

Curriculum map – structures (Autumn 2)

| | Focus Key Texts | Language | Writing focus | Hook | Science | Geography | Art |
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| Year 1 | Homes 3 little pigs Hansel and Gretel | Once upon a time Sort, compare, group, wood, plastic, glass, metal, water, rock, fabric, elastic, foil, hard, soft, rough, smooth, shiny, dull, bendy, stretchy, stiff, strong, opaque, transparent Field, hill, vegetation, school, church, shop, house, aerial, roof Build, strong, stronger, stiffer, stable | Narrative | 3 little pig houses | <u>Materials</u> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of every day materials on the basis of their simple physical properties Materials hunting & sorting What should the 3 Pigs build their houses from? | <u>History</u> Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features What does the school and local area look like from above? | <u>D&T</u> Build structures exploring how they can be made stronger, stiffer and more stable Making houses – construction kits |
| Year 2 | Great fire of London Vlad and the great fire of London | Change, solid, wood, plastic, glass, metal, water, paper, cardboard, brick, hard, bendy, stretchy, twist Map, locate, city, capital, country, sea, ocean, shop Past, historical, event, time, source Build, strong, stronger, stiffer, stable, mechanism, wheel, axel, turn, rotate | Diary | Forest school area fire pit | <u>Materials</u> Identify and compare the suitability of a variety of everyday materials for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. What should the people have built their houses from to avoid the Great Fire? | Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage Where is London? Events beyond living memory that are significant nationally or globally Great fire of London | Build structures exploring how they can be made stronger, stiffer and more stable Making a model of the Great Fire of London – junk modelling Explore and use mechanisms in their products – wheels and axels Making a fire engine |

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| Year 3 | <p>Invaders – Viking long ships</p> <p>How to be a Viking – Cressida Cowell</p> <p>Vikings in 30 seconds</p> | <p>Material, choose, float, sink, experiment, predict, fair test, measure, record, graph, compare</p> <p>Map, locate, Europe, country, region, hills, mountains, coast, rivers, seas</p> <p>Viking, journey, north, sea, long boat, Denmark, fight, shield, axe, helmet, warrior, explore, raid, invade, settle, trade</p> <p>Research, design, purpose, criteria, float, sink, material, choice</p> | Character description | Visit to Jorvik Viking Centre, York | <p><u>Forces and Magnets</u></p> <p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects but magnetic forces act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials</p> <p>Describe magnets as having two poles</p> <p>Predict whether two magnets will attract or repel each other depending on which poles are facing</p> <p>Viking long boat experiment</p> | <p>Locate the world’s countries, using maps to focus on Europe. Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features and land-use patterns. Understand how some of these aspects have changed over time.</p> <p>Where did the Vikings come from?</p> <p>Where did they settle in England and why?</p> <p>What are those places like now?</p> <p>The Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor.</p> <p>Who were the Vikings?</p> <p>What was life like in Viking Britain?</p> <p>What happened to the Vikings and the Anglo-Saxons?</p> <p>Who was Alfred the Great?</p> | <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</p> <p>Viking shields</p> <p>Can you design and make a long boat that floats? (Build on prior learning from Y1)</p> |
| Year 4 | <p>Grand design</p> <p>Mega structures around the world</p> | <p>Electricity, appliance, series, circuit, cell, wire, bulb, switch, buzzer, battery, loop, open, close, light, conductor, insulator</p> | Bedroom design | <p>Modern architecture around the world: Gaudi in Barcelona, Guggenheim,</p> | <p><u>Electricity</u></p> <p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit identifying and naming its</p> | <p>Locate the world’s countries using maps, concentrating on their environmental regions, key physical and human characteristic, countries and major cities</p> | <p>Learn about great artists, architects and designers in history</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p> |

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| | Iggy piggy architect | <p>Locate, map, atlas, globe, country, city, physical, human, characteristics</p> <p>Architect, design</p> <p>Strengthen, stiffen, reinforce, complex, structure</p> | | <p>Flatiron & Chrysler in New York, The Dancing House in Prague, Pompidou in Paris, Gherkin & Shard in London, Opera House in Sydney</p> | <p>basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some common conductors and insulators and associate metals with being good conductors</p> <p>How can we light our mega Structure/Grand Design?</p> | <p>Use maps, atlases, globes and computer mapping to locate countries and describe features studies</p> <p>Locating megastructures around the world</p> <p>A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066</p> <p>Homes through the ages</p> | <p>Who was Antoni Gaudi and what did he design?</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Design and create a board game with an electrical circuit</p> |
| Year 5 | <p>Forces</p> <p>Rollercoaster</p> <p>Up and down – Oliver Jeffers</p> | <p>Force, push, pull, gravity, friction, resistance, earth, fall, object, mechanisms, levers, pulleys, gears, smaller, greater, effect</p> <p>Region, latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle</p> <p>Mechanism, gears, pulleys, cams, levers, linkages</p> | <p>Visit a local car showroom.</p> <p>Look at examples of the world's fastest car e.g. Hennessey Venom F5 – 301 mph* SSC Tuatara – 300+ mph*</p> | <p>Forces</p> <p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces</p> <p>Recognise that some mechanism, including levers, pulley and gears allow a smaller force to have a greater effect</p> <p>STEM – may the forces be with you</p> <p>Bottle rockets</p> | <p>Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities</p> <p>Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the</p> | <p>Understand and use mechanical systems in their products</p> <p>STEM – may the forces be with you</p> <p>Bottle rockets</p> | |

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| | | | | | | <p>Prime/Greenwich Meridian and time zones</p> <p>Where in the world did the world speed record get set?</p> | |
| Year 6 | Bridge the Gap | <p>Light, straight, travel, reflect, source, opaque, transparent, shadow</p> <p>Artefact, source, industry, industrial, revolution, change, chronology</p> <p>Climate zone, rivers, valley, land use, economic activity, trade links, energy, water</p> | | <p>Visit to Magna</p> | <p><u>Light</u></p> <p>Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out light or reflect light into the eye</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> <p>STEM crime lab investigation</p> | <p>Describe and understand key aspects of physical geography and human geography</p> <p>Industrial revolution in Sheffield</p> <p>A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066</p> <p>Industrial revolution</p> | <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Bridges</p> |