# Webinar Handout

## CURRENT TECH TRENDS: for implementing Digital Technologies in Secondary Years

**Presented by: Nathan Alison Digital Learning and Teaching Victoria  (DLTV) and Martin Richards Content Manager Digital Technologies Hub**

Here is a list of relevant resources on the DT Hub

**DEVELOPMENT BOARDS (microcontrollers)**

| | |
|---|---|
| B4 formerly **BlueBerry 4**<br><br>**B4 Computer Processor Kit** | The B4 is an educational computer kit available for purchase with an accompanying support guide. |
| Getting Started with LilyPad | The LilyPad system is a set of sewable electronic pieces designed to help you build soft, sewable, interactive e-textile (electronic textile) projects. |
| Intro to start Arduino kit | These videos provide the basics of programming your Arduino and explains how to use the start kit and software. |
| 149 robot projects | These are Arduino -based projects that may be used to provide a starting point for students to design their own robots to complete a task. |
| The MicroPython guide to BBC micro:bit<br><br>Features of the micro:bit!<br><br>Morse code network simulation lesson sequence | Use this guide to learn about using the micro:bit with BBC's online MicroPython code editor.<br><br>Learn about the micro:bit.features.<br><br>Students use common, simple classroom electronics (eg the BBC micro:bit) to simulate a packet switching network, using Morse code as a metaphor. |
| Raspberry Pi | This website contains resources for using, teaching and learning with the Raspberry Pi a small, low cost computer. |

**ROBOTICS**

| | |
|---|---|
| **Robots in the 2016 Australian Classroom** | This article describes pros and cons of different robots and robotic kits available to schools. This document has been compiled based on practicing teacher's feedback. |
| DT Hub: Scope and sequence Yr 8 **Robotics and embedded systems** | A sequence of lesson ideas with accompanying resources. Students incorporate a programming board when creating a digital solution so solve a design problem. |
| DT Hub: Scope and sequence Yr 10 Robotics and embedded systems | A sequence of lesson ideas with accompanying resources<br><br>Four projects to suit a range of student skills and interest. Refer to DRAFT PDF supplied. |
| Civil Aviation Safety Authority Drones | Information about the use of drones. Much of this information is about larger outdoor drones rather than typical ones (micro drones) used in the classroom. |

**AR and VR**

| | |
|---|---|
| **Immersed in the future: a roadmap of existing and emerging technologies for career exploration** | This report provides an overview of existing and emerging digital technologies and their potential application for K-12 education and career exploration. The report scopes a range of technologies including virtual and augmented reality, haptics, tangibles, and new video media. |
| **Augmented Reality in Education Series - Part 1: What? How? Apps? Examples? Demo?** | Find out how augmented reality can be used in the classroom. |
| DT Hub: Scope and sequence Yr9 Collaborative project: Augmented reality | A sequence of lesson ideas with accompanying resources<br><br>Refer to DRAFT PDF supplied in handouts |
| **HP Reveal** | Formerly known as Aurasma, HP Reveal is available for Android and iOS phones and tablets. Almost everything can be done using the phone/tablet and has been used in schools by teachers and students. |
| **HP Reveal web-based studio** | HP Reveal offers a web-based studio that allows the user to add additional features to develop skills in augmented reality (AR) and virtual reality (VR). |
| **Metaverse** | An easy way to create Augmented Reality experiences. |

| | |
|---|---|
| **CoSpaces Edu** | A platform to make VR in the classroom. |
| **VR creation with CoSpaces: The Basics** | Create virtual reality with CoSpaces a new tool to explore Virtual reality (VR). |
| Class VR<br>http://immersiveit.com.au/ | Use Class VR to create immersive and engaging experiences |
| **ARKit** | ARKit is a platform that can also be used to create augmented reality (AR) and virtual reality (VR) applications. |
| **Unity Personal** | Unity is a game development engine that can also be used to create augmented reality (AR) and virtual reality (VR) applications. There is a free version available for students and for personal use. |
| **Roundme Virtual Reality 360 degree tours** | This site provides the opportunity for users to travel on 360 degree virtual tours through global destinations of their choice. |