




**PRIMARY
WORKBOOK**

INFORMATION FOR SCHOOLS AND TEACHERS

A visit to a round of the Repco Supercars Championship provides fantastic opportunities for students to engage with and get excited about STEM education. In an environment where they can see, hear and smell STEM in action, children can make meaningful connections between the Australian Curriculum and the action on track. This booklet has been designed to be completed by students either independently or collaboratively and can be utilised both on the day or back in the classroom.

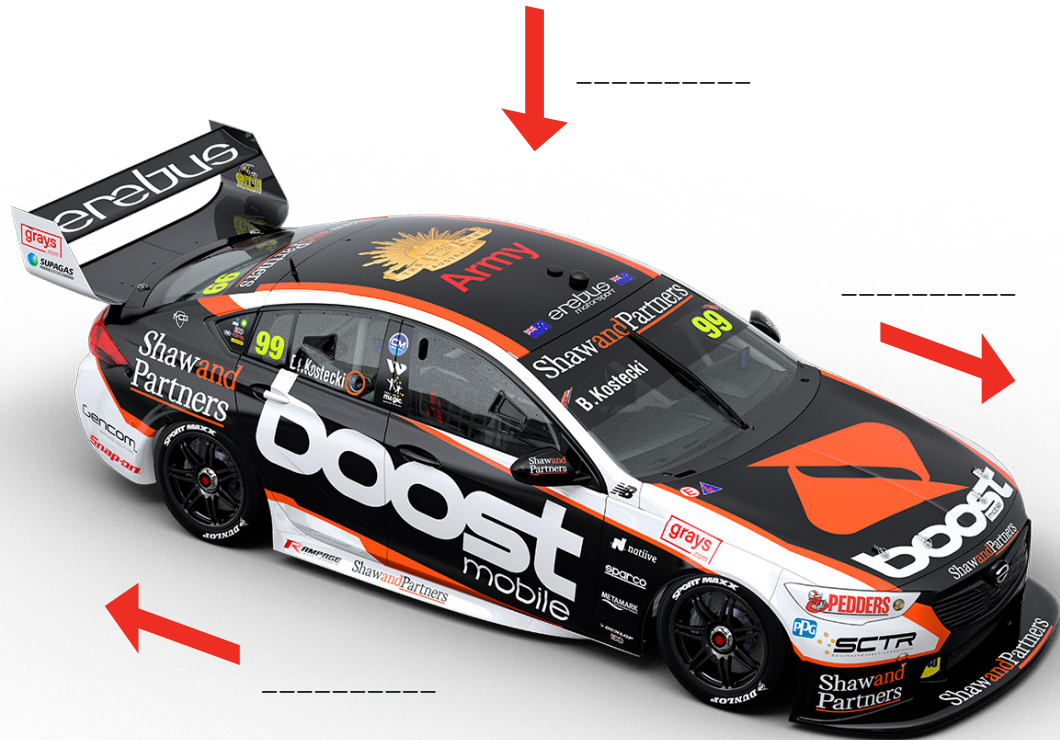


Alignment with the Australian Curriculum Year 3 – 6

| | |
|--|---|
| Curriculum Area: Science | |
| Physical sciences | Forces can be exerted by one object on another through direct contact or from a distance (ACSSU076) |
| Science inquiry skills | Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (AC SIS093) |
| Curriculum Area: Design Technologies | |
| Knowledge and understanding | Investigate how forces and the properties of materials affect the behaviour of a product or system (ACTDEK011) |
| Processes and production skills | Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025) |
| Curriculum Area: Humanities and Social Sciences | |
| Geography | The representation of Australia as states and territories and as Countries/Places of Aboriginal and Torres Strait Islander Peoples; and major places in Australia, both natural and human (ACHASSK066) |
| Curriculum Area: Mathematics | |
| Number and algebra | Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100) |
| Measurement and geometry | Convert between common metric units of length, mass and capacity (ACMMG136) Use 'am' and 'pm' notation and solve simple time problems (ACMMG086) Compare 12- and 24-hour time systems and convert between them (ACMMG110) Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090) Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113) |
| General Capabilities: | Cross Curriculum Priorities: |
| <ul style="list-style-type: none"> • Literacy • Numeracy • Critical and creative thinking • Personal and social capability | <ul style="list-style-type: none"> • Sustainability |

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), www.australiancurriculum.edu.au

1 Complete the force diagram by adding the correct labels to the force arrows.



FRICION

GRAVITY

PUSH

2 Make a list of the design features of a Supercar that make it faster than an ordinary car.





3 The fuel tank of a Supercar has a capacity of 102 litres. How many litres would be used to fill the tank 3 times?

4 What is the total length of the race circuit you are at today?

In kilometres _____

In metres _____

5 If a Supercar has completed 15 laps of the race and the circuit is 3km long, how many kilometres have been driven?

6 A Supercar team uses approximately 16 tyres during each round. How many tyres would they need to get through all 10 rounds?

7 A Supercar weighs a minimum of 1,410kg. 3 Supercars can be loaded onto the transporter truck at a time. What would the total weight of the 3 cars be?

8a If a Supercars race starts at 11:30am and finishes 3 hours later, what time does the race finish?

8b Convert that time to 24-hour time.






SUPERCARS SCAVENGER HUNT

Try and spot these items while you're at the track. Tick them off the checklist as you go.

| | | | |
|------------------|--|---------------------|--|
| Main Entry Gate | | Grandstand | |
| Tow Truck | | Safety Car | |
| TV Camera | | Start Grid | |
| Pit Lane | | Big Screen | |
| Helicopter | | Transporter Truck | |
| Supercars Driver | | Race Track Official | |



Race Flags are used in motorsports to communicate important messages to drivers. Find out what each of these flags mean and record in the table below.

| Flag | Meaning |
|---|---------|
|  | |
|  | |
|  | |
|  | |
|  | |

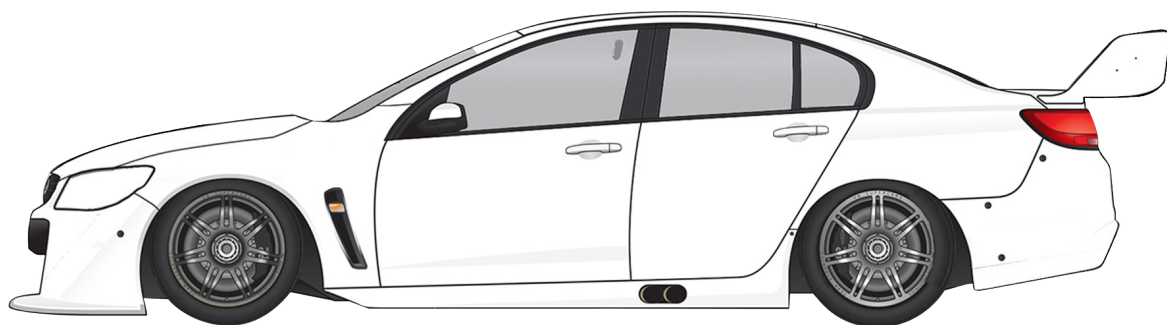
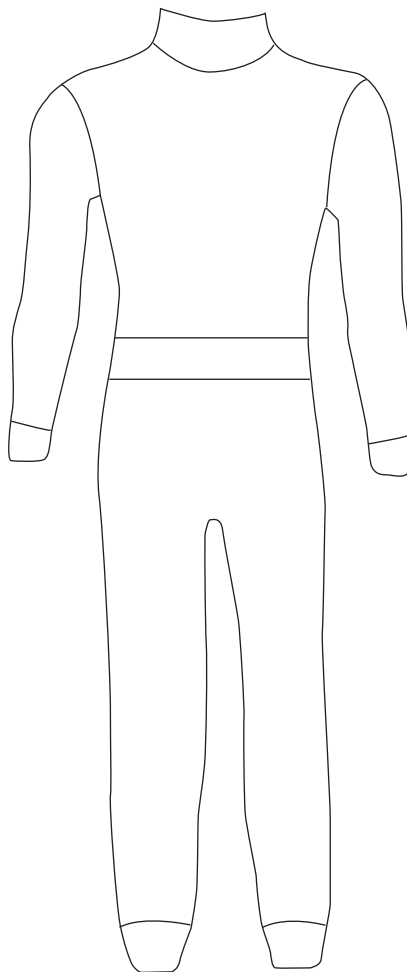
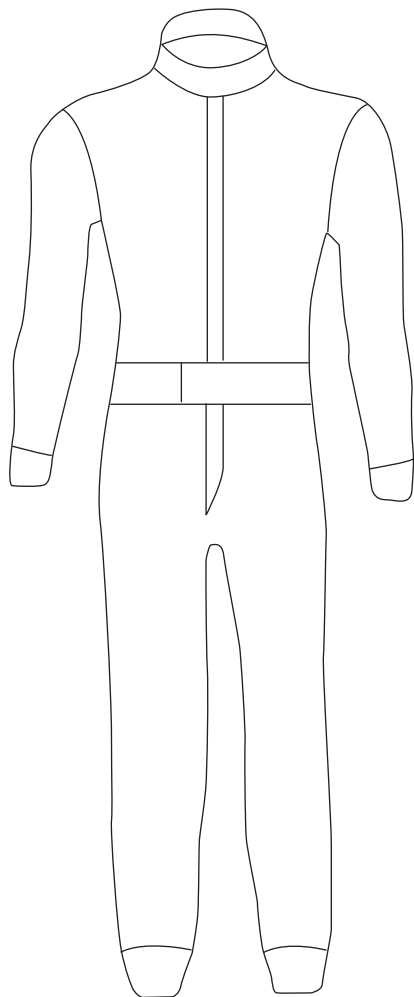
Design your own racetrack! A Supercars track is usually around 3km in length. Use the grid to help you get the distance right; one square on the map is equal to 100 metres in real life. Make sure you include features such as pit lanes, start/finish line and grandstands.



| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| A | | | | | | | | |
| B | | | | | | | | |
| C | | | | | | | | |
| D | | | | | | | | |
| E | | | | | | | | |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Write the grid references for at least 4 of your track features. For example, B3 = grandstand.

Imagine you are starting your own race team!
Come up with a design for your car and race suit.

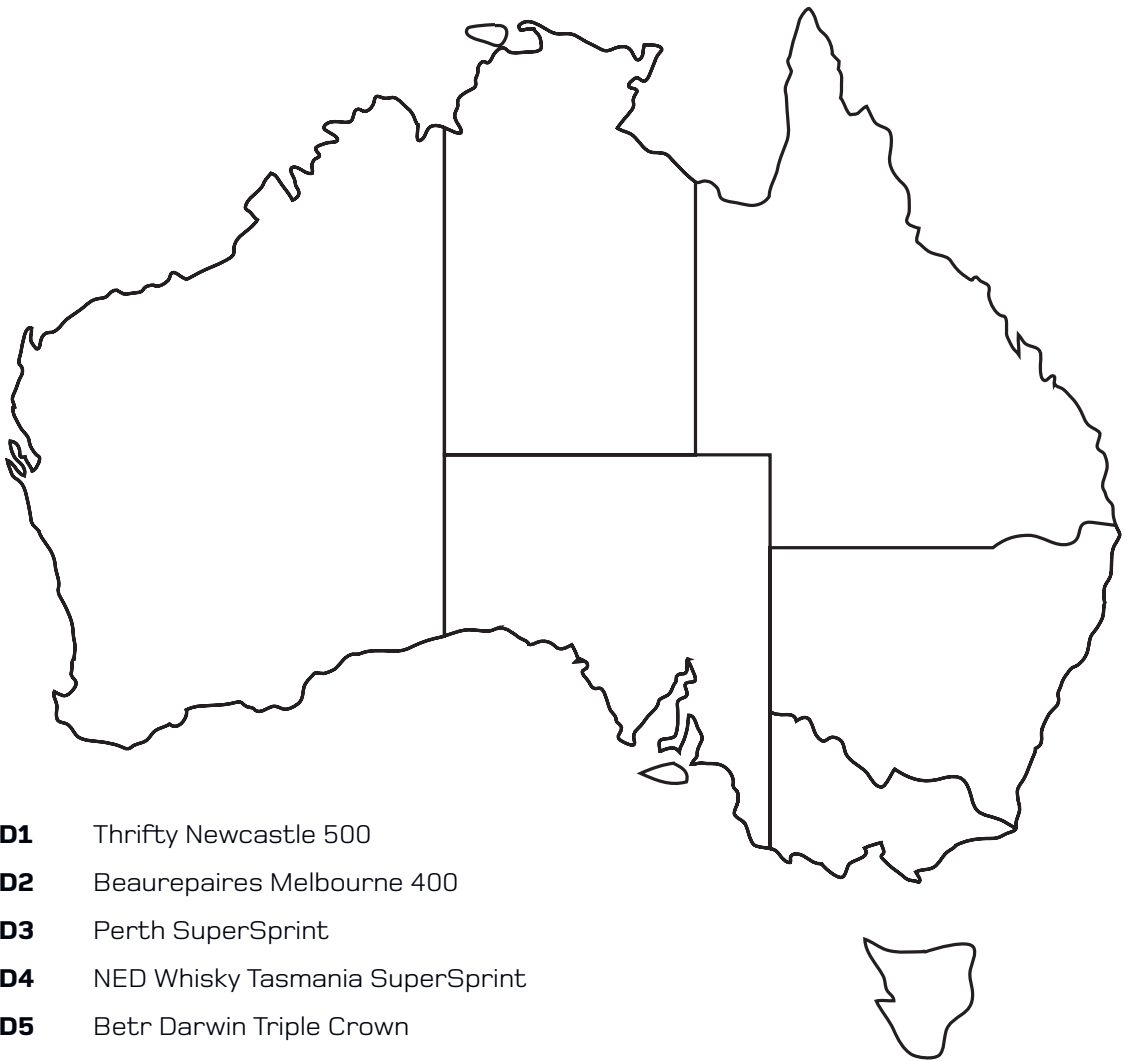


- Plot the event on the right spot on the map.
- Place a star at the location of the track you are visiting today.
- Calculate these distances:

Darwin to Townsville _____

Perth to Gold Coast _____

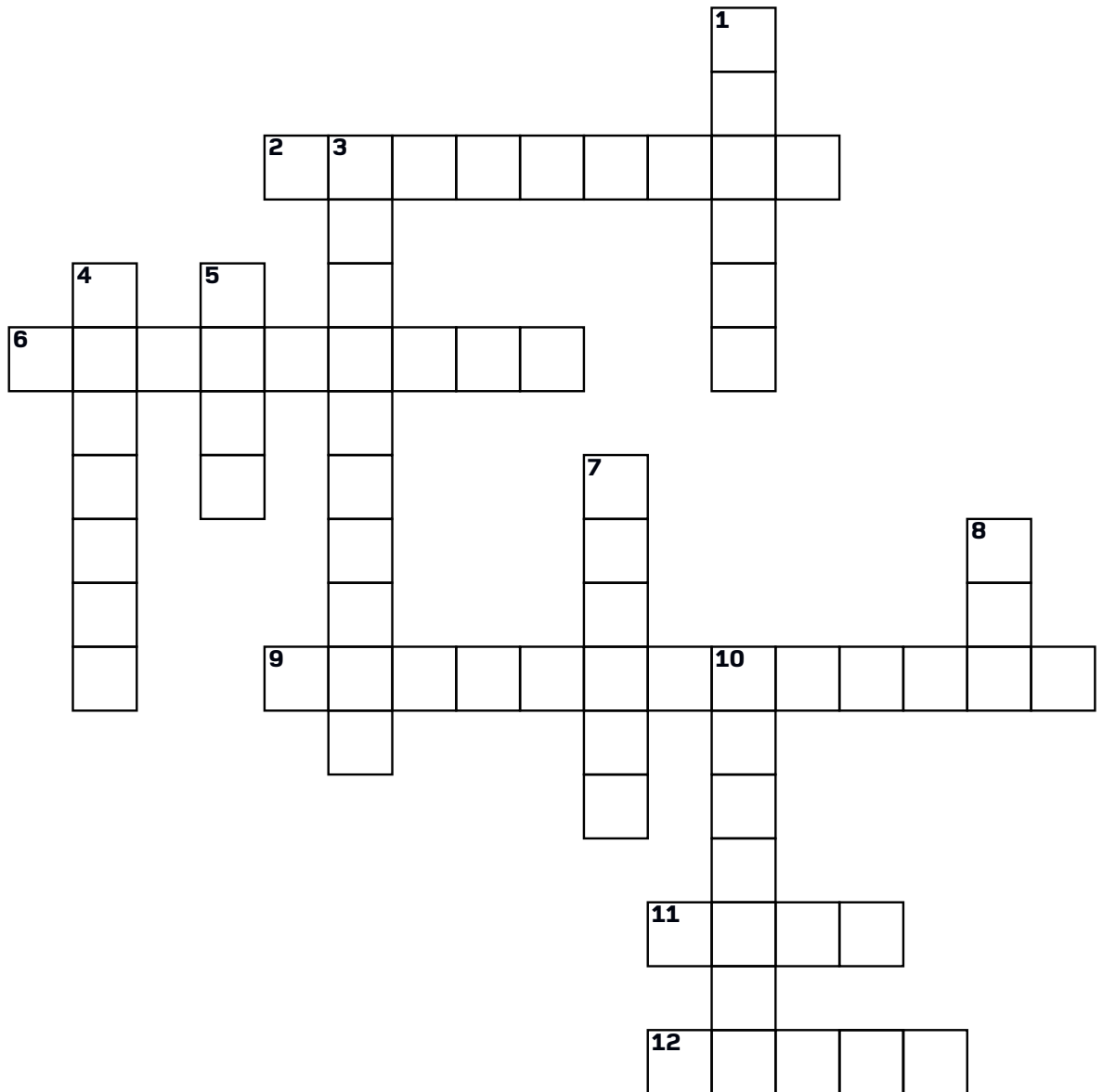
Tasmania to Sydney _____



- RD1** Thrifty Newcastle 500
- RD2** Beaufort Melbourne 400
- RD3** Perth SuperSprint
- RD4** NED Whisky Tasmania SuperSprint
- RD5** Betr Darwin Triple Crown
- RD6** NTI Townsville 500
- RD7** Beaufort Sydney SuperNight
- RD8** OTR SuperSprint
- RD9** Penrite Oil Sandown 500
- RD10** Repco Bathurst 1000
- RD11** Boost Mobile Gold Coast 500
- RD12** VALO Adelaide 500



SUPERCARS CROSSWORD PUZZLE

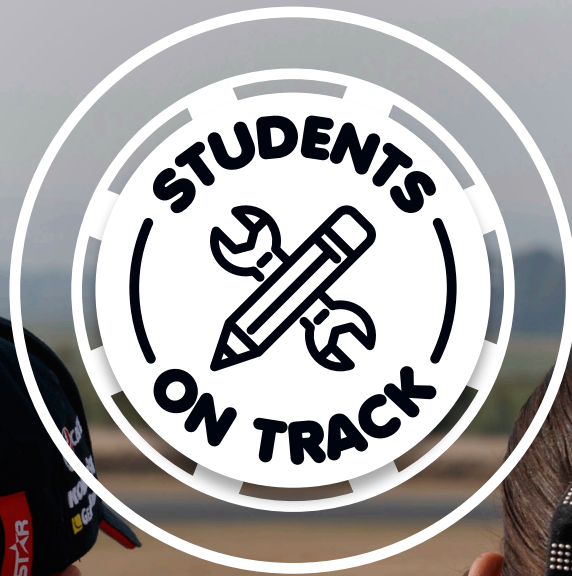


Across

- 2. Comes onto the track after a crash
- 6. Equal to 1,000 metres
- 9. Turns the car
- 11. Where Supercars go for repairs
- 12. Help the Supercar grip the road

Down

- 1. Used to slow the Supercar down
- 3. Move faster
- 4. Another name for a race track
- 5. Number of wheels on a Supercar
- 7. Gives the Supercar its push force
- 8. Number of people in a Supercar when it is racing
- 10. The force that pulls objects towards Earth



SUPERCARS
CHAMPIONSHIP
Repco

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