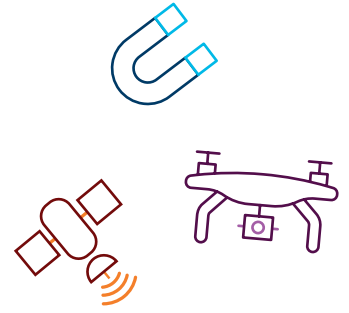


The IET

# DIY Faraday Challenge Day

## Emergency Communications Teacher Extras





# DIY Faraday Challenge Day



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Presented to



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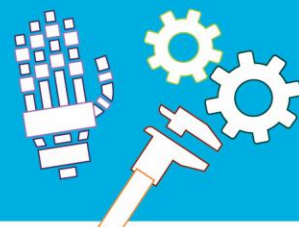
Signed by

Date



---

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# Student Team Registration Form

**Team No: ....**

**Faraday Challenge Date: .....**

**Your School Name: .....**

**Your Teacher's Name: .....**

## Team Members

**1** .....

**2** .....

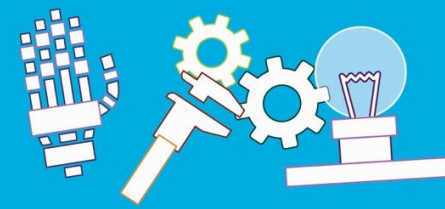
**3** .....

**4** .....

**5** .....

**6** .....

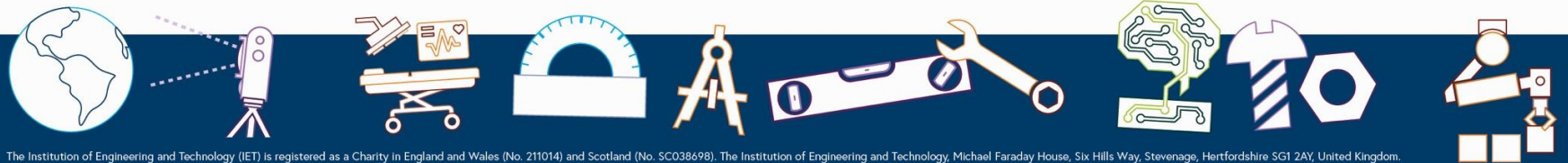


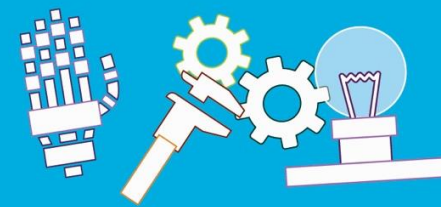


## Faraday Challenge Day

**Shop Manager Balance Sheet**    Host School .....    Date .....

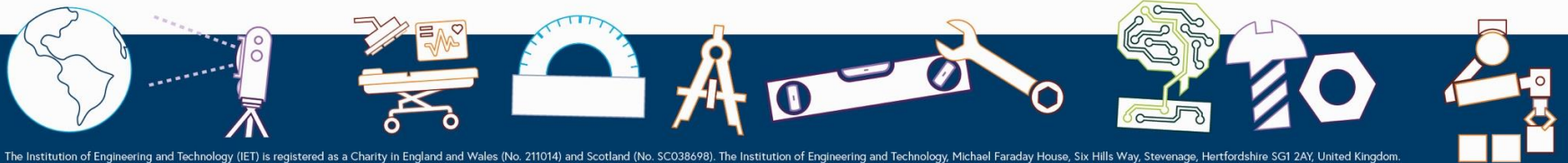
Faradays spent at each visit to the shop	Team 1	Team 2	Team 3	Team 4	Team 5	Team 6	Team 7
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
<b>TOTAL FARADAYS SPENT</b>							

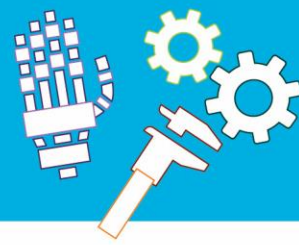




## Purchasing notes for the Shop Manager (Technician)

- This sheet will be used to cross-check the accounting sheets from the student teams for scoring
- Use this sheet to record every transaction with students – item and cost
- Students may sell back unwanted items at half price
- Students may buy lower measurements of materials at a reduced price – i.e. metre of red copper wire = 10 Faradays per metre as a standard cost. Students may buy half a metre for 5 Faradays
- Students must not use craft knife themselves. Cutting into desired size by the Shop Manager (Technician) is included in the price.
- Gluing using low melt guns and cutting is free of charge and students may operate these under supervision of the Shop Manager (Technician)





The IET

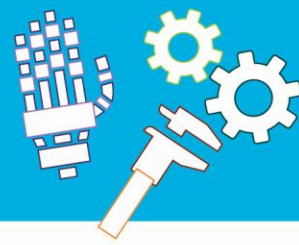
# DIY Faraday Challenge Day

## Emergency Communications Final messages

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   @IETeducation





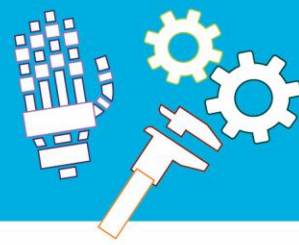
## Message 1

The message you need to transmit to your team is:

**FOOD ARRIVING**

**You have 5 minutes. Good luck!**





## Message 2

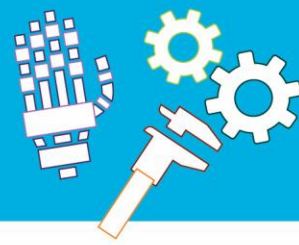
The message you need to transmit to your team is:

**TRANSPORT NOW**

**You have 5 minutes. Good luck!**







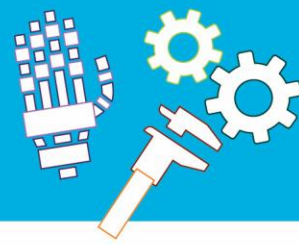
## Message 3

The message you need to transmit to your team is:

**ENGINEER HELP**

**You have 5 minutes. Good luck!**





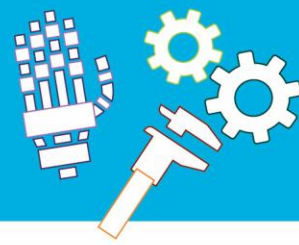
## Message 4

The message you need to transmit to your team is:

**HELICOPTER OK**

**You have 5 minutes. Good luck!**





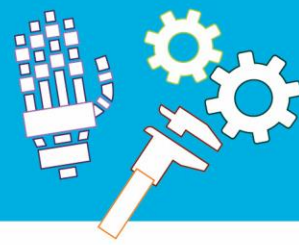
## Message 5

The message you need to transmit to your team is:

**HELP TOMORROW**

**You have 5 minutes. Good luck!**





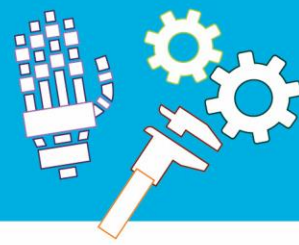
## Message 6

The message you need to transmit to your team is:

**SOLUTION DONE**

**You have 5 minutes. Good luck!**





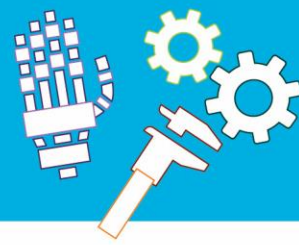
## Message 7

The message you need to transmit to your team is:

**RESCUE COMING**

**You have 5 minutes. Good luck!**





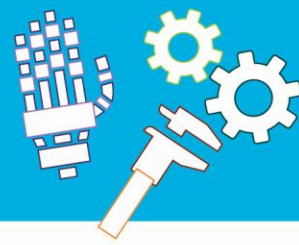
## Message 8

The message you need to transmit to your team is:

**OK COMMUNICATE**

**You have 5 minutes. Good luck!**

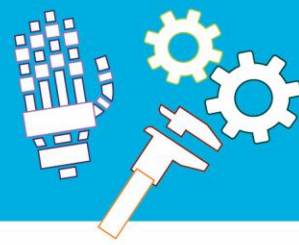




**Practice message:**

**NEED ENGINEER IN AT 5**



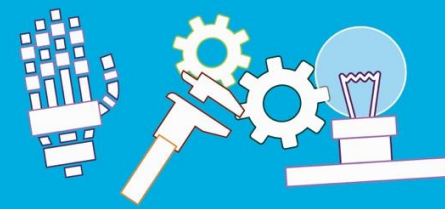


**Practice message:**

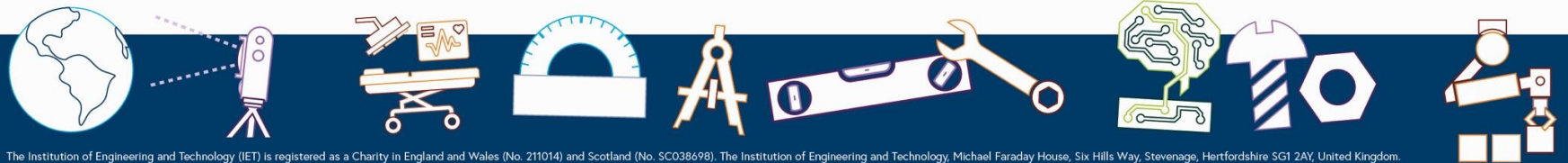
**WILL NOT COME UNTIL 8**

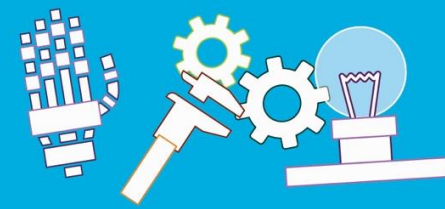




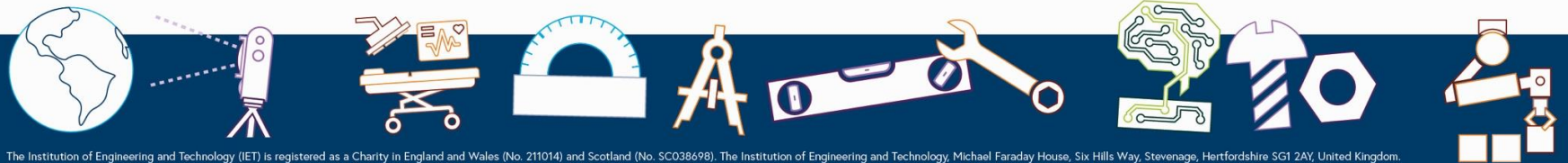


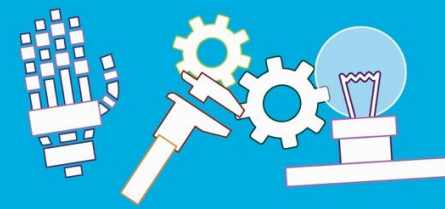
# Town Alpha



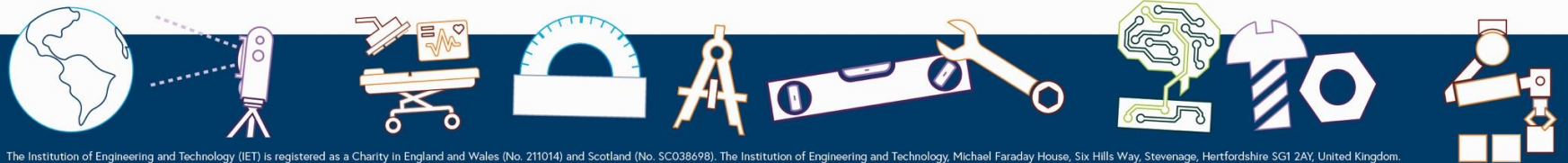


# Town Beta



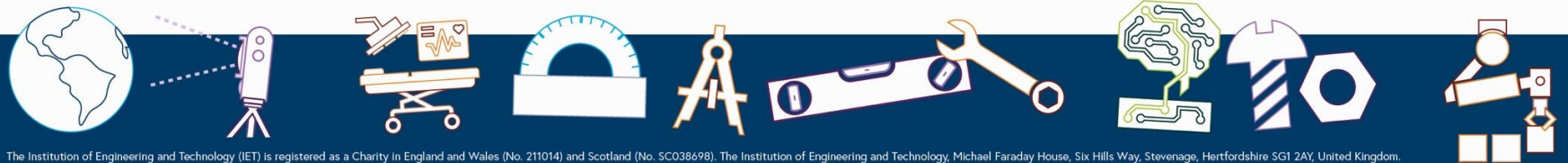


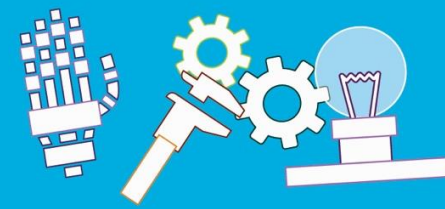
# Cutting Station



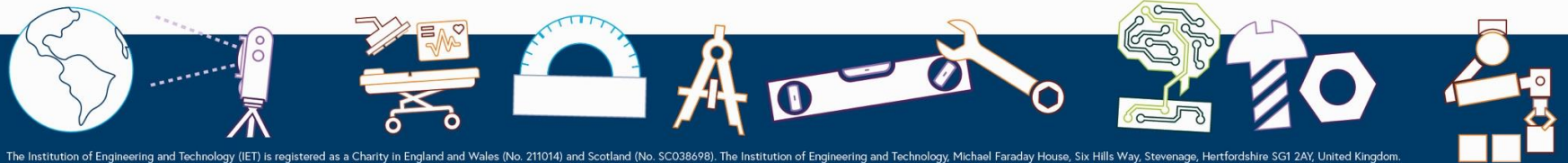


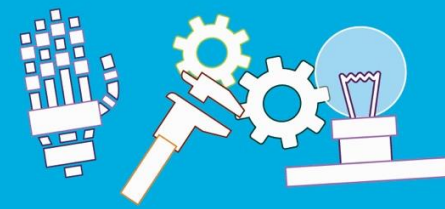
# For Hire



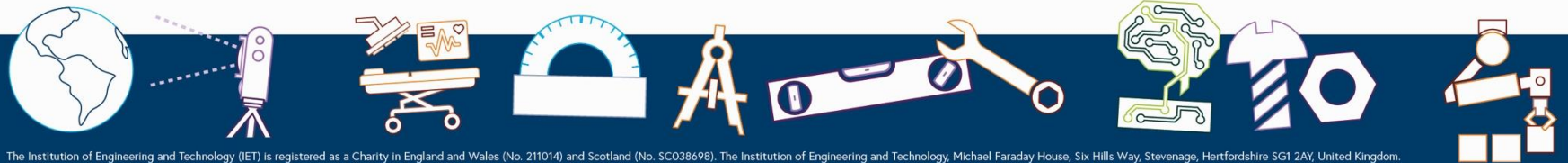


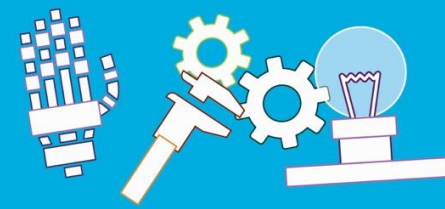
# Gluing Station



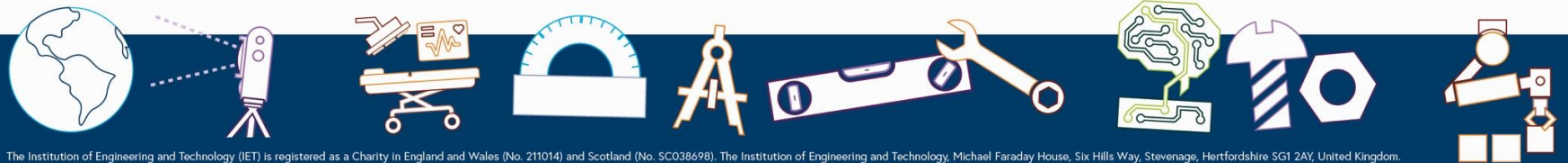


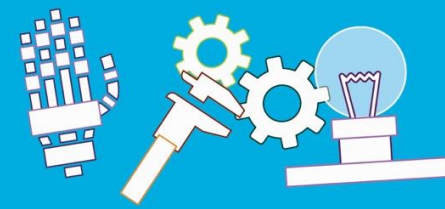
# Inspiration Station





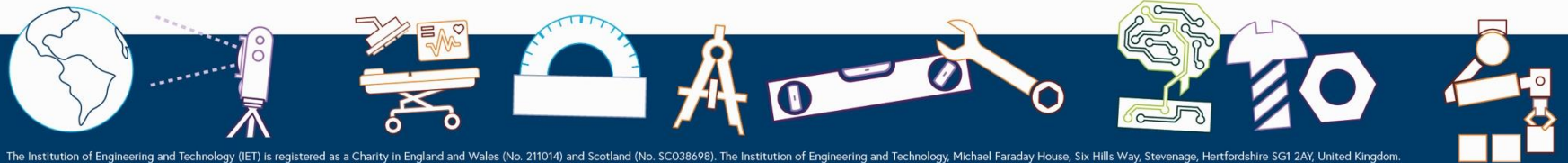
# Judges Table



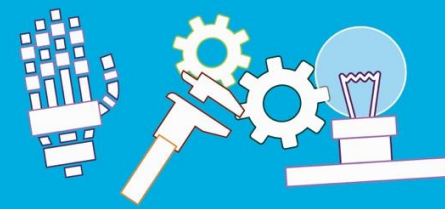


# Recycled Materials

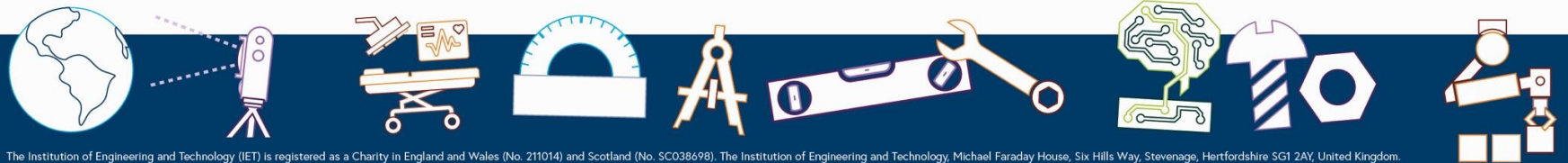
# F5.00

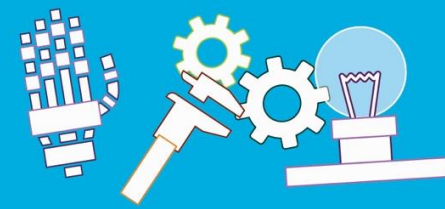




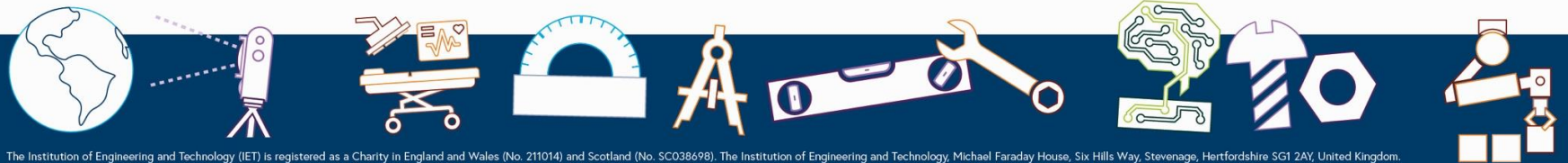


# Test Area





# The Shop





**F5.0**

**Masking tape  
30cm**



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**Masking tape  
30cm**

**F5.0**



**F8.0**

**Double-sided  
tape 30cm**



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**Double-sided  
tape 30cm**

**F8.0**



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**F1.0**

**Plastic cup**  
**1 cup**



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**Plastic cup**  
**1 cup**

**F1.0**



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**F5.0**

**Tin can**  
**Each**



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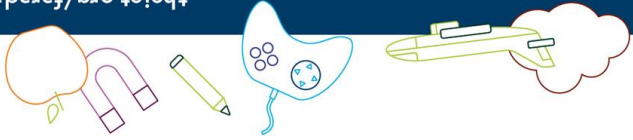
**Tin can**  
**Each**

**F5.0**



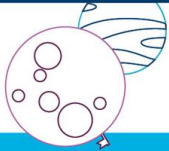
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F1.0

A4 plain paper  
Each



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A4 plain paper  
Each

F1.0



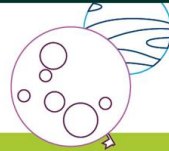
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F1.0

Coloured card  
A4 Each



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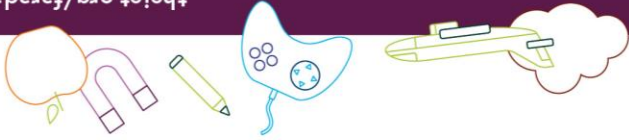
Coloured card  
A4 Each

F1.0



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**F5.0**

**Foil 30cm x 30cm Each**



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**Foil 30cm x 30cm Each**

**F5.0**



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**F5.0**

**Neoprene sheet Half sheet**



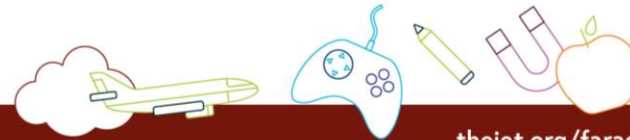
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**Neoprene sheet Half sheet**

**F5.0**



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**Bubble wrap**  
**25cm x 25cm**  
**Each 1 sheet**

**F2.0**



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**Faraday Challenge Days**

**Bubble wrap**  
**25cm x 25cm**  
**Each 1 sheet**

**F2.0**



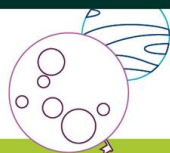
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**Acetate**  
**coloured A4**  
**Each**

**F5.0**



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**Acetate**  
**coloured A4**  
**Each**

**F5.0**



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**Each**

**F5.0**

**Mirror 150mm x 100mm**

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**Mirror 150mm x 100mm**

**Each**

**F5.0**



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**10 straws**

**F10.0**

**Straws**

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**Straws 10 straws**

**F10.0**



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**Each**

**Cardboard tubes**

**F10.0**

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**Each**

**Cardboard tubes**

**F10.0**

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**Each**

**Thin sponge**

**F2.0**

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**Each**

**Thin sponge**

**F2.0**

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**F1.0**

**String  
Per metre**

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**String  
Per metre**

**F1.0**

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**F1.0**

**Paper fasteners  
5 fasteners**

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**Paper fasteners  
5 fasteners**

**F1.0**

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**Paper clips**  
**5 paper clips**

**F1.0**



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**Paper clips**  
**5 paper clips**

**F1.0**



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**Elastic bands**  
**10 bands**

**F2.0**



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**Elastic bands**  
**10 bands**

**F2.0**



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**Steel nail 10cm**  
**2 nails**

**F10.0**



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**Faraday Challenge Days**  
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**Steel nail 10cm**  
**2 nails**

**F10.0**



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**Binoculars**  
**Each**

**F30.0**



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The Institution of Engineering and Technology

**Faraday Challenge Days**  
The Institution of Engineering and Technology

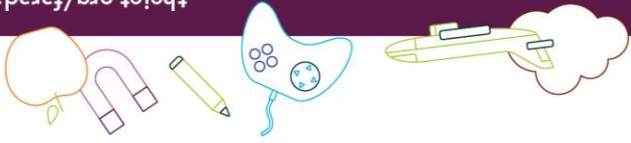
**Binoculars**  
**Each**

**F30.0**



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F30.0

Stopwatch  
Each



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Stopwatch  
Each

F30.0



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F5.0

White Tak  
Stick



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White Tak  
Stick

F5.0



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**F10.0**

**Polyfoam**  
**A4 size**

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**Polyfoam**  
**A4 size**

**F10.0**

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**F10.0**

**Copper wire**  
**red**  
**Per metre**

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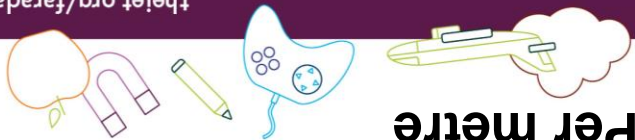
**ET** The Institution of Engineering and Technology  
**Faraday Challenge Days**

**Copper wire**  
**red**  
**Per metre**

**F10.0**

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Per metre

**F10.0**

**Copper wire  
black**



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**Copper wire  
black**

**Per metre**



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**F10.0**

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Per metre

**F10.0**

**Bare copper  
wire**



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**Bare copper  
wire**

**Per metre**



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**F10.0**

theiet.org/faraday

**Each**

**F5.0**

**Croc leads black**

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**Croc leads black**

**Each**

**F5.0**

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**Each**

**F5.0**

**Croc leads red**

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**Faraday Challenge Days**

**Croc leads red**

**Each**

**F5.0**

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**F5.0**

**Croc clips**  
Each



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**Croc clips**  
Each

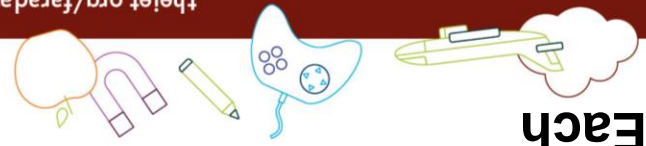
**F5.0**



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**F2.0**

**Terminal blocks**  
Each




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**Terminal blocks**  
Each


**F2.0**



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**F5.0**

**1.5V bulbs**  
**Each**




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**Faraday Challenge Days**

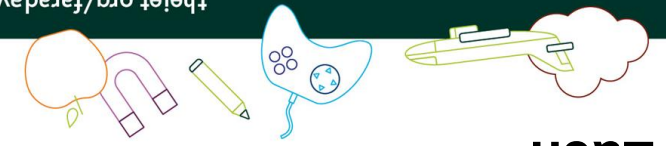
**1.5V bulbs**  
**Each**

**F5.0**




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**F5.0**

**3.5V bulbs**  
**Each**




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**3.5V bulbs**  
**Each**

**F5.0**



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Each

**F10.0**

**1.5/3.5 Volt  
bulb holder**



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**ET**  
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**1.5/3.5 Volt  
bulb holder**

Each



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**F10.0**

[theiet.org/faraday](http://theiet.org/faraday)



Each

**F2.0**

**Batteries AA  
size**



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**ET**  
The Institution of  
Engineering and Technology

**ET**  
The Institution of  
Engineering and Technology

Faraday Challenge Days

**Batteries AA  
size**

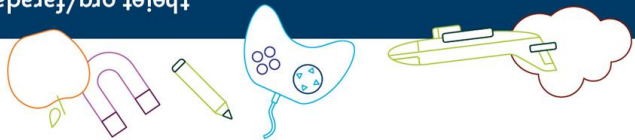
Each



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**F2.0**

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Each

**F5.0**

**Batteries D size**



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**Batteries D size**

**Each**

**F5.0**



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Each

**F2.0**

**Battery holder  
D cell**



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**Battery holder  
D cell**

**Each**

**F2.0**



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**F1.0**

**Battery holder**  
**3 AA cells**

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**Battery holder**  
**3 AA cells**

**Each**

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**Each**

**F1.0**

**Watch battery**

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**Faraday Challenge Days**

**Watch battery**

**Each**

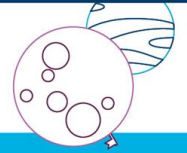
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**Each**

**F5.0**

**Buzzers 3 volt**



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**Buzzers 3 volt**  
**Each**

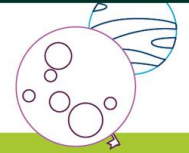
**F5.0**



**Each**

**F5.0**

**Switches**

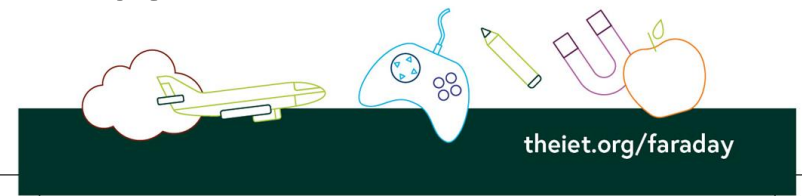


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**Switches**  
**Each**

**F5.0**



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**F5.0**

**Magnet  
Each**



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**Magnet  
Each**

**F5.0**



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**F10.0**

**Consultancy  
time  
5 minutes**



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**Consultancy  
time**

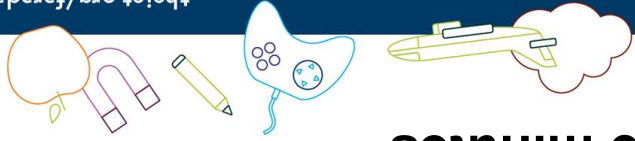
**F10.0**

**5 minutes**



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**F5.0**

**Hole punch**  
**5 minutes**

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**Hole punch**  
**5 minutes**

**F5.0**



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**F5.0**

**Stapler**  
**5 minutes**

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**Stapler**  
**5 minutes**

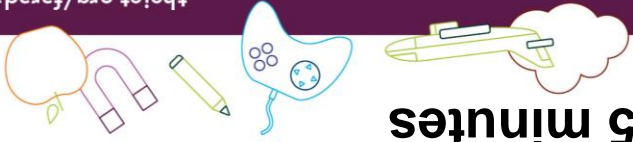
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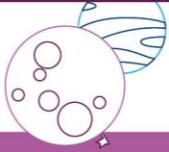
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5 minutes

F1.0

Screwdriver  
small



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Screwdriver  
small

5 minutes

F1.0



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5 minutes

F10.0

Calculator



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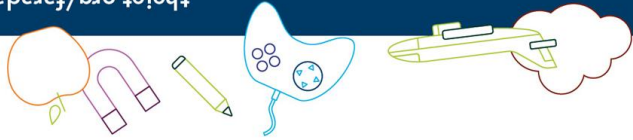
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Calculator  
5 minutes

F10.0



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**FREE**

**Craft knife**

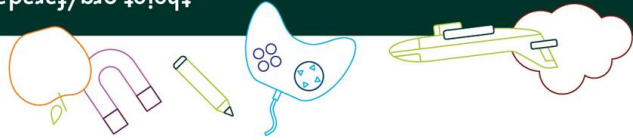
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**Craft knife**

**FREE**



**FREE**

**Glue gun**

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**Glue gun**

**FREE**





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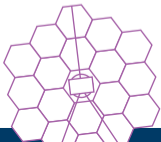
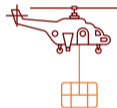
# Faraday Challenge Days

# F1

Faraday Reserve Note



# One Faraday



Michael Faraday



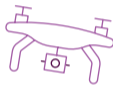
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# F5

Faraday Reserve Note

# Five Faradays



Michael Faraday





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# F10

Faraday Reserve Note

# Ten Faradays

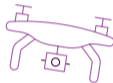
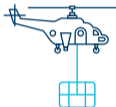
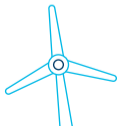


Michael Faraday



Faraday Reserve Note

# Twenty Faradays



Michael Faraday