**Biology**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | — Plants | | | | | |
| Nat Cur | Name basic parts – identify common plants. | Seed / bulb grown into plants. What plants need? | Function – including how water is transported. Life cycle of plants. | | | |
| Big Q | What is alive? | What is alive, dead or was never alive? | How do living things work? | | | |
| Vocab | Plant, deciduous, evergreen, leaves, Flowers, (blossom), petals, fruit, roots, bulb, seed, trunk, bud, branches, stem, magnifying glass | Bulb, seed, mature, water, light, temperature, grow(th), health(y), environment, germination, survival, reproduction , store | Roots, stem, trunk, leaves, flowers, fruits, flowering plants, grow(th), air, light, water, nutrients, nutrition, fertiliser, transportation, life cycle, pollination, seed formation, seed dispersal, factors/variables | | | |
| Activity | | | | | | |

|  | 1 | 2 | 3 | 4 | 5 | 6 |
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| | | | Animals incl Humans | | | |
| NC | Name common animals.<br>Name carnivores, herbivores, omnivores | Animals have offspring, basic needs for survival.<br>Importance of exercise, food hygiene. | Need for right amount of nutrition.<br>Skeletons and muscles. | Basic function of digestive system.<br>Teeth.<br>Food chains. | How humans change with age. | Human circulatory system.<br>Exercise, drugs and lifestyle. |
| Big Q | What are bodies and what can they do? | How can living things stay healthy? | Do living things need different things to survive? | What do our bodies do with the food we eat? | How do our bodies change as we get older? | How do our choices affect how our bodies work? |
| Vocab | Fish, Amphibians, Reptiles, Birds, Mammals, Carnivores, Herbivores, Omnivores, Head, Neck, Arms, Elbows, Legs, Knees, Face, Ears, Eyes, Hair, Mouth, Teeth | Animal, human, reproduction, offspring, baby, toddler, child, teenager, adult, life-cycle, egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep, grow(th), water, food, air, survival, exercise, nutrition, diet (eating habits), hygiene, health(y) | Animal, human, nutrition, diet (eating habits), herbivore, carnivore, omnivore, skeleton, bones, support, protection, movement, muscle, skull/cranium, ribcage, spine/vertebrae, femur, vertebrates, invertebrates, biceps, triceps, quadriceps, abdominals | digestive system, mouth, tongue, teeth, oesophagus, stomach and small and large intestine, incisor, canine, molar teeth, food chain, producer, predator, prey, carnivore, herbivore, omnivore | Puberty, gestation period, mammals, live young, lactation, link to RSE policy | circulatory system, heart, blood vessels, artery, vein, oxygenated deoxygenated, blood cells, white blood cells, Red blood cells plasma, platelets, diet, exercise, drugs, medicines, lifestyle, health(y) |
| Activity | | | | Eggs<br>Guts through tights<br>Insulating sound | | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
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| | | | | **Living Things & their Habitats** | | |
| NC | | Living and dead, describe habitats, basic food chains. | | Group living things, use classification keys. Change in environment can threaten life. | Animal – different life cycles, reproduction in plants and animals. | Classification including microorganisms, plants and animals. |
| Big Q | | What do living things need to survive? Can living things live forever? | | Living things: what's the same and what's different? Part 1 Are living things in danger? | Do all lifecycles look the same? | Living things: what's the same and what's different? Part 2 |
| Vocab | | Characteristics, living, non-living, dead, habitat, micro-habitat, food chain, source, environment, food, shelter, seashore, sea, ocean, woodland, forest, rainforest | | living organisms, classification, environment, habitat, ecosystem, flowering/non flowering plants, vertebrate, invertebrate, fish, amphibian, reptile, bird, mammal, snails/slugs, worms, spiders/arachnids, insects, human impact, environmental impact, nature reserve, pollution /litter, deforestation | life cycle, plant, animal, mammal, insect, amphibian, fish, reptile, sexual reproduction, asexual reproduction, habitat, ecosystem, environment, rainforest, oceans, desert, Metamorphosis | Organism, classification, invertebrates, vertebrates, micro-organism, unicellular, multicellular |
| Activity | | | | | | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | | | | **Evolution and Inheritance** |
| NC | | | | | | Fossil. Offspring different parents. Animal adaptation – Evolution. |
| Big Q | | | | | | How do living things change over time and place? pi |
| Vocab | | | | | | Fossils, offspring, characteristics, breed of animal, evolution, inheritance, adapt(ion), environment, palaeontologist, Mary Anning, Charles Darwin, Alfred Wallace, Mutation |
| Activity | | | | | | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
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| | | | | | | |
| | Seasonal Change | | | | | |
| NC | Observe weather and changes across seasons. | | NC | | | |
| Big Q | Do living things change or stay the same? | | | | | |
| Vocab | Year, season, spring, summer, autumn, winter, sunny, cloudy, windy, dry, temperature, climate | | | | | |
| Activity | | | | | | |

# Chemistry

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | **Materials** | | | |
| **NC** | Name. Describe and sort everyday materials. | Uses of materials. Changing shape of materials. | Group different rocks, how they are formed. Fossils. | Solids, liquids, gases. Change state, evaporation / condensation. | Dissolve, separating reversible changes. Change that produces new materials. | |
| Big Q | What are things made from? | How do we choose materials? Can we change materials? Part 1 | Are all rocks the same? | Is water always wet? | What are things made from and why? Can we change materials? Part 2 | |
| Vocab | hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy/not bendy waterproof/not waterproof, absorbent/not absorbent opaque/transparent, brick, paper, fabrics, elastic (noun), foil | Wood, metal, plastic, glass, brick, rock, paper, cardboard, solid, liquid, gas, squashing, bending, twisting, stretching, elastic (v), properties, suitable, unsuitable | Rock, appearance, physical properties, fossil, soil, organic matter, inorganic matter, erosion, weathering, magnifying glass/hand lens, microscope, grains, crystals, igneous, sedimentary, metamorphic, volcano, petrified | **States of Matter**: solid, liquid, gas, properties, particles, evaporation, solidification, condensation, the water cycle, melting | **Properties of Materials:** hardness, solubility, transparency, conductivity (electrical and thermal), dissolve, solution, mixture, separation, solids, liquids and gases, filtering, sieving and evaporating, changes of state, reversible, irreversible, acid, burning, bicarbonate of soda, chemical reaction, rusting, evaporation, filtering, sieving, melting | |
| Activity | Tallest Buildings – Card Games | Bridges – Card Games | | | | |

## Physics

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | | **Electricity** | | |
| **NC** | | | | Simple circuits, switches.<br>Conductors and insulators. | | Brightness of lamp, volume of buzzer.<br>Symbols circuit diagrams. |
| Big Q | | | | Can we control electricity? | | Can we vary the effects of electricity? |
| Vocab | | | | Electricity, appliance, electrical circuit, component<br>Cell, battery, wire, bulb, switch, buzzer, motor, lamp, series circuit, parallel circuit, conductor, insulator, metal, pictorial, circuit symbol, current, voltage | | Brightness, volume, cell, battery, series circuit, parallel circuit, component, symbol, switches, buzzers, lamps |
| Activity | | | | Ideas over time: electricity<br>timeline card sort game electrical inventions<br>fruity batteries<br>scribblebot<br>electroscope<br>Research cards: electricity<br>coin battery | | Ideas over time: electricity |

|  | 1 | 2 | 3 | 4 | 5 | 6 |
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| | | | | | | |
| | | | **Light** | | | |
| NC | | | Need for light to see.<br>How shadows are formed – size. | | | Travels in straight lines.<br>How light enables us to see.<br>How shadows are formed – shape. |
| Big Q | | | What is the dark? | | | How do we see? |
| Vocab | | | Light, dark, shadow, reflect(ive), mirror, surface, natural/artificial, source of light, block, opaque, translucent, transparent | | | Light, reflect(ion), eye, light source, rear-view mirror, periscope, shadow, prism, rainbow |
| Activity | | | bear cave | | | What factors affect the size of a shadow in a shadow theatre? |

|  | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | | **Sound** | | |
| NC | | | | How sound is made, travels.<br>Pitch and volume. | | |
| Big Q | | | | How do we hear different sounds? | | |
| Vocab | | | | Sound, vibration, medium, ear, pitch, volume, faint(er), source of the sound, thickness, insulation | | |
| Activity | | | | seeing sound vibrations<br>What factors affect the pitch and the volume of sound? | | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | **Forces & Magnets** | | | |
| NC | | | Compare different surfaces.<br>Magnets. | | Gravity, air / water resistance, friction.<br>Levers, pulleys and gears. | |
| Big Q | | | What can magnets do? | | How do things move? | |
| Vocab | | | Forces, push, pull, attract, repel, friction, magnet(ic), bar magnet, ring magnet, button magnet, horseshoe magnet, Contact, poles/polarity | | Forces, Push, Pull, Air resistance, Friction, Lever, Pulley, Gear, Buoyancy, Relative density, Spring, Galileo Galilei, Isaac Newton, Newton meter | |
| Activity | | | Phizzi enquiry: slippy shoes<br>https://www.ogdentrust.com/resources/phizzi-enquiry-slippy-shoes<br>Phizzi problem solving: magnetic fishing game<br>https://www.ogdentrust.com/resources/phizzi-problem-solving-magnetic-fishing-game<br>Phizzi problem solving: fridge magnets<br>https://www.ogdentrust.com/resources/phizzi-problem-solving-fridge-magnets | | slippy shoes<br>magnetic racing game<br>forces and flight<br>Research cards: friction<br>Research cards: gravity<br>investigating gears<br>timeline card sort game - fastest way to travel<br>timeline card sort game - largest planes<br>simple machines | |

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| | | | | | **Earth & Space** | |
| NC | | | | | Movement Earth, planets & moon. Night & Day. | |
| Big | | | | | Sun, Earth and Moon: what is moving? | |
| Vocab | | | | | Solar system, Sun, star, <u>Earth</u>, Moon, orbit, <u>spherical</u>, rotation, day, night, seasons, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, Pluto, Sundial, midday, midnight, astronomical | |
| Activity | | | | | solar system in my pocket<br>play dough planets<br>planetary picnic<br>magnetometer<br>Moon landings - cards<br>history of the universe<br>Research cards: Earth and space3<br>Earth & space<br>timeline card sort game Moon landings | |

**Year 6**

<span style="color:red">Periscope – need specific equipment</span>

<span style="color:red">Need idea for water cycle experiment</span>

Mirrors to reflect light