Science Overviews Term 4 - 2021 Biological Science

This term in the science lab, we will be focussing on the Australian Curriculum Science sub-strand of Biological Sciences. In essence, Biological Sciences is the area of science concerned with understanding living things. The key concepts developed within this sub-strand are that: a diverse range of living things have evolved on Earth over hundreds of millions of years; living things are interdependent and interact with each other and their environment; and the form and features of living things are related to the functions that their body systems perform. Students investigate living things, including animals, plants and microorganisms, and their interdependence and interactions within ecosystems. They explore their life cycles, body systems, structural adaptations and behaviours, how these features aid survival, and how their characteristics are inherited from one generation to the next.

Student exploration of human endeavour will be explored in a range of ways as this supports students to develop their understanding and make connections through linking tangible examples of science in their world with the scientific relevance of the concept being taught.

Students will continue to develop their Science Inquiry Skills throughout this process via such actions as questioning, investigating, researching, comparing, measuring, observing, predicting, testing ideas, collaborative group work and conducting experiments. Comparing, contrasting, reflection and evaluation will also be a key part of their work.

Kind Regards

Nic Strevens

Junior Primary

From little things big things grow

This term we will be undertaking an inquiry based unit of work that explores how living things have basic needs, a variety of external features and live in different places where their needs are met. Students will be working scientifically by engaging in a variety of investigations and experiments to explore and compare the external features of a range of living things and how these aid survival and ensure that their needs are met. This will also encapsulate a range of learning opportunities that explore how living things grow, change and have offspring similar to themselves. Fair testing will be explored through an experiment that investigates the stages of plant growth and what a plant may need to survive. Students will be supported to design their own investigative question. Students will further develop their capability in critical and creative thinking as they learn to generate and evaluate knowledge, ideas and possibilities relating to their investigative question and use this in developing future questions.

Science as a Human Endeavour will be explored through how we can impact on the environments of living things around our school. This will involve developing possible solutions to the identified problems.

Coding Challenge – Students will design and create a 'mat' for a Bee-Bot activity, using images depicting the growth and/or life cycles of living things. Students will be supported to learn how to program a Bee-Bot to move along the correct pathway.

Middle Primary

Adapt and Survive

This term we will be undertaking an inquiry-based unit of work that explores why living things have structural features and adaptations that help them to survive in their environment. Students will explore some of the physical and behavioural features of plants and animals found in Australian deserts, and compare them with plants and animals that live in other environments. Through hands on investigations and research, students will further develop their understanding of fair testing that will explore how the features of desert plants and animals help them to survive in their own natural environment. We will also explore how/why plants and animals gradually evolve in order to survive in environments that change over time.

Students will further develop their capability in critical and creative thinking as they learn to generate and evaluate knowledge, ideas and possibilities relating to their STEM challenge and other investigations and use them when developing and improving upon designed solutions.

Science as a Human Endeavour will be explored through how human influence impacts on animal environments and biodiversity. With conclusions drawn to how we can make positive changes both locally and globally.

Science based STEM Challenge - Students will work in collaborative learning teams and utilise the information they have developed over the unit to critically and creatively design and develop a stop motion video that highlights how Australia's desert animals could evolve over the next million years. They will reflect and critique their designs based on agreed criteria that we have developed within the classes.

Upper Primary

Mould Madness

This term students will build on prior knowledge and prior experience to develop an understanding that the growth and survival of living things are affected by the physical conditions of their environment. Mould will be used as a model organism for demonstrating this concept. Through research and a range of hands on experiments, students will further develop their fair testing skills by designing their own experiments using scientific inquiry skills to test their predictions about mould growth inhibitors.

Science based STEM Challenge - Students will utilise the engineering design process to design a 'mould' inhibiting kitchen, to show their knowledge of the specific requirements for mould growth. Students will justify their claims through peer sharing and critically reflecting on their designs.

Science as a Human Endeavour will explore Aboriginal uses of fungi and western scientific discoveries that have led to the use of mould for different purposes.

Feedback and Student Voice - Students will consistently be provided with constructive feedback and will be given opportunities to provide feedback to each other and the teacher. This will be both verbally and in written form. Students will also participate in peer, teacher and self-assessment processes.

Student voice will be evident through such areas as curriculum design, science room values and expectations- development, personal feedback, reflection and STEM challenges.

Science Room Health and Wellbeing - Personal development through exploration and practical application of our school values, the “Play is the Way” program and Growth Mindset principles will be embedded into our science lessons.

Differentiation – Approaches to teaching and learning will be differentiated to meet the needs of individual learning styles.