Kensington Primary School

Science Key Knowledge, Concepts and Vocabulary

Year 1						
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit F
Unit of Work	Plants	The Human Body- 5 Senses	Everyday Materials	Animal Groups	Animal Diets	Seasonal Changes

Key knowledge and skills	plants are living things that grow from the ground. names of common wild and garden plants, such as roses, daisies, bluebells, nettles, sunflower, tulip. names of some common trees such as oak, pine, cedar and maple. there are two types of tree: deciduous and evergreen trees. Deciduous trees lose their leaves in the Autumn each year. Evergreen trees keep their leaves all year. The basic parts of plants: seeds, roots, stems, branches and leaves.	the main parts of the human body (head, hand, foot, eye, mouth, knee, arm, elbow). we have five senses: sight, hearing, touch, taste, smell. the body parts associated with our senses. our eyes use light to help us see. sounds can be very different, some loud and some quiet.	An object is something we use A material is what the object is made from Describe different materials by their properties, for example soft, hard, bendy, ability to float, see through, shiny and dull. There are many different materials, for example, wood, paper, plastic, rock, metal, brick, fabrics, elastic, foil.	A mammal has fur, wool or hair and their babies are fed with milk. A bird has wings, beaks and feathers, but not all can fly. They lay hard eggs. Reptiles have dry scaly skin, and lay soft eggs. Amphibians have smooth, wet skin, lay soft eggs in water, breathe using gills and grow legs to live on land. Fish swim using fins and breathe underwater using gills.	All living things need food to live and grow. We get food from plants and animals. Fruit and vegetables comes from plants Meat comes from animals (chickens, beef is from a cow). Dairy foods comes from animals but are not meat. Herbivores are animals that only eat plants. Carnivores are animals that eat meat. Omnivores eat both meat and plants.	The 4 seasons are autumn, winter, spring and summer. In winter we have short days and it is cold. In spring the temperature gets warmer and the days get longer. In summer the days are long and it is hot. In autumn it gets cooler and the days get shorter.

Vocabulary	air, branch, bud, evergreen, flower, fruit, grow, leaf, petals, plant, root, seed, soil, stem, tree, trunk	arms, elbow, feet, knee, legs, mouth, hear, sight, smell, taste, touch, eyes, see, ears, hear, loud, quiet, sound, taste, tongue,	object, material, wood, plastic, metal, glass, rock, fabric, hard, soft, rough, smooth, shiny, dull, waterproof, bendy, stiff, see through	mammals, birds, reptiles, amphibians, fish, fur, feathers, scales, gills, lungs, eggs, birth, young, adult, habitat, water, land, wings, fins, beak, claws	animal, carnivore, herbivore, omnivore, teeth, diet, meat, plant, origin, sort, classify, observe	Autumn, winter, spring, summer, cold, warm, hot, dry, rain

Year 2						
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit F
Unit of Work	Growing Plants	Materials and Their Uses	Animal Needs	Local Habitats	Habitats and Micro-Habitats	Food Chains and Health
Key knowledge and skills	Plants can have petals, stem, leaf, roots, flower. Plants may grow from either seeds or bulbs. These then germinate and grow into seedlings which then	Describe different materials by their properties, for example soft, hard, bendy, ability to float, see through. Sort materials into groups based on their properties.	Animals, including humans, have offspring which grow into adults. In humans and some animals, these offspring will be young, such as babies or kittens that grow into adults.	Living things are alive A dead thing has been alive Non-living means that a thing has never been alive A habitat is a place that an animal or	A habitat is a place that an animal or plant lives. It provides the animal with food, water and shelter. A microhabitat is a very small, specific habitat for animals and plants, for	A food chain is a way of showing the relationship between living things. Producers make their own food (plants). Consumers get their energy from eating

	continue to grow into mature plants. These mature plants may have flowers which then develop into seeds, berries, fruits etc. Plants need different conditions (water, temperature, sunlight) to germinate and grow. Some plants are better suited to growing in full sun and some grow better in partial or full shade. Plants also need different amounts of water and space to grow well and stay healthy.	purposes and an object can be made of different materials.		habitat for animals and plants, for example a pond or a rotting log. It differs to the wider environment around it.	example a pond or a rotting log. It differs to the wider environment around it Plants make their own food, but animals get food from eating plants or other things. A food chain is a way of showing the relationship between living things. Producers make their own food (plants). Consumers get their energy from eating other animals or plants.	other animals or plants. Herbivores eat plant material Carnivores eat other animals Omnivores eat both plant and animal material,

Vocabulary	seed, bulb, growth, soil, light, water, temperature	absorbent, bend, hard, soft, shiny, not shiny, strong, flexible, hard, opaque, property, rigid, squash, stretch, transparent, twist	adult, air, baby, breathing, child, exercise, food, growth, healthy, offspring, older, survival, teenager, toddler, water, young	alive, arctic, cool, damp, dead, desert, dry, environment, forest, grow, habitat, inhabitant, light, living, meadow, microhabitat, ocean, pond, rainforest, seashore, shelter, underground, wet, warm	Microhabitat, adaptation, environment, conditions, biodiversity	Predator, prey, food chain, herbivore, carnivore, omnivore, producer, consumer, hunt

Year 3						
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit F
Unit of Work	Structure and Function of Plants	Light and Shadows	Rocks and Fossils	Animals and Humans	Forces and Magnets	The Bee Project
Key knowledge and skills	The parts and functions of plants, for example flowering plants have roots, stems, leaves and flowers	Light is a type of energy that makes it possible for us to see An object which gives out light is	Types of rock: granite, sandstone, limestone, chalk, slate, marble.	Animals need food, water and space to live and grow. Nutrients are useful substances that help	that a force is a push or a pull	Bees are insects: they have 6 legs and 3 main body parts (head, thorax and abdomen).

	The parts of the flower: carpel (stigma, style and ovary) and stamen (filament and anther). When an insect visits a plant to feed on nectar, pollen grains are transferred onto it's body and then taken to another plant. When the pollen is transferred to the stigma, a pollen tube forms down the style and into the ovary where the egg is fertilised and a seed is produced. How seeds and fruit are produced: pollen, wind, and insect pollination, fertilisation, growth of ovary, mature fruit	called a light source e.g. the Sun, light bulbs and fire We need light to see things and if there is no light we say it is dark Light from the sun can be dangerous and we can protect our eyes by not looking directly at the sun and by wearing sunglasses. Light is reflected from shiny, smooth surfaces including mirrors which reflect light so we can see a reflection A transparent material allows light to travel through it.	There are 3 types of rocks: sedimentary, igneous and metamorphic. Sedimentary rocks are formed from the broken remains of other rocks that become joined together in layers (formed by pressure). Igneous rocks are formed from molten rock that has cooled and solidified (formed by heat). Metamorphic rocks are formed from other rocks that are changed	animals and plants to grow. To stay healthy, animals and humans need the right amount of nutrition from the food we eat and we get this from a balanced diet. Carbohydrates are foods that give us energy. Proteins are needed so the body can grow, repair itself and build muscle. Vitamins and minerals are substances that are found in food which keep us healthy. They are found in fruit and vegetables. Fibre passes through the body undigested. It is needed to keep your digestive system	that when things move there are forces acting on them friction is a contact force that can slow objects moving on a surface non-contact forces include magnetic force and gravity. how to classify materials according to whether they are or are not attracted by a magnet. that most magnets contain iron lodestones are naturally occurring magnets there are two magnetic poles: northseeking and southseeking poles the law of	Bees have 5 eyes Bee stings contain venom. Only female bees have stingers. Honey bees are social bees that live in colonies. Hives have one queen bee, hundreds of drone bees and thousands of worker bees. Beehives have hexagonal rooms called cells where eggs, honey and pollen are stored. Bees have 4 stages to their life cycle: egg, larva, pupa and adult. Bees produce honey in their honey stomach from nectar.

	Unlike animals, plants make their own food.	An opaque material does not allow light through it. A translucent material allows some light to pass through it Shadows are formed when light hits an opaque object and it is absorbed The size of a shadow depends on how far away the object is from the light source.	because of heat or pressure. A fossil is the preserved remains or traces of a dead organism. There are different types of soil that have different properties eg some drain water easily.	healthy and prevent disease. The skeleton is a system of bones which supports and protects the body and allows it to move e.g. skull, femur, ribs. Bones make up the skeleton. They are very hard and strong. Muscles are attached to bones and allow us to move. Humans need to exercise in order to be healthy.	magnetic attraction: unlike poles attract, like poles repel. that the Earth behaves as if it were a huge magnet: north and south magnetic poles (near, but not the same as, geographic North Pole and South Pole).	Bees communicate through a waggle dance which tells other bees where nectar is. Some ants and wasps can also make honey.

Vocabulary	absorb, carbon dioxide, flowers, leaf (leaves), nutrients, root, stem, trunk, adaptations, fertiliser, anther, carpel, filament, nectar, ovary, pollen, stamen, stigma, style, egg, dispersal, fertilisation, pollination, seed, germination, mature, seedling.	absorb, block, dark, direction, energy, light source, mirror, opaque, reflect, reflective, reflection, shadow, surface, translucent, transparent	chalk, crystals, fossils, granite, hard/soft, igneous, limestone, marble, metamorphic, rock, sandstone, sediment, sedimentary, slate, soil, stone	balanced diet, bones, carbohydrates, exercise, fat, fibre, food, heart, joints, minerals, movement, muscles, nutrients, nutrition, protein, ribs, skull, skeleton, spine, tendons, vitamins, water	Attract, compass, contact force, earth, force, friction, gravity, lodestone, magnet, non-contact force North pole, repel South pole	Abdomen, antennae, bee, beekeepers, bread, cells, colonies, dance, drone, hexagonal, honey, honeydew, insecticide, larva, mandible, proboscis, pupa, royal jelly, solitary, stinger, sugarbag, swarm, thorax, venom, waggle

Year 4						
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit F
Unit of Work	States of Matter	Animals Including Humans: The Digestive System	Sound	Classification of Living Things	Electricity	The History of Science

Key knowledge and skills	There are three states of matter: solid, liquid and gas. Materials can be grouped together, according to whether they are solids, liquids or gases. Solids have a definite shape and volume. Liquids take the shape of their container. Gases take the shape of their container.	The main parts and functions of the human digestive system: the mouth and teeth, the oesophagus, the stomach, the small intestine and the large intestine and the rectum and anus. Food enters the body through the mouth The teeth start to break the food down. That in the stomach the food is broken down further by being churned	sound is caused by an object vibrating sound travels as waves sounds travels through solids, liquids and gases we hear because sound is detected by our ears the pitch of a sound is how high or low it is. High pitched sounds are caused by fast vibrations, low pitch sounds by slower vibrations. loud sounds are caused by large vibrations and	Animals can be classified as vertebrates (have backbones and internal skeletons) and invertebrates (do not have backbone or internal skeletons) Fish: aquatic animals, breath through gills, cold-blooded, most have scales, most develop from eggs that the female lays outside her body Amphibians: live part of their life cycle in water and part on land, have gills when young, later develop lungs, cold-	Examples of appliances that run on electricity are kettles, electric motors, televisions etc Mains electricity is the electricity that is supplied to households from power stations. An electrical circuit consists of a cell or battery connected to a component using wires. Examples of electrical components are	Technology is when scientific knowledge is used to help us live our lives in some way. Machines are anything that make a force bigger, helping us go beyond the limits of our bodies. Egyptians used chemicals (salt) to mummify and preserve bodies. Ancient Greeks were philosophers who asked big questions about the world.

	Gases escape from an unsealed container. Some materials change state when they are heated or cooled Heating, cooling, evaporating and condensation are ways in which a material changes state. Melting is the process of changing a solid into a liquid. The melting point of water is 0°C Evaporation is the process of changing a liquid into a gas. The boiling point of water is 100°C Condensation is the process of changing a gas into a liquid.	around and some chemicals are added. There are four main types of teeth in humans: incisors – used for cutting canines – rip and tear food molars and premolars – for grinding and chewing food	quiet sounds by small vibrations. sounds become fainter the further away from the sound source you are.	blooded, usually have moist skin Reptiles: hatch from eggs, cold-blooded, have dry, thick, scaly skin Birds: warm-blooded, have feathers and wings, hatch from eggs. Mammals: warmblooded, have hair on their bodies, parents care for the young, females produce milk for their babies, breathe through lungs. Animals can be classified as invertebrates and grouped into snails and slugs, earthworms, spiders, and insects Plants can be grouped into flowering plants, for	switches, buzzers, motors and bulbs A conductor is a material that allows electricity to pass through. Metals are good electrical conductors An insulator is a material that does not allow electricity to pass through it. Nonmetals such as plastic are electrical insulators	Aristotle learned the Earth is round by observing the horizon but he believed he Earth the centre of the universe. Ancient Romans built aqueducts to provide a supply of clean water to citizens. They also discovered that mosquitoes could make people sick so didn't build settlements near swamps. Brahmagupta introduced the number zero. Baghdad was a centre for science and technology. Ibn-Al-Haytham concluded that light is reflected

	Freezing is the process of changing a liquid into a solid. The freezing point of water is 0°C The water cycle consists of 4 stages: evaporation, condensation, precipitation and collection or run off.			example grasses and non-flowering plants such as ferns and mosses A classification key is a set of questions about the characteristics of living things. You can use a key to identify a living thing or decide which group it belongs to by answering the questions		into our eyes from a light source. Copernicus suggested the Earth and other planets move around the sun. Galileo Galilei proved this theory.
Vocabulary	gas, liquid, solid, melting, melting point, freezing, freezing point, boiling point, evaporation, sweat, water vapour, cloud, condensation, precipitation	anus, canines, digestion, incisor, large intestine, molar, mouth, nutrients, oesophagus, premolar, saliva, small intestine, stomach, teeth, tongue	decibel (dB) ear, hear, high, instrument, insulation, loud, low, pitch, quiet, sound source, vibrations, volume, wave	amphibian, bird, characteristic, classification, consumer, decomposer, environment, extinct, fish, flowering/non-flowering, hibernate, human impact, invertebrate, mammal, predator, prey, producer, reptile, vertebrate	charge, electrostatic forces, static, flow, appliances, circuit, current, fossil fuels, nuclear, renewable, components, voltage, generator, hazards, conductor, insulator, electric shock.	Machines, prehistoric, technology, bronze, civilisations, mummification, papyrus, horizon, pharaohs, philosophy, aqueducts, hygiene, malaria, mosquitoes, algebra, Baghdad, Kaaba, Persia,

						Timbuktu, gravity, Renaissance.

Year 5						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Properties and Changes to Materials	Animals Including Humans	Forces and Movement	Living Things and Habitats	Earth and Space	The Scientific Method

Key knowledge and skills	Materials are chosen to do a particular job based on these properties, e.g. wires are made from metals as they are good electrical conductors, windows are made from. Some materials are natural and some are manufactured e.g. metal, wood, rubber, nylon and plastic. Thermal conductors allow heat to pass through the material, thermal insulators don't. Good thermal insulators keep substances hot and cold. Some solids dissolve in water and others do	A life cycle is the series of changes that a living thing goes through Life cycles includes fertilisation, birth, growth and reproduction. mammals are born alive. They grow and develop until they become adults the reproductive organs of humans are testes in males where sperm is produced and ovaries in females where eggs are produced. Boys and girls go through changes	A force is a push or a pull which act on our bodies and the things around us. Forces can change the shape of objects Forces make things move and stop moving Forces are measured in Newtons (N). There are different types of forces e.g. gravity, friction, air resistance, water resistance. The shape of an object can affect its movement through the air (streamlined).	Most reptiles lay eggs. The eggs hatch and the young reptiles grow and develop into adults. Birds lay eggs. The eggs hatch and the chicks grow and develop into adults. Amphibians and insects animals undergo a metamorphosis (a significant change in their physical structure or habits). Some insects undergo complete metamorphosis. The stages are egg, larva, pupa, and adult, eg butterfly some	A celestial body is a natural object that exists outside the Earth's atmosphere e.g. stars, planets, asteroids. All celestial bodies move in an elliptical path. That there are eight planets in the solar system, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Note that, in 2006, Pluto was classified as a dwarf planet) The Earth and the planets revolve around the Sun The Earth takes 365 ¼ days to move around the	Scientists use a process to investigate questions and solve problems. Scientific investigations involve: ● Asking questions ● Making observations ● Forming a hypothesis ● Testing ideas ● Collecting data ● Drawing conclusions ● Evaluating evidence A **hypothesis** is a testable explanation based on knowledge and observations. A **prediction** is what you think will happen in an investigation.

	not. Solids that dissolve are said to be soluble. Those that are not, are said to be insoluble solids that do not dissolve in water can be separated from liquids by sieving or filtering a solution is formed when a substance (the solute) is dissolved in another substance (the solvent)e.g. when sugar or salt is dissolved in water a solution is formed when a solute dissolves in a solvent temperature can affect the rate at which a solute	in the adolescent years called puberty the life cycle of a human: embryo, foetus, newborn, infancy, childhood, adolescence, adulthood, old age. A period occurs if a woman does not become pregnant. A period marks the start of a woman's menstrual cycle.	Water resistance can be reduced by making their body more streamlined. A mechanism is a device or a simple machine that allows a small force to be increased to a larger force. Examples of simple machines are levers, gears and pulleys.	fertilisation takes place externally, for example frogs spawning some fertilisation takes place internally, for example in birds and mammals.	Sun. We call this a year. The phases of the moon are caused by its orbit around the Earth. As the moon orbits the Earth, we can see a different amount of the moon is lit by the sun from our perspective on Earth. The Earth spins on its own axis. One revolution takes one day (24 hours) We get day and night because sometimes the part of the Earth we are on is facing towards the Sun (day) and sometimes it is facing away (night).	Hypotheses are not simply "guesses" and that predictions and hypotheses are not the same thing. **Independent variable** – the thing you change. **Dependent variable** – the thing you measure or observe. **Controlled variables** – things kept the same to ensure a fair test. Understanding variable control helps make investigations reliable. Scientists select the best equipment for accurate measurements. Equipment introduced includes: ● Measuring cylinder ● Pipette ● Data logger

	dissolve in the solvent. Dissolving, mixing and changes of state are reversible changes. Some changes result in the formation of new materials. These are called chemical changes and are irreversible some examples of chemical change are: rusting of iron, burning of wood, milk turning sour, bicarbonate of soda with vinegar				The original model of the solar system was the geocentric model which had the Earth at the centre of the solar system. This was replaced by the heliocentric model (Copernicus) which has the Sun at the centre of the solar system.	• Bunsen burner • Centrifuge Understanding what makes results trustworthy. Key ideas: • Accurate measurements • Precise measurements • Repeatable results • Reliability of data Pupils learn that having more results does not automatically make an investigation accurate. Through case studies, pupils learn how scientific methods

						contributed to discoveries by: ● Galileo Galilei – methodical observation and astronomy. ● Charles Drew – blood donation and transfusion research. ● Jane Goodall – chimpanzee behaviour and field research

Vocabulary	Absorbent, chemical change, condensation, dissolve, evaporate, filtering, insulator, irreversible, melting, mixture, reversible, rigid, solubility, soluble, solute, solution, solvent, thermal conductivity (insulators and conductors), translucent, transparent, waterproof	Adolescence, asexual, egg, embryo, fertilisation, foetus, life cycle, mammal, menstrual cycle, ovary, puberty, reproduction, sexual, sperm, testes	Air resistance, water resistance, force, friction, gears, gravity, levers, mechanism, machine, Newton, pulley, streamlined, push, pull	Asexual, camouflaged, cocoon, egg tooth, fertilisation, frog spawn, larva/larvae, mammary glands, marsupials, metamorphosis, moulting, nymph, offspring, ovaries, ovules, pupa/pupae, variation	Celestial body, Earth, geocentric model, heliocentric model, Jupiter, Mars, Mercury, Moon, Neptune, orbit, planet, revolve, rotate/rotation, Saturn, shadow, solar system, Sun, Uranus, Venus	hypothesis, controlled variable, dependent variable, independent variable, Bunsen burner, data, data logger, measuring cylinder, pipette, volume, accurate, average, conclusion, precise, repeatable, centrifuge

Year 6						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Living Things: Further Classification	Animals inc Humans –	Evolution and Inheritance	Light		Electricity

		Circulatory System			
Key knowledge and skills	Vertebrates are classified as mammals, birds, fish, amphibians, reptiles Invertebrates are classified as insects, arachnids, worms, mollusc Plants are classified as flowering plants and non-flowering plants (ferns, mosses, conifers) That some organisms consist of only a single cell (microogansims): for example, amoeba, protozoans, some algae. Homo Sapiens: the scientific name for the species to which human	The main parts of the circulatory system are the heart, blood vessels and blood. The heart is a muscular organ. Its function is to pump blood. Valves open and close to allow the blood to flow through the heart Blood vessels carry blood around the body. These are either arteries, veins or capillaries Arteries carry blood away from the heart. They have thick muscular wall as they contain	Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Characteristics and difference within a species can be inherited or caused by mutations. Mutations are random changes (which are not inherited from the parents). Living things provide evidence for natural selection and evolution As animals and plants adapt to their environment and over time,	Light is a type of energy that makes it possible for us to see that light travels very fast in straight lines that an object which gives out light is called a light source – e.g. light sources are the Sun, light bulbs and fire that we see objects because light travels from light sources to our eyes or from light sources to an object where it is reflected to our eyes that mirrors reflect light in such a way that a reflection is seen. That a transparent material allows light to travel through it that an opaque material does not allow light through it that a translucent material allows some light to pass through it. That when light hits an opaque object, it is absorbed and a shadow is created that shadows have the same shape as the objects that cast them because light travels in straight lines The size of a shadow depends on how far away the object is from the light source- the further away the light	The cell or battery in a circuit provides energy to the component. Voltage is the amount of energy transferred from the cell to a device in the circuit. Voltage is measure in volts. The voltage of the cells affects how the components work in a circuit. The higher the voltage, the brighter the light or louder the buzzer. A switch can be added to a circuit to turn a component on or off.

	beings belong to (genus: Homo, species: Sapiens) that taxonomy is the study of classification and a taxonomist is a biologist who specialises in classification How an animal can be classified, for example, a collie dog is classified as follows… That all living things are made up of cells that most organisms are made up of many cells. We call these multicellular organisms.	blood under high pressure. Veins carry blood to the heart. They have thin walls as they contain blood under low pressure. Capillaries deliver oxygen to the body parts. Blood is made of red blood cells, white blood cells, platelets and plasma. Red blood cells transports oxygen around the body. White blood cells fight infection Platelets are tiny blood cells that help your body to form clots to stop bleeding Plasma is the medium in which	adaptation may lead to evolution. Evolution occurs when there is competition to survive (natural selection) Extinct animals can also provide evidence for evolution. Fossils provide information about living things that inhabited the Earth millions of years ago. Fossils are the remains of living things which are found in sedimentary rocks. Charles Darwin, Mary Anning and Alfred Wallace are scientists who studied evolution.	source from the object, the smaller the shadow. Rainbows are formed when light bends as it travels through different mediums and is split into the light spectrum- refraction.	It allows the electricity to flow or it stops it. The symbols for common electrical components How to draw and interpret circuit diagrams using symbols for common electrical components Some key figures around the history of electricity- Alessandro Volta invented the first battery; Thomas Edison invented the first light bulb.

		these components are suspended. Fatty rich foods can clog arteries and veins, preventing blood from delivering what is needed. Exercise can improve the health of a person as it works the heart like any other muscle. Some example of blood disorders are leukaemia, sickle cell anaemia, anaemia.			

Vocabulary	Classification, taxonomy, species, adaptation, microorganism, habitat, ecosystem, biodiversity, vertebrate, invertebrate, evolution, food chain, organism, environment, extinction	Artery, blood, blood vessel, capillaries, carbon dioxide, cardiovascular, circulatory system, deoxygenated, heart, lungs, oxygen, oxygenated, platelets, plasma, pulmonary, red blood cells, valves, vein, white blood cells	Adaptation, characteristics, environment, evolution, fossil, inherit, inheritance, offspring, mutation, palaeontologist, species, vary, variation	Absorb, block, dark, direction, energy, light source, mirror, opaque, plane, reflect, reflective, reflection, shadow, speed, straight, surface, translucent, transparent	Appliance, battery, bulb, buzzer, cell, circuit, circuit diagram, circuit symbol, component, conductor, insulator, motor, switch, voltage, wire