

Newsletter: **SCIENCE & SUSTAINABILITY**

Term 3, 2016

Welcome to Term 3,

This term we will be learning about the Physical Sciences involving forces, motion, heat, light, sound and other forms of energy.

Each class has appointed new Green Team monitors for Semester 2. These monitors will be responsible for collecting their class compost bin at lunchtime and emptying it out into the larger compost bins situated in the school grounds. They will also educate and remind the rest of the students in their class what sorts of waste can be placed into the compost bin. During the term they will also be given extra responsibilities to help look after our school environment.

What we expect the students to learn in Foundation:

Foundation students will all be learning about forces and motion. They will investigate 'push' and 'pull' forces using different toys and objects. They will learn about the downward pull of gravity on objects and the upward push of water and air on objects. They will also take part in sinking and floating investigations. Students will be predicting, investigating, observing and recording results. They are encouraged to bring along and share in Science class, any moving toys that demonstrate the concepts we will be learning about.

What we expect the students to learn in Year 1:

In term 3, the year 1 students will learn how sound is produced by a range of sources, and that it can be sensed. They will identify sources of sound in the environment, describe how sound travels and ways in which it is used. They will recognise and describe high and low sound and how to change the pitch of sound. They will explore how sound is transmitted through solid materials by making a tin can telephone with string. Students are encouraged to bring along and share in Science class, any musical toys, instruments or objects that create different sounds. It would be really helpful if each child could bring along two small to medium-sized cans they can use to make their own telephone.

What we expect the students to learn in Year 2:

This term, in Physical Sciences, students will learn about 'push' and 'pull' forces and how these forces affect how an object moves, changes direction or shape. They will understand that gravity, wind and water can move objects according to how strong the push or pull force is, that is applied to that object. They will investigate how toys from around the world use push and pull forces. Students will test a variety of objects to see whether they will roll or slide down a ramp and identify where objects should be positioned to balance a see-saw.

What we expect the students to learn in Year 3:

This term, the year 3 students will learn about sources of heat and ways it can be produced. They will discover that heat travels by conduction, convection or radiation. Through

experiments, they will identify the difference between a thermal conductor and a thermal insulator. They will find out how thermometers work and what they are used for. They will consider some of the effects of heat in everyday life. Throughout the term, they will make predictions, carry out experiments and investigations and observe and record their findings.

What we expect the students to learn in Year 4:

This term students in year 4 will learn about Newton's Laws of Motion and investigate concepts such as friction, gravity and movement. Students will have the opportunity to explore these concepts and use different ways to represent forces and motion using arrows, including some scientific conventions of force-arrow diagrams. Through various games and activities, students will identify forces that act in direct contact and forces that act at a distance. They will investigate frictional forces between an object and different surfaces. They will explore gravity's effect on an object and discuss how they experience gravity in their lives. Students will understand how lift occurs by investigating experiments on the effects of pressure to create lift.

What we expect the students to learn in Year 5:

This term in Physical Sciences, students in year 5 will learn about light sources and how light helps us see. Through various experiments and investigations students will learn about some of the characteristics of light. For example, they will discover that light is made up of different colours. They will also learn about reflection and refraction. Students will construct a pinhole camera to understand how it works. They will investigate how shadows are formed and understand the uses of light technology in daily life. Students will take a closer look at a light bulb and how it works and get a chance to construct and test their own circuit using a battery, wires and a light bulb.

What we expect the students to learn in Year 6:

This term students in year 6 will explore different types of energy and observe the energy used in school. They will identify how household machines transform one type of energy into another and explore electrical energy usage around the home. Through various experiments, students will learn the difference between electrical conductors and insulators. They will plan and conduct their own investigation in teams to use the heat from the sun to heat up water. Students will learn how solar panels, wind and water generate electricity. They will understand that scientific explanations develop historically through the contributions of ideas from many scientists and will learn about the famous scientist, Alessandro Volta who made the battery.

If you have any queries, suggestions or comments, about the Science & Sustainability program please see Mrs Polini at school. I am available Tuesday to Friday. Otherwise, you may contact me via my email address.

j.polini@sunshineheightsps.vic.edu.au

Regards,
Julie Polini
SCIENCE & SUSTAINABILITY Teacher
Sunshine Heights Primary School