



Minecraft: Inspiring Children to Travel Responsibly

Cadent Lane Rental Industry Publication

Introduction

London is a bustling city.

Home to an estimated 9 million people, 12 percent of London's population is between the ages of 5- 15, attending over 2000 primary and secondary schools. Data suggests that most children in London, 8 in 10, do not reach the recommended minimum of one hour of physical activity a day.

Encouraging young Londoners to travel sustainably, actively, and safely has never been so important, particularly when navigating roadworks, with their numbers increasing each year. Building in active travel into daily routines, improves a child's wellbeing, reduces traffic congestion, improves road safety and provides cleaner air.

There are already conventional learning programmes delivered by schools to educate children on the principles of active travel for everyday journeys. However, knowing what to do when those regular journeys are disrupted due to road interventions is not covered in depth. Children are one of the most vulnerable road users, with safety concerns expressed frequently by parents regarding children outside schools.

Education through game play can improve the knowledge and skill of a child, due to the increased engagement and enthusiasm observed with this approach. This medium enables children to experience real world situations, in a safe environment, to understand more aspects of road safety, converting and storing this newly found knowledge to memory.

With annual mains replacement programmes increasingly being required within the vicinity of schools, it is no longer feasible to undertake them during holiday periods and/or school holidays. Cadent, supported by Skewb Climate set out to take a different approach to stakeholder engagement and develop a Minecraft game aimed at school children, to increase their awareness of road/street works and how to navigate them safely.



Project Design

The project set out to increase awareness of roadworks and how to travel around them safely, while influencing parents, through children, to travel more actively and move away from vehicle use.

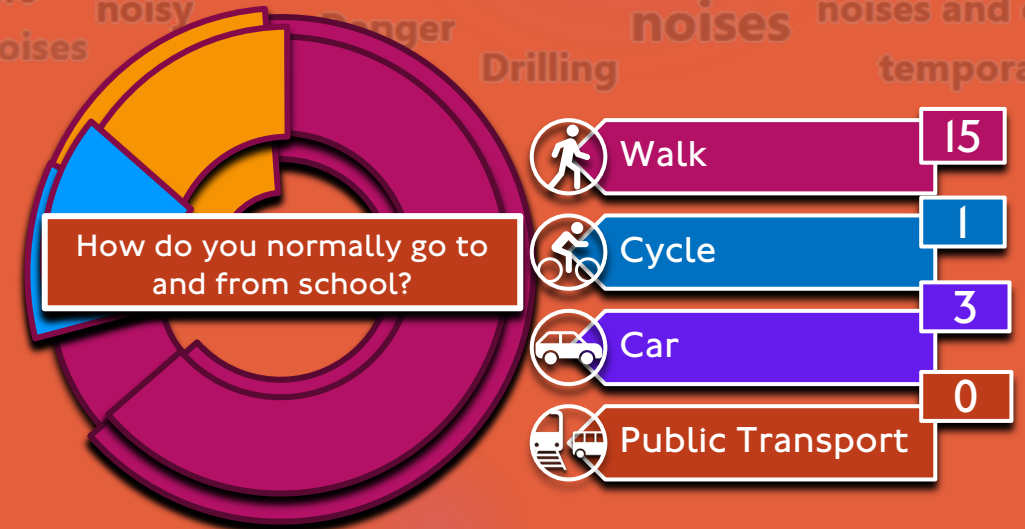
Prior to game development, [Cadent](#) with support from [Skewb Climate](#), facilitated the design of a street and road works awareness Minecraft game storyboard, involving TfL and Cadent Gas employee children. Two sessions were undertaken, one at TfL in London and the other at Cadent Gas in Coventry, with 20 children (8 girls and 12 boys) aged between 7 and 13 in attendance across the 2 sessions.

Data was gathered to establish the children's' current knowledge of active travel and roadworks through a pre-session survey, to be used in future to measure the learning and benefits. The storyboarding sessions focused on engaging children to harness their ideas and understand their level of safety awareness, to identify the learning needs of the children.

After the various learning discussions and game play, a session was facilitated, with stickers and pens, for children to create their own game ideas, resulting in 4 terrific storyboards being created!



construction and equipment
climate change
building hole
traffic workers
loud noises
dangerous
signs and traffic
signs
Traffic holes
noisy
Drilling
dangerous safety
dirty
Traffic cones
NOISE / HOLES
noises
noises and dirt
temporary



Project Delivery

The next stage was to design and build education material for the game module using the storyboards produced by the children, with the following key learnings:

- Active Travel
- Understanding basic signage and site safety
- Understanding engineers and their safety equipment
- Street works obstructions
- Understanding of non-works obstructions and how to be safe
- How to safely navigate the obstruction

TfL, Cadent Gas and Skewb Climate stakeholders worked collaboratively to review the detailed design and scripts for the game to ensure key learnings were conveyed correctly. Upon completion of game development, user acceptance testing was carried out with the children, hosted by TfL and Cadent, including many of the same children involved in the design phase.



Outcomes



The immersive scenarios within the game make it possible to foster practical skills and critical thinking. Beyond road safety, the project aims to ignite excitement about the street and road works sector to inspire future generations to select it as a career and contribute to a sustainable world.

Collaboration between TfL, Cadent, and Skewb Climate has been instrumental in achieving the project's objectives, with the following benefits expected:

- Increased awareness of street/road works safety, in line with TfL's Vision Zero strategy
- Better understanding of why utilities/authorities undertake work and the importance of stakeholder collaboration (Safety across multiple workers from different companies)
- Engagement with the next generation of engineers, thus increasing the level of engagement and recruitment within this sector, as there is an inherent risk around age profile.

The benefit measurement tool has been developed within Microsoft's Power BI to gather evidence of impact. This will analyse surveys taken before and after the game against an agreed set of parameters to understand learning achieved.

Lessons Learnt

Having a game designed by children, for children, while including important messages on safety, inclusivity, sustainability and active travel, has created a game which will create a big impact.

This inclusive and collaborative approach has been the key for success and has real potential for revolutionising road safety education and promoting active travel through innovative gamification.

The use of technology and immersive gamification will empower young Londoners with essential skills, while also fostering excitement about the street and road works sector. This initiative not only addresses the pressing need for safer road environments but also inspires a generation to become active participants in shaping a more sustainable and resilient future.



Conclusion/ Recommendations

The engagement and enthusiasm from the children and subject matter expert parents has been excellent. The design creates the right mixture of educational focus and creativity, so children can have fun while learning.

Support for this type of approach is already starting to be seen from the wider sector, with enormous potential to expand upon the module by taking it to schools to measure learnings more broadly.

The next step is to integrate the game into a broader engagement strategy, targeted at London boroughs where planned gas works are in the vicinity of a school, with the aspiration of a nationwide rollout adapted to reflect different industries within the sector in future.

This game will enable the children of today, to be the sector's workforce of tomorrow.



TfL Lane Rental Scheme

Optimising customer journeys through the delivery of safer, innovative and sustainable roadworks



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