Implementation: Science at New Horizons Academy

*Note. WRS units may not appear in the same order on their website as they appear here.

Autumn 1

This term will aim to fully engage our children and develop their love of learning and science through practical investigations using an array of different resources such as investigations taken from the British Science Week website . In this term, we aim to foster a positive culture and view of science which may previously have been a barrier for our children.

Autumn 2- Summer 1

The learning undertaken from Autumn 2 term through to Summer 1, will look to continue the development of our children's curiosity and love of science but also look to expand their knowledge of certain topics using the WRS units. The use of these resources will help to provide more structured and classroom-based learning to help support and develop our children's ability to learn in this environment, allow the children develop their skills, knowledge and understanding of the science topics but also continue to develop their engagement with science through the use of investigations and experiments. Across Autumn 2 and Spring 1, children will cover the same area (Animals including humans & Living things and their Habitats). In Spring 2 and Summer 1, the units and themes covered will diversify slightly to help further develop specific skills and knowledge and prepare students for the next step in their educational journey. Units have been decided upon based on what the school feel is important for the children's overall educational development and engagement. However, where possible, progression has also been prioritised to help develop the knowledge base of children who may be with us for a longer period of time.

Summer 2

This term will aim to: continue developing the children's engagement, solidify their love of science and consolidate their knowledge, understanding and skills through project-based learning. The project may be based on a topic from the children's learning from the current academic year that will consolidate and extend their knowledge in this area or a topic that the class have collectively agreed upon which they have not covered in the academic year but have interest in. These projects will involve a presentation, practical work and class-based learning. The learning will focus on not only the subject knowledge but also the working scientifically skills and knowledge developed throughout the year.

There will also be opportunities in this term to develop their knowledge and understanding of sustainability within this term.
Units not covered below, which appear in the WRS scheme, may any incorporated into either Autumn 1 or Summer 2 learning.

Impact - Science at New Horizons Academy

At New Horizons Academy, the impact of our Science curriculum is seen in the transformation of our pupils from hesitant learners into inquisitive, resilient, and scientifically literate investigators. By moving from high-engagement practicals to structured units and finally to independent projects, we ensure that students leave us with both the knowledge and the "working scientifically" skills required for their next educational stage.

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Impact: The Difference We Make

The impact of our curriculum is evidenced through the following outcomes:

Breaking Down Barriers to Learning

The high-engagement approach in Autumn 1 has a direct impact on student attitudes. Pupils who previously viewed Science as "too difficult" or "not for them" develop a newfound curiosity.

Proficiency in "Working Scientifically"

As students progress through the adapted White Rose Science units, they move beyond simple observation. They develop the ability to:

- **Ask Pertinent Questions:** Formulating their own "what if" scenarios.
- **Plan and Conduct Experiments:** Understanding how to use equipment safely and effectively.
- **Analyze Results:** Moving from seeing an outcome to explaining *why* it happened using scientific vocabulary.

Depth of Knowledge and Retention

By focusing on core themes—such as *Animals including Humans* and *Living Things and their Habitats*—over an extended period, we ensure knowledge is embedded in long-term memory. The impact is seen in "retrieval" sessions where students can confidently recall and apply facts about life cycles, healthy bodies, and environmental systems.

Personal Agency and Communication (Summer Project Impact)

The Summer 2 project-based learning allows students to take "ownership" of their science. The impact of this is seen in:

- Confidence: Students presenting their findings to peers and staff.
- Collaboration: Improved teamwork as they negotiate roles within a project.
- Sustainability Awareness: A growing sense of responsibility toward the environment, demonstrating that they can contribute positively to a "lawful and inclusive society."

Transferable Resilience

Scientific experimentation inherently involves "failure" when a hypothesis is proven wrong. Our curriculum fosters the resilience to see these moments as learning opportunities. This resilience transfers to other subjects, as students become more comfortable with the trial-and-error process of learning in general.

Measuring Impact

We measure the success of our Science curriculum through a variety of qualitative and quantitative lenses:

- Practical Assessment: Observing students "in the act" of investigating—how they handle equipment and follow a process.
- Pupil Voice: Interviews where students can explain a scientific concept in their own words or describe an experiment they enjoyed.
- Work Samples: Learning shows a progression from simple recorded observations to more detailed investigations and studies.

Science- Supporting Resources

RSC Education Steps into Science- Investigations and Experiments
BBC Teach Terrific Scientific
Twinkl Science experiments
Science Sparks Experiments
Fizzics Education
Brian Cox School Experiments
STEM experiments

British Science Week website

British Science Week Links

British Science Week Primary Pack 2025
British Science Week Primary Pack 2024
British Science Week Primary Pack 2023
British Science Week Primary Pack 2022
British Science Week Primary Pack 2021
British Science Week Primary Pack 2020
British Science Week Primary Pack 2019
British Science Week Primary Pack 2018

NHA Science Vision Whole School Overview

KS1 Cycle A	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Animals including Humans **WRS Units:** Y1 The Human Body	Living Things and their Habitats **WRS Units:** Y2 Living Things and their Habitats	Materials **WRS Units:** Y1 Materials	Materials **WRS Units:** Y2 Materials	Sustainability **WRS Units:** Y1 Caring for the planet Y1 Growing and Cooking **Science Class Project**

NHA Science Vision Whole School Overview

KS1 Cycle B	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Animals including Humans **WRS Units:** Y2 Humans	Living Things and their Habitats **WRS Units:** Y2 Growing Up	Animals including Humans **WRS Units:** Y1 Animals	Animals including Humans **WRS Units:** Y2 Animals Need for Survival	Sustainability **WRS Units:** Y2 Plastic Y2 Wildlife **Science Class Project**

NHA Science Vision Whole School Overview

LKS2 Cycle A	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Sound **WRS Units:** Y4 Sound	Living Things and their Habitats **WRS Units:** Y4 Group and Classify Living Things	Living Things and their Habitats **WRS Units:** Y4 Habitats	Electricity **WRS Units:** Y4 Electricity	Sustainability **WRS Units:** Y3 Food Waste Y3 Biodiversity **Science Class Project**

NHA Science Vision Whole School Overview

LKS2 Cycle B	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Animals including Humans **WRS Units:** Y3 Skeletons Y3 Movement Y3 Nutrition and Diet	Animals including Humans **WRS Units:** Y4 The Digestive System Y4 Food Chains	Forces and Magnets **WRS Units:** Y3 Forces	Forces and Magnets **WRS Units:** Y3 Magnets	Sustainability **WRS Units:** Y4 Energy Y4 Deforestation **Science Class Project**

UKS2 Cycle A	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**

NHA Science Vision Whole School Overview

NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Animals including Humans **WRS Units:** Y5 Animals including humans	Living Things and their Habitats **WRS Units:** Y5 Life Cycles Y5 Reproduction A & Y5 Reproduction B	Materials **WRS Units:** Y5 Properties of Materials	Electricity **WRS Units:** Y6 Electricity	Sustainability **WRS Units:** Y5 Global Warming Y5 Plastic Pollution **Science Class Project**

UKS2 Cycle B	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**

NHA Science Vision Whole School Overview

NHA Curriculum	**Working Scientifically Sessions** • asking questions • making predictions • setting up tests • observing and measuring • recording data • interpreting and communicating results • evaluating Sessions planned and adapted meet class needs.	Forces and Magnets **WRS Units:** Y5 Forces	Materials **WRS Units:** Y5 Reversible and irreversible changes	Living Things and their Habitats **WRS Units:** Y6 Living Things and their Habitats	Animals including Humans **WRS Units:** Y6 The Circulatory system Y6 Diet, Drugs and Lifestyle	Sustainability **WRS Units:** Renewable Energy Light Pollution **Science Class Project**