

**BAE SYSTEMS**

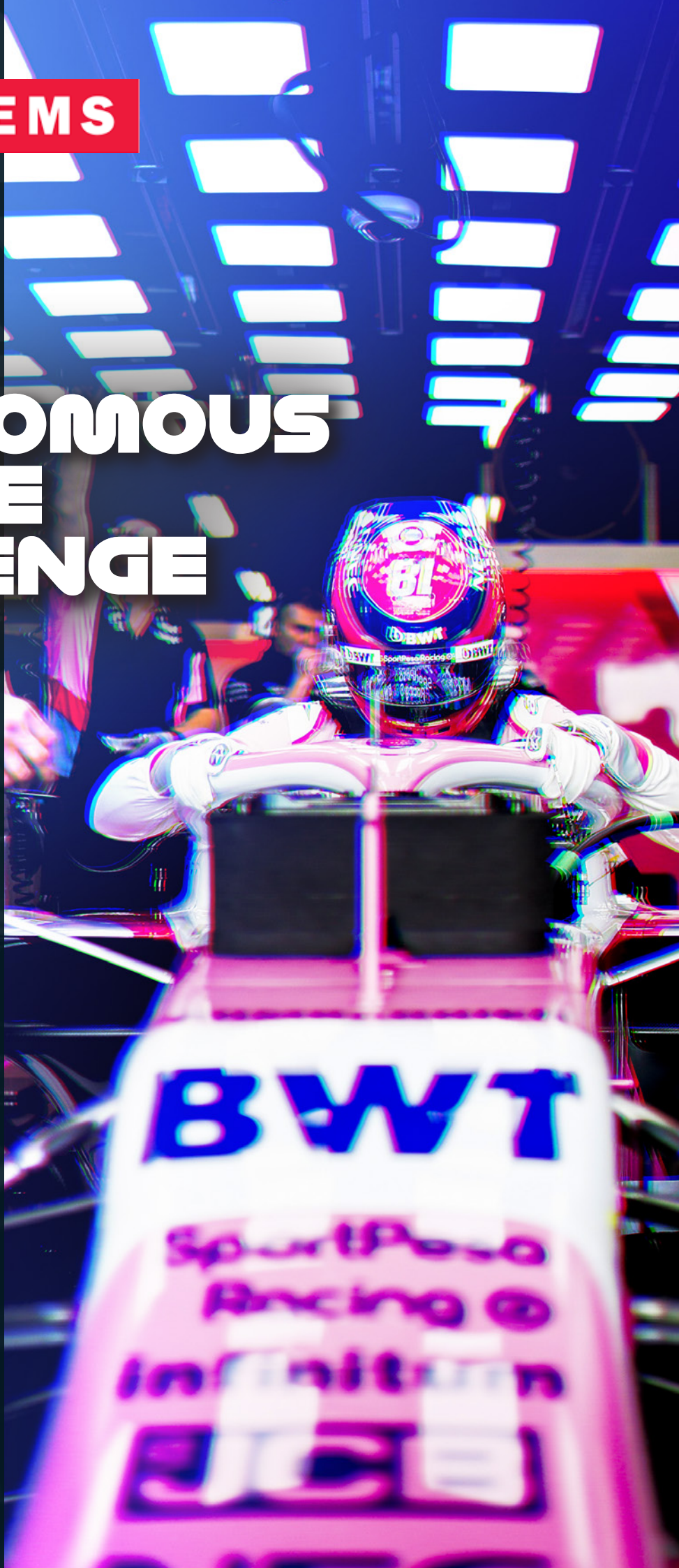


STEMHUB.COM.AU

# AUTONOMOUS VEHICLE CHALLENGE



GRANDPRIX.COM.AU



# A TRANSFORMATIVE EDUCATIONAL EXPERIENCE

Bring your best game to the 2020 Formula 1® Rolex Australian Grand Prix! The BAE Systems Australia Autonomous Vehicle Challenge brings STEM learning out of the classroom and into the real-world using student driven, and entrepreneurship approaches. We give students in grades 5 to 12 the chance to become entrepreneurs by applying creative and critical thinking, communication, collaboration, and STEM learning.

## THE COMPETITION

This competition aims to attract primary school and Secondary School level students to STEM fields and entrepreneurship. Students are asked to create solutions to the below questions:

### **Primary School:**

If you were a Race Engineer, what features would be added to a Formula One vehicle to make a winning autonomous race car?

### **Secondary School:**

If you were a Race Engineer, what features would be added to a Formula One vehicle to make a winning autonomous race car, including design features to protect itself against collisions and damage?

# ROUND 1

In order to enter and be considered, schools are asked to:

- Prepare a “3-minute” pitch deck which outlines:
  - Problem you’re solving
  - The science behind what you’ve created as outlined in ***The Science of Autonomous Vehicles*** booklet.
  - The team
  - *Additional information will be accepted if teams feel they can convey the relevant information within the designated timeframe.*
- Pitch decks must be in PDF format.
- Schools can only submit their best team, one team per school.
- Pitch decks must be submitted via the Grand Prix website found at [www.grandprix.com.au/event/driving-learning](http://www.grandprix.com.au/event/driving-learning) by 5pm on Friday 28 February where they will be judged.
- The selected schools will be notified no later than by 5pm Friday 6 March of their success.
- Ten teams (5 Primary School and 5 Secondary School) will be selected to pitch their ideas at the Formula 1 Rolex Australian Grand Prix 2020.

## Round 1: Resources

- *The Science of Autonomous Vehicles* booklet.
- Teachers are advised to download the following marking rubric to assist with creating a competitive pitch deck *Scoring Rubric – Pitch Deck.docx*.
- 1-page business plan template that helps you deconstruct your idea into its key assumptions. Using this template is not compulsory. <https://leanstack.com/leancanvas>

# ROUND 2

Teams that have successfully reached Round 2 will pitch their ideas to a panel of industry expert judges at the Formula 1® Rolex Australian Grand Prix 2020 to be held on March 12 – 15.

The selected finalists will compete on the following dates:

- Thursday 12 March (Primary School); Friday 13 March (Secondary School) in the Innovation & Tech Hub Main Stage.

Teams will be expected to:

- Pitch their concepts to a panel of industry experts.
- Pitches will be 3-minute (timed) followed by 1-minute panel Q&A.
- Judges will be using the marking rubric (see Round 2: Resources).
- Prizes to be awarded to best team on the day;
  - Two Prizes; a VIP experience for each of the team members, one school teacher and a representative of BAE Systems plus official AusGP merchandise – one per Primary School and Secondary School.

## **Round 2: Resources**

- Teachers are advised to download the following marking rubric to assist with creating a competitive pitch deck Scoring Rubric – Pitching.docx.

# TEAM ELIGIBILITY AND REQUIREMENTS

1. Each team must consist of 2 to 5 school students.
2. Teams must have 1 team supervisor (teacher or parent).
3. Teams participating in the Challenge that progress to Round 2 must be able to attend the 2020 F1 Rolex Australian Grand Prix to pitch in front of judges. (Free tickets will be provided to the schools).

## PITCH DECK SUBMISSIONS (Additional Information)

This section refers to all pitch decks submitted by the team for consideration.

1. All elements submitted by the team must be entirely the work of the student team members. Team coaches may guide the students but may not create any of the submitted elements or provide excessive influence on the concept design.
2. The submission and/or presentation may not disclose any 3rd-party intellectual property or violate any existing copyright protections.
3. Submissions may not copy or use other materials without properly citing the source. Proper citation includes the standard information of a scientific citation, including authors, publication source, dates, volume, pages or URL information.

**Good luck to all the teams, and we look forward to seeing you pitch your great ideas!**

# SCORING RUBRIC - Pitch Deck

Enter School Name Here	SCORE				
	1	2	3	4	5
	Very Weak or Missing	Weak	Ok	Good	Excellent

Please enter a score for each category below

CONTENT					
Originality of idea					
Creative pitch deck					
Concise information					
Easy to follow information					
<b>Content Total</b>	<b>/20</b>				

ALIGNMENT WITH CHALLENGE PROBLEM					
Deck addresses the problem					
Deck addresses Autonomous Vehicles					
<b>Alignment with Categories Total</b>	<b>/10</b>				

SCIENCE					
Science involved in product/service clear					
Science aligns with <i>The Science of Autonomous Vehicles</i> booklet					
<b>Science Total</b>	<b>/10</b>				

<b>GRAND TOTAL</b>	<b>/40</b>				
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# SCORING RUBRIC - Pitching

Enter School Name Here	SCORE				
	1	2	3	4	5
	Very Weak or Missing	Weak	Ok	Good	Excellent

Please enter a score for each category below

CONTENT					
Originality of idea					
Creative pitch deck					
Information relevant					
Concise flow of information					
Content Total	/20				

DELIVERY					
Storytelling – Introduction, flow of idea, summary					
Energy, confidence and creativity					
Verbal and non-verbal communication					
Delivery Total	/15				

Q&A					
Provided concise, educated and informed answers					
Q&A Total	/5				

GRAND TOTAL	/40				
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FORMULA 1  
ROLEX  
AUSTRALIAN  
GRAND PRIX  
2020 12-15 MARCH

25TH  
RACE  
MELBOURNE

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