Project Spark - Engaging young minds for brighter futures

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PROJECT SPARK is a whole of school, sequenced robotics program at Brighton Primary School which forms part of our STEM learning approach. PROJECT SPARK aims to improve student engagement and to develop 21st century skills including: programming, problem solving, collaboration, risk taking, resilience and creativity. PROJECT SPARK was ignited by way of a $30,000 grant from Schools Plus. One of the strengths of this project is the phased increase in complexity of the robots to suit the needs, capability and age ranges of students.

Building capacity in teachers and student mentors was key to initiating PROJECT SPARK. Professional learning remains essential to maximising the impact on student learning. Close collaboration with Tasmanian Department of Education Curriculum Services and the University of Adelaide ensured quality professional learning for teachers.

Central to PROJECT SPARK is the explicit seamless integration of robotics into learning programs with strong links to the Australian National Curriculum General Capabilities and specific curriculum content rather than being regarded as an add-on robotics lesson. For example, Prep/1 students are learning to program the Blue-Bots to move in different directions and follow a simple path linked to their inquiry on recycling centres. Grade 1/2 students are learning to code Ozobots to knock a tenpin over linking to their inquiry into forces. Grade 3/4 students are exploring properties of matter by programming LEGO WeDo 2.0 robots to travel over a range of different types of materials. Finally, Grade 5/6 students are using their LEGO EV3 robots to replicate migration journeys to Australia. The EV3’s have been transformed into ships, boats and aeroplanes. Assessment rubrics are used to interpret and grade student learning against clear criteria and standards.

Looking forward it is our goal that when you walk into a classroom you notice a previously disengaged student working collaboratively with a partner or small group, using a robot to solve a problem related to his/her learning.

Teachers have noted a marked increase in student engagement resulting from PROJECT SPARK and we believe that the project is in fact “engaging young minds for brighter futures”. We would love to share our journey and what we have learnt so far with you, particularly around authentic integration and assessment of student learning using robotics.