Summer Assignment : Physics

Context – link to Yr 13 work:	Developing Further Mechanics for the first part of the unit in year 13. Year 13 covers Further mechanics, Electric and magnetic fields, nuclear and thermal particle physics, thermodynamics, nuclear radiation, gravitational fields, space and oscillations. In addition remember you will be tests periodically on topics 1-5 from AS resulting in your 2017 exams being a mix of all topics 1-13.
Task:	Complete Pages 92-95 with full displayed workings out of the answers of the questions at the bottom of each page. Create a mind map summarising Momentum, 2D Collisions, Force, Impulse and Energy. Ensure you have a firm grasp on radians and relate this to preliminary reading on circular motion. Use pages 96-97 of the revision guide to highlight key points in circular motion. Use your A2 textbook and pre read the chapters on topic 6.
Resources required:	A2 Level CPG Revision guide AS and A2 Textbook issued in class.
Expectation for completed work (*e.g word count, note format, reading record etc.)*	Work will be clearly laid out in the correct calculation format for all answers. You must produce a summary of the 5 AS topics in either mind map or summary sheet format. Start the same with topic 6. Show evidence of notes for each component of topic 6 on further mechanics and circular motion.

Summer Reading List Yr 12-13 Reading List – Physics

Book	Chapter or extract	Questions to guide reading (to be completed as notes)
• *Paradox* by Jim Al-Khalili	Dip into the different enigmas of science (there are only 9 in the book!)	Which is your favourite Paradox and Why?
• *How to teach your dog Quantum Physics* by Chad Orzel	Chapter 1: Which Way? Both Ways ,Chapter 2: Where's my bone? And Chapter 9: Bunnies made of cheese.	How does this relate to Particle-Wave duality? The Heisenberg Uncertainty principle and Virtual particles.
• *Physics of the Furture* by Michio Kaku	Chapter 6 – The Future of Space Travel	How will this impact on us?
Additional Reading • *The Grand Design* by Stephen Hawking and Leonard Mlodinow		*Copies of any of the books chapters can be obtained from Ms Kempthorne.*