

The St Matthew's Science Rationale

Units of work are studied in the year group specified by the National Curriculum. The order in which they are studied across the year is designed to allow for practical considerations as well as a progression of knowledge.

Key points:

- Science is taught every half term. It is a core subject and as such we expect that it is taught weekly as much as possible.
- Some of the Year 1 and 2 topics are taught across two half terms to allow staff time to fully develop the children's learning and provide sufficient time for practical work.
- Seasonal change (including the weather) is studied across the year in Year 1 as this allows the children to make observations over time about how the seasons change.
- Animals including Humans is divided into two topics in Year 1; humans and other animals. The work on the human body and senses is carried out at the start of the year as it fits with our PSHE and topic based focus on ourselves that we do at the start of Year 1 as part of the on-going transition work.
- Living things and their Habitats is placed in the Summer term in year 2 as it allows for more opportunities for the children to work outside observing mini-beasts in the school environment. It was felt that studying it earlier in the year meant that this was not possible.
- In Year 3 Forces and Magnets is taught across a whole term in order to allow for an extended investigation into how objects move on different materials. Year 3 is the first time that children are expected to carry out fair tests and we felt that children benefitted from a more focussed teaching into this investigation type at this stage in order to better prepare them for later years.
- Light has been moved to Summer Term 2 in Year 3 as we felt that the children were not mature enough to fully grasp the concepts at the start of the year. Additionally, as there is an element of the programme of study that talks about sun safety it is a natural fit to being studied at this time of year.
- In year 4 we have moved sound so that it is taught after the topic on states of matter. The children need to understand what solids, liquids and gases are (and the differences in particle distribution between them) in order to be able to explain the differences in how sound travels in different materials.
- States of Matter, Sound and Living things are taught across slightly more than half a term each in Year 4. These half terms tend to be shorter so this should allow full coverage. Teachers are free to start a new topic earlier if they have completed the NC objectives ahead of the plan however.
- In Year 5 there is a requirement that children learn about asexual reproduction in plants. This is best achieved alongside growing some plants that reproduce in this manner so we have extended this aspect of this topic across the whole autumn term (and longer if necessary) suggesting that children continue to make observations of plants grown in this way during a whole term (e.g plants grown from cuttings, spider plants that produce runners)
- Earth and Space is taught during Autumn 2 as the dark evenings make it easier for the children to observe the moon. This could allow them to complete a moon diary over the course of a month observing and recording the changes to the moon.
- The Year 5 Materials topic has a lot of content so is taught across a full term to allow sufficient time to cover everything.
- Forces in Year 5 has a number of different components and is a very practical topic (including the opportunity for some cross-curricular DT work designing, making and testing parachutes). We have allocated a full term to this topic.
- Animals including Humans is taught in the Summer term in year 5 as part of our PSHE lessons.