**Curriculum Overview: Science**

| Year 8 Autumn Term 2 | | | |
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| **What are we learning?** | **What knowledge, understanding and skills will we gain?** | **What does excellence look like?** | **What additional resources are available?** |
| **Energy**<br><br>**Forces (to be completed in half term 3)** | • Know the energy stores and apply them to real life contexts<br>• Be able to explain how energy is transferred in a range of contexts<br>• Be able to recognise useful and wasted energy and use them to calculate the efficiency of an appliance<br>• Know about the features that can affect the size of kinetic and gravitational potential energy stores<br>• Be able to explain the three types of thermal energy transfer and when we may encounter each one<br>• Consider the advantages and disadvantages of renewable and non-renewable energy sources<br>• Be able to explain how electricity is generated<br>• Be able to calculate an energy bill<br>• Understand what is meant by 'work done' and how simple machines work<br><br>• Be able to name common contact and non-contact forces<br>• Explain Hooke's law<br>• Know how to explain and calculate pressure<br>• Be able to explain when friction is useful and not useful<br>• Know how drag forces can be increased or reduced | Complete all tasks, both in lesson and at home, to the best of your ability.<br><br>Do not be afraid of making mistakes if you learn from them.<br><br>Spend time outside of lessons reading through and improving lesson notes so that you can accurately recall key information.<br><br>Use key terminology appropriately and correctly, including when communicating through speech.<br><br>Use your free time to try and clear up misconceptions using textbooks, revision guides or appropriate websites. If these do not help, seek your teacher to concrete your understanding.<br><br>Practise calculations and exam questions to become more familiar with the format of these things.<br><br>Take an interest in the Science around you – can you apply your knowledge from lessons to explain something you see in your home or outside? Explain the Science you see to your family or friends.<br><br>Read Science in the news and ask questions about what you have read. Start a | Topic notes on show my homework<br><br>The textbook we use is: KS3 Activate Student book 1<br><br>CGP revision guide<br><br>BBC bitesize:<br>https://www.bbc.co.uk/bitesize/subjects/zng4d2p<br><br>BBC Science news:<br>https://www.bbc.co.uk/news/science_and_environment |

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| | • Understand when forces may be balanced or unbalanced and the effect this may have on an object<br>• Be able to discuss what causes an object to sink and float<br>• Recognise gravity and its effect<br>• Be able to calculate speed and interpret motion graphs<br>• Explain how and when a moment may be used. | conversation with your friends, family or teacher. | |