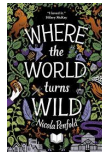






Year 7 SCIENCE

Key Learning		Pre-Exposure Tasks	Linked Fiction
<p>Autumn 1</p> <p>The Bee Curriculum: Explore bees as a context to develop scientific skills through investigating: What is the difference between different types of honey? Why are honeycombs built as hexagons? What is the best wing shape for bees?</p> <p>Cells: Explore what all living things do; consider how animal and plant cells are similar and different; learn how specialised cells are adapted for their functions and how cells, tissues and organs work together.</p>	<p>The Bee Curriculum: Research the importance of bees in the North East. Read about the work of the Hexham Beekeepers Association at HBKA Present – Hexham Beekeepers Association</p> <p>Cells: Watch the National Geographic video on the human body at: https://www.youtube.com/watch?v=Ae4MadKPJCO Research the work of the British scientist Robert Hooke: Visit http://www.cellimagelibrary.org/home</p>	 <p>Where the World Turns Wild Nicola Penfold</p>	
<p>Autumn 2</p> <p>The Particle Model: Explore how solids, liquids and gases are different, consider what evidence allowed all scientists to accept the particle theory, investigate why some things spread out and learn what air pressure is.</p> <p>Forces: Explore what forces do: how springs help us measure forces, how we can control friction and what happens when forces are balanced.</p>	<p>The Particle Model: Do a practical on diffusion using a tea bag: time how long it takes for water to change colour in cold compared to hot water.</p> <p>Forces Biomechanics is the study of forces acting on the human body. Identify the forces acting in a particular sport: The Twisted Physics of 5 Olympic Sports Live Science</p>	 <p>A Wrinkle in Time Madeleine L'Engle</p>	
<p>Spring 1</p> <p>Reproduction in Animals: Explore how different animals reproduce sexually; learn about the human reproductive organs and what happens during the gestation period and birth, puberty and adolescence; consider how we can help endangered species</p> <p>Muscles and Bones: Learn how different animal species are classified and the functions of the skeleton, explore how muscles are used in the locomotor system and how they help with the circulation of blood cells; learn about how drugs affect our bodies.</p>	<p>Reproduction in Animals: Research a zoo to find out the species they care for and how they work to improve population numbers in the wild. Read through the NHS guidance on pregnancy, birth and puberty at Pregnancy - NHS and Growing up – what's it all about?</p> <p>Muscles and Bones: Choose one of the activities from the NHS Change 4 Life webpage at Activities for kids - Healthier Families - NHS Note your experience in terms of which muscles moved in your body and how they moved. Consider a time when you or someone you know broke a bone. Include what caused the problem, what the symptoms were and what the treatment was.</p>	 <p>Beetle Boy M G Leonard</p>	

<p>Spring 2</p>	<p>Mixtures: Explore different kinds of mixtures, how you get solids out of a solution, how to separate solutes for identification and how to make seawater drinkable.</p> <p>Energy: Consider how our bodies use energy and how energy is stored and moved around; Learn where fuels come from, what other energy sources are available and what energy resources we should use.</p>	<p>Mixtures: Research how Northumbrian Water purifies water from rivers, lakes and aquifers: Resources for you Consider how obtaining safe water to drink in the UK might be different in other parts of the world.</p> <p>Energy: Look at the nutritional labels of 5 food packets. Which one has the highest source of stored energy? Research the history of regional sites for power generation: Lynemouth Power Station - once a coal-fired power station, now a biomass power station; Derwent reservoir hydro-electric plant; Hartlepool nuclear power station; Hornsea Project One wind farm; Peterlee solar park.</p>	 <p>The Wild Before Piers Torday</p>
<p>Summer 1</p>	<p>Elements & Compounds: Consider the different types of particles we can find on Earth and how we can use chemical reactions to make new substances.</p> <p>Electricity: Explore how we create electrical circuits and alter the current flowing through them. Learn about the safety features we have in our homes to protect us from danger from electricity.</p>	<p>Elements & Compounds: Locate ten elements around our own home ELEMENTS - found around the home</p> <p>Electricity: Look at a recent electricity bill and note of how many units in kilowatt-hours of electrical energy your family have used during the period. Estimate how many units you have used in the last year.</p>	 <p>Darwin's Dragons Lindsay Galvin</p>
<p>Summer 2</p>	<p>Ecosystems: Explore the variation that exists within and between species. Learn why populations change in size over the day and over the year.</p> <p>Acids & Alkalis: Consider how to deal with hazardous chemicals. Learn how we can use indicators to tell if a chemical is an acid, alkali or neutral substance.</p> <p>Sound: Learn how sound travels and can be detected. Explore how humans and animals use sound.</p>	<p>Ecosystems: Watch an episode of a natural history programme such as the recent 'Frozen Planet 2' documentary by David Attenborough and identify as many different species as you can: Frozen Planet II Trailer</p> <p>Acids & Alkalis: Locate five acids or alkalis from around your house: ACIDS ALKALIS pH household products NEW 2013</p> <p>Sound: Pick one of the seven sound experiments to do at home from: 7 Cool Sound Science Experiments for Kids Article (make sure a responsible adult is present to help out)</p>	