Year 8 WACKY RACES knowledge organiser

Previous knowledge you have already learnt, that you will use in this project.

- Creating a prototype with care following instructions
- Consideration of forces on a structure
- Using a bench hook to cut timber
- Evaluating and testing a design

Knowledge you will gain

- Upcycling
- Propulsion (thrust)
- Cutting Aluminium with tin snips
- Using HIPPS, a type of thermoplastic
- Designing for the environment
- Using a line bender
- Consideration of forces in a machine
- Testing and evaluation to improve outcomes

Tools you will be introduced to, to build your Schema and Knowledge.

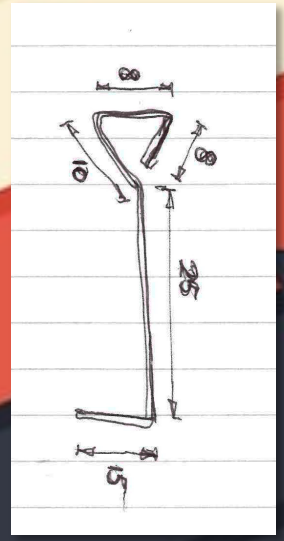
Wooden mallet
Line bender
Tin snips

Things to test for in your Whacky Races project

- Wheels need a consistently curved edge
- Wheels turn freely
- Straws are fixed securely and axles are parallel.
- Vehicle travels in a straight line.
- Bracket is attached securely
- Propeller shaft turns freely
- Balloon is tied securely
- Motor is attached to vehicle securely.

Key words

- Axel
- Member
- Propulsion
- Development
- Prototype
- Chassis
- Upcycling
- Former



Brief description of the project:

A project which will encourage students to **develop** a design through *testing* and *evaluating*.

This Project at a glance…

1. Strategies for Sustainability- Upcycling
2. Chassis- Making and Testing
3. Propulsion- the act of moving or pushing an object forward…
4. Rubber Motor- Making and Testing
5. Propeller- Making and testing
6. Development- by making improvements based on vehicle testing
7. **THE WACKYEST RACE EVER!!**

Vocabulary

Axel	The axel is where the wheels connect to the body of the car so they can rotate
Chassis	Frame and machinery of a motor vehicle of which the body is supported
Member	A part of something
Motor	Converts electrical energy into mechanical energy by making it move.
Angle of attack	The part of the propeller that hits the air fist and slices through it.
Development	Making improvements on the design by testing and evaluating