# Science Alive Theme: We Can Research

| | What we do | When we do it | How it helps students to develop our Alive theme |
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| **Year 10**<br>**Year 11** | **Core practical lessons** – These are lessons in which students need to conduct pre-planned experiments to research or investigate scientific phenomenon<br><br>**Year 10/11 mocks** – Topics are shared with students before assessments as a key revision aid | Terms 1 – Term 6 | This helps students to appreciate the process of scientific enquiry and how research plays an important role of forming and testing different hypothesises<br><br>This helps students understand the process of revision and reduces cognitive load when revising for multiple topics. Students develop an appreciation of how they best revision and practice this before real examinations |

St Mary Redcliffe and Temple School

# Science Year 10 & 11 Alive Themes

| Term | Alive Theme | Examples of themes in the curriculum | How it helps students to develop that Alive theme |
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| **All terms** | We can communicate | **Developing clear explanations**<br>Lesson power-points contain structure for writing extended/open ended answers. Method is consistent across the lessons | Students learn to use evidence to inform their statements and communicate this in a logical and coherent manner |
| | We are organised<br>We value ourselves | **PRIDE (book standards)**<br>Displayed on boards in every classroom. Students rate their work based on the PRIDE standards | Students understand that link between being organised and careful with their work and link this to successes. |
| | We can review | **MCQs and assessments**<br>Every topic has a series of multiple-choice questions and a formative assessment that students complete. These are either peer, self or teacher marked and feedback is acted upon and utilised in later assessments | Students engage with feedback cycles and use feedback as a means to review work and improve their scientific literacy |
| **1** | We value diversity and choice<br>We value justice and respect | **Stem cell research**<br>Part of the SB2 requires students to understand stem cells and evaluate the reasons why it is such a controversial issue | Students evaluate the importance, ethical and moral issues surrounding the use of stem cells in medicine. This includes looking at historical uses and how this has changed over time |
| **3** | We value diversity and choice | **Genetics and reproduction**<br>Part of SB3 requires students to understand how their genetics and characteristics are linked to their parents genetics. This involves aspects of tolerance | Students explore topical issues such as inherited diseases, causes for some disabilities and issues surrounding gene therapy and genetic modification |
| **6** | We value ourselves | **Healthy living, obesity and self-care**<br>Part of SB5 requires students to understand how diseases are spread and how we use medication and when to appropriately do so.<br>Students are introduced to real world concepts such as BMI, uses of alcohol, smoking. | Students make correlations between drugs and diseases to understand the reasons moderation is required. They are informed of the scientific detriments of smoking, drinking and taking drugs. |