

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.

Short audio clips 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 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.

Listening:

- Draw on new vocabulary and grammatical constructions from their listening

Additional context and careers resources

Audio clips from Inventive podcast

- **Clip 1: Diversity** Larissa talks about diversity in tech companies
- **Clip 2: Smart Cities** Larissa describes smart cities
- **Clip 3: How I was assembled** Larissa talks about autism
- **Clip 4: Engineers as doctors**

For other resources including posters and more information about Larissa:



nustem.uk/inventive/#larissa

Meet the engineer



Larissa Suzuki

Computer Scientist

Larissa is a computer scientist, engineer, entrepreneur and inventor. As an autistic person she is passionate about increasing diversity in tech. She is also working with space scientists to develop an Interplanetary internet.

Meet the author



Tim Maughan

My City is Not A Problem

Tim Maughan is a journalist and author. He writes fiction and on-fiction. His writing explores issues around cities, class, technology and the future.

In this story, Tim looks at how Artificial Intelligence might try to solve the problems of a large city.

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.

This resource can be used as a standalone unit, but could be completed after Resource Pack 2 *Healing the Fractured* and Resource Pack 3 *Data is Truth & Truth Data*.

1	Meet the Engineer (pg 2)	20 min	<p>Read the summary of the life of the engineer.</p> <p>Listen to Clip 3: How I was assembled and Clip 1: Diversity</p> <p>Discuss the analogy of the jigsaw pieces with students. Why is this important? How does it mirror community and the importance of diversity within a community</p>
2	Engineers as doctors (pg 3)	15 min	<p>Listen to Clip 4: Engineers as doctors.</p> <p>Larissa Suzuki talks about the similarities between a doctor and an engineer. Discuss this with students and complete the venn diagram. Suggested possible answers are given on page 4 of this guide.</p>
3	Developing inference skills (pg 4)	15 min	<p>Analyse the title - My City is Not A Problem</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>
4	Text analysis - Utopian or Dystopian (pg 5 - 7)	25 min	<p>Read the first part of the story. Explain and discuss key words. If students have studied '<i>Healing the fractured</i>' then you can link back to ideas about dystopian fiction.</p> <p>Compare and contrast the conflicting views of Vanessa and the news presenter - one utopian and one dystopian.</p>
5	Context: Smart Cities (pg 8)	20 min	<p>Read the next part of the story which includes a passage about data.</p> <p>Students answer the questions and reflect on concerns regarding privacy and data.</p> <p>If students have studied '<i>Data is Truth & Truth Data</i>' you can link back to views about data in that resources pack.</p>

Teacher Information

Resource Activity Overview continued

6	Listening to the spoken word (pg 9)	20 min	<p>Listen to Clip 2: Smart Cities.</p> <p>Students should summarise how smart city technology can be used to help wheelchair users, visually impaired people, and those who are neurodiverse.</p> <p>Revisit the metaphor of people as jigsaw pieces (Activity 1 and Clip 3). Why is that metaphor important for engineers?</p>
7	Text analysis - a fair society (pg 10 - 14)	45 min	<p>Read the next section of the story.</p> <p>Discuss why Clara's solution to Child Poverty is controversial. Why don't we just feed the hungry children?</p> <p>Students consider how phrases used by author show the engineer's passion.</p>
8	Optional research activity (pg 15)	40 min	<p>Students research the campaigning work of Marcus Rashford.</p>
9	Extended writing (pg 16 - 18)	30 min	<p>Read the end of the story.</p> <p>Reflect on the positive end and how that illustrates the views of Larissa Suzuki.</p> <p>Pupils discuss what happens next in the story, and write the next paragraph.</p>

2. Engineers as doctors for the world - suggested answers

Listen to the [audio clip of Larissa](#) comparing engineers to doctors.

Larissa describes engineers as 'doctors for the world'.

3. Complete the venn diagram to identify the similarities and differences between the skills and roles of doctors and engineers.



Scan the QR code for the clip

As Larissa identifies, both engineers and doctors save people's lives and work to make lives better. Larissa gives some examples of how that might happen through the development of technology. A simpler example is of the development of sewerage systems saving billions of lives through the reduction of water borne diseases.

The attributes that doctors and engineers need are similar.

