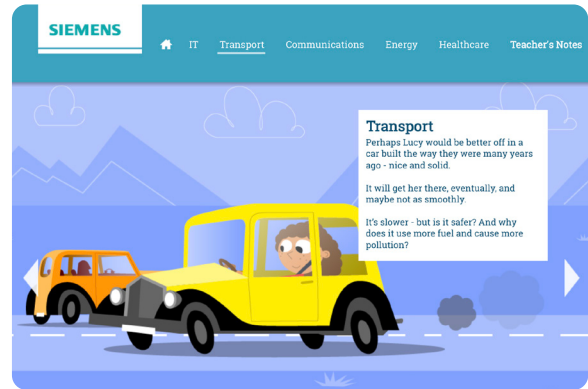
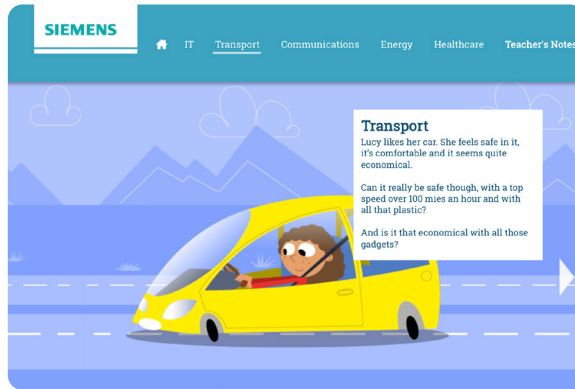


A Life Without STEM



1



Part 1: These pictures show Lucy travelling in two different types of car. The one on the left is a modern car, fast and reliable. The one on the right is much older.

The newer car is faster, uses less fuel and is better at protecting its driver and passengers in the case of an accident. The older car is already over fifty years old and is still going strong. Nobody expects the new car to still be around in fifty years' time.



1. Why might the newer car be the better one to travel in? Suggest the advantages.
2. Lucy's mother thinks the old car is better. "They don't make them like this anymore! This will still be going strong in another fifty years – long after that new one!" What do you think?
3. Lucy prefers the new car as it's smoother and more convenient. She knows, however, that it takes a lot of energy to make a new car and there are a lot of materials that go into it. Perhaps she ought to stick with the old one. What would you advise her to do?



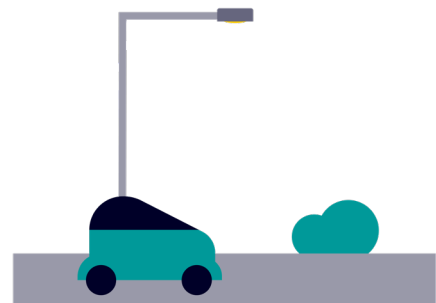


2

Part 2: Lucy wonders if her next car should be electric instead of petrol or diesel. This would mean no more visits to the petrol station, but she would have to go to a charge point instead. Living in a flat and keeping her car on the street means she wouldn't be able to charge it at home. There are a couple of charge points nearby, but they seem to be pretty busy.



1. A couple of years ago there weren't any charge points in the area and now there are many. There always seems to be at least one of them available. However, several other people Lucy knows are exploring electric cars. Suggest what might happen about the supply of charge points over the next few years.
2. Lucy's friends say that they too would like to run electric cars – they worry about atmospheric pollution near to roads and how it might affect them and their children– but they won't until there are more charge points. What would you do to make it possible to get more people using electric cars?





Why this technology is important:

Modern cars use less fuel to cover the same journey and are safer than older cars. However, it takes a lot of materials and energy to make a new car, so we have to think responsibly about this. One of the important factors is how long the car will last for and how many miles it will travel during its life. Another is how well it can be recycled at the end of its life.

Many governments are encouraging the use of electric vehicles as part of their push to reduce the impact of climate change. Electric vehicles (EVs) do not burn fossil fuels directly and so produce fewer greenhouse gas emissions which are a major cause of global warming. EVs do not release exhaust pipe fumes, reducing local air pollution which can improve air quality.

