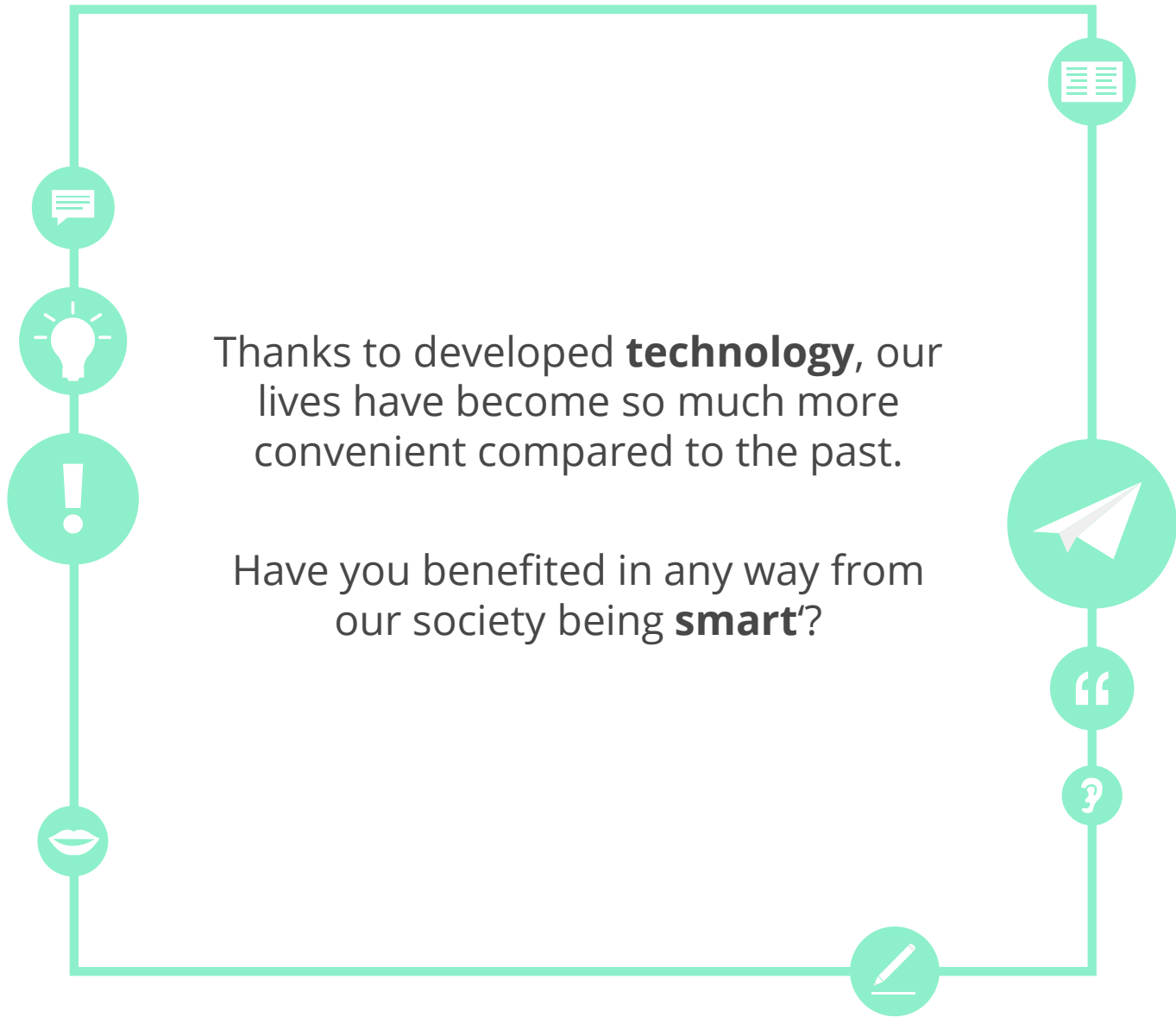# Smart cities

READING

Goals

- Can read and understand the main points of a text about smart cities.

- Can clearly explain the impact of technology on our society and discuss the advantages and disadvantages of various options.

Thanks to developed **technology**, our lives have become so much more convenient compared to the past.

Have you benefited in any way from our society being **smart**'?

Preview

In this lesson, you will practise reading a text about **smart cities**.

My **smart phone** comes in handy when I am lost and urgently need to contact someone.

What is your overall opinion on the speed of technology development?

Is it too fast or too slow?

Effects of technology on society

There is no doubt that we live in the age of technology, and it has become an essential part of everyday life and is constantly improving. How does technology affect you?

positive effects

negative effects

sustainability

resilience

environmentalists

integrated

conservation

interconnected

autonomous

infrastructure

The **sustainability** of the forest is in question if we keep cutting down all of the trees.

Environmentalists fear that the current pollution and waste situation will lead to an unsustainable future.

You can spot many wild animals and enjoy the scenic views of nature in the **conservation** land.

Autonomous driving may become the future, but many people still prefer to drive for themselves.

Do you know these words?

Many cities are spending millions on electric car **infrastructure**.

The buses from city to city are **interconnected** and only require a small additional fee.

Although the family was from a rural area, they **integrated** well when they decided to move into the city.

Stretched to the limit of their **resilience**, rubber bands can hold their position for quite a long time.

Fill in the blanks

Read the sentences below then find the correct words for each blank.

| sustainability | environmentalists | infrastructure | interconnected | resilience |

1. The boxer's _____ was also his weakness – he didn't know when to quit.
2. _____ have been trying to protect the environment by advocating a zero-waste policy.
3. The _____ of the city was not enough to host a big event like the Olympics.
4. Food _____ will become one of the most important issues in upcoming years.
5. A set of _____ computers allow higher speed and greater processing power.

What does *smart* mean to you?

smartwatch

smartphone

smart home

smart TV

Smart cities

Share your answers to the questions below with your teacher.

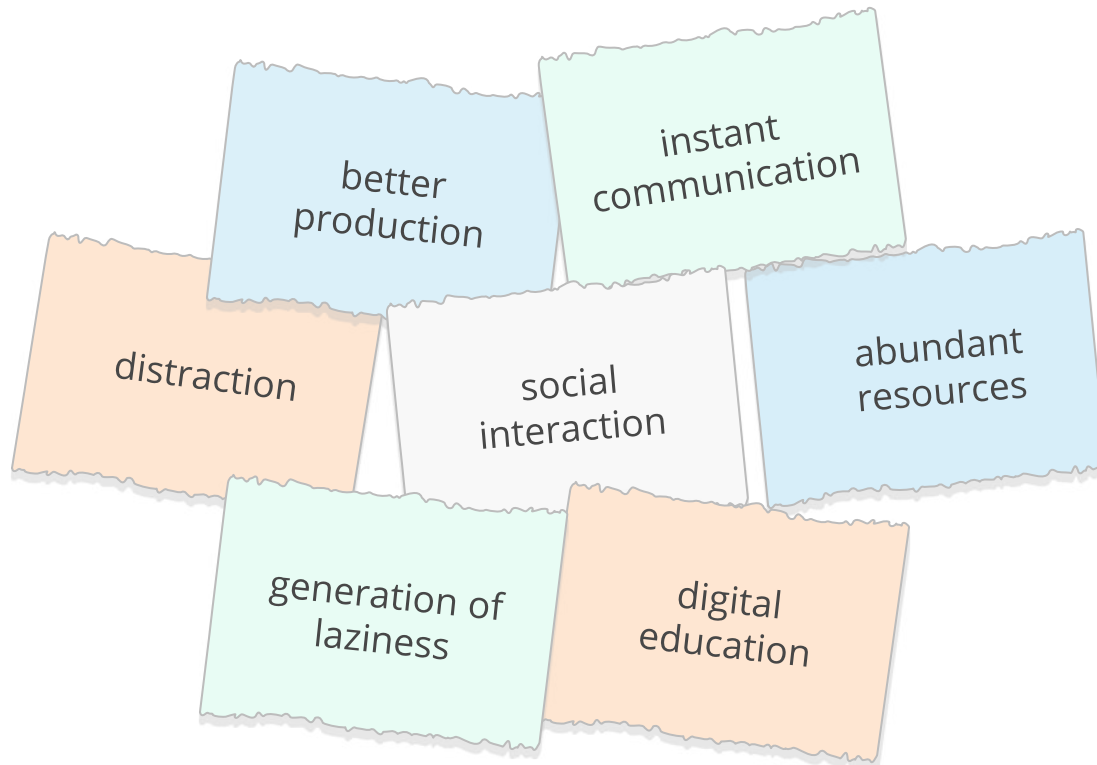**1** How can a city be smart?

2 Where is the smartest city?

3 What are the impacts of smart cities?

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Categorise

There are many pros and cons of using high-technology in your classroom, work, and home. Find pros and cons of using high-tech and talk about them with your teacher.

better production

instant communication

distraction

social interaction

abundant resources

generation of laziness

digital education

Smart cities

What if you were stuck in traffic and suddenly the lights changed and cars began moving while your own vehicle **notified** you of an available parking space nearby? You scan your phone, which contains both your licence and ID, to the available parking space machine and you are just in time for work. You can also plug your electric car to recharge, free of charge! It's all possible and happening today and is just a small example of what can be achieved in a smart city.

Urbanisation is a trend with no end. It is estimated that up to 66% of all people will live in cities by 2050. At the forefront of potential problems that this may cause are environmental, social and economic **sustainability**. The **smart city** is one solution.
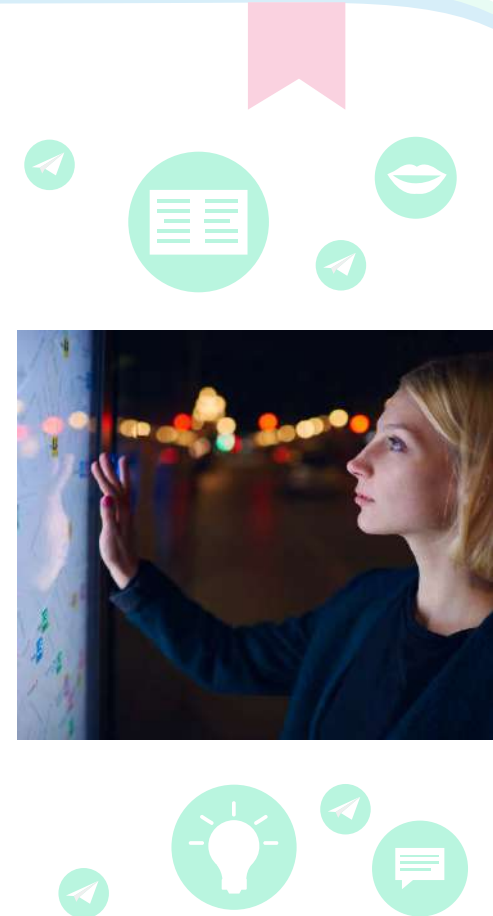
Smart cities

As you read, fill in the blanks below with the correct word forms.

A smart city is a framework that is mostly _____ [*compose*] of communication technologies that allow an ecosystem of connected devices to improve our daily lives. These devices can be, for example, your car, phone or home. _____ [*integrate*] these sorts of things with a city's **infrastructure** can lead to _____ [*improve*] energy distribution and rubbish collection, _____ [*decrease*] traffic congestion and the seamless transfer of payments and data from something as small as your key fob or smart-phone.

Smart cities

Wireless connectivity is changing the way we see and control traditional **elements** in our daily city lives. Streetlights with **sensors** are able to **detect** available parking spaces and alert drivers where they cannot only park their cars but charge them as well. They can also turn themselves off, saving energy, and turn back on when it senses a car or person in close **proximity**. High-powered LEDs can alert commuters of traffic **congestion** and re-route them and, at the same time, provide severe weather warnings. Rubbish bins can send data to the waste management **authorities**, alerting them to pick up the bins when they are close to full, rather than the **inefficient** method of a weekly schedule, which may or may not be needed at all.

Wireless connectivity

There are many smart devices with wireless connectivity in your daily city lives. According to the text, what can each device do to provide greater efficiency?

Do not use the same words used in the text, but try to paraphrase the answers in your own words.

1. Streetlights for parking

2. Streetlights for saving energy

3. LEDs

4. Rubbish bins

Smart cities

However, smart cities also come with their **drawbacks**. One argument against the **implementation** of **smart cities** is that it will cause people to become even more **reliant** on technology and **oblivious** to their surroundings. It's quite common these days to have a person walking down the street, staring into their smart phone, **unaware** of their surroundings. These people cross the street at a red light, bump into strangers or even fall off a ledge marked off-limits!

The **implementation** of technologies, which requires even less human effort, could mean that we forget how to do basic tasks - like parking or finding our car in a crowded area. If this technology were to somehow go offline for several hours or days, it could cause mass confusion and **disorder**.

Smart cities

Another argument against smart cities is data and security protection. With so many **sensor-infused** devices, there is no limit to the **surveillance** that could take place. Your personal data, payment information, whereabouts, spending and travelling habits are all pieces of data that can be collected, processed and analysed for any number of reasons. This could lead to **predictive** policing, personal privacy **violations** and easier payment theft.

You have read the sentence below in the reading text on the previous slide. Do you agree or disagree with this statement?

"

Smart cities... will cause people to become even more reliant on technology and oblivious to their surroundings.

"

Smart cities

While there are both **sceptical** and **optimistic** applications of smart cities, it's important for the governments and companies involved to demonstrate that intense **data gathering** will **enhance** and improve our quality of life. While the sky may be the limit for the technology, it will be interesting to see how it evolves and expands in the near future.

Paraphrase the text

When you paraphrase, you express the meaning of something written or spoken using different words. Paraphrase these three sentences and compare them with your teacher.

There are both sceptical and optimistic applications of smart cities.

It is important for the governments to demonstrate that intense data gathering will enhance our quality of life.

The sky may be the limit for this technology.

Reading comprehension

	TRUE	FALSE
1. Charging an electric car for free is one of the benefits of living in a smart city.	☐	☐
2. Urbanisation will start to slow down in 2050.	☐	☐
3. Problems with environmental and social sustainability lead to developing a smart city.	☐	☐
4. A smart city has nothing to do with ecosystems.	☐	☐
5. Wireless connectivity has many drawbacks when driving.	☐	☐
6. Our privacy has become more vulnerable in a high technology society.	☐	☐

There are five paragraphs in the reading passage.

On a separate piece of paper, write a 2-3 sentence summary for each paragraph.

Answer the questions

These three people below have some questions about the reading text. Read their questions carefully and provide the correct answers.

How do streetlights with sensors save energy?

Why don't waste management authorities send out people to empty the rubbish bin every day?

What does technology have to do with people bumping into me on the street when I walk?

Why smart?

What are the reasons for improving our society with the help of technology?

Is it necessary to keep working on the development?

Or is it good enough? What do you think our city will look like in 50 years?

zero-waste

digital concept

sustainability

infrastructure

Game

You are developing a smart city. First, draw a simple map of what it would look like. Then, write a short description of what it consists of.

- What would your smart city be known for?
- How would people commute?
- What kind of job opportunities would there be?

Be creative and imaginative!

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Reflect on the goals

Go back to the second slide of the lesson and check
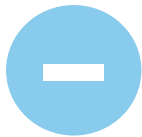if you have achieved all the goals of the lesson.

yes

no

Reflect on this lesson

Think about everything you have seen in this lesson.
What were the most difficult activities or words? The easiest?

+ _____
_____

+ _____
_____

− _____
_____

− _____
_____
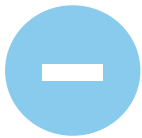
If you have time, go over
the most difficult slides again
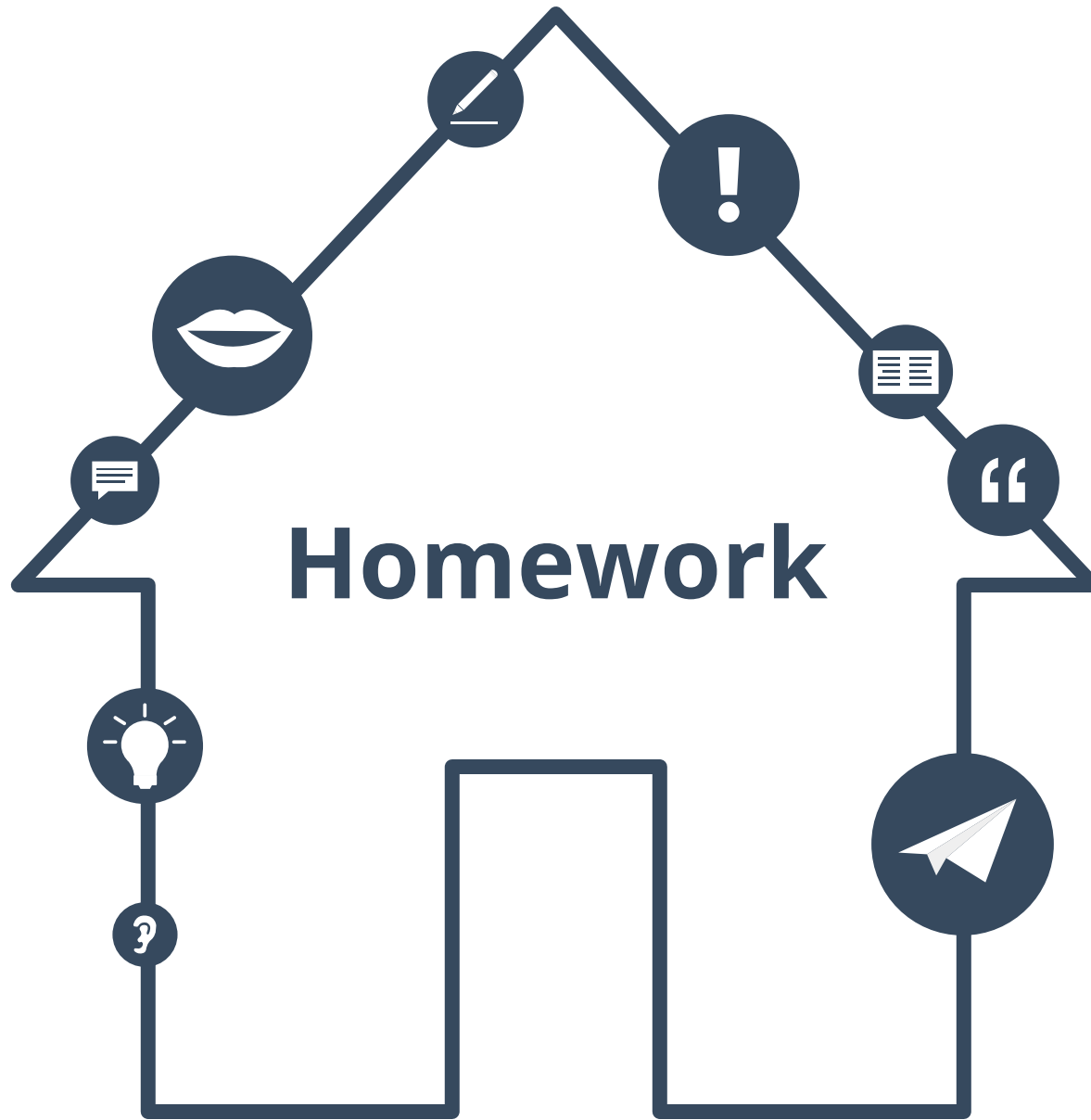
Homework

Describe what educational settings were like when you were in primary school. How did you do your homework? What did the classrooms look like? Then, compare with those in 2018. How much difference can you see? Has education become smarter?

When I was in primary school, we didn't have the internet. We played outside more and we were not interested in technology. We would rather play football or enjoy a creative writing class.

1. The electric car gives off zero-carbon

2. Many people have predicted that the future of cities will see

3. The city planning officials used several methods of

4. The efficiency of modern cars has come

a. An even bigger increase in population within the next few decades.

b. A long way, allowing for both increased horsepower and fuel efficiency.

c. Emissions and qualifies for a tax exemption.

d. Analysation to create a more efficient public transportation system.

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