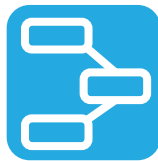


Pitsco Racer

Year 8 Technology

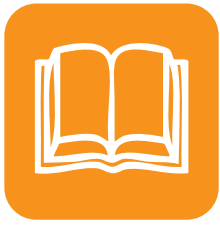


Name: _____

Class: _____



This booklet works in conjunction with www.sactas8.weebly.com



Glossary of Terms

On this page you will need to write down the definitions for the terms, items and concepts explored in this unit.

1 _____

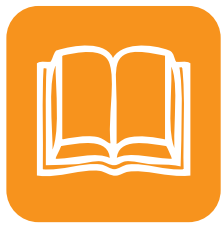
2 _____

3 _____

4 _____

5 _____

6 _____



Identification of the need

On this page you will need to identify and explain the problem you will be solving in this project.

Design Situation

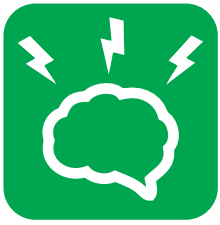
Vehicles are designed with aerodynamics in mind to consider speed, efficiency and to prevent lift and vehicle instability at speeds. As a car travels at speed, it is pushing against a wall of air, which causes resistance. Well considered aerodynamic cars reduce the effect of the air's resistance and drag on the vehicle allowing them to move through the air with greater speed. It also allows cars to be more efficient as good aerodynamics prevents drag and enhances acceleration.

Design Brief

Referring to the design situation use the following words to complete the close passage to define the problem you are solving in this project:

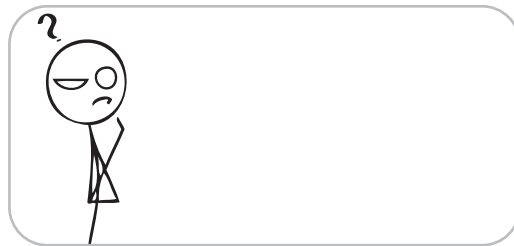
reductive propulsion axle aerodynamic weight
aesthetics timber resistance graphics

Design an _____ car shape that will perform well and allow you to race and compete with your classmates. You will need to consider both _____ and aerodynamics to allow your car to travel at maximum speed with minimum _____. You will be provided with a piece of _____ that you will shape using a _____ process to remove material. Your car's design will incorporate two holes for an _____, and support a canister for _____ at the back of the car. Improve your car's _____ and get it race ready by applying _____ or colour to your pitsco body.



Brain-Storm

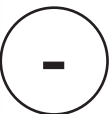
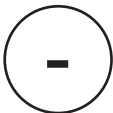
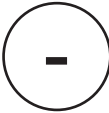
In the space below you will create a brainstorm lead by your teacher to help explore ideas and themes for your project.

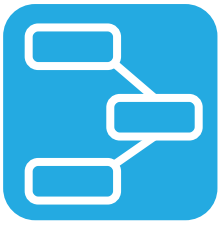




Past Project Design Analysis

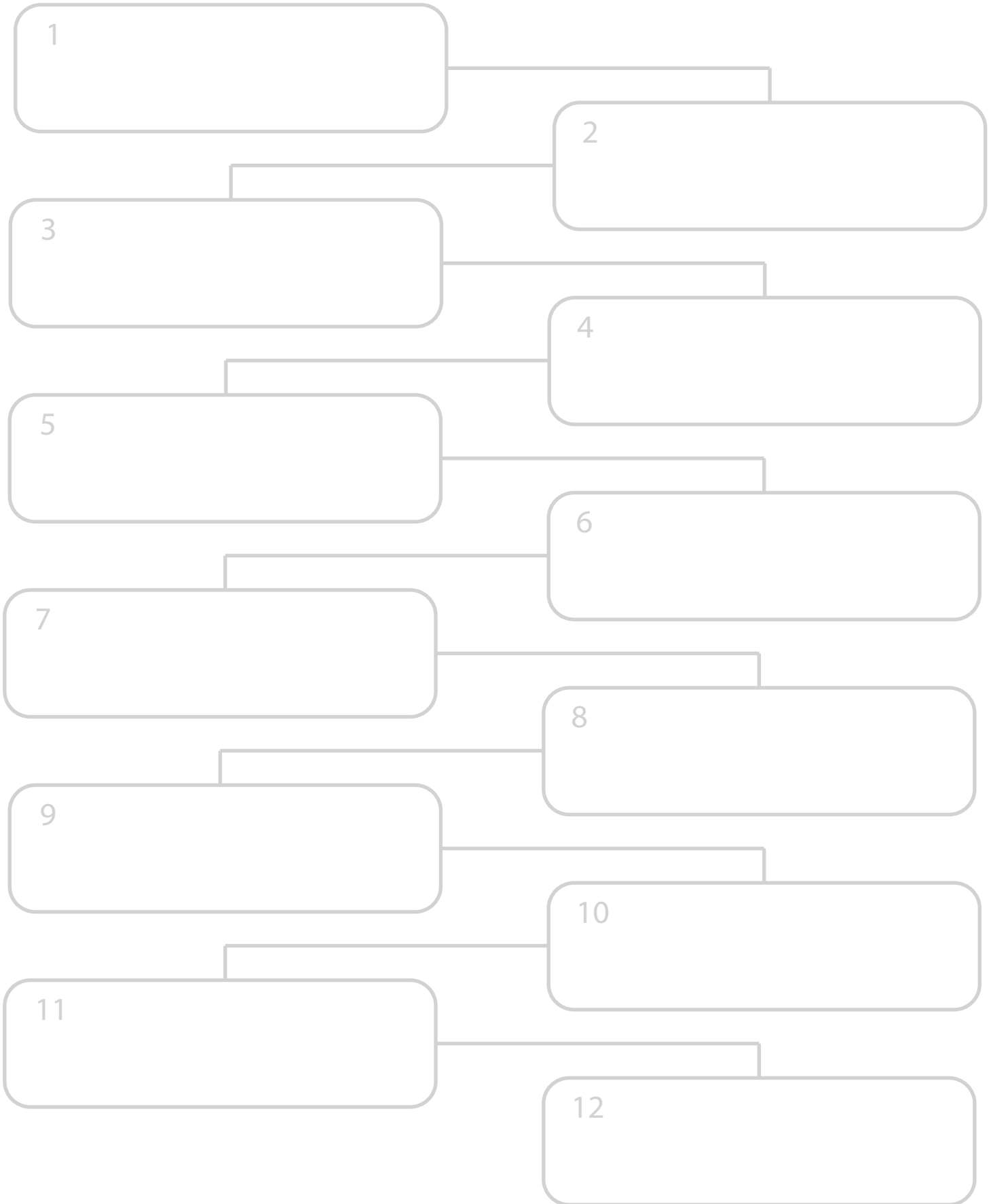
Using images from the www.sactas8.weebly.com you will need to do a PMI analysis on three past student designs.





Steps of Construction

Based on a class discussion with your teacher you will need to record the required steps of construction involved in this unit.





Tools & Techniques

In the space below you will need to draw the tools specific to the unit and explain how to use them correctly and safely.

A large, empty white square with rounded corners and a subtle drop shadow, intended for drawing and writing.A large, empty white square with rounded corners and a subtle drop shadow, intended for drawing and writing.A large, empty white square with rounded corners and a subtle drop shadow, intended for drawing and writing.



Written Task

You will need to complete the written task for this unit which can be found on www.sactas.weebly.com

Fold your research task
and affix it here.



Skill Development Task

In the space below you will explore designs for a small project which will help you develop the skills necessary for this unit.

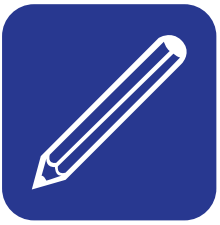


Skill Development Reflection

In the space below you will draw in your chosen design for the skill development task and reflect on what you learnt from it.

What have I learnt from the skill development task?

How will my experience in this task impact the design of my final project?



Free-Sketching Idea Page

This page is a 'blank canvas' to show ideas and sketches for the design of your project. Feel free to have fun and be creative!



Idea Generation & Development

From your sketching page choose your best ideas and develop them further. Remember to annotate!

A large white trapezoidal area with a grey bar on the left side and a small grey dot near the bottom left corner, intended for developing an idea.A large white trapezoidal area with a grey bar on the left side and a small grey dot near the bottom left corner, intended for developing an idea.A large white trapezoidal area with a grey bar on the left side and a small grey dot near the bottom left corner, intended for developing an idea.A large white trapezoidal area with a grey bar on the left side and a small grey dot near the bottom left corner, intended for developing an idea.



Final Design & Justification

Document your final chosen design by drawing it neatly in the space below and justifying why you chose the design below.



Two reasons why I selected this design include:

The elements / characteristics that will make my car fast include:

I believe the hardest part of producing this design will be:



Prototype Production

As part of the development and production process you will need to create a prototype to test your design.



Affix your Prototype here.



Finished Project Presentation

In the space below you need to insert a photo of your finished project.



Upload your work to instagram using #sactas

While you're there check out all the other fantastic student work on display!

* NB: Please respect this online forum in accordance with school policy.



Project Evaluation

Thinking critically about your project answer the questions below to evaluate the success of your project. Be honest!

Do I believe my project was successful? Why / Why Not?

What is one thing I learnt about tools during this project?

What is one thing I learnt about processes in this project?

How could I change my design to improve its aesthetics, function or quality?



Free Space!

Woooo! Get drawing!



Year 7 Technology



Year 8 Technology



Your Practical work will be marked in the following 3 areas:



Stage 4 (Yr7 & Yr8) Practical: Marking Criteria

SPECIFICATIONS:

Does it meet the design brief requirements and adhere to the specifications and limitations?

DESIGN:

Is it a well-suited and developed design presenting a high level of functionality, challenge and originality?

EXECUTION:

Does it show accuracy & execution of practical skills using appropriate techniques and processes to a highly competent level?



Stage 4 (Yr7 & Yr8) Practical: Marking Rubric

Marks /60	Mark Descriptor
51-60	Demonstrates very high quality in all aspects of the project
41-50	Demonstrates high quality in most aspects of the project
31-40	Demonstrates substantial quality in most aspects of the project
21-30	Demonstrates limited quality in most aspects of the project
11-20	Demonstrates very limited quality with some incomplete work
1-10	Demonstrates basic quality with a majority of incomplete work
0	Non-submission of work



Stage 4 (Yr7 & Yr8) Written Task: Marking Rubric

Marks /20	Mark Descriptor
19-20	Demonstrates high quality in all aspects of the written task
17-18	Demonstrates high quality in most aspects of the written task
14-16	Demonstrates substantial quality in most aspects of the written task
11-13	Demonstrates limited quality in most aspects of the written task
7-10	Demonstrates very limited quality with some incomplete work
1-6	Demonstrates basic quality with a majority of incomplete work
0	Non-submission of work



Stage 4 (Yr7 & Yr8) Folio: Marking Rubric

Marks /20	Mark Descriptor
19-20	Demonstrates very high quality in all aspects of the project folio
17-18	Demonstrates high quality in most aspects of the project folio
14-16	Demonstrates substantial quality in most aspects of the project folio
11-13	Demonstrates limited quality in most aspects of the project folio
7-10	Demonstrates very limited quality with some incomplete work
1-6	Demonstrates basic quality with a majority of incomplete work
0	Non-submission of work

Additional Comment:

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