

DATTA Vic Teachers' Toolkit

Teaching Primary Design & Technologies



THIS IS A FREE TOOLKIT PRODUCED AND COLLATED BY DATTA VIC. [JOIN US TO ACCESS OUR EXTENSIVE LIBRARY OF DESIGN & TECHNOLOGIES RESOURCES](#)



In November 2020, DATTA Vic, HEV, Primary Connections and Deakin University partnered on this virtual STEM education program for primary teachers. Design & Technologies (D&T) is the perfect vehicle for delivering successful STEM programs in primary schools. D&T fosters creativity, curiosity and a passion for problem solving. It encourages students to use their skills and knowledge to address issues – for themselves and their communities. D&T has an applied, project-based way of teaching that empowers young people to have a positive impact on the world around them. This package of resources features the webinar recordings and presenter slides from each of the 3 sessions. The aim of the project was to build capacity in primary teachers to deliver engaging STEM programs that are relevant for their students and their school community.

Webinar 1

- Teaching Applied STEM in Design & Technologies by Laura Murphy, DATTA Vic
- Primary Connections STEM units of work by Nicola and Jennifer Lawrence, Primary Connections

Webinar 2

- The Model Solar Vehicle Challenge by Dr. Wendy Jobling, Deakin University
- The Frog Bog Project by Patrizia Luna, St Raphael's Primary

Webinar 3

- STEM by Design by Peter Murphy, Northcote High School
- Insect Discovery STEAM Investigation by Sally Barlow, Guildford Primary
- STEM at Mackellar Primary - by Sally Wilson - Focus on Food

- [Primary Connections](#) is a flagship primary school STEM program from the Australian Academy of Science. It is an innovative approach to teaching and learning which aims to enhance primary school teachers' confidence and competence for teaching STEM.
- [The Public Transport Teachers' Hub](#) has a range of resources on public transport safety, some of which address the Design & Technologies curriculum and the capabilities
- The [3D PrintaCar Inquiry Planner](#) is a unit outline on 3D Printing & Technologies, written by Laburnum Primary School, the winners of the Quantum Victoria 2015 3D PrintaCar Challenge

- [The Foil Challenge](#) is a great hands-on introduction to design thinking for younger students from The Institute of Design at Stanford
- The [Schoolhouse Centre for Educational Innovation](#) have created a fantastic design process map which is based on IDEO's Design Thinking model.
 - Click [HERE](#) for the Primary Guide
 - Click [HERE](#) for the Facilitator's Guide
- This is a great guide from [Design 39 Campus](#) in San Diego on how to use design thinking with younger students to tackle global problems. Click [HERE](#) to watch
- [The Junior Landcare Trust](#) have a great range of sustainability and biodiversity resources that are perfect for Design & Technologies
- [The James Dyson Foundation](#) have a library of design and engineering projects for the classroom
- DATTA Vic and [Discovery Science & Technology Centre Bendigo](#) collaborated on *Sounds Like - a Primary STEM Project* which is based on sound and music. Click [HERE](#) download the lesson plan, complete with extension activities
- **STEM by Design: Accessible Cities** is a Year 5/6 project that uses the design process to solve the problem of equality of access to life and work in a city for people with a disability. Click [HERE](#) to download the resources, which include a teacher notes, a class PowerPoint and student worksheet
- [The Primary Industries Education Foundation Australia](#) has a great range of resources for teaching Food & Fibre
- [Forest Learning](#) is a great site for education resources on forests and forest-based projects
- The [Stephanie Alexander Kitchen Garden Foundation](#) is a wonderful resource for education on food and fibre production, health and food technology
- [Create the Future: Get Your School Making](#) is a great guide to setting up maker activities for your classes
- [Questacon](#) has a library of STEM projects perfect for the primary classroom
- [PBS Design Squad](#) has loads of fun, hands-on science and technology projects. They have published a fantastic [Activity Guide](#) on engineering challenges for 9-12 year olds
- **Practical Action** are a group who work to tackle poverty and climate change around the world. Their [website](#) has a great range of projects perfect for the Design & Technologies classroom, searchable by age and subject
- [Teaching Ideas](#) has a good library of Design & Technologies projects and units
- [Instructables](#) have guides for hands-on engineering projects for kids

- Take the **Station Ideation - Minecraft Mission Challenge** with your students - a fantastic resource which gets your class designing a space for the new Town Hall Station - all based on the needs of a diverse group of passengers!
 - Museums Victoria have published a range of student resources which explore **STEM and Innovation**
 - The UK's Design & Technology Association had produced a **Design Thinking Random Scenario Generator** - great for setting up some short design tasks for students
 - ABC iview have a fantastic series for young people called **So You Want to be a Designer** - each episode is less than 30 mins long, and they explore topics like user-centred design, life-cycle assessment, mass manufacture and sustainability.
 - Cisco's **Global Problem Solvers** is an online series, based on a team of teenage superheros, which promotes social entrepreneurship in years 4-8
 - You can challenge your student to tackle the UN's 17 Sustainable Development Goals with the **World's Largest Lesson** website

Disclaimer: These resources the work of practising teachers or education providers, who have shared them in good faith and for general information only. They do not necessarily reflect the views of DATTA Vic, nor do DATTA Vic endorse the accuracy or suitability of the information for any particular purpose. Note that this material has not been verified by VCAA. Responsibility in response to the material must be accepted by users. For VCE, teachers must refer to the mandatory documents in relation to the VCE Product Design and Technology/Systems Engineering study designs from VCAA, which are available online and updated every year. For safety information, teachers must consult the relevant OHS Hazard Management section of the department's website.

DATTA Vic Abbotsford Convent Room C1.22 1 St Heliers Street Abbotsford VIC 3067
P: 03 9349 5809 E: pl@datta.vic.edu.au W: www.datta.vic.edu.au