

## West Norfolk Academies Trust (Primary) – Curriculum Map - Science

	Autumn 1 <sup>st</sup>	Autumn 2 <sup>nd</sup>	Spring 1 <sup>st</sup>	Spring 2 <sup>nd</sup>	Summer 1 <sup>st</sup>	Summer 2 <sup>nd</sup>
<b>EYFS Knowledge</b>	<b>My body and Me</b> <i>What body parts do I have and what do they do?</i> Are our bodies all the same? Teach pupils and parents about health regular exercise healthy eating tooth brushing sleep routines keeping safe safety out and about limited screen times	<b>Weather and Seasons</b> <i>Observe and interact with natural processes, such as ice melting (snow, ice, hail), a sound causing a vibration (thunder, instruments like a drum)</i> Identify the sun as a light source and discuss how clouds can block the light to cast a shadow.	<b>Kings and Queens</b> <i>Explore materials</i> associated with crown jewels and compare to non precious natural and manmade materials	<b>Transport and Moving</b> Compare forces used for movement in transport - e.g. hot air, wind power, pushing and pulling. <i>Use magnets to explore forces and observe repulsion and attraction.</i>	<b>Living and Growing</b> <i>Name, group and describe some plants and animals' in our locality.</i> Why is it important to grow plants and trees? Do animals always look the same? (life cycle of a butterfly compared to humans)	<b>The Sea</b> <i>Identify causes of sea pollution and how we protect sea life.</i> Look at the local lighthouse and discuss the way the light can be seen from a distance. Explore light travelling through transparent materials (torches, tissue, cellophane, card) discuss light and casting of shadows.
<b>EYFS vocabulary</b>	Skull, lungs, heart, body, skin, blood, bones, vitamins, brain, confident, anxious, delighted	Light, dark, shadow, block, shade, transparent, opaque	<b>Shiny, heavy, precious, golden, strong, natural, manmade, dense, light, flexible</b>	Push, pull, force, attract, repulse, speed, brake, direction	Oak, birch, ash, beech, willow, oxygen, plum, apple, nettle, cow parsley, dandelion, clover	Creatures, starfish, cuttle fish, barnacle, transparent, limpet, sea horse, stingray pollution, protect
<b>Year 1 Knowledge</b>	<b>The Human Body</b> Naming parts of the body, Eyes and sight, Ears and hearing, touch, taste and smell, understanding sensory impairment	<b>Animals and their Needs</b> Wild and tame, taking care of pets, Baby animals (including humans), <i>Describing and grouping animals</i>	<b>Seasons and Weather</b> <i>The four seasons, tools to record the weather,</i> daily weather and weather forecasts, weather symbols, weather around the world, Floods and Hurricanes	<b>Taking Care of the Earth</b> The Earth's natural resources, Conservation of natural resources, logging, recycling, how <i>pollution is caused and can be prevented</i>	<b>Plants</b> <i>what plants need to grow, the parts and functions of plants,</i> food production, flowers and seeds, deciduous and evergreens, farming, crops, pesticides, harvest, from field to supermarket	<b>Materials and Magnets</b> <i>What is magnetism,</i> magnetic attraction, use of magnets, classification of materials,
<b>Year 1 Vocabulary</b>	Body, senses, sense organ, impairment, joints, vision, purpose, limbs, sight, parts of the eye, parts of the ear, taste buds, touch, smell	Wild, tame, pet, safe, kitten, puppy, omnivore, carnivore, herbivore, habitats, amphibians	Season, seasonal, spring summer, autumn, winter, wind, rain, sun, snow, axis, orbit, tilt, rain gauge, wind vane, thermometer, cloud cirrus, cumulus, stratus precipitation, forecast, predict, meteorologist hurricane	Care, earth, world, resources, natural, logging, flooding, pollution, energy, oil, gas, mining, renewable, non-renewable, limited, unlimited, logging, felled, deforestation, flooding, biodiversity, extinction, erosion, recycle, pollution, contamination	Environment, adapted, Tropical, plants, flowers, deciduous, evergreen, bushes, roots, anchor, absorb, Minerals, stem, leaves, energy transport, Seeds, reproduce, disperse, survive, gravity, Pepper pot, germination, shoot, prediction, aim, method, Rate, crops, pests, weeds, pesticide, Harvest, package, transport	Magnet, magnetic field, magnetism, magnetic, non-magnetic, attract, opposite, poles, force, pull, push, attract, repel, invisible force, object, passing through, prediction, results, conclusion, North & South Pole

<b>Science Enquiry</b>	Phizzi Light and. Sound-Bear Cave	Phizzi Electricity – Static Butterflies		Phizzi problem Solving – Magnetic Fishing Game		Phizzi Forces – Magnetic materials
<b>Year 2 Knowledge</b>	<b>Living Things and the Environment A</b>  Habitats, meadow habitats, underground habitats, rainforest habitats, desert habitats, plants	<b>Living Things and the Environment B</b>  Food chains, oceans and undersea habitats, deep ocean habitats, over fishing and habitat destruction and damage	<b>The Human Body</b>  The skeletal and muscular systems, exercise, digestive system and healthy eating, circulatory system, nervous system, and preventing illness, germs, diseases, vaccinations, Edward Jenner (smallpox), Louis Pasteur (milk)	<b>Matter - Solids, Liquids, Gases</b>  Concepts of atoms, states of matter, materials and their properties, suitability of materials for particular purposes, manipulation of materials	<b>Electricity</b>  What is electricity, static electricity, safety, Circuits, conductive and non-conductive materials,	<b>Astronomy</b>  Orbit and rotation, sun, moon, planets, stars, Earth, our solar system, what's inside the Earth, surface of the Earth, volcanoes, geysers, rocks and minerals
<b>Year 2 Vocabulary</b>	Living, habitat, adapt, environment, survive, damage, tropical, barren	Habitat, adapt, environment, food chain, producer, consumer, predator, prey, oceans, over fishing, deforestation, damage, ocean floor, ocean trench, sustainable, pollution	Bone, skeleton, joint, organs, x-ray, muscle, cardiac, heart, digestion stomach, oesophagus, small /large intestine, mouth, tongue, nutrition, circulate, lungs, veins, arteries, oxygen, diet, balanced, bacteria, hygiene	Scientists, atoms, molecule, solid, liquid gas, magnify, microscope matter, bonds, expand, purpose, suitability, properties, magnetic, waterproof, absorbent, transparent, opaque	Electricity, energy, Appliance, battery store, Mains, wire, plug socket power station, generator pylon, underground electricity, static, plasma ball, lightning, current, charge, investigation, predict, results, conclusion, safety, dangerous, shock, caution, frayed, supervision, circuit, flow, + positive, negative, wire, clips, buzzer, light bulb, switch, motor, connect, disconnect, component diagram, symbol, conduct, conductor, insulate, insulator	Planet, solar system, orbit, rotate, axis, day, night, seasons, waxing, waning, new moon, crescent, constellation, layer, crust, mantle, core, volcano, eruption, pressure, lava, igneous, sedimentary, metamorphic,
<b>Science Enquiry</b>	Phizzi Forces- Floating and Sinking	Phizzi Forces- Floating and Sinking	Phizzi Sound and Light - Curtains	Phizzi Forces- Sinking Treasure	Phizzi Electricity – Closing the Gap	Phizzi Earth and. Space- Astonappy
<b>Year 3 Knowledge</b>	<b>Cycles in Nature</b>  Life Cycles- The life cycle: birth, growth, reproduction, Butterflies life cycle Plants life cycle, amphibians life cycle, seasons, migration	<b>The Water Cycle</b>  Evaporation, ground water, condensation and precipitation, water vapour in the air, clouds	<b>Rocks, fossils and Soils</b>  Compare different types of rocks, investigate rock hardness, how fossils are made? What is soil, permeability	<b>The Human Body</b>  Cells, organ systems excretory system, senses, taking care of your body, a healthy diet, vitamins and minerals	<b>Light and Optics</b>  The speed of light, transparent and opaque objects, reflection, mirrors: plane, concave, convex, use of mirrors in telescopes and some	<b>Magnetism</b>  Magnets around us, lodestones, magnetic poles, magnetic field law of magnetic attraction, north and south magnetic poles, orienteering using a magnetised needle

					microscopes, using prisms, using lenses	
<b>Year 3 Vocabulary</b>	Reproduce, fertilise, anther, pollen, ovule, mature, ripen, migrate, sprout, hatchling, frog -spawn, metamorphosis, hibernation	Evaporation, water vapour, cirrus clouds, cumulus clouds, stratus clouds, condensation, droplets, precipitation, ground water, humidity, particles, infiltration, solid, liquids, gas	Geologist, minerals, sedimentary, igneous, metamorphic, flint, chalk, organic matter humus, topsoil, subsoil bedrock, permeability	Cells, microscope, microscopic tissue organs, carbohydrates, proteins, digestive system, vitamins, minerals, tissue, teeth molars, premolars, canines, incisors, corrosive, chemicals, acid, saliva	Light source, prism, refraction, dispersed, reflect, reflective, unreflective, absorb, predict, investigate, retina, cornea, pupil, lens, iris, optic nerves, UVA rays, UVB rays, protect, transparent, translucent, opaque	Exert, force, attract, repel, contact forces, non-contact forces, magnetic field, magnetic force, North & South Poles, compass, magnetised, classify, predict, evaluate, variables, fair test, conclusion
<b>Science Enquiry</b>	Phizzi Forces – Magnetic Strength	Phizzi Forces – Making Contact	Phizzi Earth and Space – Space Soil (Year 4)	Phizzi Forces – Slippery Shoes	Phizzi Light and Sound-Sun Shadows or Periscope	Phizzi Forces -Attract or Repel
<b>Year 4 Knowledge</b>	<b>Classification of Animals</b>  Cold-blooded or warm-blooded, vertebrates or invertebrates, classification groups, insect, arachnids, molluscs, animal research investigation	<b>The Human Body</b>  The muscular system, the skeletal system, the nervous system, Eyes Ears	<b>States of Matter</b>  Solids and liquids, gases, melting and cooling, evaporation and condensation, changes of state in the water cycle	<b>Sound</b>  How sound travels, sound waves, speed of sound, pitch, intensity, how the ear works	<b>Electricity</b>  Static electricity, electric current, electric circuits, and experiments with simple circuits closed circuit, open circuit, short circuit, conductors and insulators, electromagnets: how they work and common uses Using electricity safely	<b>Astronomy</b>  The Big Bang theory, the Universe, our Solar System, Gravity, the moon and our galactic neighbourhood
<b>Year 4 Vocabulary</b>	Organism, vertebrate, invertebrate, spinal-column, exoskeleton, endoskeleton, cold blooded, warm blooded, insect, arachnids, molluscs, diversity	Skeleton, cranium, vertebrate, ligaments, tendons, cartilage, joints, marrow, muscles, voluntary, involuntary, nervous system, nerves, x-ray, tendons, contract, relax, ear/eye vocabulary	Solid, liquid, gas, state, particles, thermometer observation, fair test, evaporation, condensation, molecules water vapour, precipitation, transpiration	Vibration, compress, decompress, ear drum, pitch, volume intensity, speed, sound, barrier, high/low pitch, larynx, ear canal, ear drum, auditory nerve, anvil, stirrup	Electricity, sources, batteries, mains, rechargeable, fossil fuels, pylon, pollution, environment, wind turbine solar power, environment, hydroelectricity, energy efficient, cells, wires, bulbs, buzzers, circuit, battery, component, current, static, force, atom, electron, proton, neutrons, attract, repel, material, insulator, conductor, flow, electromagnet	Universe, galaxy, planet, star, Milky Way, expanding, Andromeda, orbit, rotate, axis, seasons, waxing, waning, crescent, gravity, force, tides, asteroid belt, inner planets, outer planets

<b>Science Enquiry</b>	Phizzi Light and Sound – Sound Circus	Phizzi Light and Sound – String Telephones	Phizzi Light and Sound – Can you hear me?	Phizzi Light and Sound – Investigating Pitch	Phizzi Electricity - Closing the Gap	Phizzi Earth and Space – Moon Phases or Keplers Laws (Year 5)
<b>Year 5 Knowledge</b>	<b>The Human Body</b>  Circulation and Respiration. The circulatory system, the heart, what is blood and why do we need it? The lungs and smoking William Harvey's pioneering work	<b>Chemistry</b>  Basic terms and concepts Atoms, properties of matter, cutting a cube, different kinds of atoms, atom elements and solutions.	<b>States of Matter</b> Compare and group states of matter Changing states of matter Research states of matter and how it changes using condensation, evaporation, freezing, boiling	<b>Forces</b>  Gravity, Air resistance, water resistance and friction, pulleys, gears and levers	<b>Life cycles and Reproduction</b>  Asexual reproduction, sexual reproduction, seeds, flowers, fertilisation, reproduction in animals, growth stages.	<b>Meteorology</b>  Weather and climate, clouds, the atmosphere, how the sun and earth heat the atmosphere, air movement, wind direction, cold and warm fronts, forecasting the weather
<b>Year 5 Vocabulary</b>	Circulation, respiration, oxygenated, deoxygenated, arteries, capillaries, diaphragm, carbon dioxide, oxygen, nutrients, haemoglobin, platelets	Atom, particle, proton, neutron, electron, positive, negative, substance, element, properties, solution, solvent, soluble, insoluble, solute	Porous, weight, mass Newtons, gravity, density, mass, volume, solution, molecule, dissolve, solvent, solute, saturate, soluble, solution ,filtering, sieving, particles, magnetic, evaporation	Force, push, pull, increase, decrease, gravity, friction, air/water resistance streamline, variable, lever, pulley, gear, fulcrum, pivot	Asexual, non-sexual, reproduction, cell division, cloning, spores, regeneration corm, fern, moss, liverwort, tubers, propagation, artificial sepals, pollination, gamete, stamen, anther, filament, pollen grains, pistil, stigma, style, ovary, ovule, fertilisation, embryo, dispersed, digest, germination, photosynthesis, sperm, testes, ovaries, fertilisation, spawning, zygote, uterus, fallopian tube, foetus, gestation gametes	Meteorology, meteorologist, layers, atmosphere, outermost, exospheres, thermosphere, mesosphere, stratosphere, troposphere, zone, ultraviolet radiation, meteors, ionosphere, heat energy, anemometer, prevailing winds, humidity, electrons, static electricity, tornadoes, updraft, downdraft, spiral, hurricane, low pressure, eye, cirrus, stratus, cumulonimbus
<b>Science Enquiry</b>	Phizzi Forces – Balloon race	Phizzi Forces - Slippery Shoes	Phizzi Forces -Planetary Landings	Phizzi Forces – Simple Machines	Phizzi Forces – Pendulum Swing	Phizzi Earth and Space Thermal Properties of materials
<b>Year 6 Knowledge</b>	<b>Chemistry</b>  Matter and Change Atoms, John Dalton and the Elements, The Periodic Table, Molecules, Compounds, Physical and chemical changes	<b>Classification of Living Things</b>  Why classify – classification keys, Classifying organisms (the five kingdoms), cells, plant and animal cells, fungi, protists, prokaryotes, taxonomy, Latin names,	<b>Plants</b>  Revise the parts of plant, the lifecycle of a flowering plant, photosynthesis, vascular and non-vascular plants	<b>Light and Electricity</b>  Travel of light, light sources construction of series circuits, components, designing useful circuits	<b>The Human Body</b>  Human growth stages, adolescence and puberty, The human reproductive system, The endocrine system, glands, circulatory system	<b>Evolution and Inheritance</b>  Fossils, adaptation, characteristics passing through generations, Mary Anning, Alfred Wallace, Charles Darwin, Darwin's sketches of finches

		micro-organism - vertebrates				
<b>Year 6 Vocabulary</b>	Atom, molecule, proton, neutron, electron, nucleus, periodic table, elements, neutral, compound, reversible, irreversible, reaction	Classification, organism, plant, animal, fungus, protists, prokaryotes, cell, nucleus, cytoplasm, mitochondria, vacuole, chloroplast, bacteria, chlorophyll	botanist, roots, stem, flower, carbon dioxide, chlorophyll, photosynthesis, xylem, phloem, transpiration, capillary action, stomata, vascular plant, non-vascular plant, stalk, leaves, pollination, fertilisation, seed dispersal, germination, moss, spores, germinate, eggs, sperm, fertilise, capsule, fronds, water, sunlight energy, sugars, starch, nutrients, moist, moss	Light source, travel, straight line, reflect, reflection, shadow, opaque, transparent, translucent, voltage, circuit, component, variation	Growth stages, embryo, foetus, uterus, infant, puberty, metabolism, adolescence, hormones, glands, growth spurt, puberty, metabolism, adolescence, endocrine system, duct glands, ductless glands, secrete, perspiration, puberty thyroid, pancreas, digestive system, insulin, diabetes, adrenal, adrenaline	Fossil, sedimentary, palaeontologist, adolescence, reproduction, fertilised, fallopian tubes, uterus, vagina, menstruation, sperm, testes, scrotum, penis, semen, urethra, chromosome, genes, genetic, variation, evolution, mutation, adaption, maladaptation, species, characteristics, evolve, generations
<b>Science Enquiry</b>	Phizzi Light and Sound- Investigating Shadows	Phizzi Light and Sound – Sun Shadows	Phizzi Electricity – Spin yourself Silly	Phizzi Electricity – Christmas Lights	Phizzi Electricity – Turn it Up	Phizzi Electricity – Electrical Games