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Overview of Science Programmes

Term 2, 2021

Our Science focus for Term 2 is 'Earth and Beyond'. This is a great opportunity for all pupils to explore Matariki and parts of our solar system. Key learning experiences will include conducting experiments, writing a scientific report, investigating new phenomena and worksheets.

For an overview of our aims in Science, please see the detailed Curriculum Achievement Objectives listed below.

Also this term, Shyam has been helping me to prepare for the arrival of some tropical fish! As well as learning about these particular fish and their needs, we will be using this as an opportunity to explore the key features of fish in general, and how they fit within the kingdom of animals.



Year 1-4:

Our junior pupils will be encouraged to describe what they notice about the world around them. We will use our senses to make observations, describing what we notice. As the term progresses, we will explore the Matariki stars, the moon and the concept of day and night.



Year 5-6:

A focus for pupils as they grow their scientific skills is to understand that science is based on evidence. Through the lessons, they will be encouraged to use their observational skills to gather data. We will be looking at how data is presented and finding the information within graphs, sketches and tables. The Year 5 and 6 students will investigate what an animal needs to survive in its habitat, explore Matariki stars and the cycles of the moon. As they build their understanding of the concepts of day and night, we will be exploring using the sun to tell time.



Year 7-8:





Similarly for the Year 7 and 8 pupils, we will be refining our understanding that science is based on evidence, and encouraging them to use their observational skills to gather data reliably and accurately. Our seniors will be looking at how data is presented and finding information from within graphs, sketches and tables. The Year 7 and 8 students will investigate planets and the solar system while also exploring Matariki and constellations.





Our learning in these areas will be well supported by our hosting of a mobile planetarium from [Starlab Astronomy](#). On June 16th, our classes will each visit the planetarium which will be set up in our gym.

Our Science Committee members are keenly supporting the Science Badge scheme again this year. This is an excellent resource for pupils who wish to study an area of science in more depth, in their own time. This term we have the following badge projects underway:

Kate Hopkins	8	Large Animals	
Claudia Angelini-Lyons	8	Food Technology	
Shyam Vallabh	8	Astronomy	
Sanya Singh Shloke Dutta	7 8	Human Biology	

... with Rose and Maya also in the process of registering their topics.

We are looking forward to hearing more about each project once the badge criteria are met, when the recipients present their study and findings to the school at an assembly.

If you have any questions about our science lessons (or science badges) this term, please do not hesitate to contact me.

Roché Marx
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Curriculum Achievement Objectives:

Year 1-4

Investigating in science

Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I give simple explanations for things that happen.
- I understand that explanations try to answer why something happens.
- I show that my explanations are tentative, using words like maybe and perhaps.
- I use evidence to support my explanations.

Communicating in science

Build their language and develop their understandings of the many ways the natural world can be represented.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I can share my observations.
- I can use one or more of my senses to make observations.
- I can support my observations with relevant detail.
- I can experiment with different ways of communicating my observations.

Year 5-6

Investigating in science

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I understand cause and effect by using words like because, as and since.
- I use different forms of evidence to support my explanations e.g. observations, measurements, information sources, explanations by others.

Communicating in science

Begin to use a range of scientific symbols, conventions, and vocabulary.

Engage with a range of science texts and begin to question the purposes for which these texts are constructed.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I can choose the most appropriate senses to make observations.
- I can communicate or share my observations with clarity.
- I can describe in precise detail what has happened.

Year 7-8

Investigating in science

Build on prior experiences, working together to share and examine their own and others' knowledge.

Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I use conditional reasoning such as it depends and if ... then.
- I use analogies or allude to other situations to explain my ideas.

Communicating in science

Begin to use a range of scientific symbols, conventions, and vocabulary.

Engage with a range of science texts and begin to question the purposes for which these texts are constructed.

Rubric: Collins, M. 2019. *Sir Paul Callaghan Science Academy*.

- I can choose the most appropriate senses to make observations.
- I can communicate or share my observations with clarity using appropriate scientific language.
- I can describe in precise detail using scientific vocabulary what has happened.