

**Date: Monday 1<sup>st</sup> June – 15<sup>th</sup> June 2020**

**Subject: Science- Physics**

Year 9 students are currently in their Physics rotation, which means both of their science teachers were teaching topics from the Physics curriculum. This would amount to four hours a week in school.

There is no expectation that that length of time should be spent on Physics at home each week, however I hope this explains why there are two specification sections for each installment of work set from science.

Over the two weeks students should try to complete as much as they can from both sections. Below is the work for Topic 2 topic and on page 3 is Topic 3 work. If you have any questions about the work that has been set please contact me: [Thomasi@pks.coventry.sch.uk](mailto:Thomasi@pks.coventry.sch.uk) or any member of the Science team.

### **CP2 Specification**

This week the lessons for CP2 will be more reflective and cover some of the maths skills required and therefore do not have clear specification points.

Therefore I have elaborated on the things students should be able to do below.

- Understand standard form notation.
- Be able to convert numbers into standard form and back again.
- Use prefixes to notate standard form and convert numbers between prefixes.
- Know Newton's laws. Understand and draw force diagrams.
- Be able to identify action-reaction pairs.
- Apply Newton's laws to describe the motion of an object.

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Week 4 Learning Activities	Communication	Supporting Sites
<p>Topic: CP2 Standard Form and Prefixes Recap Newton's 3<sup>rd</sup> Law</p> <p>What do you want students to know? See above specification objectives</p> <p>What do you want them to produce to demonstrate learning?</p> <ol style="list-style-type: none"><li>1. Review PowerPoint on Standard Form and Prefixes and listen to the audio. Complete the examples as you go on paper.</li><li>2. Complete the tasks on the following worksheets when instructed:<ul style="list-style-type: none"><li>- Standard Form 1 – Set 1-3 complete all questions – Set 4-6 choose 10 to practice. Self Assess.</li><li>- Standard Form 2 – Set 1-3 complete all questions – Set 4-6 choose 10 to practice. Self Assess.</li></ul></li><li>3. Return to PowerPoint to listen to work on prefixes and complete tasks as you go on paper.</li><li>4. Preview PowerPoint on Recapping Newton's 3<sup>rd</sup> Law and listen to the audio. Complete the examples as you go on paper.<ul style="list-style-type: none"><li>- Set 1- 3 – N3 Sheet 3 (apply your knowledge) Create your own examples of Newton's 3<sup>rd</sup> law draw and label diagrams to represent them.</li><li>- Set 4-6 – N3 sheet 2 (Newton's Third Law Strengthen)</li></ul></li></ol> <p>What do you want them to practice? How?</p> <ol style="list-style-type: none"><li>1. Practice conversions of Standard Form</li><li>2. Memorise the prefixes, have someone test you on which is which!</li></ol> <p>What can they teach to someone else? How?</p> <ul style="list-style-type: none"><li>- Explain Newton's 3<sup>rd</sup> Law to someone in your family and give an example.</li></ul> <p>Resources needed: Pen and lined paper</p>	<p>Key Vocabulary (list 10 words per week)</p> <p>Standard Form Prefix Giga Mega Kilo Centi Milli Micro Nano Forces Balanced</p> <p>What would you like them to read?</p> <p><b>Higher revision guide</b> Section 17 in revision guide Page 153-155</p> <p><b>Foundation revision guide</b> Section 17 in revision guide Page 154-155</p>	<p>Signpost to: Websites</p> <p><i>BBC Bitesize – Newtons Third Law</i> <a href="https://www.bbc.co.uk/bitesize/guides/z3rhqhv/revision/4">https://www.bbc.co.uk/bitesize/guides/z3rhqhv/revision/4</a></p> <p>Standard Form explained again <a href="https://www.youtube.com/watch?v=ceneATH5EZ8">https://www.youtube.com/watch?v=ceneATH5EZ8</a></p> <p><i>Download "23 questions" on your phones app store to practice physics equations</i></p> <p><i>Share point Resources</i></p> <p><b><u><a href="#">Click Here</a></u></b></p> <p><i>Frog</i></p>

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### **CP3 Specification**

3.9 Explain ways of reducing unwanted energy transfer including through lubrication, thermal insulation	
3.10 Describe the effects of the thickness and thermal conductivity of the walls of a building on its rate of cooling qualitatively	

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Learning Activities	Communication	Supporting Sites
<p><b>Topic:</b> CP3 Conductivity and Insulation</p> <p><b>What do you want students to know?</b> See above specification points</p> <p><b>Activities:</b></p> <ol style="list-style-type: none"><li>1. Review PowerPoint on Conductivity and Insulation. Listen to the audio and complete tasks throughout.<ul style="list-style-type: none"><li>- Heat Transfer sheet (all sets) self assess</li><li>- Conductivity Data (all sets) self assess</li></ul></li><li>2. Complete a worksheet as indicated below.<ul style="list-style-type: none"><li>- Set 1-3 – Insulation worksheet</li><li>- Set 4-6 – Keeping Warm Strengthen worksheet</li></ul></li><li>3. Challenge: Complete the progress check questions (Q1-3)</li></ol> <p><b>What do you want them to practice? How?</b></p> <ul style="list-style-type: none"><li>- Practice worksheet questions.</li><li>- Quiz on BBC bitesize</li><li>- Practice exam questions BBC bitesize.</li></ul> <p><b>What can they teach to someone else? How?</b></p> <ul style="list-style-type: none"><li>- Talk to a family member about the ways of saving energy around your house.</li></ul> <p><b>Resources needed:</b> Pen, lined paper.</p> <p><b>This will support:</b> See powerpoints with links to other physics topics displayed on the first few slides.</p>	<p><b>Key Vocabulary (list 10 words per week)</b></p> <p>Thermal Conductivity Conduction Convection Radiation Insulation Electricity</p> <p><b>What would you like them to read?</b></p> <p>Combined Science Revision Guide – CP3 Conservation of Energy Chapter – Sources of Energy</p> <ul style="list-style-type: none"><li>• P156-164 in foundation and P156-163 in higher.</li></ul>	<p><b>Signpost to:</b></p> <p><i>Websites:</i> BBC Bitesize <a href="https://www.bbc.co.uk/bitesize/guides/zty2k2p/revision/1">https://www.bbc.co.uk/bitesize/guides/zty2k2p/revision/1</a></p> <p><i>Videos:</i></p> <p>Excellent videos and Quizzes for Edexcel Science: <a href="https://www.kayscience.com/edexcel-biology.html">https://www.kayscience.com/edexcel-biology.html</a></p> <p><i>Share point Resources</i></p> <p><a href="#"><u>Click Here</u></a></p> <p><i>Frog:</i></p>