

ice
Institution of Civil Engineers

2023 Learning
Technologies
Gold Award

2024
Bett Award
Winner



CITYZEN

BUILD YOUR WORLD

2024-25 Award
Game Guide



For pupils aged 16-18



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The CityZen Challenge

Our award-winning CityZen Challenge spans four weeks. Teams navigate a virtual city, tackling engineering challenges. There's a different one every week to keep it fresh, and teams get to explore STEM subjects. Also, 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.

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





Success in the CityZen Challenge - what you need to know

CityZen is a learning game so your main aim should be to find out as much as you can in every round. The building stage is a bit like solving a puzzle where you get to use your learnings to find a solution for your cities inhabitants.

Where are the 'answers'?

The right answers for your team depends on what promises you've made, and also your earlier choices. Your build choices could be quite different to another teams and you could both get a good score!

Why is there no national scoreboard?

The variations in each individual game make scoring less important than some other competitions/ awards. We strongly encourage students to submit a **Project Pitch** which shows much more effectively that the lessons of the CityZen Challenge have been absorbed.

Modest **prizes** are given to the top-scoring teams, but Gold, Silver and Bronze Award prizes are given for the top **project pitches**, along with the special prizes sponsored by Loud Speaker and JBA Trust. (See the Student, Teacher and Mentor Guides for more prize details).

There is a school scoreboard on the CityZen account manager which registering teachers can view and share with participants. This gives the opportunity for a little friendly rivalry as you progress through the rounds.

Scores at the end of rounds come with a visual indicator showing how well you've done in each of the key criteria:

- Sustainability
- Value for money
- Satisfaction

There is also a star-rating indicator of how well you've done overall too.

What happens if you retry a round?

There is a score penalty of 1000 points for each round retry. Think carefully about whether you will be able to better your score if you choose replay as only your last score will be recorded (with the penalty).

Getting started

CityZen can be played in teams of a maximum of **4 students**. Solo students are welcome to compete in teams of 1.

There are roles recommended in the game which you can assign within your team to make your gaming process easier:

- Budget Holder
- Note Taker
- Decision Maker

Find the game at <https://bit.ly/play-CityZen>

Important! To play the game you'll need to enter your team's access code which your registering teacher has created for you on the CityZen Account Manager.



Week One

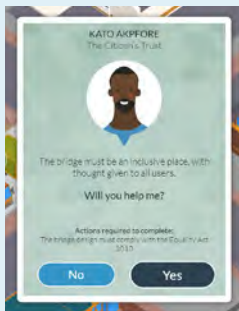
In the first week, the focus is on bridge building. Teams will choose where to place the bridge, how it will be constructed, and how it will best meet the needs of their citizens.

Challenges in this round involve balancing the needs of the city for improved infrastructure against its environmental impact, and managing budget to produce a bridge that meets the needs of citizens. Teams will be penalised heavily if they build a bridge that does not meet the requirements of the Equality Act 2010 (this is explained in the game).

The first round is designed to teach teams the game as they play.

Needs, Wants and Values

Meeting the needs of stakeholders is key to success in the game. Each team will have a different set of stakeholders to appease in a round.



Location exploration

Hotspots in each location will give information that will inform the build. It is very important that a team member is taking notes, otherwise you may get caught out.



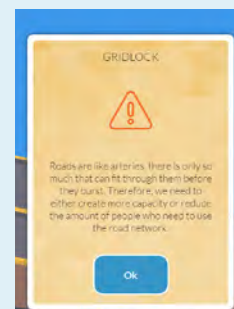
Build

The build menu is where teams will use their knowledge and make decisions based on their notes. It can be closed at any point if they want to check something, and will save their choices.



Variable events

Certain decisions will increase the likelihood of events occurring in later weeks of the game – for example, not signing a maintenance contract on the bridge.



Game over

Teams can get a 'Game over' if they run out of money, satisfaction or sustainability, or if congestion gets out of control. Don't worry though, rounds can be retried with a score penalty.

If teams would like more information about bridge building then further reading links will be unlocked for them on completion of the round.

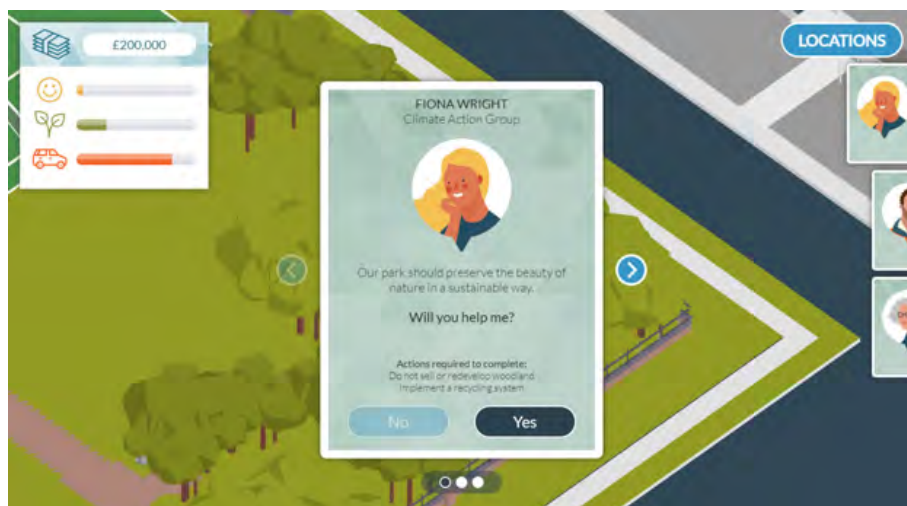
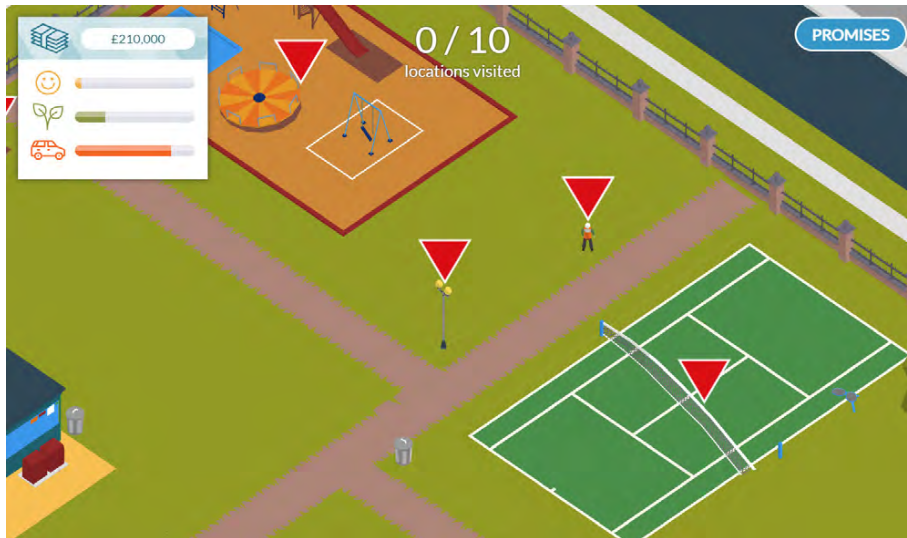


Week Two

In week two, the focus of the round is on the renovation of a park.

There are many areas of the park that can be redeveloped to meet citizen requests, but teams will not have the budget to do everything they want. They will need to consider which elements of the park should be redeveloped, and how much wild green space should be kept, as well as considering the impact that water systems and drainage might have.

Once again, further reading links will be unlocked on completion of the round.





Week Three

Play through round three of the game, which focuses on sustainable building.

Teams should think carefully about which site to choose, as brown and greenfield sites both present different challenges. There is also a substantial score bonus on offer if they are able to successfully complete a low carbon development.



Discussions around this could include:

- Building on greenfield vs. brownfield sites, especially if development is taking place in the nearby area
- What makes building truly sustainable?

As well as the further learning links at the end of the round, teams might also be interested in ICE Past President Rachel Skinner’s video about achieving net zero for infrastructure (25 minutes):

<https://www.ice.org.uk/news-and-insight/latest-ice-news/shaping-zero-watch-the-film>

Another useful link to explore for final inspiration for teams' Project Pitches below explores the concept of the '20 minute neighbourhood':

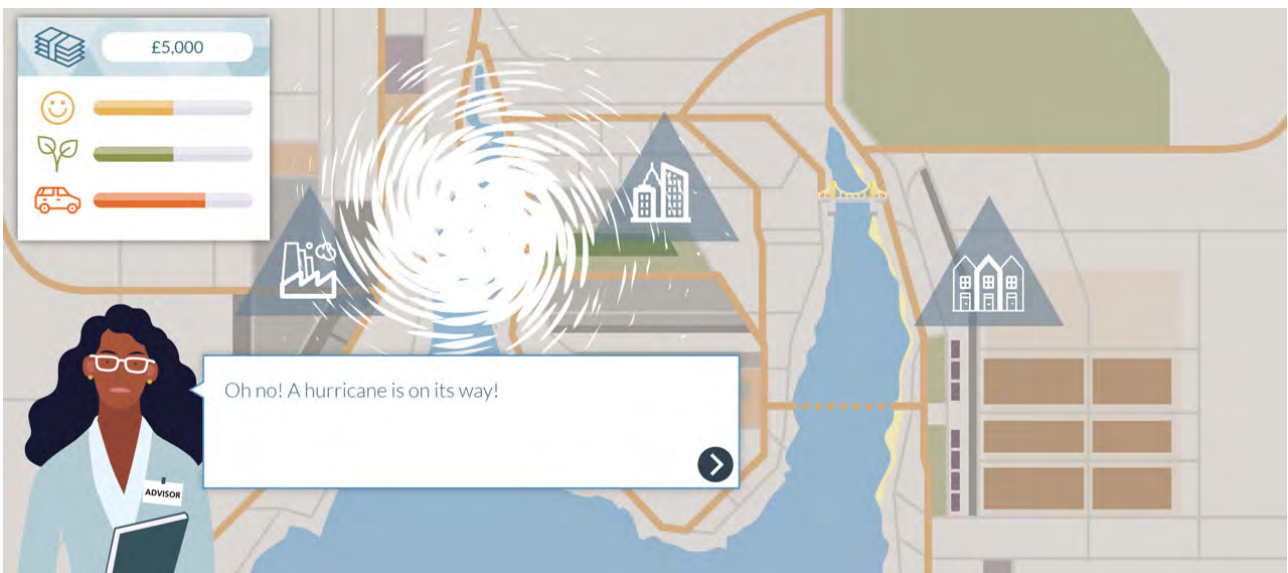
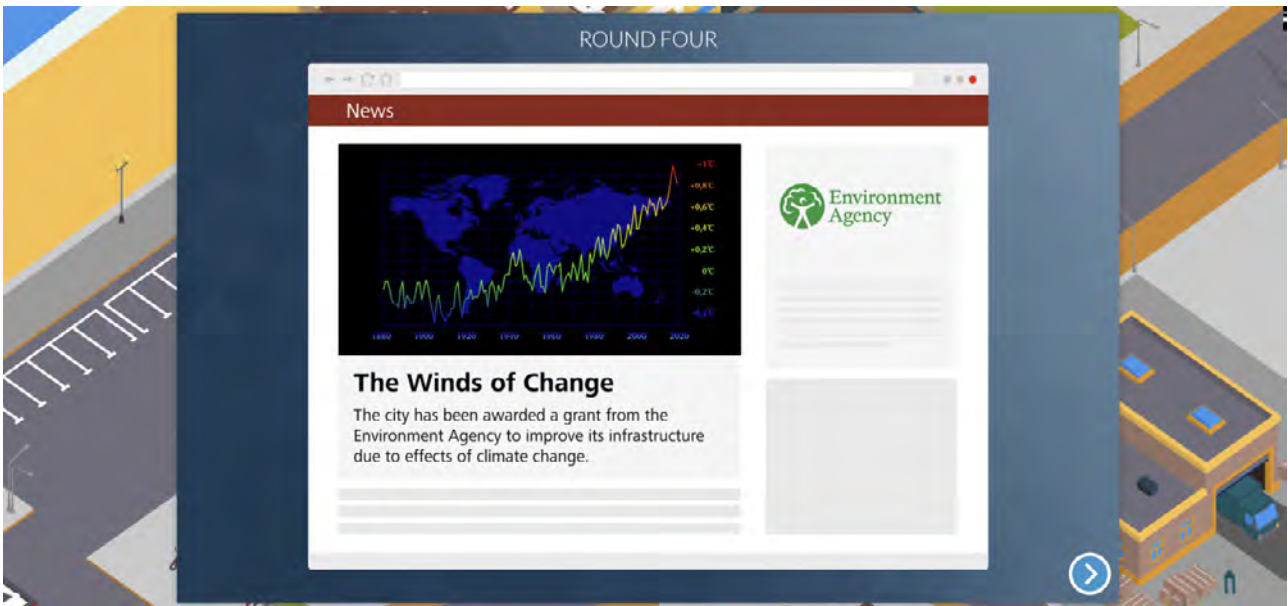
<https://www.newcivilengineer.com/latest/20-minute-neighbourhoods-bringing-life-back-to-our-empty-town-and-city-centres-29-03-2021/>



Week Four

Play through round four of the game, which focuses initially on disaster preparedness, and then asks teams to respond quickly to an imminent hurricane.

Teams will revisit areas from previous rounds of the game, and decide how much budget they want to spend to make these safe. Many improvements that teams have built will be put to the test in this round, and those who cut corners to get high scores may well find themselves slipping down the leaderboard as adverse events occur.



Interested learners can find out more about different civil engineering roles here:

<https://www.ice.org.uk/what-is-civil-engineering/who-are-civil-engineers>



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