

**ice**  
Institution of Civil Engineers

2023 Learning  
Technologies  
Gold Award

2024  
Bett Award  
Winner



# CITYZEN

## BUILD YOUR WORLD

2024-25 Award  
Student Guide



For pupils aged 16-18



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# Introduction

## A little bit about us to begin with...

The Institution of Civil Engineers (ICE) is a professional organisation that promotes and supports civil engineering. It's where engineers come together to create solutions that enable our planet and our people to thrive.

## The ICE CityZen Award

Get ready to take part in the ICE CityZen Award. It's a fun, rewarding and unforgettable journey. Plus, it could pave the way for a fulfilling career in civil engineering. There are two ways to get involved – just pick the one that works best for you!

## The CityZen Challenge

Your first option is our award-winning CityZen Challenge. Four engrossing weeks of gaming with your teammates. Simple, fun and great for your future career options.

## The Project Pitch

To achieve the full CityZen Award, your team can take things a step further. It's your chance to use your CityZen Challenge learnings to improve your community. Get creative and pitch your idea to help improve people's lives and where you live.

**Our winners receive generous cash prizes and exclusive access to the ICE headquarters.**



**Two thirds of CityZen participants have told us they are interested or very interested in civil engineering after taking part in the award.**

**So grab your team and get started!**



# Cityzen Student Soapbox

Nobody can explain what it's like to take part quite like our previous participants...

**SUBJECT INSIGHTS**  
**IMPROVE SKILLS**  
**HAVE FUN**  
**UNDERSTAND CIVIL ENGINEERING**  
**ACHIEVEMENT RECORD**  
**COMMUNICATION SKILLS**

**PRIZES**  
**RECOGNITION**

## What did you think of the CityZen Award?

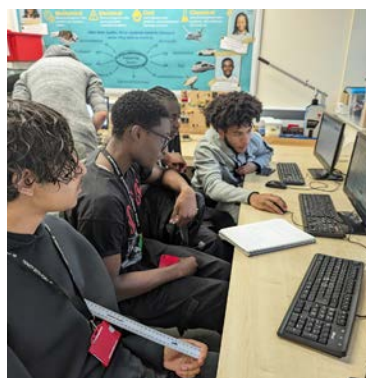


Taking part in the competition was very fun. I'm happy to have had the opportunity to compete.

Year 13 Student, Comberton Sixth Form

CityZen is a unique and enjoyable competition. It helped me to expand my communication and leadership skills.

Year 12 student Barton Peverill College



Thank you very much for this wonderful opportunity to experience a replica of real-world engineering. I really enjoyed it.

Year 12 Student, Dulwich College



# Award timeline

You can take part flexibly throughout the autumn/spring terms to fit in with your school timetable. As long as the game and video project are completed by the submission date below it's entirely up to you when you do them!

**2024 Award submission date: 21 March 2025**





# Prizes

No competition is complete without great prizes. Our winning students receive a fantastic haul of goodies. And so do their schools – because improving your community is what future civil engineers do! There are two ways to take part, so there are also two sets of prizes.

## The CityZen Challenge prizes

For the three highest scoring teams who complete the CityZen Challenge

### Each student receives:

**1st Place:** £50 Waterstones voucher

**2nd Place:** £35 Waterstones voucher

**3rd Place:** £20 Waterstones voucher



Every team who completes the CityZen challenge receives a certificate



2023 CityZen Award winners on their VIP visit to ICE Headquarters

## The ICE CityZen Award

Our top three teams will enjoy a tour of ICE’s headquarters, including lunch with the ICE president

The architecture and history of the building were really impressive and it was great to meet the other winning teams and hear their ideas.

Lara McDonald, Highly Commended 2023

Thanks for the amazing hospitality at the winner’s dinner. We felt well rewarded for our hard work!

Team Canon Slayer, Silver Award Winners 2023



GOLD

£2,000\*

PRIZE MONEY



SILVER

£1,000\*

PRIZE MONEY



BRONZE

£500\*

PRIZE MONEY

There's also more special prizes on the next page!

\*Shared equally between students and school



# Additional prizes

The following special prizes will be awarded by the final CityZen judging panel - alongside those for the Gold, Silver and Bronze Awards (whose winners are ineligible for these additional prizes).

## JBA Trust Special Award for Nature and People Positive Innovation

JBA Trust sponsors this special prize for the project pitch which suggests highly creative and practical ways to support nature and the environment, as well as considering how the project can have inclusive positive impacts on society. This could include, for example, nature-based and/or community based initiatives to strengthen resilience or deliver environmental benefits.

**The winning team will receive £500 – split equally between students and school.**

**The winners of this prize will also be invited to the VIP CityZen winners lunch at ICE Headquarters (see main prize page for more info!).**



It will be awarded for a project pitch that strongly demonstrates at least one of the following:

- A positive impact on nature and/or biodiversity.
- An innovative/original solution that will positively impact the environment for both people and nature.
- A solution that uses natural processes or materials in an impactful and/or original way.

For more information on JBA Trust, visit:  
[www.jbatrust.org](http://www.jbatrust.org)



## Loud Speaker Prize for Communication Skills

One team will be awarded this special prize which celebrates excellence in communication skills (demonstrated in their project pitch).

It will be awarded for a project pitch that demonstrates at least one of the following:

- Has an outstanding presenter(s).
- Uses a highly original and effective communication style.

That also demonstrates a genuine passion for the project – showing how much you care about making a difference.



**LOUDSPEAKER**

**The winners of this prize will be invited to the VIP CityZen winners lunch at ICE Headquarters (see main prize page for more info!). Their school will also be offered Loud Speaker's brilliant 'For Love or Money' workshop for 100 students – their flagship workshop for building students' confidence and public speaking skills! For more information on Loud Speaker visit: [www.loudspeaker.org.uk](http://www.loudspeaker.org.uk)**



# Your data and competition terms and conditions

We will collect, use, store and share, the following items of personal data about you, [if your school registers you to take part in the Competition]:

- Name.
- Date of birth.
- Name and address of your school.
- The year in which you entered the Competition and your school-year at the time of participation.

## How is your personal data collected?

If you decide to take part in the Competition then, subject to the following paragraph, your school may register you as a participant via our online platform, in which case your personal data will be shared with us by your school, via our platform provider, who receives and processes your personal data on our behalf.

Your school is also a controller of any Personal Data it shares with us. We have an agreement with your school, which prohibits it from sharing your personal data with us unless your school has made this privacy policy available to you in advance and you have indicated to your school by email, that you accept the terms of this privacy policy.

We will also share your personal data with UCAS who will conduct a data analysis to track named individuals through the UCAS application process (results are anonymised in the report UCAS will provide so we can't identify individuals from this).

For more information on data use in the competition please read the full **Competition Terms and Conditions** which can be found at:

[ice.org.uk/cityzen](https://ice.org.uk/cityzen)





# The CityZen Challenge

Our award-winning CityZen Challenge spans four weeks. Your team navigates a virtual city, tackling engineering challenges. There's a different theme every week to keep it fresh. You'll get to explore STEM subjects. And, you'll learn how civil engineering can create change in your community. What's not to love?

Here's why you shouldn't miss the CityZen experience:

### 3D action

Web-based 3D gameplay. It's like stepping into your own virtual city!

### Be the boss

Your choices matter here, and every decision affects your citizens' lives. Work effectively as a team and you're on to a winner.

### Loads of challenges

CityZen throws all sorts of scenarios your way, so you won't get bored! You'll build bridges, renovate parks, and consider sustainable housing and crisis management.

You can find more detailed advice for playing the CityZen game in the separate Game Guide found at [ice.org.uk/CityZen](http://ice.org.uk/CityZen)

I really enjoyed the game. It was fun and informative, and it was satisfying being able to implement lessons that you had learnt in previous lessons.

Year 12 Student,  
Guildford High School

Student Rating: ★★★★★



### Award winning

CityZen is the winner of not one, but two international awards. Because, quite frankly, it's worthy!

- Best Learning Game, Learning Technologies Awards
- Best Secondary Free Digital Content App or Open Educational Resource, Bett Awards





# The CityZen Award – Project Pitch

## Use your knowledge

For your project pitch, you will present an original idea to effect change in your community. Think about the unique needs and challenges faced by people where you live. Is there an issue related to infrastructure, transportation, environmental sustainability or public amenities? Can you find an innovative and sustainable solution to address it?

Show us:

- the problem your team wants to solve
- your solution
- how it will benefit your community



**Pro Tip:** Draw on what you learnt in the CityZen Challenge

## Get creative

As a team/on your own, you'll craft a compelling project pitch, including an optional video. Be as creative as you can. Use visuals, animations, voiceovers or testimonials if you like. Or maybe you'll do something we haven't seen before!

Your Project Pitch needs to be in **PowerPoint** file format of up to 10 slides. If you want to include **original video**, you can include a **maximum of three**, totalling three minutes (e.g. 3x 1 minute or 1x 3 minute).

## Be realistic

Remember, this is all about civil engineering in the real world. So think about how much it will cost to deliver your idea, versus the impact it will have. Look at the possible challenges you'll face, and what you could do to overcome them.

**Pro Tip:** Seeking advice from teachers, mentor and local businesses could be really helpful.

## We're looking for:

- original and practical ideas
- a really clear explanation
- creative presentation and design skills
- ideas that will have a BIG impact on the problem you're trying to solve
- a clear demonstration of your learnings from the ICE CityZen Challenge

Each of these criteria is marked out of a score of five, with equal weighting.

You can find more detailed advice for creating your presentation and video(s) in the separate Project Pitch Guide found at [ice.org.uk/CityZen](http://ice.org.uk/CityZen)



# Could you be a civil engineer?

**If you like designing or building, solving problems or improving people's lives then you'd enjoy a career in civil engineering!**

To become a civil engineer you'll need to choose the right subjects at school or college. It's a good idea to check the requirements for any courses you're interested in, as they can vary a lot. **Maths** at A level or Scottish Highers is needed to get onto nearly all civil engineering degree courses. A good grade at GCSE or equivalent will help you secure an apprenticeship. **Physics** at A level or Scottish Highers is also asked for by many universities.

Other useful subjects for civil engineering include Geography, Art and Design, Design Technology, Computing, English and some specialist courses such as the Design Engineer Construct! programme.

## Top career facts



**SALARY** The average starting salary for UK civil engineers is around £28,000 rising to £60,000 for experienced engineers. Professional qualification with an institution like ICE can help you earn more and those at the top of the profession earn well over £100,000.



**INTERNATIONAL** Civil engineers' skills are also in demand across the world and many get the chance to travel to and work in exciting places.



**OPPORTUNITIES** Studying to become an engineer can open doors to other careers: it keeps your options open!



**WELLBEING** Civil engineering regularly features in polls of the top happiest jobs!



**DEVELOPMENT** It's a career which has clear routes through study and qualification.



**STATUS** Qualified engineers have a high status similar to doctors and lawyers.



**EMPLOYMENT** The UK needs lots more civil engineers in the near future.

**Find out more: [ice.org.uk/wice](https://www.ice.org.uk/wice)**



# Meet the professionals

If you're wondering who can become a civil engineer, the short answer is everyone. They can also look just like you!

The Institution of Civil Engineers, as the oldest membership organisation for the profession, is working hard to ensure that the everyone feels welcome and can succeed in their career.

Our campaigns and activities are driven by our members and include:

- Supporting Pride and the Building Equality organisation
- Driving change on racism within the construction industry
- Working with the Women in STEM Campaign



**Ayo Sokale**  
Graduate Civil Engineer,  
The Environment Agency

I got interested in engineering as a child when I saw how engineers had transformed the lives of a community in Nigeria. One of the best things about being a civil engineer is the variety. Some days I'm in the office writing a business case, or organising planning and the next I'll be on-site speaking with contractors or surveying. My favourite part of the job is helping people – for example, protecting families from flooding.

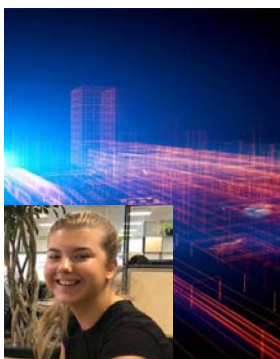
[ice.org.uk/ayso-sokale](http://ice.org.uk/ayso-sokale)



**Kishore Ramdeen**  
Graduate Civil Engineer, Highways England

I originally thought that civil engineering was just about buildings and doing complex maths. But it's so much more. It's about communication, working together, building businesses, creating new forms of transport and fighting climate change. There is some maths (not my best subject), but it's achievable and hasn't held me back! My work involves planning and building road systems and motorway structures. It's great because it's both challenging and rewarding. It's also one of the very few jobs where your work will be there for decades into the future!

[ice.org.uk/kishore-ramdeen](http://ice.org.uk/kishore-ramdeen)



**Lauren Cunningham**  
Undergraduate Highways Engineer, WSP

I didn't originally enjoy STEM subjects but an after-school club changed my mind – so much so that I opted for a Design Engineer Construct GCSE level qualification. My day-to-day job varies but mostly I'm using design software – working on aspects of multi-million-pound projects. I really enjoy problem-solving in my job. I've worked on a huge variety of projects already, including Britain's longest road (A1). I achieved my NVQ and qualified EngTech status aged only 18 and now I'm studying for a civil engineering degree on day release.

[ice.org.uk/lauren-cunningham](http://ice.org.uk/lauren-cunningham)



**Eric S. W. Leung**  
Assistant Resident Engineer, AECOM, Hong Kong

One of my first jobs was the detailed design of the 1.8km Cross Bay Link Bridge in Hong Kong. This landmark structure serves a million residents, myself included, and will significantly improve traffic flow. I'm excited about what civil engineering will do in the future to transform lives. We're using smart technology to build sustainable cities and address the biggest global environmental issues – it makes me proud to be part of that.

[ice.org.uk/eric-leung](http://ice.org.uk/eric-leung)



# How to become a civil engineer

**There are many different routes you can take.**

A vocational course (such as BTEC or HND) combines study with 'hands on' experience and can give you a fast-track to qualified Engineering Technician status. If you get taken on as an apprentice by a company you'll get paid as well as be given time off each week to learn. It's possible to progress from this role to become a Civil Engineer with enough job experience.

Studying at university can give you a fast-track route to Chartered Engineer status and the top jobs in the profession.

There are more ways to study and enter industry than ever before – including starting while still at school (foundation apprenticeships) and working and getting a degree at the same time (degree or graduate apprenticeships).

**Find out more:** [ice.org.uk/wice](https://www.ice.org.uk/wice)



## Financial support

Apply for funding to help you study civil engineering at either university or a vocational course through the ICE QUEST fund.

- QUEST Undergraduate Scholarships ≤£8,000
- QUEST Technician Scholarships ≤£1,000

**Find out more:** [ice.org.uk/quest](https://www.ice.org.uk/quest)

## Free student membership

When you begin studying civil engineering you can sign up for free student membership of ICE. You get lots of great benefits like career advice and resources to help you learn about the industry.

**Find out more:** [ice.org.uk/student](https://www.ice.org.uk/student)



# Careers support resources

If you're looking for more information and support to explore careers in civil engineering we've got it here!

## Virtual work experience

Take part in our on-demand civil engineering virtual work experience to learn why civil engineering is such an exciting and rewarding career. **The Civil Engineers Shaping the World programme** is free and available to all young people via the Springpod platform.

[bit.ly/ICE-virtworkexp](https://bit.ly/ICE-virtworkexp)

## The ICE Inspire 360° website

Visit our virtual careers building to find out loads more about civil engineering. Watch a film in the cinema, visit the virtual gallery and meet plenty of real Civil Engineers and hear their stories, plus there's an extra CityZen game to play if you want to hone your skills for the main competition.

Explore the ICE Inspire virtual careers centre [ice-inspire.co.uk](https://ice-inspire.co.uk)





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