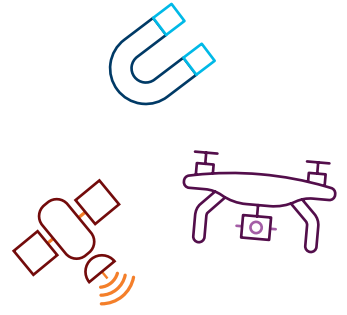


The IET

DIY Faraday Challenge Day

Coding the Future
Teacher Extras





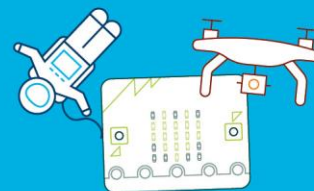
DIY Faraday Challenge Day



Presented to

Signed by

Date



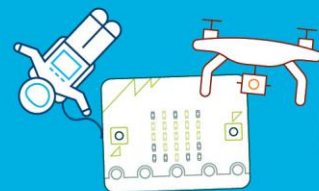
Account sheet

Team.....

You will need to keep an accurate record of all the purchases your team makes.

Materials/resources purchased	Quantity	Cost		Faradays remaining
		Spent	Received	
Total Faradays remaining:				





Student Team Registration Form

Team.....

Faraday Challenge Date:.....

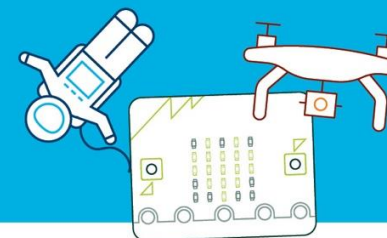
Your School Name:.....

Your Teacher's Name:.....

Team Member Names (please print clearly):

	First name	Surname
1		
2		
3		
4		
5		
6		

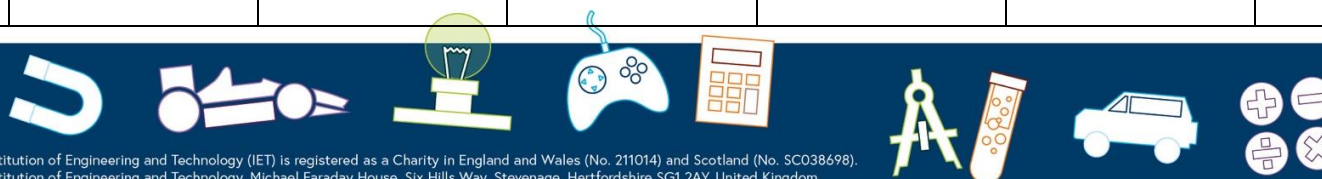


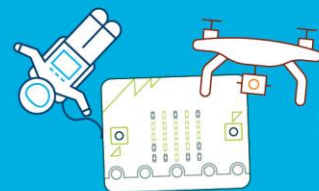


IET Faraday Challenge Day









Shop Manager Balance Sheet School Date

Faradays spent/refunded at each visit to the shop	Team 1	Team 2	Team 3	Team 4	Team 5	Team 6	Team 7
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
TOTAL FARADAYS SPENT							



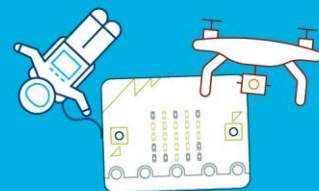


Full list of materials to purchase from the shop

Item	Description	Unit	Cost
Crocodile leads	 Lead with crocodile clips at each end	Each	5 Faradays
Piezo buzzer	 Connect to the rings in a circuit to give a sound output	Each	8 Faradays
LEDs – green + resistor	 LED which can be connected to the rings in circuit – green. Must be used with a resistor.	Each	10 Faradays
LEDs – amber + resistor	 LED which can be connected to the rings in a circuit – amber. Must be used with a resistor.	Each	10 Faradays
Thermistor + resistor	 Component that detects the ambient temperature and changes resistance to allow a current to flow through a circuit. Must be used with a resistor.	Each	15 Faradays
Light Dependent Resistor + resistor	 Component that detects the light level and changes resistance to allow a current to flow through a circuit when it becomes dark. Must be used with a resistor.	Each	15 Faradays
Resistor	 Component used in a circuit to ensure that the correct current is supplied to other electrical components in the circuit.	Each	Comes free with LED, thermistor and LDR
Potentiometer	 Component used to adjust the sensitivity of a sensor in an electrical circuit.	Each	10 Faradays
Polyfoam	A5 foam sheet – assorted colours	Each	10 Faradays
Coloured card	A4 sheet of card – assorted colours	Each	5 Faradays
Tin foil	A conductive material	30cm strip	5 Faradays
Masking tape	Can be used to secure parts in your design - do not stick anything to your BBC micro:bit or it may not work properly.	30cm piece	5 Faradays

Item	Description	Unit	Cost
Sticky tape	Can be used to secure parts in your design - do	30cm piece	5 Faradays





	not stick anything to your BBC micro:bit or it may not work properly.		
Rectangular sponges	Can be used to make pressure switches or enhance your design.	Each	5 Faradays
Cardboard tube	Can be used to reduce or focus light levels or enhance your design	Each	5 Faradays
Cable ties	Can be used to hold your BBC micro:bit onto a background	Each	5 Faradays
Scissors	Used for soft materials only – do not use to cut wires or any part of your BBC micro:bit.	Each	5 Faradays
Stapler	Used to staple soft materials only – do not use to staple anything to your BBC micro:bit	Each	5 Faradays
Hole punch	Used to make small holes in soft materials	Each	5 Faradays
Rulers	Used to measure any part of your product or additional items	Each	5 Faradays
String	Can be used as part of your product design	30cm piece	5 Faradays
Calculators	Can be used to calculate resistance and to help with accounting	Each	FREE
Codes to buy	Complete codes which your team can buy to copy or adapt – ask the shop keeper for information on the codes available for purchase	Each	50 Faradays

AVAILABLE ON THE LAPTOP:

Item	Description	Cost
Coding support sheets	PDFs of support sheets and PowerPoints under 'New to Coding'	FREE
PowerPoint	Basic software for creating a presentation	FREE

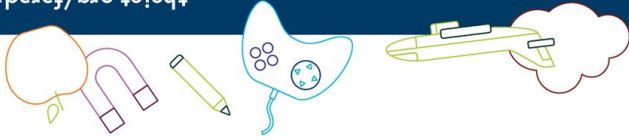
AVAILABLE ON THE JUDGES/PRESENTATION TABLE:

Item	Description	Cost
Coding support sheets	Hard copies (laminated) of 'How to	FREE

The Coding Support sheets can be provided to help students get started on their products. We recommend you print 3 or 4 of each so that students have access to these when needed. You may also wish to put an electronic copy of the document on the laptops/computers the students are working on.

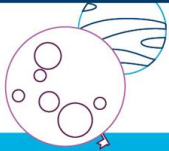


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F5.0

Crocodile leads



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Crocodile leads

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String



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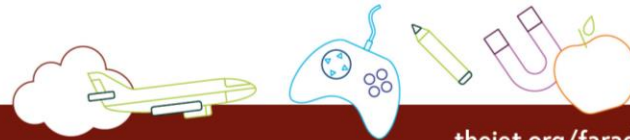
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String

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Piezo buzzer



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Piezo buzzer

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LEDs - green



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LEDs - green

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LEDs - amber

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LEDs - amber

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Potentiometer

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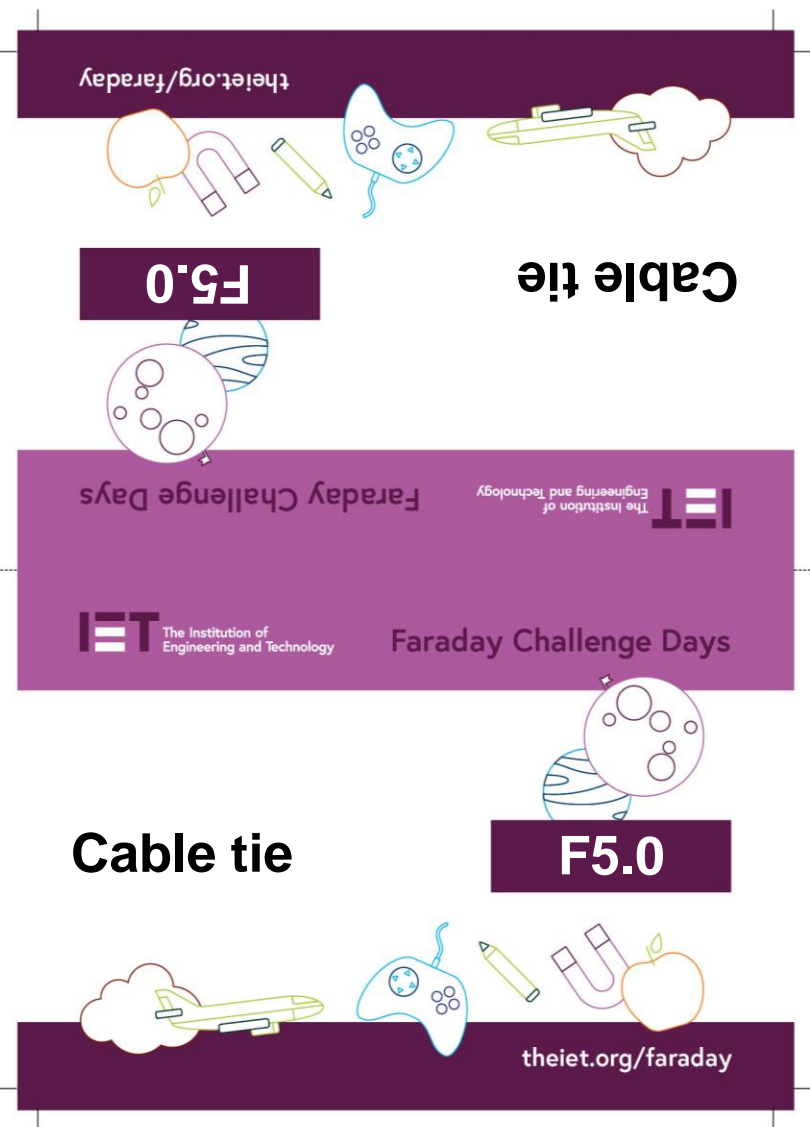
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Potentiometer

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**Light
Dependent
Resistor**

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Calculator

FREE



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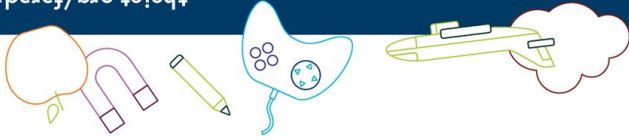
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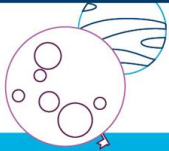


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Cardboard tube



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Cardboard tube

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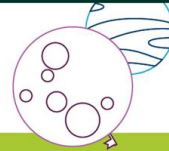
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Masking tape



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Masking tape

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Scissors

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Scissors

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Stapler

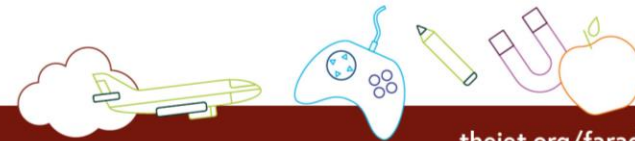
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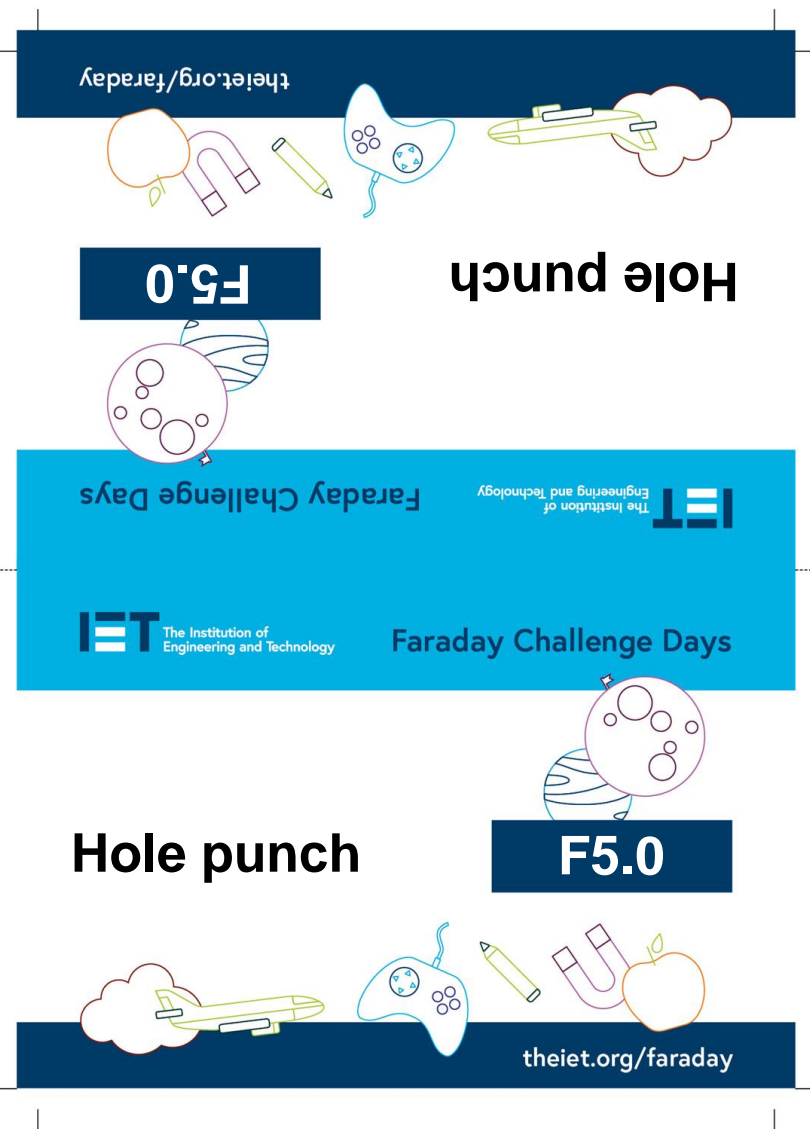
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Stapler

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Codes to buy



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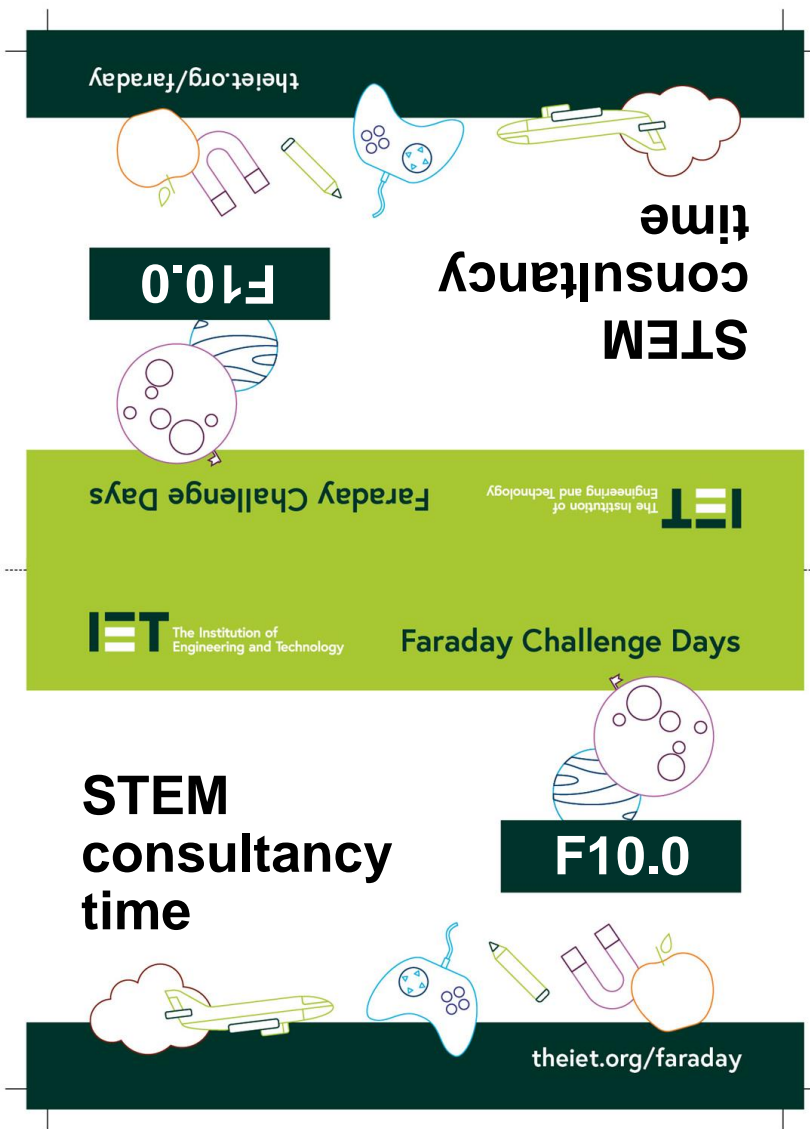
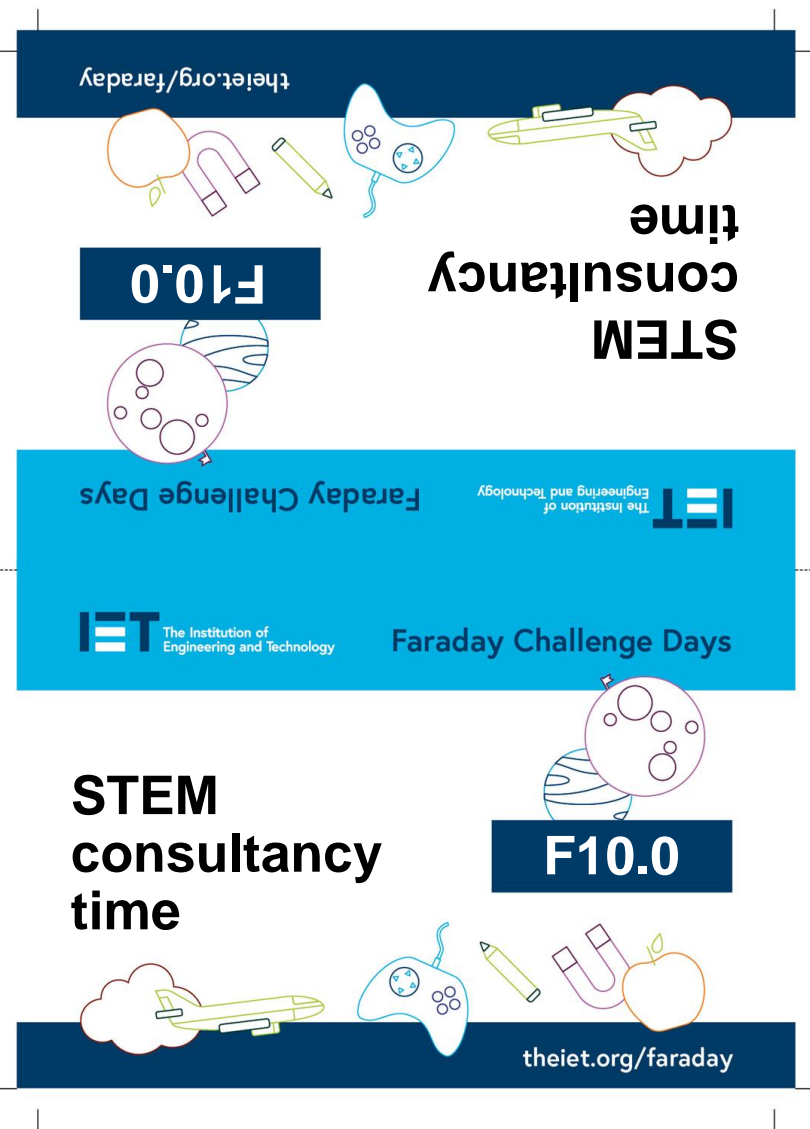
Tin foil



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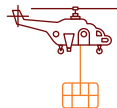


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Faraday Reserve Note

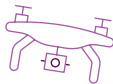
= One Faraday



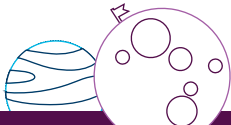
Michael Faraday

Faraday Reserve Note

Five Faradays



Michael Faraday





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F10

Faraday Reserve Note



Ten Faradays



Michael Faraday



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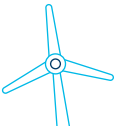
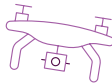
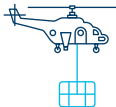
Faraday Challenge Days

F20

Faraday Reserve Note



Twenty Faradays



Michael Faraday