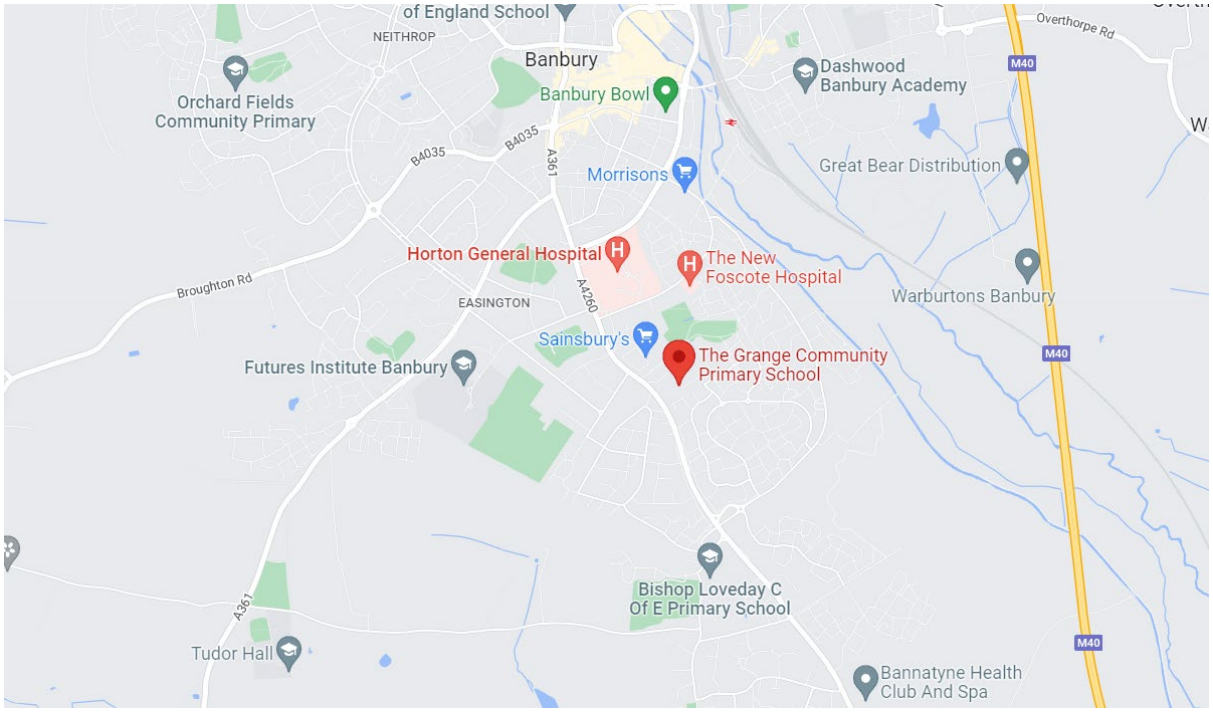

of England School
NEITHROP
Banbury
Orchard Fields
Community Primary
Banbury Bowl
Dashwood
Banbury Academy
Overthorpe Rd
M40
B4035
B4035
A361
Morrisons
Great Bear Distribution
Horton General Hospital
The New
Foscote Hospital
Broughton Rd
EASINGTON
A4260
Warburtons Banbury
Sainsbury's
The Grange Community
Primary School
Futures Institute Banbury
M40
Bishop Loveday C
Of E Primary School
A361
Tudor Hall
M40
Bannatyne Health
Club And Spa

SCIENCE WEEK 2022

DIGITAL ENGINEERING TECHNOLOGY & INNOVATION

WECOUNT

WeCount TO GET ABOUT

This activity allows pupils to understand what climate change is and the impact of road transport on emissions. Pupils will zoom in on how their journeys can impact emissions. Will there be growth in the number of people who walk, cycle and scoot their way around their towns and cities in the near future?

1 hour

Skill set: Committed, imaginative, observant

Kit list

Printed Google maps of the school and surrounding roads on an A4 piece of paper.

Allow space around the map for a key and beneath the map to write your challenges.

A tally chart on a flipchart/ whiteboard with separate columns for cars, pedestrians, cyclists and heavy vehicles.

Instructions

1 Consider the following questions: What is climate change? What activities contribute to climate change? How might we reduce the emissions we produce? Read the fact sheet on the next page to find out more.

2 Using your maps, draw your route to school, including any obstacles that made your journey longer or more dangerous. Include a key and write any challenges faced on the route. Discuss why you take different transport to school.

3 Watch this video bsa.sc/YouTube-traffic-survey. Count the number of pedestrians, cyclists, cars and heavy vehicles. Nominate one pupil to tally the answers, as the rest of the class calls out the transport mode. Explain how this is an example of manual traffic counting. Now we will look at digital traffic counting, taken by citizens across Europe using sensors.

4 Head to: //telraam.net/en. Zoom out to Europe to show the number of active sensors. Zoom in to a particular location (an active street near your town/city if possible) and click 'more data'.

- Which type of transport is the highest for this street? E.g., bike lanes, footpaths, signage, etc.
- How might the street design affect this?

5 Scroll down to 'overview per day'.

- Which day(s) have the most amounts of traffic?
- What times of day are busiest? Why might that be?
- What changes do you think need to be made on this street to make them more people-, bike- and scooter-friendly

6 Brainstorm local solutions that can reduce transport emissions near your school. Work in groups and share ideas with the class. Agree on the most feasible and effective solutions. Then design posters to share with fellow pupils.

Next steps

- By completing this activity, your school could be working towards Modeshift STARS accreditation. Find out more and sign up at: modeshiftstars.org/education.
- WeCount is a Horizon2020 funded citizen science project under grant agreement 872743. Find out more at: we-count.net
- The initiative for Digital Engineering Technology and Innovation (DETI) aims to show how digital technology can be used to engineer a better world. Find out more at: digitaltrailblazers.co.uk/about.

At home

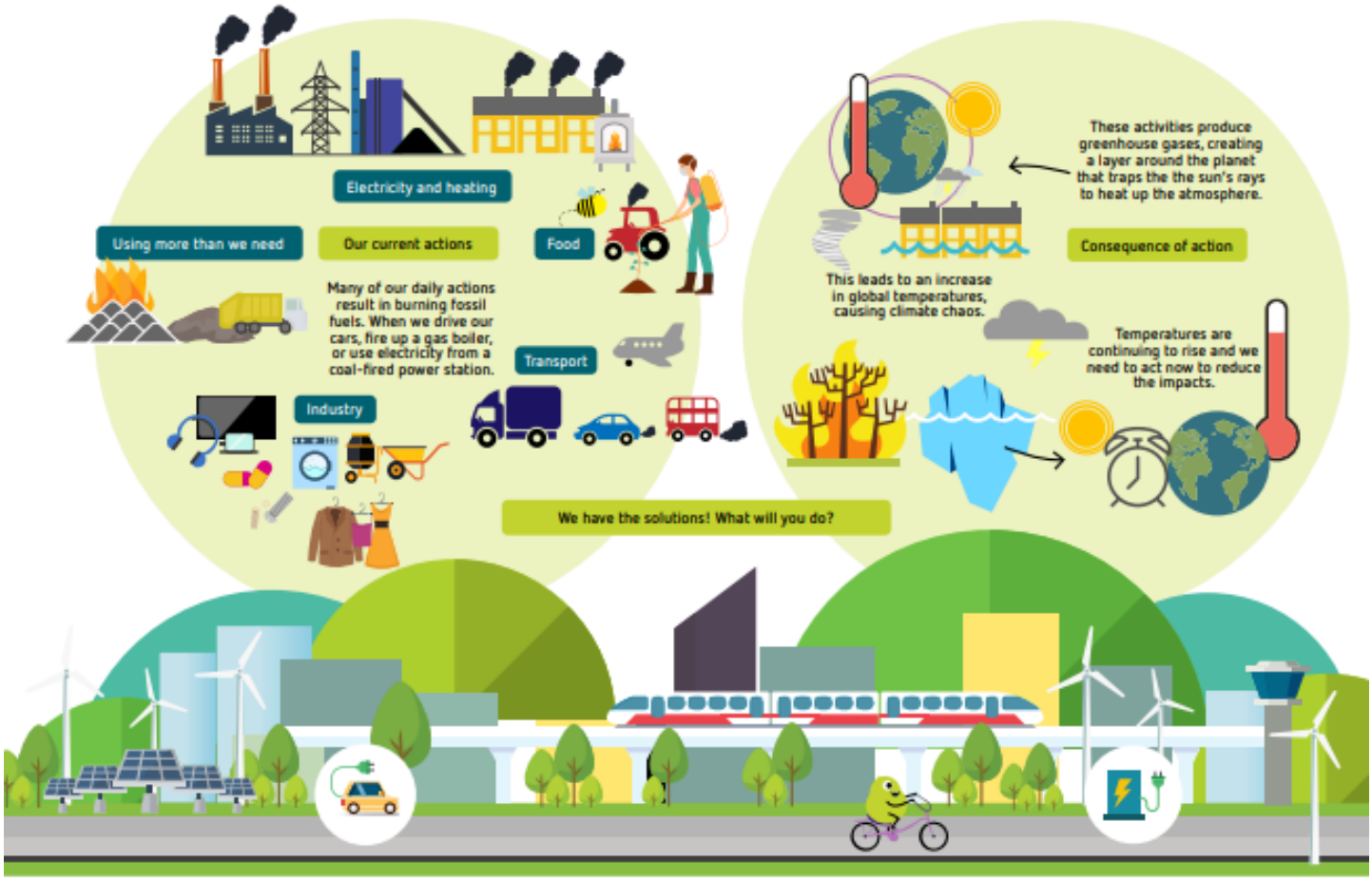
Choose a few people you could interview and ask: would you like fewer cars on the road, and why? For example, your parents, grandparents, teachers or shopkeepers. Write up answers, ready to share next week.

Career options

Engineers find solutions to problems. We now understand that we need to reduce car travel, but some street designs do not help people feel safe to walk or cycle. Maybe you would like to be a traffic engineer who monitors our journeys to see how they can improve the design of our streets, to make it easier for us to get about safely?

WE COUNT TO GET ABOUT CLIMATE CHANGE: THE CONSEQUENCES OF OUR ACTIONS

WECOUNT



Above:
Image adapted from original by ClairCity Project

claircity.eu/wp-content/uploads/2020/05/CC-infographic.png

Climate change is caused by greenhouse gases trapping heat in the world. The greenhouse gases are released when fossil fuels are burnt and produce emissions. For more resources, visit: together-for-our-planet.ukcop26.org/schools-pack-resources.

About a quarter (27%) of the UK's carbon emissions come from transport, as well as being the main source of toxic air pollution. And our car use has doubled since the 1980s. To reduce the impact of climate change, we need to reduce our emissions. So we need to shrink our car use, and grow how much we walk and cycle about. Think about transport – how we get about from our homes and to our schools – and solutions to reducing emissions.

Technology can help us better collect traffic data – this is digital engineering. Speed cameras for example, measure vehicle speeds. Other sensors measure air pollution particles in the air, while others count the number of different types of transport, like pedestrians, cars and bikes. People across Europe are currently counting traffic from their homes so they can use this evidence to reduce the number of cars and increase the number of cyclists, scooters and pedestrians.

How can we help people walk or cycle more locally?