

# Bosworth Academy Super Curriculum








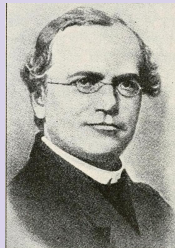






**Science**



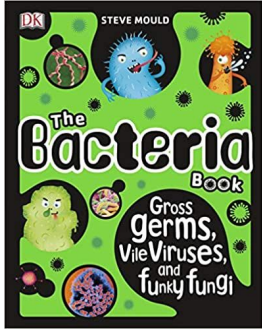
 Collaboration	 Citizenship
 Communication	 Critical Thinking
 Creativity	 Character

# KS4 SCIENCE SUPER CURRICULUM













## YEAR 9: Biology

 <p>Grow a plant at home. Research the nutrients it needs and how you can provide them. Share your plants' life through social media e.g. instagram photos.</p>	 <p>Write a story from the view point of being a fungus. Explain the stages of your life and how you reproduce.</p>	 <p>Watch this <a href="#">video</a> about maintaining a healthy heart. What changes to your life can you make to maintain heart health?</p>
 <p>How large can a bacteria get? What do you think are the limiting factors? Do your ideas agree with this <a href="#">video</a> ?</p>	 <p>Write an instruction manual to explain how to use a microscope correctly.</p>	 <p>What is the deadliest being on the planet? Why do you think it is so deadly? Do your ideas make you match the ideas in this <a href="#">video</a>?</p>
 <p>Is the Covid-19 pandemic the worst pandemic the world has ever experienced? What evidence do you have to support your arguments? This <a href="#">video</a> on the corona virus may help you.</p>	 <p>This is Gregor Mendle. Find out as much as you can about him and plan a fitting tribute to him.</p> 	 <p>Research into plant diseases. What do you think the major effects of plant diseases are on farming? How are plant diseases treated in farming?</p>
 <p>Design an experiment at home to determine how limiting factors affect plant growth. Share your method and findings.</p>	 <p>With a friend, design a mime/model/poster to cell specialism and how it occurs.</p>	 <p>Heart disease is a huge problem in the UK. Design a snazzy t-shirt you could make with a heart character showing how people can have a healthier heart.</p>

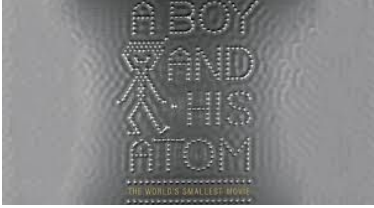



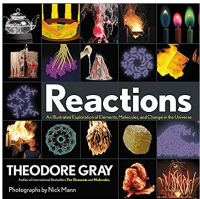
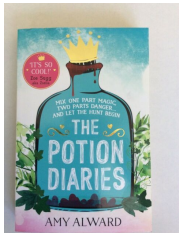
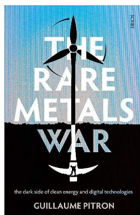
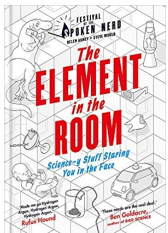
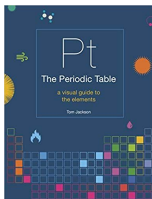
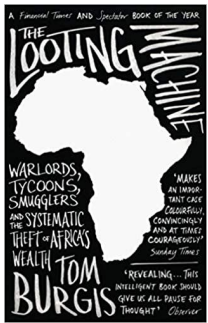
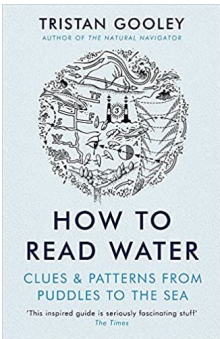
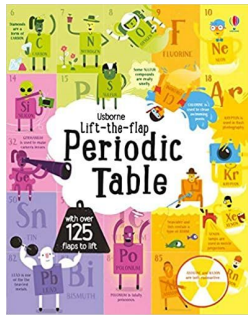
Reading and watching suggestions to develop your learning of this topic

<p>BBC The Private Life of Plants</p> 	<p>Contagion - 12A</p> 	<p>Fantastic Fungi and the Magic Beneath Us</p> 
<p>The Magic Far Away Tree - Enid Blyton</p> 	<p>Fungus the Bogeyman - Raymond Briggs</p> 	<p>Whisper of the Heart - U</p> 
<p>Planet of the Apes - 12A</p> 	<p>Watership Down - Richard Adams</p> 	<p>The world of the microscope - Usborne</p> 
<p>Botanical Folk Tales of Britain and Ireland - Lisa Schneidau</p> 	<p>Heart: A History - Sandeep Jauhar</p> 	<p>The Bateria Book - Steve Mould</p> 

KS4 SCIENCE SUPER CURRICULUM  
Year 9 Chemistry













 <p>Listen to <a href="#">this</a> ted talk and make a poster for school to make people aware of the risks to children in the diamond mining industry.</p>	 <p>Which element which makes up the atmosphere is the most important and why have you made that choice?</p>	 <p>'Atoms are not the fundamental building blocks of matter'. Research into why this statement could be considered true.</p>
 <p>With a friend create a model bucky ball and explain what they can be used for.</p>	 <p>Watch the documentary 'Mosquito' and write a critique of it.</p> 	 <p>Work with a friend/group of friends to make a Carbon Cycle the size of a wall. Take a photo of it and show it to your teacher.</p>
 <p>What are the main similarities and differences between covalent and ionic structures?</p>	 <p>How has the ordering of the periodic table by Mendeleev changed the world for the better?</p>	 <p>Make/draw a detailed cross section of the water cycle - can extrapolate to create a 'future image' if global warming continues?</p>
 <p>It would be amazing if you could visit <a href="#">HMS Warrior</a> in Portsmouth to find out about the world's largest warship of it's time.</p>	 <p>Watch the documentary <a href="#">Pump!</a> and make a poster about the most interesting facts you found out in the documentary.</p>	 <p>Can you explain to someone the difference between the plum pudding model of atoms and the basic atomic structure we use today?</p>

Reading and watching suggestions to develop your learning of this topic

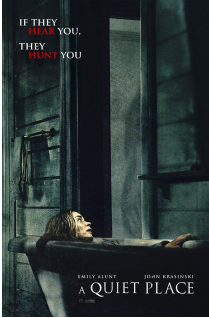

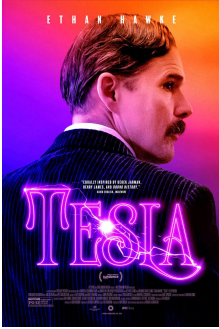
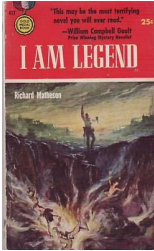

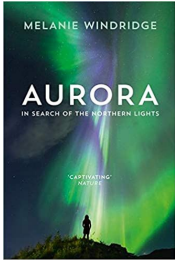
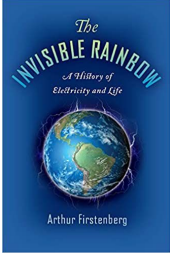
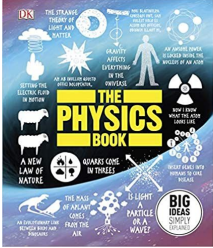
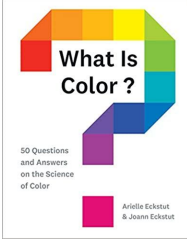
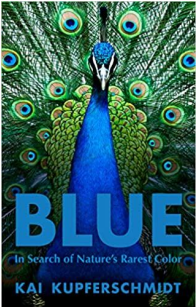
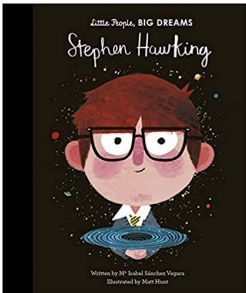
<p>A boy and his Atom</p> 	<p>Antman - 12A</p> 	<p>Indiana Jones and the Temple of Doom - 12A</p> 
<p>Deepwater Horizon - PG13</p> 	<p>Reactions - Theodore Gray</p> 	<p>The Potion Diaries - Amy Alward</p> 
<p>The Rare Metals War - Guillaume Pitron</p> 	<p>The Element in the Room - Helen Arney</p> 	<p>The Periodic Table - Tom Jackson</p> 
<p>The Looting Machine - Tom Burgis</p> 	<p>How To Read Water - Tristan Gooley</p> 	<p>Lift the flap Periodic Table - Usborne Books</p> 

# KS4 SCIENCE SUPER CURRICULUM

## Year 9: Physics

 <p>Which electromagnetic wave is the most important for life on Earth? Why do you think this?</p>	 <p>What effect do Chlorofluorocarbons have on the atmosphere and how does this affect life on Earth?</p>	 <p>Would our voices sound the same on Jupiter? Why?</p>
 <p>Write a Blog explaining the effect of one type of renewable electrical energy resource on the environment.</p>	 <p>With a partner create a TED talk about how gamma rays are used in medicine.</p>	 <p>How is an x-ray image of a bone created?</p>
 <p>Is heat a physical property? Explain your reasoning.</p>	 <p>Which type of car has a more detrimental effect on the environment, Diesel or Electric? Write an essay explaining your arguments.</p>	 <p>Can you create a 'to scale' electromagnetic spectrum?</p>
 <p>Which type of energy do you experience most every day? Give examples.</p>	 <p>Teach someone at home about how a fetal ultrasound machine works.</p>	 <p>It is Claude Monet's Birthday in November. Find out how cataract surgery affected his experience of the visible spectrum and how that affected the colours of his paintings.</p>

Reading and watching suggestions to develop your learning of this topic

<p>A Quiet Place - PG13</p> 	<p>The Day After Tomorrow - 12A</p> 	<p>Tesla - PG13</p> 
<p>I am Legend - Richard Matheson</p> 	<p>The Boy who Harnessed the Wind - William Kamkwamba</p> 	<p>Aurora - Melanie Windridge</p> 
<p>The Invisible Rainbow - Arthur Firstenberg</p> 	<p>The Physics Book - Jim Al-Khalili</p> 	<p>What is colour - Arielle Eckstut</p> 
<p>Blue - Kai Kupferschmidt</p> 	<p>Little People, Big Dreams: Stephen Hawking - Isabel Sanchez Vegara</p> 	<p>The Physics of Climate Change - Lawrence M. Krauss</p> 