Date:	Subject: Maths	Topic: BSKC		Pos Ref: AT1, AT4	Teacher:	
Sequence of session in scheme of work:	Focus of the session: Statistical analysis of lap data from British University Karting Championship					
Expectations (Learning Outcomes):				Equipment/resources needed:		
Group Expectations Level			AT/Minimum	Scaled Kart track starter sheet String Lap analysis instruction/ completion sheet showing the lap and sector times from BUKC rounds Lap time data sheets Computer with spreadsheet		
AU Be able to calculate average lap speeds and average sector speeds from sector times and circuit maps			5			
Be able to evaluate and suggest reasons for the differences in average speeds in different sectors			5			
Represent competitors average lap times in graphical form			5			
To explain if the	fastest driver won		5			
Most Suggest reasons for the different average lap times at different circuits on different days			6			
Analyse the statis	tical difference between H	ne fastest teams at each race	6			
Skills to be developed: Data analysis, pattern identification			Assessment: Level of data handling and analysis achieved through completion of data analysis sheet			
Differentiation: By objective; worksheet			Cross Curriculum Development (Literacy, Numeracy, Citizenship): Numeracy functional skills			

Lesson	Teaching and learning activity	Learning Outcomes	Individual/SEN
Starter	Using the scale kart circuit map – estimate the shortest possible lap length and the longest possible lap length if you are always moving in the required direction of travel. Mark on the sheet where you think the karts would be travelling the quickest and the slowest. Be ready to explain your answers.	Reinforcement of estimation of distances using scale maps Thinking starter about where karts could travel fastest and the need for slowing down for corners	Help sheet on estimating lap lengths using string
Core	Collate the answers on the board – ask each student to explain how they estimated the lap lengths and how they identified the fastest and slowest parts of the circuit,. Introduce objectives – The aim is to analyse the data produced in the British University Karting Championship and relate the learning from that to the BSKC Go through the lap data sheet and what students have to do. Explain, if required, how to program formulae into a spreadsheet. Students complete the analysis either using calculator/ pen/ pencil/ paper or spreadsheet	Calculation and graphical representation of average sector and lap speeds, mean and median average lap speeds between teams at the same circuit or between circuits.	Laptop with formula for average sector and lap time inserted in two different cells. Instructions on how to copy/ paste/ use those formulae. Instructions on how to enter data.
	When students have completed the sheets – collate the answers to each section on the board. Ask each student to explain the process that they used to find the answer Discuss/ identify patterns within the data in a team/ between teams at the same circuit and between circuits. Ask students to suggest causes for those patterns	Personal understanding of the patterns within the data/ ability to explain and suggest reasons for those patterns. Hypothesis production	
	Ack, students to identify an anomalies in the data and uppert reasons		