

# STEM – Task 1



# Can we **TRAVEL** the **GLOBE** and still be **GREEN?**

**Change the way the world moves:**

Design electric planes, scooters and trains.  
Transform cycle routes. Develop sustainable  
aviation fuel. Enable Hyperloop. Create the  
next carpooling app.

**Engineer your future.**

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

**neon**  
Brilliant Inspiration



Brilliant Inspiration

**Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.**

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



## Questions:



How do I travel the world sustainably?



How important is travel in an increasingly virtual world?



Can we move to another planet?

## Activities:



Investigate which bio-fuels could be used for transport



Design your own personal, eco-friendly transport



Plan your low-carbon commute to school

# STEM – Task 2





# Will we need **FOSSIL FUELS** ... in **2050?**

**Change the way we power our world:**  
Algae fuel, pedal power, fuel cell  
technology, smart lighting, hydropower,  
giant space reflectors, PV cells.

**Engineer your future.**

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

**neon**  
Brilliant Inspiration



Brilliant Inspiration

Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



### Questions:



Can we harness the energy in our bodies?



Is nuclear power 'renewable'?



Should we generate our own power at home?

### Activities:



Think of different ways to sustainably power your school or home



How could you work out your school's carbon footprint?



How far would you need to walk, to generate the amount of electricity you use in a typical day?

# STEM – Task 3





# DOES LOOKING GOOD need to cost the EARTH?

## Change the way we use things:

Fruit fabrics, bioplastic, upcycling, automated waste sorting, smart cards, sustainability-checking apps, biodegradable packaging, sustainable manufacturing, ocean cleanup technology.

## Engineer your future.

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

**neon**  
Brilliant Inspiration





Brilliant Inspiration

**Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.**

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



## Questions:



Will your clothes outlive you?



Do we have enough land for landfills?



Could food be the future of fashion?

## Activities:



Design a clothes swapping app



Find a bio-plastic example. Can you re-design the item in a more sustainable way?



Think about things that aren't normally recycled. How could we recycle them?

# STEM – Task 4



# Can we **EAT** OUR WAY TO A HEALTHIER PLANET?

## Change the way we eat:

Robotic harvesting, urban farming, 3D printed food, sustainability-checking apps, aquaponics and hydroponics, global food distribution, sustainable packaging.

**Engineer your future.**

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

neon



Brilliant Inspiration

**Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.**

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



## Questions:



Can we save the planet and still eat meat?



What can we grow vertically?



Should we stop flying food into the UK?

## Activities:



Design a sustainable food menu



Explore how engineers can tackle food poverty in sustainable ways



Grow cress in the sun versus under artificial lighting



# STEM – Task 5



# Can we make our **AIR** **FRESH AGAIN?**

## **Change the way we keep air clean:**

Design car-free communities, develop electric aircraft, create diesel-free trains, monitor air quality, produce low emission fuels, supply clean electricity, improve indoor ventilation and respond to health impacts of air pollution - e.g. by manufacturing smart inhalers.

## **Engineer your future.**

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

**neon**



Brilliant Inspiration

Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

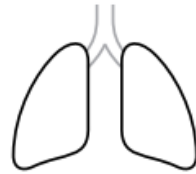
You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



### Questions:



What are the 3 biggest health impacts of pollution, and how might this change in 50 years?



How could we improve the air quality in our cities?

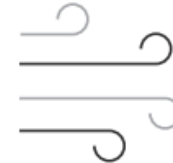


Will we ever need to buy or rent clean air?

### Activities:



Find out which parts of the UK or your local region have the best/worst air quality



List the items you use daily that reduce the air quality



Re-design a local area (such as where you go to school) as a vehicle-free zone

# STEM – Task 6





# Can we BREATHE **NEW LIFE**

..... into buildings?

## Change the way we live:

Retrofitting (making existing buildings last longer), power-saving sensors, low-carbon heat pumps, rainwater harvesting, heated skirting boards, air-powered showers, indoor forests, kinetic flooring, sustainable emergency shelters and eco-communities.

**Engineer your future.**

Visit [neonfutures.org.uk/green](https://neonfutures.org.uk/green)

**neon**  
Brilliant Inspiration



Brilliant Inspiration

Listed below are some prompts for teachers to use with their students in class, as part of a class discussion, small group activity or suggested homework.

To view, download or order printed copies of other posters in this series (along with other inspiring engineering careers resources) go to: [www.neonfutures.org.uk/resource](http://www.neonfutures.org.uk/resource)

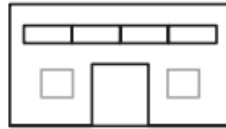
You could also get your students to take the Meet the future you careers quiz, helping them match their skills and interests to different engineering job roles: [www.mtfy.org.uk](http://www.mtfy.org.uk)



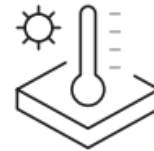
Teachers can scan here to find case studies, useful links and further content related to environmental and sustainability careers in engineering



### Questions:



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



Should we insulate ourselves as well as our houses?



Can we design emergency, temporary shelter sustainably?

### Activities:



Re-design your favourite place as a multi-use space (e.g. sports stadium with foldaway grass)



Research or share your ideas for sustainable building materials



Draw or describe different ways of re-using empty high street shops