



Sandon Road, Meir, Stoke-on-Trent, ST3 7DF Telephone: 01782 377100 Fax: 01782 377101

Email: info@omera.co.uk Website: www.ormistonmeridianacademy.co.uk

Principal: Mrs C Stanyer

## Subject: Science Year 8 Curriculum Map 2020 – 2021

### Resources:

Week Commencing	Topic (including links to additional resources) (HAL only)	Assessment Window
1 <sup>st</sup> September	<b>Bridging Unit Lesson 1-</b> The Solar System <b>Bridging Unit Lesson 2-</b> Forces <b>Bridging Unit Lesson 3-</b> Weight, Mass and Gravity	
7 <sup>th</sup> September	<b>Bridging Unit Lesson 4-</b> Speed <b>Bridging Unit Lesson 5-</b> Energy <b>Bridging Unit Lesson 6-</b> Efficiency	
14 <sup>th</sup> September	<ol style="list-style-type: none"> <li><b>Atomic Structure</b> <ul style="list-style-type: none"> <li>What is an atom?</li> <li>Name the three sub-atomic particles and where are they located.</li> <li>What are charges and masses of these sub-atomic particles?</li> </ul> </li> <li><b>Atomic Structure</b> <ul style="list-style-type: none"> <li>Describe the atomic number and mass number.</li> <li>Learn how to calculate the number of neutrons.</li> </ul> </li> <li><b>Atomic Structure</b> <ul style="list-style-type: none"> <li>Explain how electrons occupy shells in an order</li> <li>Describe the pattern of the electrons in shells for the first 20 elements.</li> <li>Recap for that week.</li> </ul> </li> </ol>	<a href="https://www.bbc.co.uk/bitesize/guides/zsp4jxs/revision/1">https://www.bbc.co.uk/bitesize/guides/zsp4jxs/revision/1</a> <a href="https://www.bbc.co.uk/bitesize/topics/zstp34j/articles/zqr4tv4">https://www.bbc.co.uk/bitesize/topics/zstp34j/articles/zqr4tv4</a> <a href="https://www.omerascience.co.uk/year-9-chemistry-topics">https://www.omerascience.co.uk/year-9-chemistry-topics</a> <a href="https://www.youtube.com/watch?v=LhveTGblGHY">https://www.youtube.com/watch?v=LhveTGblGHY</a> <a href="https://www.youtube.com/watch?v=vQP4UJhNn0I">https://www.youtube.com/watch?v=vQP4UJhNn0I</a>
21 <sup>st</sup> September	<ol style="list-style-type: none"> <li><b>Elements and Compounds</b> <ul style="list-style-type: none"> <li>What is an element?</li> <li>Learn about symbols for elements.</li> </ul>           What is a compound?         </li> <li><b>Elements and Compounds</b> <ul style="list-style-type: none"> <li>What is the difference between an element and a compound?</li> <li>Iron sulphide / Burning magnesium practical.</li> </ul> </li> <li><b>Elements and Compounds</b> <ul style="list-style-type: none"> <li>Metals and non-metals.</li> <li>Properties of a compound.</li> <li>Learn about formulas and the number of atoms present.</li> </ul> </li> </ol>	<a href="https://www.omerascience.co.uk/year-9-chemistry-topics">https://www.omerascience.co.uk/year-9-chemistry-topics</a> <a href="https://www.bbc.co.uk/bitesize/guides/zvksscw/revision/1">https://www.bbc.co.uk/bitesize/guides/zvksscw/revision/1</a> <a href="https://www.youtube.com/watch?v=UdQ3GkIDRo4">https://www.youtube.com/watch?v=UdQ3GkIDRo4</a>

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28 <sup>th</sup> September	<p><b>7. Types of Substance</b></p> <p><b>8. Periodic Table</b></p> <ul style="list-style-type: none"> <li>• What are groups and columns?</li> <li>• Where are metals and non-metals situated in the periodic table?</li> <li>• Why do groups and columns have numbers, what does it indicate?</li> </ul> <p><b>9. History of the Periodic Table</b></p> <ul style="list-style-type: none"> <li>• How were elements classified in the early 1800s?</li> <li>• The timeline of ideas.</li> <li>• Describe two changes that Mendeleev made to early periodic tables.</li> </ul>	<p><a href="https://www.bbc.co.uk/bitesize/guides/z84wjxs/revision/1">https://www.bbc.co.uk/bitesize/guides/z84wjxs/revision/1</a></p> <p><a href="https://www.bbc.co.uk/bitesize/guides/zg923k7/revision/1">https://www.bbc.co.uk/bitesize/guides/zg923k7/revision/1</a></p> <p><a href="https://www.youtube.com/watch?v=fPnwBITSmgU">https://www.youtube.com/watch?v=fPnwBITSmgU</a></p> <p><a href="https://www.rsc.org/periodic-table">https://www.rsc.org/periodic-table</a></p>
5 <sup>th</sup> October	<p><b>10. Chemical Formulae</b></p> <ul style="list-style-type: none"> <li>• How many atoms are there in a given formula?</li> <li>• Compounds have formulas. Name the compound and elements it contains.</li> </ul> <p><b>11. Chemical Reactions</b></p> <ul style="list-style-type: none"> <li>• Learn about chemical changes using word and symbol equations.</li> <li>• What are reactants and products?</li> <li>• What is oxidation and thermal decomposition?</li> <li>• Explain the Law of Conservation of Mass.</li> </ul>	<p><a href="https://www.bbc.co.uk/bitesize/guides/zxiy6yc/revision/1">https://www.bbc.co.uk/bitesize/guides/zxiy6yc/revision/1</a></p> <p><a href="https://www.youtube.com/watch?v=dxY3svHNu4M">https://www.youtube.com/watch?v=dxY3svHNu4M</a></p>
12 <sup>th</sup> October	<p><b>12. Properties of Compounds</b></p> <p><b>13. Assessed Task</b></p>	
19 <sup>th</sup> October (inset Friday 22 <sup>nd</sup> )	<p><b>14. Acids and Alkalis</b></p> <ul style="list-style-type: none"> <li>• What are acids and alkalis?</li> <li>• What is pH scale and how do we measure pH of a solution?</li> <li>• Describe what an indicator is.</li> <li>• Explain neutralisation.</li> </ul> <p><b>15. Acids and Alkalis</b></p>	<p><a href="https://www.bbc.co.uk/bitesize/guides/zf73382/revision/1">https://www.bbc.co.uk/bitesize/guides/zf73382/revision/1</a></p> <p><a href="https://www.youtube.com/watch?v=-aGRYS7JVd8">https://www.youtube.com/watch?v=-aGRYS7JVd8</a></p>
Half Term		
2 <sup>nd</sup> November	<p><b>16. Making Salts Investigation</b></p> <ul style="list-style-type: none"> <li>• Name examples of salt.</li> <li>• Predict the reactants used in and the salts made by different neutralisation reactions.</li> </ul>	
9 <sup>th</sup> November	AR1 Preparation/Consolidation	
16 <sup>th</sup> November		AR 1 ASSESSMENTS
23 <sup>rd</sup> November		AR 1 ASSESSMENTS
30 <sup>th</sup> November	<p><u>Communicable Diseases –</u></p> <ul style="list-style-type: none"> <li>• Define the term communicable disease.</li> </ul>	<p><a href="https://www.bbc.co.uk/bitesize/topics/ztnnb9q">https://www.bbc.co.uk/bitesize/topics/ztnnb9q</a></p> <p><a href="https://www.stem.org.uk/resources/elibrary/resource/26929/infectious-diseases-pathogens">https://www.stem.org.uk/resources/elibrary/resource/26929/infectious-diseases-pathogens</a></p>

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	<ul style="list-style-type: none"> <li>Describe some common modern and historical communicable diseases.</li> <li>Explain how diseases are transmitted from human to human.</li> </ul> <p><u>Communicable Diseases –</u></p> <ul style="list-style-type: none"> <li>Explain how diseases are transmitted from human to human.</li> <li>To include how they pass in air through contact and through bodily fluids.</li> <li>Explain the results of transmission through a class practical.</li> </ul> <p><u>Non-communicable diseases –</u></p> <ul style="list-style-type: none"> <li><b>Define</b> the term non communicable disease.</li> <li>Give <b>examples</b> of non-communicable diseases.</li> </ul>	
7 <sup>th</sup> December	<p><u>Non-communicable diseases –</u></p> <ul style="list-style-type: none"> <li><b>Describe</b> links between lifestyle choices and non-communicable diseases.</li> </ul> <p><u>Bacteria –</u></p> <ul style="list-style-type: none"> <li><b>Describe</b> the structure of a bacteria.</li> <li><b>Describe</b> the optimum conditions for bacterial growth.</li> </ul> <p><u>Bacteria –</u></p> <ul style="list-style-type: none"> <li><b>Describe</b> the optimum conditions for bacterial growth. <b>Describe</b> methods of preventing bacterial growth.</li> </ul>	<p>, <a href="https://www.ducksters.com/science/biology/viruses.php">https://www.ducksters.com/science/biology/viruses.php</a>  <a href="https://www.sciencenewsforstudents.org/article/explainer-what-virus">https://www.sciencenewsforstudents.org/article/explainer-what-virus</a></p>
14 <sup>th</sup> December	<p><u>Viruses –</u></p> <ul style="list-style-type: none"> <li>Describe the structure of a virus.</li> <li>Describe how viruses reproduce.</li> </ul> <p>Assessed Task</p>	<p><a href="https://www.educationquizzes.com/ks3/science/health-02/">https://www.educationquizzes.com/ks3/science/health-02/</a></p>
Christmas Holiday		
4 <sup>th</sup> January		
11 <sup>th</sup> January		
18 <sup>th</sup> January		
25 <sup>th</sup> January		
1 <sup>st</sup> February		
8 <sup>th</sup> February (Inset 12 <sup>th</sup> February)		

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February Half Term		
22 <sup>nd</sup> February		
1 <sup>st</sup> March		
8 <sup>th</sup> March		
15 <sup>th</sup> March		
22 <sup>nd</sup> March		
29 <sup>th</sup> March		
Easter Holiday		
19 <sup>th</sup> April		
26 <sup>th</sup> April		
3 <sup>rd</sup> May		
10 <sup>th</sup> May		AR 2 ASSESSMENTS
17 <sup>th</sup> May		AR 2 ASSESSMENTS
24 <sup>th</sup> May		
7 <sup>th</sup> June		
14 <sup>th</sup> June		
21 <sup>st</sup> June		
28 <sup>th</sup> June		
5 <sup>th</sup> July		
12 <sup>th</sup> July		

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19 <sup>th</sup> July (School closed from 22 <sup>nd</sup> )		
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