

# Curriculum Overview

Subject: Science

Year Group: 7

Students are introduced to the importance of Science in the world around them. Students will develop the powerful knowledge needed to go beyond the common understanding of science to a deeper, more rounded world view. With a focus on key concepts, Apparatus and Techniques students will develop the subject disciplinary knowledge needed to think, write, communicate and relate Scientific ideas to the wider world. Students will follow the national curriculum and have opportunities to undertake open ended investigations each term developing analytical and rational thought processes.

TERM 1	TERM 2	TERM 3
<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Digestion, Aerobic respiration  <b>Chemistry:</b> Safety in the Laboratory, Drawing and Handling Apparatus, separating mixtures  <b>Physics:</b> Forces and motion  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Cells, Plants  <b>Chemistry:</b> experimental planning and procedures. Matter, Periodic table  <b>Physics:</b> Energy transfer, Sound  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Skelton, muscles, Comparing respiration.  <b>Chemistry:</b> Elements and compounds  <b>Physics:</b> n/a  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>
<b>KEY ASSESSMENTS</b>  Half term 1: Baseline test, Bunsen Licence Investigation focus- graphing. Topic test  Half term 2: Investigation focus – methods. EOT test	<b>KEY ASSESSMENTS</b>  Half term 1: Model making, Extended writing, Sanky diagrams  Half term 2: Open ended investigations and variables, EOT test	<b>KEY ASSESSMENTS</b>  Half term 1: Extended writing, Personal QLA.  Half term 2: EOY test.

Extended reading suggestions and external resources:

KS3 Bitesize Science <https://www.bbc.co.uk/bitesize/subjects/zng4d2p>

Oak National Academy Lessons <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science>

Chase High Youtube Playlists <https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ>

We actively encourage students to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where students can engage with Science from the safety and comfort of their own homes.

# Curriculum Overview

Subject:

Year Group: 8



Students are encouraged to secure and deepen their knowledge into the importance of Science in the world around them. Students will continue to develop the powerful knowledge needed to go beyond the common understanding of science to a deeper, more rounded world view. With a focus on key concepts, Apparatus and Techniques students will develop the subject disciplinary knowledge needed to think, write, communicate and relate Scientific ideas to the wider world. Students will follow the national curriculum and have opportunities to undertake open ended investigations each term developing analytical and rational thought processes.

TERM 1	TERM 2	TERM 3
<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Health and drugs, Variation and survival  <b>Chemistry:</b> Obtaining useful materials  <b>Physics:</b> Motion on Earth and in Space, Waves  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Energy for the body  <b>Chemistry:</b> Physical changes  <b>Physics:</b> Magnetism  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Health and disease, Respiration  <b>Chemistry:</b> Acids and alkalis.  <b>Physics:</b> Electricity and circuits  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>
<b>KEY ASSESSMENTS</b>  Half term 1: Investigation focus- Variables Models - Planets  Half term 2: Effects of drugs assessment, EOT test.	<b>KEY ASSESSMENTS</b>  Half term 1: Investigation focus - Methods  Half term 2: EOT test	<b>KEY ASSESSMENTS</b>  Half term 1: Investigation focus- methods, FIFA assessment.  Half term 2: EOY test

Extended reading suggestions and external resources:

KS3 Bitesize Science <https://www.bbc.co.uk/bitesize/subjects/zng4d2p>

Oak National Academy Lessons <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/science>

Chase High Youtube Playlists <https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ>

We actively encourage students to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where students can engage with Science from the safety and comfort of their own homes.

# Curriculum Overview

Subject:

Year Group: 9



Students are encouraged to secure knowledge into the importance of Science in the world around them. Students will continue to develop the powerful knowledge needed to go beyond the common understanding of science to a deeper, more rounded world view. With a focus on fundamental concepts, Apparatus and Techniques students will utilise the subject disciplinary knowledge needed to think, write, communicate and relate Scientific ideas to the wider world. Students will follow the national curriculum and have opportunities to undertake open ended investigations each term developing analytical and rational thought processes.

TERM 1	TERM 2	TERM 3
<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Intro to Cell biology, Cell division  <b>Chemistry:</b> Intro to Atomic structure, Periodic table  <b>Physics:</b> Intro to Energy Conservation, Energy transfer of heating.  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Intro to Organisation of digestive system  <b>Chemistry:</b> Intro to Structure and bonding  <b>Physics:</b> Intro to Energy resources  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>	<b>KNOWLEDGE/SKILLS</b>  <b>Biology:</b> Intro to Organisation of animals and plants  <b>Chemistry:</b> Intro to Chemical calculations  <b>Physics:</b> Intro to Electricity and circuits  <b>Skills:</b> <ul style="list-style-type: none"> <li>• Development of scientific thinking (modelling).</li> <li>• Experimental skill and strategies (risks and variables)</li> <li>• Analysis and evaluation (graphing)</li> <li>• Use of scientific vocabulary, units and symbols.</li> </ul>
<b>KEY ASSESSMENTS</b>  Half term 1: Extended writing – History of the atom  Half term 2: Investigation focus – Variables EOT test	<b>KEY ASSESSMENTS</b>  Half term 1: Extended writing – uses of bonding, Topic test Half term 2: Investigation focus – Maths skills in Science, EOT test	<b>KEY ASSESSMENTS</b>  Half term 1: Chapter 4 topic tests  Half term 2: PPE's

Extended reading suggestions and external resources:

KS4 Bitesize Science <https://www.bbc.co.uk/bitesize/subjects/zrkw2hv>

Oak National Academy Lessons <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/combined-science>

Chase High Youtube Playlists <https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ>

We actively encourage students to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where students can engage with Science from the safety and comfort of their own homes.