

100% Homework

Subject: Science

Parents / carers can support their child in improving their learning by accessing the 100% Homework resources and encouraging self-quizzing at home. Regular testing of key concepts, content and vocabulary is proven to improve memory and the ability to recall important knowledge.

Key learning for term 2 (January-April):

| | What they need to know | What they should be doing at home | What resources are available | How can I help? |
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| Yr 7 | Topic: Physics – forces. Including: <ul style="list-style-type: none"> • Identifying Forces • Measuring Forces • Balanced and Unbalanced Forces • Newtons Laws • Hooke's Law • Friction • Streamlining • Speed Calculations • Distance time graph • Velocity time graph • Feedback • Solar System • Day and Night • Seasons | Learning key words Revising key knowledge using knowledge organisers Completing all homework tasks set | Seneca Learning BBC Bitesize | Talk to your child about their science lessons. Quiz them on the information they have been learning. Encourage them to watch Science programmes, and to take notice of Science in the news. |

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| | <ul style="list-style-type: none"> Galaxies and Universe | | | <p>Encourage them to create a revision timetable</p> <p>Past exam question papers</p> |
| Yr 8 | <p>Topic: Physics - waves and Pressure Including:</p> <ul style="list-style-type: none"> Identifying Energy Transfers Transverse and Longitudinal Producing Sounds How Sound Travels Hearing Sound Wave Calculations Waves - EM Waves Introduction to Light Comparing sound and Light Waves The Eye Reflection Refraction Pressure (over area) | <p>Learning key words</p> <p>Revising key knowledge using knowledge organisers</p> <p>Completing all homework tasks set</p> | | |
| Yr 9 | <p>Topics: Biology: Organisation</p> <p>Chemistry : Atomic Structure and the periodic table Bonding and the properties of matter</p> <p>Physics: Energy</p> | <p>Learning key words</p> <p>Revising key knowledge using knowledge organisers</p> <p>Completing all homework tasks set</p> | <p>Seneca Learning GCSE pod</p> <p>Free Science lessons, You tube videos, AQA website for specification and practise exam papers</p> <p>Revision guides</p> | <p>Talk to your child about their science lessons.</p> <p>Quiz them on the information they have been learning.</p> <p>Encourage them to watch Science</p> |

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| Yr 10 | <p>Topics:</p> <p>Biology: Infection and Response Bioenergetics</p> <p>Chemistry: Rates of chemical change Atomic Structure</p> | <p>Learning key words</p> <p>Revising key knowledge using knowledge organisers</p> <p>Completing all homework tasks set</p> | <p>programmes, and to take notice of Science in the news.</p> <p>Encourage them to create a revision timetable</p> <p>Past exam question papers</p> |
| Yr 11 | <p>Revision</p> <p>Biology Paper 1:</p> <ul style="list-style-type: none"> • Cell Biology • Organisation • Infection and Response • Bioenergetics <p>Biology Paper 2:</p> <ul style="list-style-type: none"> • Homeostasis and Response • Inheritance, Variation and Evolution • Ecology <p>Chemistry Paper 1:</p> <ul style="list-style-type: none"> • Atomic Structure and the periodic table • Bonding and the properties of matter • Quantitative chemistry • Chemical changes • Energy changes | <p>Learning key words</p> <p>Revising key knowledge using knowledge organisers</p> <p>Completing all homework tasks set</p> | |

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Chemistry Paper 2:

- Rates and the extent of chemical change
- Organic Chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources

Physics Paper 1:

- Energy
- Electricity
- Particle model
- Atomic Structure

Physics Paper 2:

- Forces
- Waves
- Magnets and Electromagnetism



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Reading:

Reading is a key driver in the improvement of learning and the ability to recall knowledge. All pupils have the following suggested reading list in their student planners. Please encourage your child to read in order to deepen their knowledge of the subjects they study. All books are available in our school library.

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|-------------------------------|---|
| Books suitable for KS3 | <ul style="list-style-type: none">• Ada Twist, Scientist (Andrea Beaty)• Ada Byron Lovelace and the Thinking Machine (Laurie Wallmark)• Nick and Tesla's High-Voltage Danger Lab: A Mystery with Electromagnets, Burglar Alarms, and Other Gadgets You Can Build Yourself (Bob Pflugfelder and Steve Hockensmith)• The Curious World of Calpurnia Tate (Jaqueline Kelly) |
| Books suitable for KS4 | <ul style="list-style-type: none">• Human Body Theater (Maris Wicks)• Women in Science: 50 Fearless Pioneers Who Changed the World (Rachel Ignotofsky)• Planesrunner (Ian McDonald) |

“Books expose children to more facts and to a broader vocabulary than virtually any other activity, and persuasive data indicate that people who read for pleasure enjoy cognitive benefits throughout their lifetime” — Daniel T. Willingham