

STEM
Term 3, 2021

At Berwick Lodge Primary School, we use STEM to help students develop a range of life-long skills. We teach students to work cooperatively in group settings, build upon prior learning, make conceptual connections, and take away meaningful content.

In the program, students use a range of tools to create code, build circuits, construct robotic devices and produce their own films. They use software such as Scratch Jr in the junior school, Minecraft: Education Edition in the middle school and iMovie in the senior school.

As the students learn in a hands-on way, they build their agency, problem solving skills and knowledge of the importance of STEM in the 21st Century.

- Prep: Students learn to code basic block algorithms. They move away from Tynker on the iPads to learn new digital skills, concepts and thinking skills via the laptop computers. They continue to develop computational thinking skills and multiplicative thinking strategies. They will also use digital technologies to capture and edit images and sounds and text to tell stories.

- Grade 1/2: Students start to build an awareness of digital systems, system engineering and how coding connects to the real world of robotics via building LEGO WeDo robots. They develop open ended learning skills, social and collaborative skills are emphasised and team building is incorporated into the WeDo sessions. The WeDo kits expand knowledge and build academic and 21st century skills in students to create active, collaborative, lifelong learners. They are introduced to numerical and text based codes into literacy and numeracy. Through the practical application of technologies, students develop dexterity, fine motor skills and coordination through experiential activities.

- Grade 3/4: Students from across the G3/G4 cohort participate in weekly 45 minute Minecraft: Education Edition lessons. This term focuses on using Minecraft to provide students with an engaging activity and to support students to build 21st century skills and coding skills. Focused and engaging activities allow students to work at their own pace and stay challenged. The classroom version of the hugely popular game Minecraft the Education Edition has been specifically created to immerse students in various Minecraft

worlds to promote creativity, problem solving, critical thinking, and collaboration between students.

- Grade 5/6: This term, the senior school students will participate in writing, recording and editing their own films in our 2021 filmmaking project. Filmmaking can play a key role in supporting the development of essential transferable skills among students. Applicable right across the senior school academic curriculum, it's not only a fun and engaging activity but it can also make a real difference to a young person's learning journey. Filmmaking provides a great opportunity for young people to work within a team, building trust and respect. Filmmaking is also inclusive and helps to develop a variety of skills and abilities – creative thinking is enhanced by developing ideas; writing skills and literacy are expanded by scriptwriting; organisational skills are progressed by becoming a part of, or leading, a crew; and presentation and performance skills are improved by starring in the films.