

# Internet of Things Kitchen Gardens

## Outline of Project

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STEM education needs to be delivered in a way that engages with students' interests and demonstrates how these skills can intertwine with the things they love; it can no longer be presented as an abstract concept with no connection to their lives.

Starting in Year 3, the proposed Internet of Things Kitchen Garden (IoT KG) program will use schools' existing kitchen garden programs of schools as an authentic context for a journey of discovery that combines Science and IT. It will utilise simplified, inexpensive IoT devices to collect meaningful but easy-to-understand environmental data in the school's kitchen garden and will use this data as the basis of age-adequate scientific enquiry processes that investigate core aspects of the garden's well-being, such as growth speeds, yield, plant health, etc. In doing so, the program engages students with the principles of an interconnected world and the IoT technology that will pervade their lives as they grow up. As students' knowledge and interest grows, they will graduate to more complex processes and, eventually, will feel empowered to explore their natural curiosity and creativity to develop entrepreneurial solutions to problems they have encountered.



The IoT KG initiative is truly gender neutral, and authentically motivated by a non-IT application context with positive societal impact. What sets this initiative apart is that it will not just focus on technology and its use, but will support a mindset of data-centric reasoning.

### ACADEMIC LEADERSHIP

**Professor Bernd Meyer**, *Associate Dean of Graduate Research for the Faculty of IT; former Deputy Dean of Education and Director of Education Outreach*, has broad experience in IT outreach and school curriculum design. He is working closely with secondary educators and the Victorian Curriculum and Assessment authority on a new kind of curriculum that investigates computing beyond programming.