Future Transport

Your Mission: You are future engineers exploring the cars of tomorrow. Your mission: program autonomous vehicles to drive, sense, and decide - then debate the ethics of letting machines make choices on the road.

Pre-Visit Activity

Mission Intel	10 mins	**Watch:** The Simple Solution to Traffic (CGP Grey) • What's the "invisible force" that causes traffic jams? • Could autonomous vehicles reduce or even eliminate these problems?
Traffic Lab	20 mins	**Task:** Explore the Traffic Simulation Tool. • Run different scenarios: What happens when you add more cars? What if drivers are inconsistent? • Experiment with different "solutions" (spacing, flow, fewer cars, better driving rules). **Discussion:** • What seemed to be the main cause of traffic? • Could the jams be solved with just one solution? • Did this activity help better understand traffic in the real world?
Introduction to Autonomy	20 mins	**Kahoot:** Ready set Drive! – Intro to autonomous vehicles • Test what you know about sensors, automation, and smart transport. • Connect your learning to real-world AI vehicles (like Tesla, Waymo, Zoox).
Reflection	10 mins	**Write a quick "Future Headline" that could appear in 10 years:** • *"Autonomous vehicles solve ____ problem by ____."*

Post-Visit Activity

Thymio Simulation Hack	20 mins	**Task:** Continue your Thymio journey with the Thymio Simulator. • Program your Thymio to follow a path, stop at "traffic lights," or avoid collisions. • Bonus: Try coding with **Python mode** to give your robot more complex decision-making.
AI Transport Debate	20mins	**Prompt**: *"Should autonomous vehicles replace human drivers?"* • Split into two groups: *Pro* and *Con*. • Each side presents 2–3 strong arguments. • Reflect: Where do you personally stand after the program?
Reflection	5 mins	**Discussion prompts:** • Has your opinion on AI and autonomous vehicles changed? • How might this technology benefit society? • If you were in charge of designing Melbourne's traffic systems in 2040, what would you implement first?