

PIONEERS STEAM CURRICULUM PLANNING

CYCLE A	Virtue Focus:	Aspiration Commitment	Children's own questions from knowledge elicitation in addition to... The Big Question: How do you build a school (community)?	
Autumn 1st Half	Enquiry Focus:	Explore and Ask		
Science	National Curriculum: Materials and Their Properties Children will learn to: <ul style="list-style-type: none"> • Plan and conduct fair tests; • Give reasons for particular uses of everyday materials, including metals, wood and plastic; • Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible; • Explain changes associated with burning and the action of acid on bicarbonate of soda. 		Purpose & Outcome: Children will consolidate their understanding of materials and their properties through a range of science experiments and investigations. They will explore a range of uses for different materials and ask their own questions based on a range of scientific processes, such as dissolving, mixing and separating. Pupils will then apply their understanding of these concepts to design and make a water bottle cover, specific for Nansledan, made from neoprene. Pupils will also consider the work of Andy Warhol and will learn about his childhood, influences and most famous pieces of 'pop art'. They will design and create their own piece of art, in the style of the piece, 'Marilyn Diptych'. Pupils will then hold an event for the wider school community to demonstrate their understanding.	
Technology	Narional Curriculum Design and Technology Children will learn to: <ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Children will develop their knowledge and understanding of design technology to design and market water bottle covers, made from neoprene.		Key Topic Texts: Rosie Revere, Engineer by Andrea Beaty Iggy Peck, Architect by Andrea Beaty Andy Warhol (Little People, Big Dreams) by Maria Isabel Sanchez Vegara Zaha Hadid (Little People, Big Dreams) by Maria Isabel Sanchez Vegara	Hook / Trip/ Visits & Visitors: <ul style="list-style-type: none"> • NannersFest – children will apply their knowledge from their STEAM learning to hold a 'knowledge fayre' for pupils across the wider school. They will produce items, such as 'pop art' images and neoprene water bottle covers which pupils across the wider school will be able to purchase for a donation to a local charity.
Engineering	Engineering Curiosity: Children will learn to: <ul style="list-style-type: none"> • Dispel myths about engineering; • Debate and discuss engineering careers; • Engage with key learning through an engineering perspective; • Apply their knowledge of materials and their properties to the work of a civil and structural engineer; • Apply their knowledge of design and technology to the work of a design engineer. 		Equality Objective: Pupils will learn about the importance of promoting engineering roles for both males and females. They will explore and engage with the work of civil and structural engineers, as well as design engineers.	Links to Local Industry / Real Life: <ul style="list-style-type: none"> • Pupils will explore and engage with the work of civil and structural engineers, as well as design engineers.

PIONEERS STEAM CURRICULUM PLANNING

Arts	<p>KS2 National Curriculum: Pupils should be taught:</p> <ul style="list-style-type: none"> to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. about great artists, architects and designers in history. <p>Pupils will explore the artwork of Andy Warhol. They will learn about his childhood and background, including how this influenced his artwork. Children will colour using Warhol’s technique in his ‘Marilyn Diptych’ work, produce a sketch in the style of Andy Warhol’s work and produce a final version of pop art, using watercolour or pencil as their medium.</p>	<p>English Curriculum: Spelling: Pupils will follow Spelling Shed spelling patterns. Week 1-6 will focus on challenge words from the year 5/6 word list. GPS: Pupils will revise taught GPS concepts from previous years, e.g. adjectives, adverbs and fronted adverbials. They will consolidate their understanding of punctuation from previous year groups. Writing: Pupils will spend time learning about their class namesake, Charles Darwin. They will learn about Darwin’s voyage to the Galapagos Islands and produce a setting description of what the islands look like. In their independent writing, pupils will design their own island and produce a setting description to describe their setting. Pupils will also explore a narrative text, ‘The Horses of Troy’, which explores materials and their properties through the context of storytelling. They will imitate the story through a guided write, and innovate by writing their own version.</p>
Mathematics	<p>White Rose Year 6 Block 1: Number and Place Value: Children will:</p> <ul style="list-style-type: none"> Recap numbers to 10, 000, 100,000 and 1,000,000 Identify numbers to 10,000,000 Compare and order any numbers Recap numbers to 10, 100 and 1000 Confidently round any number Identify negative numbers in context <p>White Rose Year 6 Block 2: Addition and Subtraction, Multiplication and Division Children will:</p> <ul style="list-style-type: none"> Recap adding whole numbers with more than 4 digits (column method) Recap subtracting whole numbers with more than 4 digits (column method) Recap inverse operations (addition and subtraction) Recap multi-step addition and subtraction problems Add and subtract integers Recap multiplying 4-digits by 1-digit Recap multiplying 2-digits (area model) Recap multiplying 2-digits by 2-digits Recap multiplying 3-digits by 2-digits <p>N.B. Multiplication and Division unit will continue in Autumn 2.</p>	<p>Guided Reading Key Texts: Pupils will explore a range of setting descriptions using the VIPERS approach. Pupils will explore a range of texts about Charles Darwin using the VIPERS approach. The Horses of Troy – Science through Storytelling</p>