

WEDNESDAY ALL DAY WORKSHOPS

<p>Andrew Fairbank - UNSW Engineering Studies Day Stage 6 focussing on Materials. This workshop is to be held off site at the School of Material Science and Engineering UNSW.</p>	
<p>Martin Naughton, Gerald Harding Sharpening Stage 4 - 6. This workshop has been presented before and is back by popular request.</p>	<p>Learn how to quickly sharpen and hone your blades and tools to keep them in top condition and allow your students to produce higher quality projects. You be shown techniques that will considerably reduce your time sharpen tools and make them much sharper. Would you like to sharpen and hone a chisel in 30 seconds? You will be shown how to do this and it will be razor sharp. Please bring blunt chisels and plane blades, drills, metal & wood lathe tools, router bits with you, that you will need sharpen. Also, you will need your own safety glasses and appropriate clothing & footwear. Even if you are an experienced teacher, you will gain a lot from this course!</p>
<p>Rob Newell and Phil Legge - Mechatronics for beginners. Make a robotic car using Arduino Stage 4 Technology Mandatory to Stage 6 Robotics and Coding</p>	<p>The robotic car is an Arduino based project aimed at satisfying the Digital Technologies (especially coding) sections of the Mandatory Technology syllabus. The aim has been to develop a fun and easy way to learn coding. Our students build a chassis from laser-cut MDF. They solder some wires and place electrical components. A base code is uploaded that will make the robot drive forward for 1 second. Students start coding by adjusting the delay to make the car drive 2 metres. Challenges escalate in difficulty from straight lines, squares, triangles and circles. The ultrasonic sensor comes in to play for the next level of challenges including obstacle avoidance. More advanced students can upgrade to a pixy cam and code the robot to play soccer using vision recognition. Participants would get the most out of the session if they brought their own laptop (Mac or PC). Participants will make their own robot and begin to code it during a 6 - hour workshop.</p>
<p>Dr Tim Kitchen and Jason Carthew Adobe Day. These workshops are to be held off site at Adobe. You will do both courses.</p>	<p>Animating using the Adobe Creative Cloud. Participants will explore how Adobe Animate, After Effects and Photoshop can provide different ways to animate. From cell-based animations to particle effects, the workshop will provide the opportunity to see how to create effective animations using these industry-strength applications. Requirements: Participants will need laptops with Adobe Animate, Adobe Photoshop and Adobe After Effects installed. maximum of 30 participants. Video production made easy with Adobe Participants will explore the workflow between a range of Adobe products such as Spark Video, Premiere Rush, Premiere Pro and Photoshop. Requirements: Participants will need laptops with Adobe Photoshop CC, Adobe Premiere Pro CC and the new Premiere Rush is available. Note that some school systems may not allow Premiere Rush. maximum of 30 participants</p>
<p>Scott Lipsham RGB Arduino driven night light Stage 5 STEM</p>	<p>Arduino Controlled RGB NightLight - this all day workshop offers participants the opportunity to solder and construct an electronic circuit using standard electronic components on Veroboard. Coding an Arduino connected to the circuit allows you to colour mix the RGB LED's in a variety of ways. A LDR (light dependent resistor) in circuit tells the Arduino whether it is night or day. The projects covers some basic circuit design and associated electronic skills; looks at utilising a range of standard type electronic components and looks at the relationship or process of controlling traditional electronic and/or mechanical devices through the use of coding. In this instance it is using the Arduino platform. The whole project is boxed and used to shine coloured light up through a lasered acrylic image. Tools, materials, Circuit diagrams and explanation supplied. Participants need a laptop with the Arduino IDE installed.</p>
<p>Rob Torok - Advanced Play with LEGO MINDSTORMS EV3 - for teachers with prior knowledge and experience with using LEGO MINDSTORMS EV3</p>	<p>The LEGO MINDSTORMS EV3 set enables students to explore science, technology, engineering, and mathematics through a wide range of inherently motivating design challenges. This session covers the basics of the EV3 set, provides hands-on opportunities for using it, and explores the many ways it can be included in your classroom. Suitable for secondary school classrooms. Participants will be required to bring a laptop with the LEGO MINDSTORMS Education EV3 Software (EV3 Lab) installed. This software is available to download for free from: https://education.lego.com/en-au/downloads/mindstorms-ev3/software This full-day workshop is intended for any teachers who have prior experience using LEGO MINDSTORMS EV3 with their students. Although there will be flexibility to accommodate a wide range of interest and experience this is not a workshop for beginners. The workshop will consist of three sessions. Each session framed in terms of a particular design challenge or theme that will provide opportunities for participants to develop skills relating to the following techniques. • Advanced EV3 programming (including arrays and design patterns) • Data logging • Feedback and controls (including EV3-EV3 bluetooth)</p>
<p>Monique Dalli - Resin Cast Jewellery</p>	<p>Leaabout two types of resin - a 2:1 clear epoxy and a 1:1 polyurethane resin, these can be used for small scale projects such as jewellery and larger scale moulds or project tops. Participants will make three projects that demonstrate the resin properties and flexibility so as to inspire your classroom and students project making 1. Found objects in resin - this demonstrates how to add repurposed items suspended into resin and basic mixing techniques. 2. Resin pendant - this project demonstrates using moulds, dyes and timber with resin, participants get to keep their moulds. 3. Resin cheese board - this demonstrates how to add a vein as well as topping timber with resin, participants make their own cheese board and get to take home the project sheets/instructions to use with their classes. These techniques can be appropriated to larger scale projects. Skills learnt include: - Mixing resin safely - Understanding resin types and uses - Using dyes and colours - Mould types - Basics of creating your own moulds - Creating veins in timber using a router IF time permits we will look at how 3D printing can be used to make moulds.</p>

Peter Thompson - Introduction to digital control Technology Stage 4	This 6 - hour workshop is an easy entry into control technology. The course will introduce concepts of coding with real world devices, an introduction to microprocessors via a locally developed board with built in I/O, motor driver, multiple LEDs, LDR, buzzer output. Easily learn to code a microprocessor. This is a low-cost entry appropriate to schools using free software for simulation and experimentation. This workshop will address Materials, Engineering and Digital outcomes of the 2019 Technology Mandatory syllabus. Course includes one 'Techstarter' board. Additional sets are available for purchase. Course includes one 'Techstarter' board. Additional sets are available for purchase. Participants will engage in discussion regarding problem / project-based learning, its application in the classroom and how to develop appropriate assessment methodologies. This workshop is suitable for all levels of expertise. Targeted concepts are Project Based Learning, Design Thinking, Computational and Algorithmic thinking and Integrated Learning. Maximum Number: 20
Ruth Thompson - Introduction to coding using scratch Stage 3 - 4	This 6 - hour workshop will introduce teachers to the programming language SCRATCH from MIT. Scratch is a free download. It is a gentle introduction to coding and is appropriate for absolute beginners. Scratch is used to teach a range of subjects in the curriculum in an engaging way. The contemporary popularity of computational and algorithmic thinking leads to curriculum development that embodies these concepts. Learn to make students CREATORS of technology solutions and not just consumers. The tools and pedagogical approaches presented in this course aids teachers to develop meaningful activities using real world project-based approaches. Use it in many cross-curricular activities. Targeted concepts are Project Based Learning, Design Thinking, Computational and Algorithmic thinking and Integrated Learning. Participants need to bring a laptop with Scratch 3.0 installed. Here is the link: https://scratch.mit.edu/download Maximum Number: 20
TECSEXPO ALL DAY WORKSHOPS	
Rob Thompson - LST Group. Target audience- Educators and ancillary staff who are actively using laser cutters in the classroom.	Description- With the increasing popularity of laser cutters in schools, teachers are regularly asking for advice on optimising or maximising their usage. Are jobs taking too long, are there too many jobs or maybe your laser is underutilised? Rob will provide practical, best practice processes that will reduce bottlenecks and encourage more efficient use of the laser in the your classroom. As previously stated, this course will mostly benefit educators and ancillary staff who are actively using laser cutters in the classroom. No devices or software are required, though attendees may wish to take notes. Application tip sheets will be provided. Topics covered will include- Own your laser (Take best advantage of your laser by understanding how it works) Redeeming the time (Design and set out conventions to improve throughput) Cut it better (Proven methods for achieving improved results on commonly lasered materials) Can I laser it? (How to approach new or untried materials) Grill the presenter (The questions you always wanted to ask) Hands On 6 hour workshop Maximum numbers - 20. Minimum numbers - 6
River Pours - with Recycled Timber Drive Marine Services - Dave Giddings	<i>Have you always wanted to know the Tips & Tricks of doing River Pours? How to get rid of those pesky air bubbles in Pour on finishes?</i> This workshop will give you all the Tips & Tricks and correct products to do River Pours and more. By doing your own projects you will be loaded up with heaps of techniques for working with recycled and new timber for making unique woodworking projects. You will gain Tips & Tricks on how to take very ordinary pieces of timber from fence palings to slab timber and turn them into one off masterpieces. The plan is for you to bring your own slab to pour a river no longer than 250mm x 300mm wide. You will do the pour on Wednesday and take it home with you on Friday. We will provide you with a list of goodies (Do not sweat if you do not have timber – we can supply) and tools you will need to bring once advised you have selected our knowledgeable workshop. Practical Areas covered include: ★ River Pours in slab timber for Table Tops and wall features. ★ Learning how to re-purpose recycled timber including how to clean up fill cracks and finishing options. ★ If time permits - High gloss pour On finish equivalent to 40 Plus coats of varnish. ★ Cover off on Clear finishing timber with Clear System. Theory areas covered as you work; ★ A safer way to Work using Bote Cote and other modern technology Epoxies & polyurethanes we will be playing with. ★ Properties of different types of Epoxies & Polyurethanes and why some are safer to use than others. ★ Heaps of Tips & Tricks for achieve good results filling holes, pouring Rivers and high gloss finishes. ★ Why coatings fail. Additional Cost: \$150.00 per teacher including GST. Includes a 1.5 Ltr LuciClear casting Kit, 500ml Pour On Gloss Kit, Bote Cote Boat Building Book. Skill Level: A positive attitude. Do not need previous Wood Working Skills. Minimum – 4 Teachers Maximum 10 Workshop duration: 6 hours. Ideal for Wednesday Session. Conducted by: Dave Giddings of DRIVE Marine Services.
OnGuard Safety Training Bruce Lewis Max number – x10	BYOD Machine Inspections and Maintenance Requirements – Own Mobile Device with QR Reader App installed. Session Brief – Regular Machine Inspections A. Machine Inspections - Practical Experience Participants will: 1. Login in to OnGuard Safety 2. Setup the Machine Inspection Register by adding machines 3. Edit the Serviceability Criteria for each machine added 4. Conduct a sample inspection 5. Develop Machine Inspection Reports B. Maintenance Register - Practical Experience Participants will: 1. Login in to OnGuard Safety 2. Record a sample Maintenance Procedure Knowledge Consolidation Upon returning to school the participant will be able to: 1. add machines to the Machine Inspection Register 2. edit Serviceability Criteria for each machine 3. Conduct Machine Inspections for all the machines at their school http://www.onguardsafety.com.au/forms/JIT_Regular%20Machine%20Inspection%20A4-%204-8-2015.pdf Improve efficiency, reduce paperwork and retrieve data with interactive, customisable machine inspection checklists that can be completed on the spot..... Just-in-Time.... using your tablet, iPad or smartphone. The inspection results are instantly recorded in the Machine Inspection Register. Failed inspection notices are emailed directly to your facilities manager.