The Next Lap Challenge

Formula 1® Australian Grand Prix 2027 – Albert Park Circuit

Mission

Think like Formula 1® engineers and innovators. As the Formula 1 Australian Grand Prix returns to Albert Park in 2027, the circuit continues to evolve – with faster sections, reprofiled corners, and changing race conditions reshaping how cars perform.

Your team must investigate these changes and the science behind them, including speed, aerodynamics, and safety. Using your findings, identify a problem or opportunity created by these evolving conditions, then design one bold innovation that takes racing to the next lap at Albert Park.

Present your idea as a professional pitch to Formula 1® decision-makers.

What Your Team Will Do

1. Investigation (All Divisions)

Your team will begin by exploring how the Australian Grand Prix circuit at Albert Park is evolving and how these changes affect the way Formula 1® cars race.

You should investigate:

- How track changes influence speed, braking and cornering.
- How airflow and surrounding structures may affect aerodynamics and stability.
- How increased speeds impact safety and risk.
- How the circuit and event design affect teams, drivers and fans.

As part of your investigation:

- Research the recent and upcoming changes to Albert Park.
- Explore the science behind these changes using class activities, experiments or simulations.
- Identify one specific problem or opportunity created by these changes.

👉 This problem will become the focus of your innovation.

👉 Need.ideas?.See.the.Inspiration.Prompts.section.below.to.help.your.team.explore.possible.directions¡.

Inspiration.Prompts

Use these questions to spark ideas and guide your thinking. You do not need to answer all of them – choose the ones that help your team develop a strong innovation.

🏎️ Performance & Racing

- How could changes to the track improve speed, grip or overtaking opportunities?

- Could a new racing line, surface or track feature make cars faster or more competitive?
- What design changes could help cars brake later or accelerate faster out of corners?

🌬️ Aerodynamics & Environment

- How might buildings, grandstands or structures affect airflow around the track?
- Could you design something that reduces turbulence or improves car stability?
- How could wind be used to improve performance instead of disrupting it?

🛡️ Safety Systems

- How could high-speed corners be made safer without slowing cars down?
- Could barriers, materials or track design reduce the impact of crashes?
- What new technologies could predict or prevent accidents before they happen?

🏗️ Track, Infrastructure & Architecture

- How could the layout of Albert Park be improved for racing or safety?
- Could new buildings or structures enhance both performance and the fan experience?
- How might you redesign a section of the track to make it more exciting?

👥 Fan Experience

- How could spectators see more of the race or feel more connected to the action?
- Could digital technology improve how fans experience the Grand Prix?
- How could crowd movement, access or viewing areas be improved?

🌱 Sustainability & Energy

- How could the Grand Prix use cleaner energy or reduce environmental impact?
- Could track materials, infrastructure or operations become more sustainable?
- How might energy be generated, stored or reused during the event?

💡 Big Thinking

- What would the Australian Grand Prix look like in 10 or 20 years?
- If you had no limits, what would you change about Formula 1® racing?
- What is one problem nobody has solved yet, and how would you solve it?

2. Design & Build (Division-Specific Guidance)

Use engineering, design and creative tools to develop your innovation.

Primary (Years 4–6):

- Build a physical model of your idea using classroom materials such as cardboard, recyclables, LEGO or toy components.
- Your model could represent a section of the track, a safety feature, a building, or something that improves how cars race.
- Label key parts to show how your idea improves speed, safety, aerodynamics, or fan experience.
- Draw and label your design to clearly show how it works.

  Optional¿Try.creating.a.simple.digital.design.of.your.idea.using.tools.like.Tinkercad.or.Scratch.

Junior Secondary (Years 7–9):

- Create a digital design of your innovation using Tinkercad or similar free software.
- Build a physical model that demonstrates how your idea works, for example improving airflow, reducing risk, or enhancing track design.
- Explain how your design improves racing performance, safety, or the overall Grand Prix experience.
- Include diagrams or annotations to show how your design functions.

  Optional¿Run.a.simple.test.or.simulation.using.tools.such.as.PhET.or.Algodoo.to.explore.forces?motion.or.airflow¡

Senior Secondary (Years 10–12):

- Develop a detailed concept of your innovation, supported by diagrams, models or digital designs.
- Explain how your solution improves performance, safety, aerodynamics, infrastructure or event systems at Albert Park.
- Include a clear explanation of the science and engineering principles behind your design.
- Consider feasibility by outlining how your idea could be implemented in a real Formula 1® environment.

  Optional¿Include.data?calculations?or.simulation.results.to.strengthen.your.design.justification¡

3. Analyse & Explain (All Divisions)

Show the science behind your innovation.

- Describe how your design improves racing at Albert Park, for example speed, cornering, aerodynamics, safety or the fan experience.
- Explain the science or engineering behind your idea, such as forces, motion, airflow, energy or materials.
- Include a diagram, labelled model or short paragraph that clearly shows how your innovation works.
- Junior Secondary (Years 7–9): Use observations, diagrams or simple testing to support your explanation where possible. If you completed a simulation or test, include what you found.
- Senior Secondary (Years 10–12): Provide a clear and logical explanation of how your design works and why it is effective. Where possible, support your explanation with data, calculations, research or simulation results.

4. Pitch Your Solution (All Divisions)

Sell it like a real Formula 1® innovation team.

- Create a narrated PowerPoint presentation showcasing your idea, model or design.
- Your presentation must be delivered at normal speaking speed and must not exceed 3 minutes in total duration.
- Where schools or parents prefer not to show student faces, submissions may use voiceover narration with slides, models or visuals instead of on-camera presentation.

- Fast-forwarded, sped up or artificially accelerated narration is not permitted.
- Clearly explain the problem, your solution and how it works.
- Show why your idea improves the future of racing at Albert Park and why it should be adopted in Formula 1®.
- Be clear, creative and convincing in your presentation.

How the Challenge Works

1. Teams of no more than five students research, design and present their innovation.
2. Submissions are a narrated PowerPoint, with a maximum duration of 3 minutes.
3. Projects are judged nationally across three divisions.
4. The top three Victorian teams in each division are invited to pitch live on stage at the 2027 Formula 1® Australian Grand Prix.
5. For all other states and territories, submissions are judged remotely, with one Overall Winner selected per division (Junior Secondary and Senior Secondary) to represent the rest of Australia.
6. All teams will be notified of their results via email.

Key Dates

Submission Deadline: Friday 12 February 2027
National Division Winners Announced: Friday 26 February 2027
Victorian Live Finals: To be confirmed

Team Divisions

Schools may enter multiple teams across one or more divisions.

- Primary School Division: Years 4–6
- Junior Secondary Division: Years 7–9
- Senior Secondary Division: Years 10–12

Basic Draft Judging Rubric (Full table to be provided)

Creativity & Innovation: Originality, bold thinking and future-focused ideas.
STEM Application & Technical Rigor: Effective use of science, engineering and systems thinking to support the design.
Problem Identification & Impact: How clearly the team defines a relevant problem or opportunity, and how effectively their solution improves racing, safety, performance or experience.
Pitch & Communication: Clarity, persuasiveness and creativity in how the idea is communicated, using engaging visuals, storytelling or innovative presentation approaches.