St. Nicholas School Canterbury

Curriculum Progression Map

Science

Curriculum Intent

At St. Nicholas School we aim to develop scientific exploration and investigation through personalised learning programmes, to develop students curiosity and wonder about themselves and the world in which they are growing.

The Science schemes of work will provide opportunities to explore and experiment, and encourage pupils to develop a lifelong interest in the natural world around them. Programmes of study aim to give pupils a progressively deeper understanding of the central concepts of science.

Students are taught through hands on explorational learning activities, with a focus on investigation, problem solving and practical life experiences.

Science exploration is taught in the classroom: in our outside areas; at forest school and out in the wider community.

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Key Stage 1 Science Cycle			
Year 1	**Animals Including Humans** *Twinkl PlanIt Yr 1 Seasonal changes autumn/winter*	**Plants** *Twinkl PlanIt Yr 1*	**Floating and Sinking** *Everyday Materials Twinkl PlanIt Yr 1*
Year 2	**Animals including Humans** *Twinkl PlanIt yr 2*	**Seasonal changes Spring / Summer** *Twinkl PlanIt yr 1*	**The Environment** *Twinkl PlanIt Yr2*

Key Stage 2 Science Cycle			
Year 1	**Earth and Space** *EQUALS/ TWINKL PlanIt*	**Light and Sound** *EQUALS Scheme of Work*	**Living Things and Their Environments** *TWINKL Living Things and Their Habitats Yr 2.*
Year 2	**Health and Growth** *Animals Including Humans 2- EQUALS/ TWINKL Planit*	**Plants 1 – Green Plants** *KS2 - EQUALS*	**Forces 1 and/or 2** *KS2 EQUALS*
Year 3	**Electricity** *EQUALS KS2 And TWINKL Planit*	**Properties and Changes of Materials** *EQUALS*	**Variation and Classification** *TWINKL PlanIt Biodiversity Minibeasts EQUALS*

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Key Stage 3 Science Cycle			
Year 1	**Biology:** *Variation and Classification*	**Chemistry:** *Separating materials and their properties*	**Physics:** Electricity and Magnetism/ Light and Sound
Year 2	**Physics:** *The Earth and Beyond*	**Biology:** *Keeping Healthy*	**Chemistry**: *Changing Materials*
Year 3	**Biology***: Living things and their environment*	**Physics**: *Force and Motion*	**Chemistry:** *Grouping and classifying materials and their properties*

Key Stage 4 Science Cycle			
Year 1	**Physics** *Earth and the atmosphere*	**Biology and Chemistry** *Health, Disease and Medicine*	**Biology and Physics** *Senses*
Year 2	**Biology** *Animals and environments*	**Biology** *Plants*	**Physics** *Forces & Motion*

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Curriculum Impact

Key Stage 1
Learning Specific Skills:

- Children will engage in practical exploration and investigation activities that encourage curiosity about the world to answer questions.
- Children will begin to ask their own questions.
- Children will begin to observe changes, notice patterns and group things.
- Children will begin to use drawings and photos to communicate about their investigation.
- Children will begin to transfer the knowledge learnt to different contexts or environments.

Key Stage 2
Learning Specific Skills:

- Children will carry out investigations, exploring and testing everyday phenomena and to talk about their findings.
- Children will become familiar with some scientific language.
- Children will begin to record their investigation and results through drawings, diagrams and charts.
- Children will begin to draw conclusions from their investigation.
- Children will begin to access reference sources.
- Children will be encouraged to link their scientific knowledge to their everyday experiences.

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Curriculum Impact

Key Stage 3
Learning Specific Skills:

- Students will become familiar with some scientific language and answer scientific questions.
- Students will be aware of safety procedures involved with investigations.
- Students will become aware that their actions have consequences, looking at cause and effect.
- Students will begin to make predictions about what will happen.
- Students will collect and record evidence as part of scientific inquiry.
- Students will begin to interpret observations and data, to identify patterns.
- Students will begin to evaluate investigations to draw conclusions.
- Students will link their scientific knowledge to their everyday experiences.

Key Stage 4
Learning Specific Skills:

Learning Specific Skills:

- Students will use scientific investigation to answer scientific questions.
- Students will be able to explain why they follow safety procedures involved with investigations.
- Students will be able to predict the consequences of their actions.
- Students will demonstrate fair testing and repeatability within their recording of investigations.
- Students will use scientific language to present there their enquiry.
- Students will show the data collected and the patterns observed within their recording.
- Students will present their conclusions.
- Students will draw on reference sources to expand their learning.