Level Up Rail Safety
A Minecraft Experience Quick Play Guide

NSW GOVERNMENT

Acknowledgement of Country

Transport for NSW acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the lands, waters and seas and their rich contribution to society.
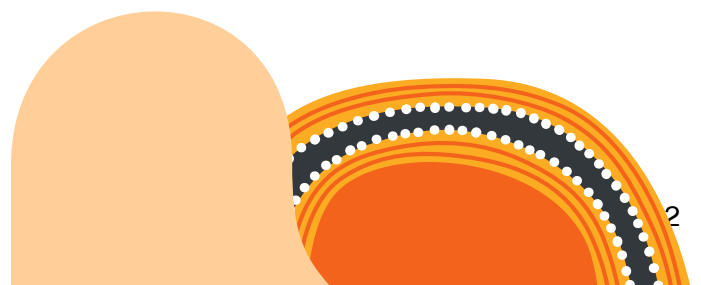
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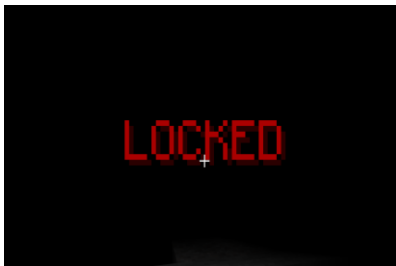
Level Up Rail Safety Quick Play Guide

This project is designed for students to play in small teams. The 4 missions are designed so that students might work together or at times may divide the tasks and then share knowledge gained with their team. Tasks like research and town building readily lend themselves to splitting for an individual focus. In the Minecraft world students will adopt a level crossing. In their local world they should do the same. You can use this NSW Public Level Crossing Finder to locate your nearest crossing.

The Missions

Students spawn outside the Town Hall and will learn about their mission as town safety officers. As they complete each mission, they will return to the Town Hall to report and check off their progress.

Mission	**Takes Place**	**The Mission**
MISSION 1: MAKE THIS YOUR TOWN	In Town	Learn about the issues in this town. Talk to towns' people, look about, find out about the crossing and its safety issues. Try to take lots of notes and photos. Use maps to plan and discuss what your team would change or add to make this look like your hometown. Build the most important features and landmarks, the ones people would recognise in your hometown. When complete, come here to the Town Hall to report your progress to the Town Councillor.
MISSION 2: UPGRADE TO ACTIVE CROSSINGS	Rural Crossing The Lab Town Crossing Town Hall	Visit the **rural crossing** to find out why it's urgent that we upgrade it first. The rail engineer will meet you and guide you to The Lab for research and simulation testing. The engineer will use your settings to create the upgrade. Then at the **town crossing** learn about the slower speed and pedestrian issues. In The Lab carry out your simulation testing for this second crossing then give your settings to the engineer. When both upgrades are complete, report your progress to the Town Councillor.
MISSION 3: ADOPT A CROSSING AND BECOME SAFETY AMBASSADORS	Town or Rural Crossing Lab Library Town Hall	Revisit both crossings and select one (town or rural) that is most like the one in or near your town or local area. If there is more you would like to build, to make it like your town's crossing, do that now. Your team should also think about who uses this crossing and how they will make their crossing (on foot, on bike, or in a car). Think about the risky behaviours that might take place there. Do more research if you need to. Report your progress to the Town Councillor.

MISSION 4: CREATE A SAFETY CAMPAIGN	Town or Rural Crossing Lab Library Town Hall	Choose the group of people you want to influence. Research and discuss their behaviours. Remember you are now the official town safety ambassadors. Create a campaign to influence those people to be safe in the level crossing. How will you use what's in this town to get your message across? Test your campaign and vote to decide on the team with the most powerful message and influence. When your campaign has been tested the Mayor will award you the ambassador's medal.

PLEASE NOTE: Teachers should be aware that if a student attempts an unsafe behaviour around trains on multiple occasions they will be 'locked' from play and their screen display this image. The student will have a timer on screen showing how long they are locked for. You can release them early if you choose by typing in the in-game chat on their computer (press 't' to bring up chat)   /tag @s add teacherunlock

Awards Ceremony

Please note: The teacher will need to check off **completion of Mission 4** the safety campaign by typing in the in-game chat, at each student computer, the command   **/tag @a add teachercheck**

Students can then check off **Mission 4 Complete.** Play concludes when the 4 missions are reported as complete, with a medal ceremony. The townspeople gather in the Town Hall to see the ambassadors receive their medals from the Mayor. Students are challenged to go out into their local area to continue their safety ambassador work.

Key Destinations

Area	Co-ordinates	Image
Town Hall For Missions Town Building and Award Ceremony	75 65 630	 Spawn point – The Town Hall
Rural crossing For Upgrade	130, 65, -160	 The passive rural crossing
Town crossing For Upgrade	125, 65, 600	 The passive urban crossing
The Lab For Research and Simulation	2, 67, 62	 The Lab

NOTE: After walking about the town and rural areas to orient themselves, students may want to **teleport** between key destinations. They should press 't' to bring up chat and type **/tp <coordinates>** for instance /tp 2, 67, 62 will teleport them to the Lab. Key coordinates are listed in the table above.

In The Lab

In the Lab students will do the game's version of a VR headset and work to simulate timing for the elements of an active crossing to create a safe journey for all. The simulation will ask them to decide the distance from the crossing to place the signal box and to create the correct sequence and timing for the lights and boom gates to warn and ensure the safety of people on the side roads. HINT: Setting s signal box distance far enough away from the crossing is vital – think BIG!
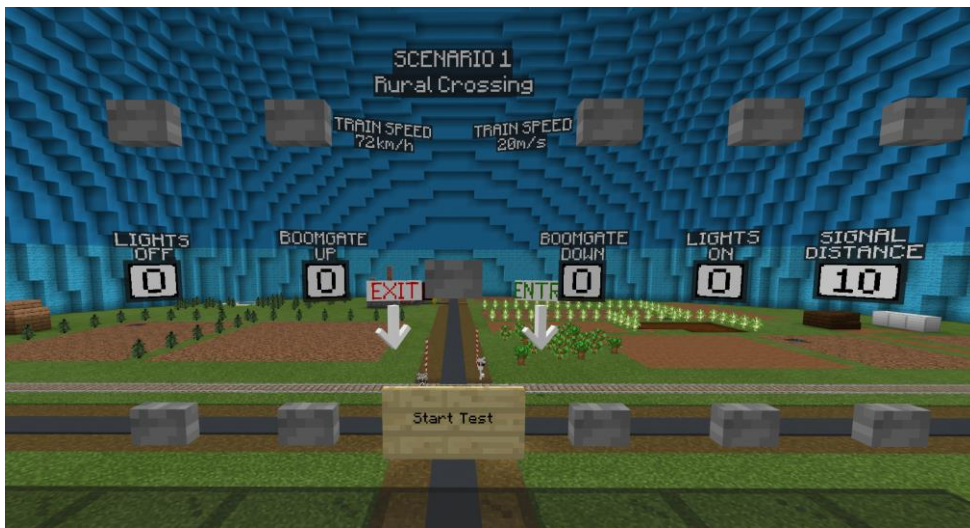
View through the in-game (pretend) VR headset for simulation settings to prepare the rural upgrade.

The Simulation Results

The Settings	A Failed Test	A Successful Test
Students set 5 variables to create a safe level crossing ● distance train is detected from the crossing entry ● time after the train detection for lights turn on ● time after the train detection for boomgate to go down. ● time after the train leaves the crossing before boomgate goes up ● time after the train leaves crossing before lights turn off.	If students' crossing is drastically unsafe the simulation will fail. Drastically unsafe is defined as the boomgates moving or not down while the train is in the crossing, or the lights not being on while the boomgates are moving or down.	A successful test can result in two outcomes: If the timings are not within safe bounds students will be given targeted feedback to support them to adjust and improve the safety of their proposed timings. If the timings are within the safe bounds students will be requested to run the simulation again to get three consecutive successful trials.

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