

# Berrycoombe School



## Science Policy

Revised July 2024

The purpose of this document is to state the aims, principles, strategies and organisation of the teaching of science through Reception, Key Stage 1 and Key Stage 2.

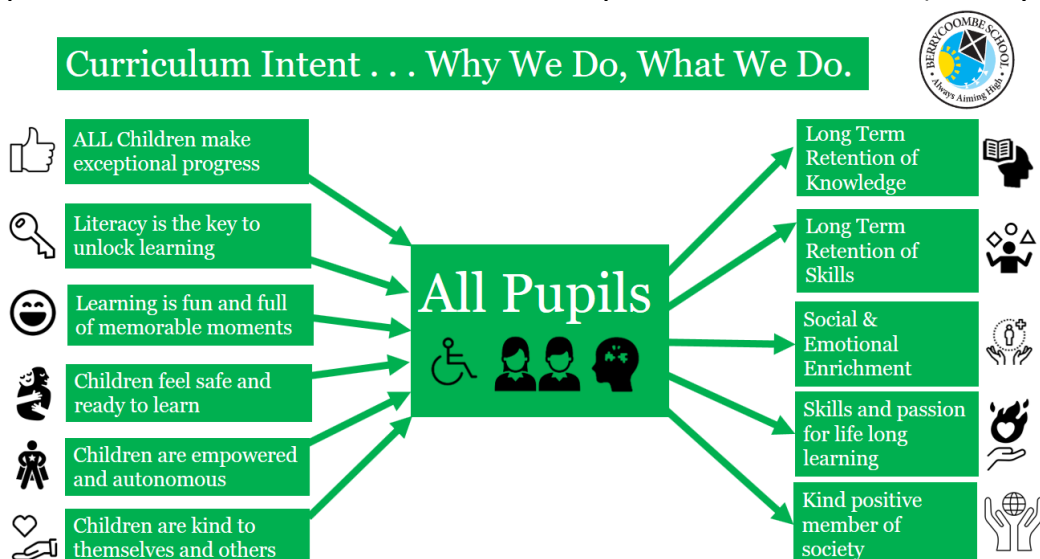
*A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.*

Purpose of Study, National Curriculum, May 2015

### Intent

Our science lessons aim to ignite curiosity in our children, question why things happen and understand the way things work.

- We have a shared understanding of the importance and value of science across the school.
- We endeavour to foster children's natural desire to be inquisitive in finding out more about our world and promote respect for our environment.
- We aim to develop an understanding of the nature, processes and methods of science through different types of scientific enquiries that help them to answer questions about the world around them.
- We endeavour to ensure that children are equipped with the scientific enquiry skills required to understand the uses and implications of science, today for the future.



## Learning

Science learning takes place in a variety of ways at Berrycoombe School. Children are given the opportunity to develop knowledge, skills and an enquiring mind. This is done through formal lessons, group activities, individual work, school trips, experiments and curriculum themed days. Children are taught to think scientifically and ask questions. Problem solving activities and investigations are used to engage children in their learning; these activities often have a real-life context.

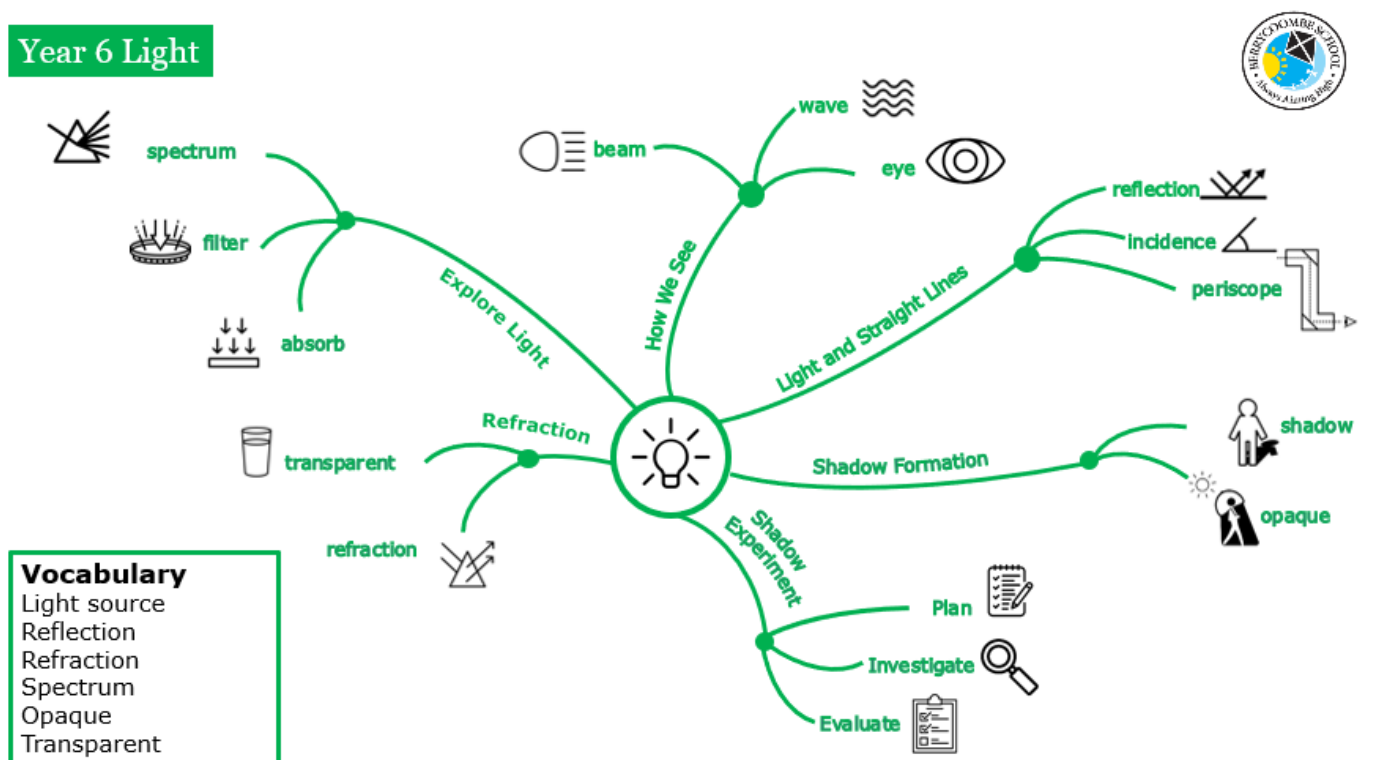
## Teaching

The delivery of science teaching at Berrycoombe School places an emphasis on scientific investigations and practical activities which are based on real world scenarios. Science is taught in weekly lessons and is also delivered through cross curricular links in other subjects. Science lessons are differentiated according to children's learning requirements. This ensures all groups of learners can access the curriculum and make progress in each session. Care is taken to ensure progression from the foundation stage and throughout key stages 1 and 2.

When topics are revisited another layer of knowledge and skills are added. The study of science is based on the 2014 national curriculum. The structure of the whole science curriculum at Berrycoombe School is taught through units of work which are linked to these topic areas when appropriate. All units of science from the national curriculum are mapped out in the schools long and medium-term planning and refined in short term planning. This ensures statutory content, and skills are covered.

We use mind maps to reinforce the children's learning and promote their long-term retention. These are discussed by staff and children at the start of each Science session to recap previous learning but also at the start of a new topic to assess the children's knowledge. It is also used for assessment at the end of the topic. These are shared with parents each half term.

### Year 6 Light



Example mind map – Year 6 Light

## **Curriculum Links**

Science has many strong links with other subjects as well as constantly reinforcing children's basic skills. It develops many of the skills used in literacy such as reading, writing, speaking and listening. Children enhance their mathematics skills by developing their ability to problem solve, measure, and represent and analyse information. Children use technology whenever appropriate in science lessons. This includes using computers, tablets, cameras and movie creators. Science makes a significant contribution to PSHE. It raises matters of citizenship, welfare and provides opportunities for debates and discussions.

## **Assessment for Learning**

Pupil work is assessed by direct observation when completing science activities and in discussion with the teacher, as well as on the finished work. Children's achievements are shared with parents at Parent Consultations by sharing the class's science floor book and independent books. Parents have access to children's work and individual dialogue with the class teacher. Parents see science displays and evidence of the children's work through class open days, parent consultations and work in their books.

The children are assessed at the end of each topic and again at the end of the year. This is reported to parent in end of year reports.

## **Recorded work**

Scientific work is recorded in a variety of ways appropriate to the age of the children and their individual needs in each key stage. This can include teacher observations, photographs, drawings, tables, graphs, written accounts and formal write ups. It is expected that all recorded science work is to be presented to a high standard but not to the detriment of science investigations or the teaching and learning aspect of the lesson. The balance of practical activity and length of recording tasks is carefully planned to maintain a scientific emphasis.

## **Resources**

We keep a wide range of science resources in school. Class teachers and the subject lead are responsible for purchasing, organising and replenishing resources.

## **Health and Safety**

Safe working practices are an integral part of all Science activities. All staff are aware of safe and correct handling of tools, materials and equipment. The teaching staff demonstrate to pupils how to work safely and ensures that all children using equipment are properly supervised.

## **Equal Opportunities**

Consideration is always given in respect of cultural differences and experiences and to children whom English is an additional language. All children with Special Educational

Needs are provided with challenging experiences in a flexible manner suited to their individual requirements.

### **Monitoring**

Subject leaders monitor the delivery of science teaching and the quality of learning across the school. This is done through observations and drop-in sessions. The subject leader also scrutinises children's individual books and the classes floor books and the learning environment.

### **Parental Involvement**

Science is a way of understanding the world, a perspective, and a pattern of thinking that begins in the very early years. That is why parental involvement is so important in a child's science education. Science is all about exploring how things work. It's often best learned through hands-on experiments and observation. This makes it a fun and easy subject area for children to dive into while at home.

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