



GREEN EDUCATION

THE ROLE OF SUSTAINABILITY IN SCHOOLS

“Sustainability is a core component of our education programme, integrated into every year group, preparing our students for life beyond the school gates.” -

RICHARD BAKER, DEPUTY HEAD OPERATIONS AND STAFFING

EMBEDDING THE CONCEPT OF sustainability within a student’s education is incredibly important, as we teach a generation of students who have developed the skills to address environmental challenges. As climate change, resource depletion, and biodiversity loss continue to threaten the planet, it has become an ever-increasing necessity to provide young minds with a range of resources to help understand the intricacies of these issues and develop the skills to think and act sustainably. By integrating concepts of sustainability into a child’s education, Cranbrook not only promotes environmental stewardship but also instils the values of responsibility, innovation, and resilience.

Our comprehensive approach to teaching sustainability, from Pre-School to Year 12, prepares students to be proactive leaders who can contribute to a more sustainable future.

Teaching sustainability in our Pre-Schools.

THE COORDINATOR OF CRANBROOK’S two Pre-Schools, Abigail McFarlane, says awareness of the environment is promoted through daily practices, interactions, and resources. “We are incredibly proud to have a Sustainability Focus Group, made up of our teachers and educators, with the purpose of thinking about sustainability across the curriculum, classroom, administrative and everyday practice. Our Sustainability Focus Group exists along with our other groups - Equity, Inclusivity and High Expectations Focus Group and the Aboriginal and Torres Strait Islander Perspectives Focus Group,” she says.

Teachers, educators, children and families are encouraged to engage in innovative practices and appreciate the wonder of the natural world while protecting the planet for future generations. The concepts of reduce, re-use and recycle are part of everyday practice for both children and educators to build lifelong attitudes towards sustainable practices.

“We attend Bush School in Centennial Park as part of our ‘Sharing the plant’ unit of inquiry, where we explore how our actions impact living things. We also participate in Clean Up Australia Day with families from both Pre-Schools, which is a wonderful opportunity to bring families together so the children can put their learning into action. World Ocean Day is also an important part of the calendar. We learn about plastic pollution by creating a Save the Ocean obstacle course, where children collect plastic bottles and refuse as the children tackle the obstacle course,” Abigail says.

Teachers and educators make sustainable practices a part of the daily

routine by recycling, gardening, energy conservation, water conservation and sustainable equipment purchases.

Abigail says educators also role model and discuss sustainable practices as part of the Pre-School’s curriculum. “We also encourage the application of sustainable practices in the home environment,” she says.

Junior School’s Bee Project initiative

RICHARD BAKER, DEPUTY HEAD of Operations and Staffing proudly announced the Junior School has secured a prestigious grant from the Woollahra Council to establish a native garden. “This initiative is a testament to the collaborative spirit between the broader community and the School to improve the environment” he remarks.

In a generous gesture, the Year 6 Class of 2023 gifted the Junior School with two native bee hives upon their graduation. “This contribution has been invaluable,” Richard says. “It has allowed our students to engage deeply with the ecosystem, learning about the specific plants needed to attract bees and actively participating in the planting of a native garden along the school driveway. We anticipate introducing the native bees in Spring this year,” he added.

Richard emphasises the importance of sustainability in the School’s curriculum: “Sustainability is a core component of our education programme, integrated into every year group, preparing our students for life beyond the school gates.”

A highlight of the project has been the leadership of Paulette O’Hara, Year 5 and 6 Educational Development Teacher, who spearheaded the Bee Project, inspiring her peers and coordinating efforts to ensure its success.

The Junior School’s Environmental Leaders have been instrumental in driving ongoing contributions to environmental and sustainability efforts. These dedicated students organise and participate in initiatives such as Clean Up Australia Day and Take 3 for the Sea, demonstrating their commitment to preserving and protecting the environment. Additionally, the Community Service Coordinators play a vital role in programmes like Boots for the Bush, collecting football boots for communities in need.

This project not only enhances the school’s environment but also instils a strong sense of responsibility and environmental stewardship in the students, fostering a generation of conscious and proactive citizens.



Day to day practices include...

A composting bin to reduce food waste. Teachers and educators discuss with the children and families which foods can be composted. The children are involved in maintaining the compost.

Energy and water conservation practices include turning off lights and air-conditioning when a room is not in use, and emptying water play containers onto garden areas.

Equipment is eco-friendly where possible. Teachers and educators reduce the amount of plastic and disposable equipment they purchase and select materials that are made of natural materials and fibres.

‘Nude’ foods (food without plastic wrap) are encouraged.

Fruit and vegetables are planted in the garden and maintained by students, who both water and weed the garden beds.

The importance of reducing and re-using paper and paper towels. Students also learn about where paper comes from.

The Pre-Schools have a library of books teaching all aspects of sustainability for the children to use for research and the educators to read to the children as part of their intentional teaching sessions.

SUSTAINABILITY

Teaching sustainability at the Junior School

GENET ERICKSON-ADAM, DEPUTY Head of Curriculum, P-6, says teaching sustainability is incredibly important for futureproofing and preparing students for real-world challenges. “These little people are inheriting our world... so we want them to make great decisions about its future. Sustainability is not only about environmental issues but also about ethical and social considerations,” she says.

Sustainability is one of the three cross-curriculum priorities in the Australian Curriculum and is also embedded into the IB Primary Years Programme, where teachers draw on relevant real-world issues and encourage critical thinking and problem-solving.

Genet says this means that sustainability is integrated across various subjects and year levels. “Teachers incorporate sustainability concepts across all key learning areas, particularly within the units of inquiry,” she says.

The NSW Geography and Science syllabus includes the study of ecosystems, conservation, renewable and non-renewable resources, environmental issues, and the impacts of human activities on the environment, while the NSW PDHPE syllabus also includes content related to responsible

citizenship, ethics and personal responsibility, encouraging students to think about their role in creating a sustainable future.

Indigenous perspectives and knowledge are also integrated into the curriculum in NSW, recognising the importance of traditional ecological knowledge and sustainable practices. Indigenous experiences are also taught at Cranbrook’s Wolgan Valley campus, located on Wiradjuri country.

The IB Primary Years Programme (PYP) also places a strong emphasis on sustainability and environmental education across its programmes. Genet says the PYP is designed to nurture students’ development as responsible global citizens, and sustainability is a key component of this approach. “Within the PYP, one of the six transdisciplinary themes is ‘Sharing the Planet,’ which is directly related to sustainability. This theme encourages students to explore issues such as environmental stewardship, interdependence and responsible citizenship. Students investigate real-world problems and develop an understanding of their role in preserving the planet,” she says.

Within units of inquiry, students are encouraged to explore sustainability from both local and global perspectives. “They learn about the challenges and solutions related to sustainability in their immediate community and the wider world, fostering a sense of global-mindedness and responsibility. Often, parents with expertise or other community members come in as speakers to share their knowledge in this area. For example, we have hosted speakers in the Junior School who have come in to discuss sustainable practices on their farms, changes in the processes used in manufacturing, and how they are minimising the environmental impact of their businesses. Indigenous perspectives are explored through incursions or excursions addressing traditional ecological practices of First Nations peoples,” she says.

Sustainability in the Senior School

INCORPORATING SUSTAINABILITY into the curriculum helps prepare students not only to understand and address current environmental challenges, but to also become proactive, informed individuals who are capable of leading sustainable practices in their personal lives and professional careers. Learning about sustainability across interdisciplinary learning, their environmental responsibility, renewable energy, equitable access, problem solving skills readies each student to become global citizens. Cranbrook’s Heads of Department have provided a round-up of how sustainability is taught in key subjects across the curriculum.

ENGLISH

Head of English, Stephen Henriques, says the new English curriculum provides many opportunities to teach students about sustainable concepts. “We are able to explore environmental and social sustainability from the beginning for Year 7 with the Unleashing Creativity unit, right through to a Visions of Australia unit in Year 10. This body of work encourages students to engage with and understand the critical importance of sustainable practices and cultural perspectives throughout their educational journey,” he says.

GEOGRAPHY

Sustainability is at the core of Cranbrook’s Geography teaching. Head of Social Sciences Paulina White says students investigate local environmental issues and management strategies for our coastal harbour close to school in Rose Bay. “This involves fieldwork for students in Years 9 and 10. The Year 12 Geographers look at sustainability issues and strategies in all their units, including their viticulture case study which includes a site visit to a vineyard in the Hunter Valley,” she says.

PHYSICAL EDUCATION

Sustainability is tied to several units teaching in PE. Head of PE, Thomas Pyle, says this includes units on respect, exploring how promoting and sustaining the environment contribute to healthy communities and individual behaviours, nutrition and the importance of healthy foods, the food industry’s approach to sustainability, and the roles of Government in keeping our community clean and safe. “In practical units of study, students are provided with opportunities to develop a connection with outdoor and natural environments, and to develop an appreciation of the interrelationship between the health, safety and wellbeing of people and their environments,” Thomas says.

HISTORY

Anne Byrnes, Head of the History department, says the concept of sustainability is taught in Year 8 when students study the global context of the Khmer Empire. “The concept of sustainability implies the notion of living within our means, and it is central to an understanding of the nature of interactions between environmental systems and societies. As a consequence, students understand that resources help a civilisation to develop and need to be used wisely,” she says. Students study the cultural achievements of the Khmer civilisation, including its system of water management and the building of the temples of Angkor. They also consider theories about the decline of Angkor, such as the overuse of water resources, neglect of public works as a result of ongoing war, and the effects of climate change.

MATHS

Head of Mathematics, Ryan Sadler, says sustainability is taught across many areas of Mathematics courses. “These include environmental data analysis, and sustainable resource management. Maths study also incorporates real-world environmental data into Mathematics lessons, such as climate change data, biodiversity statistics, or energy consumption data,” he says. “We also teach students to use mathematical modelling, statistics, and graphing to analyse and interpret environmental data, helping them understand the impact of human activities on the environment.” Students can study the mathematics of resource allocation, optimal harvesting, and sustainable farming practices. Green Building and Design - integrate sustainability concepts into geometry and algebra by exploring green building and design concepts.

SCIENCE

Sustainability is covered in several of our topics in the Science curriculum. Head of Science, John Horton, says as an ongoing theme right through from Years 7 to 12, as one of the International Baccalaureate MYP Global contexts is Globalisation and Sustainability. “In Year 9 one of our topics called Working with the Earth is focussed on sustainable practices, and really allows students an in-depth exploration of this topic,” he says.

TAS

The Technological and Applied Studies (TAS) Department is one of Cranbrook’s most industrious places! Head of TAS, Joel Budd, consistently reuses, reduces, and recycles materials for student projects throughout the Senior School. “We facilitate Computer Aided Design, which we call CAD, with students across Stage 4 to 6, modelling prototypes before the manufacturing stage. We instil with students the design philosophy of cradle-to-cradle and replace the make-take-dispose approach,” Joel says.

MUSIC

Head of Music, Phillip Beverley, says many students are moving to digital music to save paper. He says every senior student studies the ‘Australian Music’ unit, which explores in part the Indigenous Connection with land and how to preserve and appreciate it. “Music is a very sustainable art form, a single instrument lasts hundreds of years,” he says.

DRAMA

Acting Head of Drama, Andrew Bensen, says the Drama productions at the Junior and Senior School reuse and recycle timber for set building. He says that the set from the School musical, *School of Rock*, has been repurposed, repainted, and redesigned for every junior and senior production over the

past two years. “This has allowed our students to become aware of the limitations of timber as a resource and the budgetary restraints of productions, but also by helping to ensure they think about how a set can be redesigned and reimaged for different performance spaces. It forces them to think creatively,” he says. In the classroom, sustainability is being achieved with digital copies of scripts online and asking students to be judicious with how they print scripts and re-use class copies of scripts between classes. Drama students are often globally minded and emotionally intelligent students who are thinking about sustainability options and lead these discussions in the classroom and the rehearsal space.

VISUAL ARTS

In Visual Arts, sustainability is ingrained throughout the curriculum, from Years 7 to 10. Head of Visual Arts Georgia Neeson says that through a conscious adherence to the principles of reducing, reusing, and recycling materials, students learn the importance of ecological responsibility in creative endeavours. “Beginning in Year 7, students delve into the realm of innovative technologies within architecture, where sustainability takes centre stage in the exploration of contemporary design. While Years 9 and 10 students in Photographic and Digital Media eschew paper for digital portfolios, reducing waste. Additionally, the Visual Arts and Design course in Years 9 and 10 delves into sustainability within architecture and design processes,” she says. ■



The PYP units of inquiry across the Junior School years

KINDERGARTEN

Cranbrook’s youngest learners build a foundation for understanding sustainability by learning to take responsibility to care for other living things.

YEAR 1

Students explore sustainable farming practices in their unit about how plants and animals are used for food and fibre products.

YEAR 2

Students explore the distribution of water on our planet, how it is managed and how we can use water in a sustainable way.

YEAR 3

This year group investigate the impact of our food choices on the environment.

YEAR 4

How humans utilise Earth’s resources is at the core of the Year 4 unit of inquiry which focuses on responsible solutions to address needs and opportunities used in our world.

YEAR 5

Students apply their understanding of sustainable practices in a few different units and share their understanding of how to be critical consumers and creators.

YEAR 6

Students apply and deepen their understanding of sustainability in units about innovation and informed solutions, as well as the sustainable practices used in primary industries today and in the future.

