

Using the resource and Inventive podcast

This resource is 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.

These resources make use of those pieces of writing to support the teaching of English.

A short audio clip about the engineer provides context and can be played during a lesson. Students may wish to listen to the whole podcast in their own time. All resources can be accessed using the QR code below.

This English lesson resource supports students in:

Reading:

- make inferences and refer to evidence in the text
- check their understanding to make sure that what they have read makes sense
- study setting, plot, and characterisation, and the effects of these.

Writing:

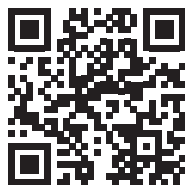
- summarise and organise material, and support ideas and arguments with factual detail.

Additional context and careers resources

Audio clips from Inventive podcast

- **Clip 1: Trauma Plates** Greg describes what Trauma plates are
- **Clip 2: Apprenticeship** Greg explains how he trained as an apprentice.

For other resources including posters and more information about Greg:



nustem.uk/inventive/#greg

Meet the engineer



Greg Bowie

Manufacturing Engineer

Greg's followed an apprenticeship route into engineering. He learned to solve problems practically. He now develops new polymer and composite materials for medical applications. Some of the materials are used to support healing bones.

Meet the author



Emma Newman

Healing the Fractured

Emma Newman is a science fiction and fantasy writer, podcaster and audiobook narrator.

She uses Greg's interview and job to write about a dystopian future in which the trauma plates Greg creates provide hope for those fighting tyranny.

The table provides an outline of the resource activities, and suggests approximate timings for each activity. You may wish to adapt these to suit your students' needs.

1	Meet the Engineer (pg 2)	20 min	<p>Read the summary of the life of the engineer.</p> <p>Clip 1 explains what Trauma plates are and why they are used. He also talks about other uses of the materials.</p> <p>Clip 2 describes Greg's route into engineering.</p> <p>Explain that students are going to read a story inspired by the podcast, and the interview with the engineer.</p>
2	Developing inference skills (pg 3)	15 min	<p>Analyse the title - Healing the Fractured</p> <p>In pairs students discuss their initial thoughts.</p> <p>A series of key questions are provided which will allow a guided discussion about the engineer and the story.</p>
3	Introduction to dystopian fiction (pg 4 - 6)	20 min	<p>To provide contexts students look at dystopian images and select adjectives that describe the images effectively.</p> <p>Examples of dystopian fiction are given, and key vocabulary introduced.</p> <p>A short multiple choice activity checks student understanding.</p>
4	Text analysis - identifying the features of dystopian fiction. (pg 7 - 9)	30 min	<p>Read the first part of the story. Explain and discuss key words.</p> <p>Students try to identify the key characteristics of dystopian fiction such as setting. Discuss who the antagonist and protagonist are.</p>
5	Text analysis - writers' technique to create intrigue. (pg 10 - 11)	30 min	<p>Read the passage where we first meet David. Discuss how the writer tells us he is worried, how the writer creates a sense of urgency, and how that adds intrigue to the text. Students use words and phrases from the text to answer these questions.</p>
6	Developing inference skills (pg 12 - 13)	30 min	<p>After reading the next section of the story, students should identify what they know about the characters so far - are they antagonists or protagonists.</p> <p>They can also make predictions about what is going to happen in the story.</p>

Teacher Information

Resource Activity Overview continued

7	Optional Activity Research task using skimming and scanning. (pg 14 - 17)	30 min	Students to understand, and be able to use the concept of censorship Students to research censorship in China using skimming and scanning to extract 5 key points. You may wish to liaise with your history/poitics department to support this task.
8	Summarise and organise information (pg 18 - 20)	45 min	Read to the end of the story. If students did not complete Activity 7 they will need to read the story on pages 16 - 18 Students to complete an analysis grid with the key features of a dystopian story using Healing the Fractured.
9	Predicting what happens next (pg 21)	45 min	Using the checklist of features of dystopian fiction students write the next paragraph of the story. You may wish to model how to structure the paragraph.
10	Optional essay task (pg 22)	60 min	Link back to the title of the story. What is the double meaning of 'Healing the Fractured'? Students consider the literatl meaning of Petra healing the fractures bones with a trauma implant, but also David's attempts to heal the fractured society by making contact with the USA using the chip.

This resources could be followed by the resource pack for Jack Haworth 'Ingenious' which includes poetry by Katrina Porteous and extends students' understanding of dystopian and utopian fiction.

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