distance using a digital timer. Very easy to set up and use but nevertheless highly accurate. Includes 3 steel balls. A micro-magnet holds the ball in its start position. Three contact pins under the release mechanism ensure that the start position of the ball can be reproduced and act as the contacts of a switch that opens when the ball is released, thus triggering the beginning of the timing measurement. When the ball strikes the contact plate at the bottom, the timer is stopped. The ball is also held firmly on the plate so that it does not bounce

"THE HEAT ABSORPTIONA RADIATION "

PRODUCT DESCRIPTION

utilized in vaporizing material. There is no room for large losses by reflection or by conduction of heat away from the spot where the radiation strikes, or by absorption in the plume of vaporized material.

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09 S.T.E.M LABS

"THE LUNG-DEMONSTRATION"

PRODUCT DESCRIPTION

Lung Demonstration ModelA firsthand view of how the lungs work! This simple, yet effective apparatus consists of two sacs which represent the lungs, a rubber membrane which serves as the diaphragm and a clear plastic enclosure which models the chest cavity

"THE MAGNETIC FIELD DEMOSTRATOR "

PRODUCT DESCRIPTION

This magnetic field demonstrator is a convenient, clean, and safe way to visualize magnetic fields. It is a transparent acrylic case that holds iron filings in a fluid of proper viscosity. The unit can also be placed on an overhead projector for classroom demonstration. The iron filings move to form shapes consistent with the various magnetic fields applied. The viscous liquid holds the filings in place for a while after the magnetic field is removed, making observation easier. Instructions are included. This magnetic field demonstrator measures 8.75" x 4.75" x 0.4".

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10 S.T.E.M LABS

"THE MAXWELL'S WHEEL"

PRODUCT DESCRIPTION

This magnetic field demonstrator is a convenient, clean, and safe way to visualize magnetic fields. It is a transparent acrylic case that holds iron filings in a fluid of proper viscosity. The unit can also be placed on an overhead projector for classroom demonstration. The iron filings move to form shapes consistent with the various magnetic fields applied. The viscous liquid holds the filings in place for a while after the magnetic field is removed, making observation easier. Instructions are included. This magnetic field demonstrator measures 8.75" x 4.75" x 0.4".

"THE MOTOR MODEL "

PRODUCT DESCRIPTION

An electric motor is an electrical machine that converts electrical energy into mechanical energy. Most electric motors operate through the interaction between the motor's magnetic field and electric current in a wire winding to generate force in the form of rotation of a shaft. Electric motors can be powered by direct current (DC) sources, such as from batteries, motor vehicles or rectifiers, or by alternating current (AC) sources, such as a power grid, inverters or electrical generators.

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11 S.T.E.M LABS

"THE NEEDLE MODEL"

PRODUCT DESCRIPTION

A hypodermic needle is used for rapid delivery of liquids, or when the injected substance cannot be ingested, either because it would not be absorbed (as with insulin), or because it would harm the liver. There are many possible routes for an injection, with the arm being a common location.

"THE BIOLOGY MODEL "

PRODUCT DESCRIPTION

Systems biology models serve as abstractions of biological systems. Biochemical models, for example, associate model components, such as mathematical expressions, objects or variables, with biochemical entities such as molecule species or chemical reactions.

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12 S.T.E.M LABS

"THE NEWTON'S FIRST LOW OF MOTION"

PRODUCT DESCRIPTION

Newton's first law of motion - sometimes referred to as the law of inertia. An object at rest stays at rest and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force.

"THE ORESTED LAW "

PRODUCT DESCRIPTION

In electromagnetism, Ørsted's law, also spelled Oersted's law, is the physical law stating that an electric current creates a magnetic field. ... Ørsted's discovery was the first connection found between electricity and magnetism, and the first of two laws that link the two; the other is Faraday's law of induction.

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13 S.T.E.M LABS

"THE PEERISCOPE MODEL"

PRODUCT DESCRIPTION

A periscope is an instrument for observation over, around or through an object, obstacle or condition that prevents direct line-of-sight observation from an observer's current position.
In its simplest form, it consists of an outer case with mirrors at each end set parallel to each other at a 45° angle. This form of periscope

"THE PIN HOLE CAMERA "

PRODUCT DESCRIPTION

The pinhole camera model describes the mathematical relationship between the coordinates of a point in three-dimensional space and its projection onto the image plane of an ideal pinhole camera, where the camera aperture is described as a point and no lenses are used to focus light.

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14 S.T.E.M LABS

"THE PUMPING HEART"

PRODUCT DESCRIPTION

Kids will explore how the heart and lungs work together for oxygen exchange. A hand pump demonstrates basic heart and pulmonary blood flow. Features clearly labeled heart chambers, main artery, veins and lungs.

"THE REFLECTION OF SOUND WAVES "

PRODUCT DESCRIPTION

Reflection of sound waves off of surfaces is also affected by the shape of the surface. As mentioned of water waves in Unit 10, flat or plane surfaces reflect sound waves in such a way that the angle at which the wave approaches the surface equals the angle at which the wave leaves the surface.

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15 S.T.E.M LABS

"THE RING BOLL APPRATUS"

PRODUCT DESCRIPTION

The softening point is the temperature at which a material softens beyond some arbitrary softness.It can be determined, for example, by the Vicat method (ASTM-D1525 or ISO 306), Heat Deflection Test (ASTM-D648) or a ring and ball method (ISO 4625 or ASTM E28-67/E28-99 or ASTM D36 or ASTM D6493 - 11). A ring and ball apparatus can also be used for the determination of softening point of bituminous materials.

"THE SEISMOGRAPH "

PRODUCT DESCRIPTION

A seismograph, or seismometer, is an instrument used to detect and record earthquakes. Generally, it consists of a mass attached to a fixed base. During an earthquake, the base moves and the mass does not.

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16 S.T.E.M LABS

"THE SKELETON"

PRODUCT DESCRIPTION

A skeleton is the hard structure that protects the internal organs of a living thing. Skeletons can be inside the body or outside the body. In mammals, which include humans, the skeleton is made of bones. All the bones, when they are joined together, make the "skeletal system" of a body.

"THE SLINKY "

PRODUCT DESCRIPTION

A Slinky is a precompressed helical spring toy invented by Richard James in the early 1940s. It can perform a number of tricks, including travelling down a flight of steps end-over-end as it stretches and re-forms itself with the aid of gravity and its own momentum, or appear to levitate for a period of time after it has been dropped

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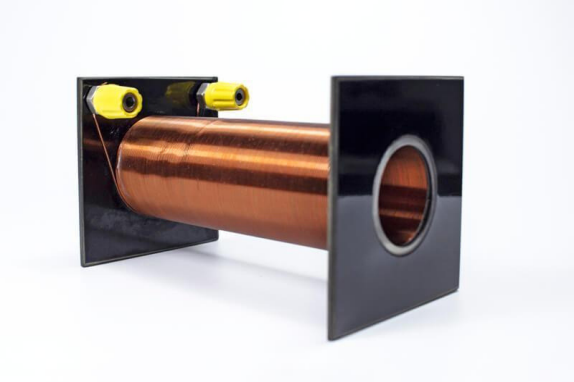
17 S.T.E.M LABS

"THE SOLONOID"



PRODUCT DESCRIPTION

Solenoid is the generic term for a coil of wire used as an electromagnet. It also refers to any device that converts electrical energy to mechanical energy using a solenoid. The device creates a magnetic field from electric current and uses the magnetic field to create linear motion.

"THE SPOUTING CYLINDER "

PRODUCT DESCRIPTION

A Slinky is a precompressed helical spring toy invented by Richard James in the early 1940s. It can perform a number of tricks, including travelling down a flight of steps end-over-end as it stretches and re-forms itself with the aid of gravity and its own momentum, or appear to levitate for a period of time after it has been dropped

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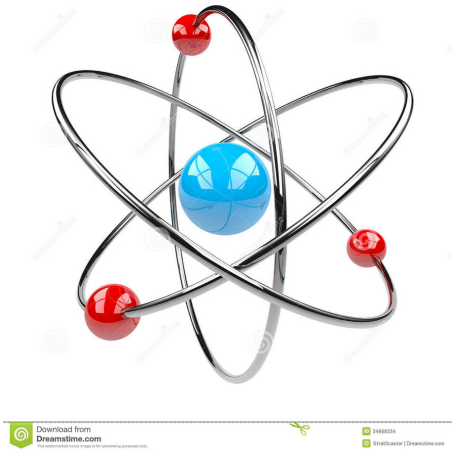
18 S.T.E.M LABS

"STRUCTURE OF ATOM"



PRODUCT DESCRIPTION

An atom is the smallest constituent unit of ordinary matter that has the properties of a chemical element. Every solid, liquid, gas, and plasma is composed of neutral or ionized atoms. Atoms are extremely small; typical sizes are around 100 picometers (a ten-billionth of a meter, in the short scale).

"THE WAVE MOTION MACHINE "

PRODUCT DESCRIPTION

This is with Museum case quality construction and a visually superior /non-toxic fluid formula, the vessel measures 15" in length and 2.5" high.Â The quality and wave response is like nothing ever seen in a wave machine previously.Â A variety of colors are available and you are sure to be pleased with it.Â Please see the color chart in the photos.Â Â 2x LED Bed Light

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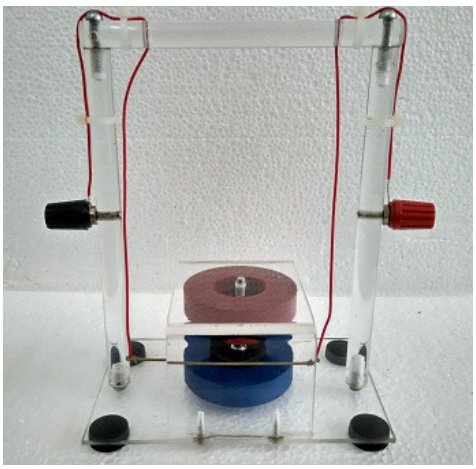
19

S.T.E.M LABS

"FLEMING'S LEFT HAND RULE"



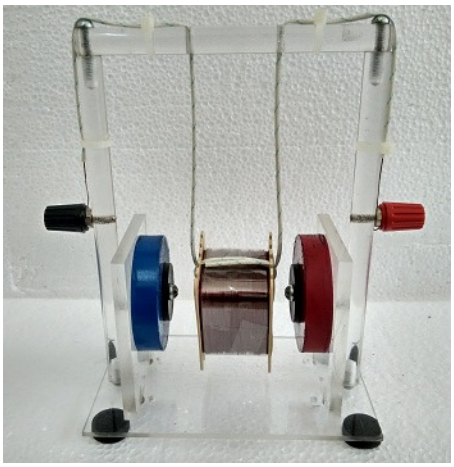
PRODUCT DESCRIPTION

Fleming's left-hand rule for electric motors is one of a pair of visual mnemonics, the other being Fleming's right-hand rule[1] (for generators). They were originated by John Ambrose Fleming, in the late 19th century, as a simple way of working out the direction of motion in an electric motor, or the direction of electric current in an electric generator.

"FLEMING'S RIGHT HAND RULE "

PRODUCT DESCRIPTION

Fleming's Right-hand Rule (for generators) shows the direction of induced current when a conductor attached to a circuit moves in a magnetic field. It can be used to determine the direction of current in a generator's windings.



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