

Arduino Bootcamp for Teachers

Intake: August 2018

Preparation	Task	Description
	1	Review video "How to get the most out of this bootcamp"
	2	Gather the tools and parts you will need
	3	Enrol to the course on txplore.com to gain access to the content
	4	Book your group calls in your calendar
	5	Learn how to submit work for evaluation or feedback
	6	Introduce your self to the class and instructors in Facebook Messenger

Bootcamp features	1	Daily immersion and completion of objectives
	2	Alternating activities: First day "Learn & Test", Second day "Do"
	3	Day 1: Learn - Test
	4	Day 2: Do
	5	Twice-weekly group bootcamp Zoom meetings
	6	Online support available via Facebook Messenger (responsive within minutes during NSW working hours)
	7	Fully documented via video and downloadable PDF notes. Notes are licenses for one teacher to use in their classroom.



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Day	Wk	Date	Weekday	Activity type	Estimated workload (m)	Title	Activity 1	Activity 2	Activity 3	Activity 4	Activity 5	Activity 6	Quiz	Mini-project
1	1	6-Aug-18	Monday	Learn-Test	90	Introducing the Arduino	Learn about Arduino's pins, power and clock		How to use the digital output pins	How to use the digital input pins	How to use the analog output pins	How to use the analog input pins	Yes	No
2	1	7-Aug-18	Tuesday	Do, Reflect	60	LBD 1 - Introducing the Arduino	-	-	-	-	-	-	No	Yes
3	1	8-Aug-18	Wednesday	Learn-Test	90	The Arduino IDE and your first program	Introduction to the Arduino IDE	The basic parts of an Arduino program (a.k.a. "sketch")	The Preferences window of the Arduino IDE	How to upload a sketch to your Arduino (Windows, Mac)	-	-	Yes	No
4	1	9-Aug-18	Thursday	Do, Reflect	45	The Arduino IDE and your first program	-	-	-	-	-	-	No	Yes
5	1	10-Aug-18	Friday	Learn-Test	120	Introduction to Arduino programming	An introduction to Arduino programming	The basic parts of an Arduino sketch	Creating your own functions	Creating functions with parameters that can return a value	Variables and Variable scope	Constants		

6		11-Aug-18	Saturday	Rest and catchup											
7		12-Aug-18	Sunday	Rest and catchup											
8	2	13-Aug-18	Monday	Do, Reflect	60	Introduction to Arduino programming	-	-	-	-	-	-	-	No	Yes
9	2	14-Aug-18	Tuesday	Learn-Test	75	Control structures	The "if" statement	The "while" statement	The "for" statement	The "switch" statement	-	-	-	Yes	No
10	2	15-Aug-18	Wednesday	Do, Reflect	60	Control structures	-	-	-	-	-	-	-	No	Yes
11	2	16-Aug-18	Thursday	Learn-Test	45	Digital inputs and outputs	How to control an LED	How to read a button	-	-	-	-	-	Yes	No
12	2	17-Aug-18	Friday	Do, Reflect	90	Digital inputs and outputs	-	-	-	-	-	-	-	No	Yes
13		18-Aug-18	Saturday	Rest and catchup											
14		19-Aug-18	Sunday	Rest and catchup											
15	3	20-Aug-18	Monday	Learn-Test	45	Analog inputs and outputs	How to read a potentiometer	How to make an LED fade	-	-	-	-	-	Yes	No
16	3	21-Aug-18	Tuesday	Do, Reflect	90	Analog inputs and outputs	-	-	-	-	-	-	-	No	Yes
17	3	22-Aug-18	Wednesday	Learn	60	Color LEDs	Introducing the color RGB LED	How to wire the RGB LED	How to create colors with the RGB LED	-	-	-	-	No	No
18	3	23-Aug-18	Thursday	Do, Reflect	60	Color LEDs	-	-	-	-	-	-	-	No	Yes
19	3	24-Aug-18	Friday	Learn-Test	60	Color LEDs and libraries	How to use a library to control an RGB LED	How to use the Arduino language documentation	-	-	-	-	-	Yes	No
20		25-Aug-18	Saturday	Rest and catchup											
21		26-Aug-18	Sunday	Rest and catchup											
22	4	27-Aug-18	Monday	Do, Reflect	60	Color LEDs and libraries	-	-	-	-	-	-	-	No	Yes
23	4	28-Aug-18	Tuesday	Learn-Test	60	The light sensor	Introduction to the light sensor	What is a photoresistor and how to wire it	How to select the appropriate fixed resistor for a photoresistor	-	-	-	-	Yes	No
24	4	29-Aug-18	Wednesday	Do, Reflect	60	The light sensor	-	-	-	-	-	-	-	No	Yes
25	4	30-Aug-18	Thursday	Do, Reflect	120	Project: Cylon Lights								No	Yes
26	4	31-Aug-18	Friday												
27		1-Sep-18	Saturday	Rest and catchup											
28		2-Sep-18	Sunday	Rest and catchup											
29	5	3-Sep-18	Monday			Project: Electronic Dice									
30	5	4-Sep-18	Tuesday	Do, Reflect	120	Project: Electronic Dice								No	Yes