

Growing Resilience in our Community – Working Together to Save the Endangered Kangaroo Valley Brush-tailed Rock-wallaby from Extinction

Outline of School Education Program – Stages 4-6

The *Friends of the Brush-tailed Rock-wallaby* community group has won multiple awards and grants for community education and delivered engaging school programs to thousands of students over 20 years.

The Friends can tailor a school education program to suit your class. The fully subsidised enrichment program will be presented by passionate members with *Working with Children Checks* and first-hand experience on the local Rock-wallaby Recovery Program.

The first part of the program will be delivered in the classroom. From an environmental scientists' perspective, students will explore how human activity has caused the current biodiversity crisis and consider the repercussions for society and global systems, ie. cause and effect relationship.

Students will be reminded that the cell is the basic unit of life and that there is a diverse range of living things that have evolved on Earth, classified into plants, animals, fungi and bacteria, etc. Students will develop their understanding of behavioural and structural adaptations for survival and reproduction, populations, habitats, ecosystems, biotic and abiotic interactions, genetics, photosynthesis, energy flows, food webs and nutrient cycling.

Science and technology can find solutions to conserving and managing sustainable ecosystems. Students' investigation of the real-world problems relating to the protection of a local endangered species will develop their understanding of and skills in applying the processes of Working Scientifically. Students will identify strength and limitations of the Rock-wallaby recovery project and threat abatement strategies, evaluate the monitoring methodology and explore constraints of ecological experimental design.

The classroom component incorporates a multimedia online presentation accompanied by thought-provoking discussion and a creative exercise designed to challenge students to problem-solve and transfer what they have learnt to different threatened species and situations. As a collaborative group exercise, students will develop a mind-map and flow chart for a community-supported threat abatement program for the protection of a real or imagined endangered species, including a scientific monitoring program.

A fieldwork and/or computer lab component will develop students' skill in the application of technology to monitor native and introduced fauna. A selection of interested students will be offered the opportunity to actively participate in monitoring with sand pads, remote cameras and radio-tracking technology for the Shoalhaven Brush-tailed Rock-wallaby Recovery Program.

Compared to other scientific disciplines, our knowledge of the living world is infantile. As scientific research gradually increases our understanding of the interconnectedness of life on this planet, the values of society, industry and government sway. Peoples' perceptions and priorities change. This in turn influences the focus of scientific research and technological development. Unfortunately, much of the current technological trends are actively disconnecting young people from nature. How can we protect biodiversity and life as we know it, if we do not know it or care?

As you would be aware, the aim of the *Science Years 7–10 Syllabus* is to develop students':

- *interest in and enthusiasm for science, as well as an appreciation of its role in finding solutions to contemporary science-related problems and issues*
- *knowledge and understanding of the nature and practice of scientific inquiry, and skills in applying the processes of Working Scientifically*
- *scientific knowledge of and about phenomena within the natural world and the application of their understanding to new situations and events*

- *appreciation of the development and dynamic nature of scientific knowledge, its influence in improving understanding of the natural world and the contribution of evidence-based decisions in informing societies' use of science and technology.*

This enrichment program targets numerous values and attitudes, skills, knowledge and understanding outcomes developed for Stage 4 and Stage 5 for the NSW Science Syllabus: Including, a student:

- appreciates the importance of science in their lives and the role of scientific inquiry in increasing understanding of the world around them SC4-1VA, SC5-1VA
- shows a willingness to engage in finding solutions to science-related personal, social and global issues, including shaping sustainable futures SC4-2VA, SC5-2VA
- demonstrates confidence in making reasoned, evidence-based decisions about the current and future use and influence of science and technology, including ethical considerations SC4-3VA, SC5-3VA
- identifies questions and problems that can be tested or researched and makes predictions based on scientific knowledge SC4-4WS
- develops questions or hypotheses to be investigated scientifically SC5-4WS
- produces a plan to investigate identified questions, hypotheses or problems, individually and collaboratively SC4-5WS, SC5-5WS
- selects and uses appropriate strategies, understanding and skills to produce creative and plausible solutions to identified problems SC4-8WS
- applies scientific understanding and critical thinking skills to suggest possible solutions to identified problems SC5-8WS
- explains how advances in scientific understanding of processes that occur within and on the Earth, influence the choices people make about resource use and management SC4-13ES
- relates the structure and function of living things to their classification, survival and reproduction SC4-14LW
- analyses interactions between components and processes within biological systems SC5-14L
- explains how new biological evidence changes people's understanding of the world SC4-15LW
- explains how biological understanding has advanced through scientific discoveries, technological developments and the needs of society SC5-15LW
- presents science ideas and evidence for a particular purpose and to a specific audience, using appropriate scientific language, conventions and representations SC5-9WS

This enrichment program strongly links with the Stage 5 and 6 Earth and Environmental Science electives and can be customised to meet specific outcomes.

Looking for a less academic approach? Our predator-prey simulation game is always a huge hit. The 30-40 minute activity begins with a photo-card led story of the Rock-wallabies and their threats. This info is followed by a fun and active predator-prey tag game *dressed up* with reversible Rock-wallaby-Predator masks, habitat and even Friends and NPWS rangers to save our species.

Please contact the friends@rockwallaby.org.au to discuss options or schedule a program for your class.