University of South Australia

UniSA STEM Showdown

Presented by UniSA Education Futures

GET READY TO RIDE

Name:_____

The STEM Showdown is a series of STEM challenges to solve by the end of the season. You can complete the tasks individually or in small groups (up to 3 people). Make sure you write all the names of the people in your group above. The student with the most tasks completed over the season will be crowned the UniSA STEM Showdown Champion. Good Luck.

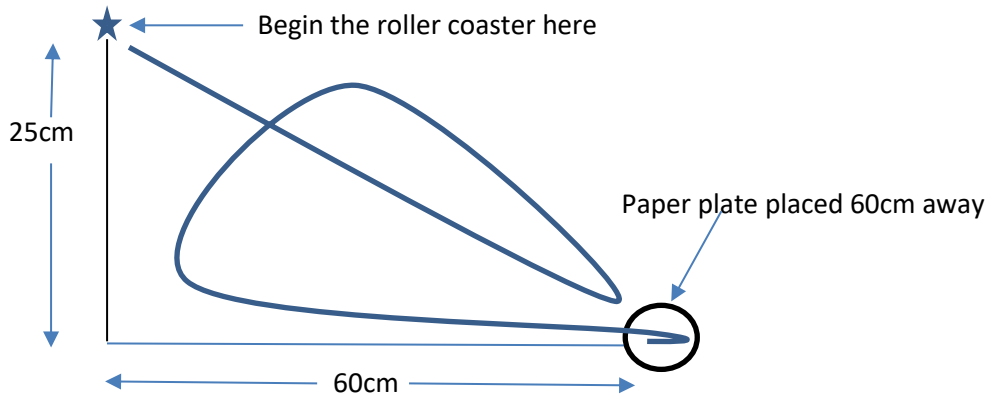
Get rady to ride

Civil engineers design structures, these include bridges, buildings and roller coasters. Today , you are the engineer. Can you design a safe rollercoaster ride that allows your friends to ride the rollercoaster safely to school?

Your Task

- You can only use these materials supplied to make your rollercoaster
- Create a rollercoaster that begins 25cm from the ground and spans 60 cm.
- Your rollercoaster must allow a ping pong ball to travel safely without stopping or falling off along the way and it needs to finish on the “school” paper plate supplied

Good Luck



Show the Showdown umpire your design in action.

Draw your working design, if yours isn't working draw the design and suggest what you would change if you could build it again.

STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)
Completed rollercoaster	
Drawing of the design	

Extension task

Engineers have to consider many different ways of doing the same task.

Can you think of how your design would change if you were using a tennis ball instead of the ping pong ball? Explain or draw

Create a list of materials you could use to make your rollercoaster environmentally friendly?

STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)
Alternative design for a tennis ball idea	
Environmentally friendly materials list	

Make sure you hand up your signed sheet to the umpire at the end of the session to have your points allocated to the leaderboard