

## Inventive Podcast

### Using engineering-inspired fiction in the classroom.

*“All teachers should link curriculum learning to careers” Gatsby Benchmark 4*

These resources are all based on the [Inventive podcast](#). The podcast mixes engineering fact with fiction. Each podcast features an interview with an engineer. That interview was used as inspiration by a variety of authors and poets to create a piece of fiction.

Each podcast episode has a set of resources associated with it:

1. Science question worksheet linked to KS3 National Curriculum for science
2. Online case study about the Engineer
3. Career poster for download and display

Additionally, 6 of the podcasts have English resource packs as well.

All materials can be accessed via <https://nustem.uk/inventive/> or QR code



### KS3 Science worksheets

Engineer	Subject	Topic
<b>Shrouk El-Attar</b> Electrical Engineer and LGBT rights campaigner	Physics	Magnets and electromagnets
<b>Roma Agrawal</b> Structural Engineer, author and broadcaster	Physics	Forces
<b>Sophie Robinson</b> Aerospace Engineer	Chemistry / Physics	CO <sub>2</sub> from human activity and forces
<b>Askwar Hilonga</b> Chemical Engineer and social entrepreneur	Chemistry	Mixtures
<b>Greg Bowie</b> Manufacturing Engineer	Chemistry	Properties of materials
<b>Ruth Amos</b> Inventor and entrepreneur	Science	Working scientifically (problem solving)
<b>Sian Cleaver</b> Spacecraft Engineer	Physics	Space physics
<b>Joshua Macabuag</b> Search and Rescue Engineer	Physics	Forces

Engineer	Subject	Topic
<b>Enass Abo-Hamed</b> Chemical Engineer, and entrepreneur <b>Manjot Chana</b> Systems integration engineer	Chemistry / Physics	The atmosphere and energy resources
<b>Larissa Suzuki</b> Computer Scientist	Computing	Data protection and privacy
<b>Jack Howarth</b> Electrical Engineer	Physics	Light waves

### English resource packs

- Many of the engineers highlight the importance of communication and collaboration. These are attributes which English is well-placed to develop.
- The podcast highlights the utility of English in a range of engineering careers – potentially providing motivation for students whose strengths lie in science/maths

### Overview of English Resource packs

Pack No.	Engineer	Author	Key stage
1	<b>Roma Agrawal</b> Structural Engineer, author and broadcaster	<b>C M Taylor</b> The Night Builder	3
2	<b>Greg Bowie</b> Manufacturing Engineer	<b>Emma Newman</b> Healing the fractured	3
3	<b>Enass Abo-Hamed</b> Chemical Engineer and entrepreneur <b>Manjot Chana</b> Systems integration engineer	<b>George Sandifer-Smith</b> Data is Truth & Truth Data	3
4	<b>Larissa Suzuki</b> Head of AI and Data	<b>Tim Maughan</b> My City is not the problem	3
5	<b>Jack Howarth</b> Electrical Engineer	<b>Katrina Porteous</b> Ingenious (poem)	KS4 / KS5
6	<b>Shrouk El-Attar</b> Electrical Engineer and LGBT rights campaigner	<b>Tania Hershman</b> Human Being As Circuit Board, Human Being As Dictionary	KS4 / KS5

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