

## DESIGN ENGINEERING PATHWAYS

### YEAR 9 BRMe RACER LP

<b>DECLARATIVE KNOWLEDGE</b> <b>I know</b>			<b>PROCEDURAL KNOWLEDGE</b> <b>I can do</b>		
K1	That electric vehicles have existed in the 19 <sup>th</sup> century		C1	Research future and emerging technologies	
K2	the impact on the environment that burning oil and gas is having on the environment.		C2	Calculate pulley ratios and calculate potential speeds of a vehicle with different wheel sizes	
K3	There are many different forms of energy and that machines can convert energies to different forms i.e. from electricity to light (LED)		C3	Use 2D design software to modified their own parts	
K4	The basic structure of an electric motor including the brushes		C4	Label an electric motor showing the forces acting on it	
K5	Evaluations will help to improve on future developments of contextual challenges.		C5	Build an electric car from a kit using soldering iron, hot glue gun, pliers, nyloc nuts, machine screws and glue	
K6	There are many factors involved in calculated the speed of a vehicle.		C6	Use a spreadsheet to make a competition grid and record results.	
K7	Reflecting on work completing will help improve future learning		C7	Independently use progression over time, independently evaluate the quality of the product, related research and design tasks.	
K8			C8	Independently identify targets for improvement in future products.	