



STEMSEL Inventors Club Newsletter

Workshops Location:

eLabtronics upstairs, 51 Byron Place, Adelaide SA 5000

Phone: 0425 868 353 or 8231 5966

Email: miro@stemsel.com

January 2020 STEMSEL Workshops

Make LEDfun :-) electronic soldering – To Take Home

Tuesday 14th January (10.30am – 1.00pm)

Details: Solder electronic parts into a LEDfun PCB board to make and take home.

Learn how circuit boards are put together and assemble your own at the soldering workshop. Students will learn soldering techniques which can be used to create permanent electronic circuits.

YOU PICK one of 8 fun projects to make and take home...

1. Random LEDs	2. Variable LED Chaser
3. Binary Countdown/Alarm	4. Ladder/Reaction Timer Game
5. Blinking Face	6. Doorbell/Alarm
7. Memory/Sequence Game	8. Authentic Pattern Dice using 7 LEDs for Dots



Recommended ages: 10 years old and up.

Cost: \$50 (include LEDfun material and soldering kits to be bring home)

Bring: Snack, drink etc. for break, Windows laptop if possible—otherwise we have spares on loan.

Make Laser Projects! (Fun for Beginners)

Saturday 4th, 11th, 18th, 25th of January (2:45pm - 4:30pm)

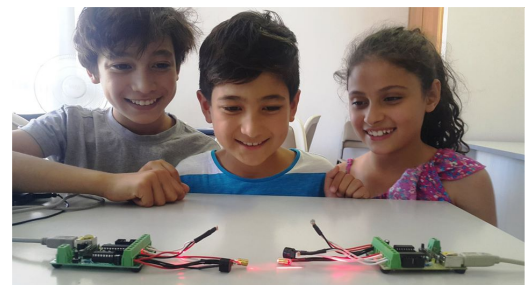
Details: Control a laser pointer using a STEMSEL Controller to make different laser diode project each week (laser pointer) Easy and fun graphical programming using a STEMSEL Controller.

Week 1. Laser security - cut the laser beam to trip the alarm.

Week 2. Send and receive signals by laser! How far away can you be?

Week 3. Heat up a temperature sensor by laser. Control the temperature.

Week 4. Control movement for a Laser light show.



Recommended ages: 9 years old and up

Cost: \$20 per week. Use our laser and STEMSEL inventors kit.

Bring: A Windows laptop if possible (free software) - otherwise we have a few to lend.

Make Talking WiFi Controlled Robots – Intermediate and Beginners

Saturday 4th, 11th, 18th, 25th January (1:00pm – 2:45pm)

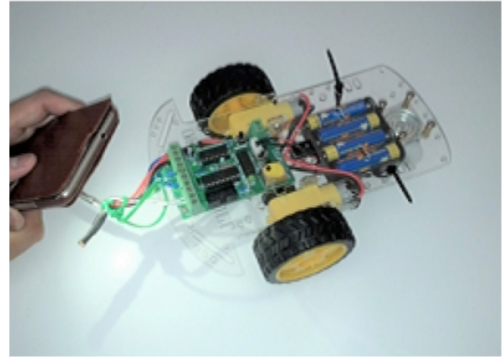
Details: Learn STEM IoT AI and also have fun....
Moving Robots that you assemble and code to Talk.
Make it say "Intruder Alert" or "Object Found" when the light sensor detects an object.
Uses latest runlinc WiFi cyber technology for coding on a web page.

Week 1. Make WiFi control system for robots to move and speak.

Week 2. Make robot with sensor to detects obstacles and says "Object found" then change the voice to what YOU want it to say.

Week 3. Make mars rover robot that sends samples of data to a computer web site that you make

Week 4. Make searching robot that tells you its "Following a trail" and "Found the object"



Robotic Base and STEMSEL Inventors Kit and runlinc WiFi will be on loan with option to buy.

Recommended ages: 10 years up

Cost: Only \$25 per workshop

Please bring a Windows Laptop if you have one, otherwise limited number of loan laptops available :-)

Build Model Sports Stadium with WiFi Scoreboard - Advanced

Saturday 4th, 11th, 18th, 25th of January (2:45pm – 5:00pm)

Details: Build and keep your very own model sports stadium with sensors to send the score to a phone that acts as a WiFi scoreboard. Use 3D printed components to make it more realistic. Add your own materials.
Take it home and play model sports with friends and family. Then enter your WiFi IoT sports model into the Royal Adelaide Show competition. Learn important lessons in assembling and coding WiFi and Phone Web App. Use New runlinc WiFi software to make vision with 1 line of code, and voice with 2 lines of code!

New STEMSEL WiFi programs microchips on a Web Page to make STEM, Artificial Intelligence inventions to control and sense anything, anywhere using mobile devices! Use any smart phone WiFi and browser as scoreboard (no need to install on your phone).

Recommended ages: 10 years old and up

Cost: \$30 per week (\$60 for 2 weeks) – Keep supplied materials

Bring: A Windows laptop if possible (free software) - otherwise we have a few to lend.



Term 1, 2020: STEMSEL Inventors Club Saturdays will start from February 1st 2020.

Beginners (Make B1 Interactive Projects) – 2:45pm to 4:30pm (\$20 per workshop)

Intermediate (High Tech Environment Projects) – 1:00pm to 2:45pm (\$25 per workshop)

Advanced (Models for Competitions) – 2:45pm to 5:00pm (\$30 per workshop)

Home School Workshops: Wednesdays Starting 29th of January 2020 – 10.30am – 12.30pm (discounted to \$15 per week or pre-pay \$135 for 10 weeks)