

# NGHS Challenge Day

## Table tennis server

Serving up a challenge



# Planning your day

10.00 Welcome and introduction - Directions for the day

10.15 Design time

**11.15 Break (shop opens)**

11.30 Start manufacture/continue learning poster

**12.30 Lunch**

13.00 Complete manufacture/start testing

13.30 Shop closes

14.00 Finish manufacture, put your engineering solutions to the challenge



# Context/brief

- Table tennis is a growing sport in the UK
- Practice, as with most things, is the key to improving at the sport. The problem is, it is hard to practice on your own.
- Being able to return service is often what provides the edge in terms of winning and losing.



## Engineering brief

- Design and make a prototype table tennis server
- The server must be operated remotely



# Watch the film: Practice makes perfect





# Watch the film: Commercial table tennis server







# First piece of assessment



**ALL** teams:

- Sketch a variety of ideas for the table tennis server

We are looking for:

- Working in pairs
- A **VARIETY** of ideas
- Sketches and notes
- Not whole team chats



# Engineers and engineering



**IET** Education  
The Institution of  
Engineering and Technology | **Faraday**

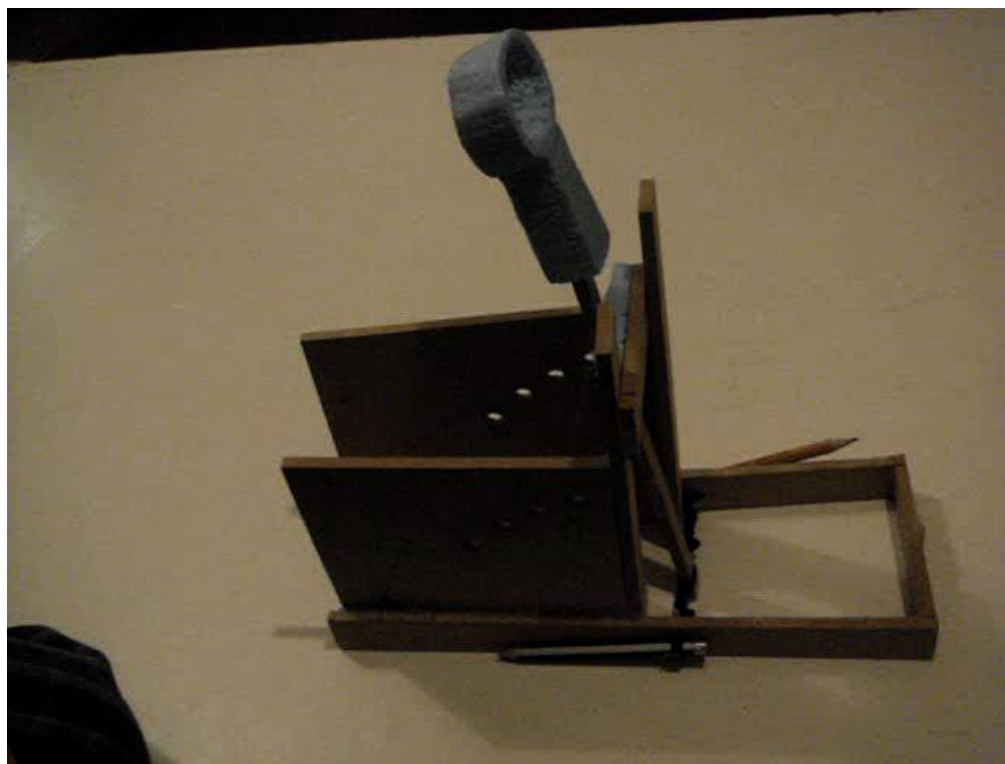


# Watch the film: Example server 1





# Watch the film: Example server 2





# Watch the film: Example server 3



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# Assessment



Initial design sheets (3)	30 marks
Developed ideas	40 marks
Accountant balance sheet	10 marks
Quality of final product	20 marks
Function of device	50 marks
Teamwork	50 marks
<b>TOTAL</b>	<b>200 marks</b>

# What else?

- Faradays
- Buying materials (one person)
- Teamwork – what’s your role
- Time management
- Learning poster (STEM)



# Session one

- Teams to look at available materials
- Teams to discuss initial ideas
- Teams to develop your chosen idea





# Development of ideas

You need to show the journey from your first idea to your final solution

So, what we're looking for:

- a series of sketches to show how things have changed
- annotations (notes) explaining why you have made the changes



# Session two

- Teams to continue developing and start manufacture
- Teams to continue producing learning poster



# Session three

- Complete manufacturing
- Start testing
- Put your engineering solution to the challenge!
- Results

