

How will we make living environments
safe and healthy?



CHANGE

the way we

TACKLE AIR POLLUTION

using engineering and technology



Collect the set:



Engineers are helping to make our air fresh again by:

- Developing electric aircraft
- Supplying clean electricity
- Producing low-emission fuels
- Designing AI-powered sensors to detect pollution levels
- Creating anti-smog devices
- Planning and building urban forests

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Brilliant Inspiration

By monitoring and improving air quality, engineers help to:



Increase life expectancy



Improve our health










Keep us safe



Reduce healthcare costs

As an engineer, you use:

-  Creativity
-  Teamwork
-  Open-mindedness
-  Social conscience
-  Communication
-  Determination
-  Problem-finding and solving
-  Innovation



Discuss...

Should we allow people to travel to school in a diesel or petrol vehicle?



Sujith,
Environmental Consultant



Sujith is an engineer on a mission to help people get the right air quality.

Find out more



How will we tackle **climate change**?



CHANGE

the way we **TRAVEL**

using engineering and technology

Collect the set:



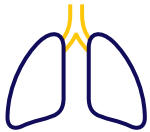
**Engineers
are helping
us to travel
sustainably by:**

- Improving cycle routes
- Designing trains powered by hydrogen, solar and biomethane
- Developing electric vehicles
- Reducing carbon emissions through improved traffic management
- Creating shark-inspired 'skins' for planes to reduce fuel use

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Brilliant Inspiration

By creating new and improved transport methods, engineers help to:



Improve our health and wellbeing



Reduce air and noise pollution



Make travel more safe, reliable, enjoyable and efficient

As an engineer, you use:

- Creativity
- Teamwork
- Open-mindedness
- Social conscience
- Communication
- Determination
- Problem-finding and solving
- Innovation



Discuss...

How can we reduce travel while still experiencing the world and connecting with others?



Elaine,
Electrical Engineer



Elaine analyses how to make the most out of electric vehicles and the infrastructure needed to power them.

Find out more



Find out more: www.neonfutures.org.uk/green www.thisisengineering.org.uk



Brilliant Inspiration

Collect the set:



How will we ensure we **produce and consume**
things **sustainably**?



CHANGE

the way we

USE THINGS

using engineering and technology



Engineers are helping us to look and feel good and reduce waste by:

- Creating fabrics made from fruit
- Designing apps to encourage people to re-use and upcycle clothes
- Using AI to improve automated waste sorting
- Developing biodegradable microbeads (found in cosmetics and cleaning products)
- Making recyclable wind turbine blades

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Brilliant Inspiration



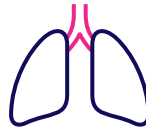
By innovating the way we use, re-use and dispose of everyday products, engineers help to:



Reduce landfill



Reduce pollution



Improve our health and wellbeing

As an engineer, you use:

- Creativity
- Teamwork
- Open-mindedness
- Social conscience
- Communication
- Determination
- Problem-finding and solving
- Innovation

Discuss...



How can we solve the fast fashion problem?



Serena,
Environmental Engineer



Serena uses her skills to prevent plastics from entering our rivers and oceans.

Find out more



Find out more: www.neonfutures.org.uk/green www.thisisengineering.org.uk

How will we tackle **climate change**?



CHANGE

the places we **LIVE IN**

using engineering and technology

Collect the set:



Engineers are helping us to adapt buildings and communities by:

- Using materials like timber and cement-free concrete to reduce carbon emissions
- Designing 'smart' buildings with power-saving lighting, heating and security systems
- Planning and building sustainable, flood-proof, future cities
- Developing low-carbon heat pumps
- Exploring floating communities

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Brilliant Inspiration

**By improving buildings,
engineers help to:**



Tackle
poverty



Save
space



Reduce
pollution



Keep us
safe



Maintain our
old buildings



As an engineer, you use:

- Creativity
- Teamwork
- Open-mindedness
- Social conscience
- Communication
- Determination
- Problem-finding and solving
- Innovation



Discuss...



**How many public
buildings will still be
standing in 100 years?**



Divya,
Senior Design Engineer



Meet Divya and
find out more about
how engineers are
helping to future
proof our cities
and towns.

Find out more



Find out more: www.neonfutures.org.uk/green www.thisengineering.org.uk

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Brilliant Inspiration

How will we get **affordable, reliable, sustainable power?**



CHANGE

the way we ●●●●●●●■++

POWER OUR WORLD

using engineering and technology

Collect the set:



 **Engineers are helping us to access clean, green electricity by:**

- Creating solar paint for buildings and road markings that converts sunlight to electricity
- Designing floating wind technology
- Developing fuel cell technology
- Expanding hydropower
- Researching space based solar power
- Optimising power distribution through smart grids

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Brilliant Inspiration

By adapting to the world's resources, engineers help to:



Tackle poverty



Reduce pollution



Ensure affordable, reliable, sustainable power











Discuss...

Should we generate our own power at home?

Find out more: www.neonfutures.org.uk/green www.thisengineering.org.uk

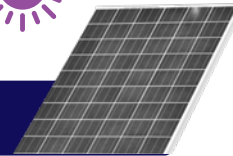


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-  Communication
-  Determination
-  Problem-finding and solving
-  Innovation



Enass,
Chemical Engineer



Enass co-founded an engineering company that develops new ways to store clean energy.

Find out more



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Brilliant Inspiration

How will we ensure we produce and consume things **sustainably**?



CHANGE

the way we create **FOOD**
and enjoy
using engineering and technology

Collect the set:



Engineers are helping us to eat our way to a healthier planet by:

- Reducing packaging and making it sustainable
- Designing 3D and 4D printed plant-based food
- Researching food preservation methods to reduce waste
- Planning vertical and floating (space-saving) farms
- Creating harvesting robots

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Brilliant Inspiration

By transforming the way we get our food, engineers help to:



Save space



Ensure food security



Make food more nutritious



Promote sustainable agriculture

As an engineer, you use:

- Creativity
- Teamwork
- Open-mindedness
- Social conscience
- Communication
- Determination
- Problem-finding and solving
- Innovation



Discuss...

Should we only eat food that has been grown or produced locally?



Charlotte,
Land-Based Engineering Apprentice



Charlotte is an engineering apprentice, helping to make farming more energy efficient.

Find out more

