



## Spring 2023 - Listening

27th January 2023

Dear Parents/Carers

I would like to take this opportunity to outline some examples of how, why and when we study the different topics of the science curriculum, and put into context how the activities that pupils undertake in their science lessons are not just designed to cover the curriculum, but also have a focus on the pupil's cultural capital. The science department's vision intends to promote young people to aspire in their future learning, *and help prepare them to integrate into the wider community and society. This also gives me the opportunity to share examples of some of the activities pupils across the school are getting up to in their science lessons.*

Rather than studying separate sciences at KS2 and 3, we use a topic based approach. When the St Mary's science curriculum was radically updated and rewritten, much time and thought was put into sequencing the topics so that transitions from topic to topic, from year group to year group, from Key stage to Key Stage, and from St Mary's on to Upper School maximise the transfer, retention and recall of knowledge. Without sharing the whole curriculum map; here are some examples.

The first topic that Year 5 pupils study is called Working Scientifically. Pupils identify, learn and practise the skills that they require to work as a scientist. These skills (such as measuring, recording, planning, evaluating, identifying variables) are not just used throughout science lessons through Year 5, but are the foundation of skills that are revisited, reinforced and developed through the whole school. During the topic of Properties and Changes in materials, Year 5 pupils discover, describe and compare the characteristics of substances. Again, this is the foundation for so much of what pupils will learn through school in topics such as Particle Theory, Atoms elements and Compounds in Year 7, through to the Periodic table in Year 8.



In the Autumn term of Year 6, pupils' science lessons start with the topic of Evolution and Inheritance followed immediately after by Classification of living Things. By having these two topics sequenced this way, pupils can see how the characteristics that living things inherit, that lead to the evolution of different species, naturally lends itself to the classification of those species. Pupils go on to study Light and Electricity, but then return to a more a biological based topic of Humans as Organisms at the end of the summer term. This aids the flow of the transition from Year 6 to Year 7, as having studied the digestive system and the circulatory system at the end of KS2, the pupils return after the summer break, starting KS3 with Cells, and Body Systems, that relate directly with what they studied when they were last in school. You will hear discussions in Year 7 science lessons that start with "At the end of Year 6, you studied...in this topic we will be studying...."



*Patrick and Barnaby modelling the Respiratory System at the end the summer term of Year 6*



**7BG using Microscopes to see cells**

**The pupils who have done exceptionally well....**

**Year 5**

Tom C—5FM

**Year 6**

Bobby C—6DH

*Dates for your diary..*

**Monday 30th January**

Year 7 Hinduism Day (Hindu Cooking & Dance)

**Tuesday 31st January**

Cross-Country @ Canford

**Wednesday 1st February**

Strike Day (see letter sent home)

**Tuesday 7th February**

Year 7 Girls Netball fixture @ Budmouth

**Wednesday 8th February**

Parents invited to view books  
Year 8 Girls Football fixture @ Wey Valley

**Thursday 9th February**

KS3 Cross-Country @ Bryanston

**Friday 10th February 2023**

INSET DAY

**Monday 13th February to Friday 17th February**

Half term

**Monday 20th February 2023**

All Pupils back in school

**School Association Movie night**

**Wednesday 1st February**

*Apologies, this has now been postponed. A new date will be released in due course.*

The science curriculum is always evolving, and we have now found many ways of cross referencing different topics, and relating the content and context from one topic to another. This “interleaving” can be seen if we take a look at what the current Year 8 pupils are studying. The topic of Earth and the Rock Cycle began with pupils exploring the structure of the Earth. This involved looking at the chemical makeup of the different layers and the atmosphere, which enabled reference and revision of Atoms, Elements and Compounds and Particle Theory from Year 7, and the Periodic Table from the autumn term. Ask a Year 8 pupil to explain why the inner core of the Earth is solid, when it is so hot that it should be a liquid, and they should tell you about particles under pressure! During the current topic of Body Systems in Year 7, and while studying the joints of the body, pupils used model arms (manufactured by Mrs Rainford) to measure the force needed to lift masses. This reflects on and revises the measurement of forces (forces were last covered by these pupils while they were in Year 5) while studying biomechanics. This also precedes the Year 7 topics of Forces and The Solar System, so serves as prior-learning. “Remember when we measured the force needed to lift masses...”



*7MIB measuring forces while doing a Biology topic! Please note Mrs Rainford’s handiwork in making model arms*



*Year 8 modelling Sedimentary Rock formation using chocolate as part of the “Earth and the Rock Cycle “ topic*

If you have had a look at your child’s Satchel One pages, you may well have noticed that the home-learning activities and quizzes do not necessarily relate to the topics that the pupils are studying during their current science lessons. This is also intended to enable pupils to reflect and revise previous learning from earlier that school year, or from previous years. The Year 8s are approaching the transition from St Mary’s to Upper School, and during the summer there will be more formal assessments that are not just based on this year’s work, but look back on topics from Year 7 and even back to KS2. So for example, despite studying the Periodic table and Separation Techniques, pupils would have been set home-learning based around Year 7 topics such as Cells, Body Systems and Particle Theory. Revising these topics at regular intervals rather than “cramming “ towards the end of the year is proven to help retention and recall. The quizzes allow pupils to have three attempts, so they can always attempt them, revise again, then beat their own personal bests. Investing time in these activities now leads to much more efficient revision, and I hope you and the pupils understand that they are there to support pupils of all abilities to achieve their potential, and are not arduous homework tasks, set for the sake of setting homework.

I will just quickly mention that these photographs (and many others) are often used as a record of pupils’ work, and are also used to update teacher’s presentations that are used in lessons. Each year we use the previous year’s examples of work to model to the next year group. Inspiring today to shape tomorrow!

Many thanks for your continued support,

Mr Houldey  
Head of Science



## Year 8 Pencelli Trip—Update

Sunday 26th March to Friday 31st March 2023



The following information has been sent home with all pupils today ahead of the Pencelli trip in March...(Miss Osborne would be grateful if this could be returned as soon as possible...)

- Kit List
- Room Choices
- Hoodie Order Form

Miss Osborne is also preparing a video with all the relevant information. Once this link is available, it will be sent home via Parentmail and will be posted via the school facebook page.



The last two payments of **£77** are due on the **17th February** and **13th March 2023**

**Year 5...** had a very early start yesterday as they travelled to The British Museum in London to view the Benin artefacts as part of their humanities studies...more photos will be added to the school website.



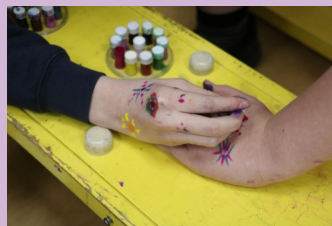
The British Museum

**Congratulations** to Daisy (5MO) and Lauren (6SC) who attended the awards ceremony for the Rotary Club Young Writer competition, earlier this week. Last term, they wrote short stories, based on the theme of 'Peace'. Lauren's piece was highly commended by the judging panel and Daisy won second prize. The competition was advertised at school but no time or help was given to anyone who entered - it was done completely independently, in their own time. We are very proud of both of them and indeed, all of the entrants - *Well done to you both on your fantastic efforts!*



## Year 7 Hinduism Workshop

On Wednesday, Year 7 enjoyed a colourful, informative, and fun-filled morning, led by the Hinduism Education Service. The workshop was organised to launch the Year 7's Theology and Ethics topic. Our pupils enjoyed hand-painting, dressing up as Hindu prince and princesses and stick dancing!



## Important Information

As from Friday 3rd February, Parentmail will no longer be active.

You should have received a welcome email /text to invite you to please download the Weduc app, this will be live by Monday 6th February.



Keep up to date on what is going on in school...Follow us on Facebook...

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If any further information is required please visit our website at [www.stmaryscemiddleschool.co.uk](http://www.stmaryscemiddleschool.co.uk)