

## Science - A Whole School Journey

When studying science at All Saints' Primary, pupils will gain a thorough understanding of the key elements below. Most units are revisited throughout the year groups to build upon pupils' understanding. Pupils will use all scientific enquiry types each year and use their scientific investigation skills (disciplinary knowledge) as outlined below.



**Year 6**  
Living things and their habitats  
Animals, including humans  
Evolution and Inheritance  
Light  
Electricity

**Year 5**  
Properties and changes of materials  
Living things and their habitats  
Earth and Space  
Animals, including humans  
Forces

**Year 4**  
Living things and their habitats  
Animals, including humans—Teeth and digestion  
States of matter  
Electricity  
Sound

**Year 3**  
Rocks  
Plants  
Forces and Magnets  
Animals, including humans  
Light

**Year 2**  
Animals, including humans (growth)  
Uses of everyday materials  
Living things and their habitats  
Plants

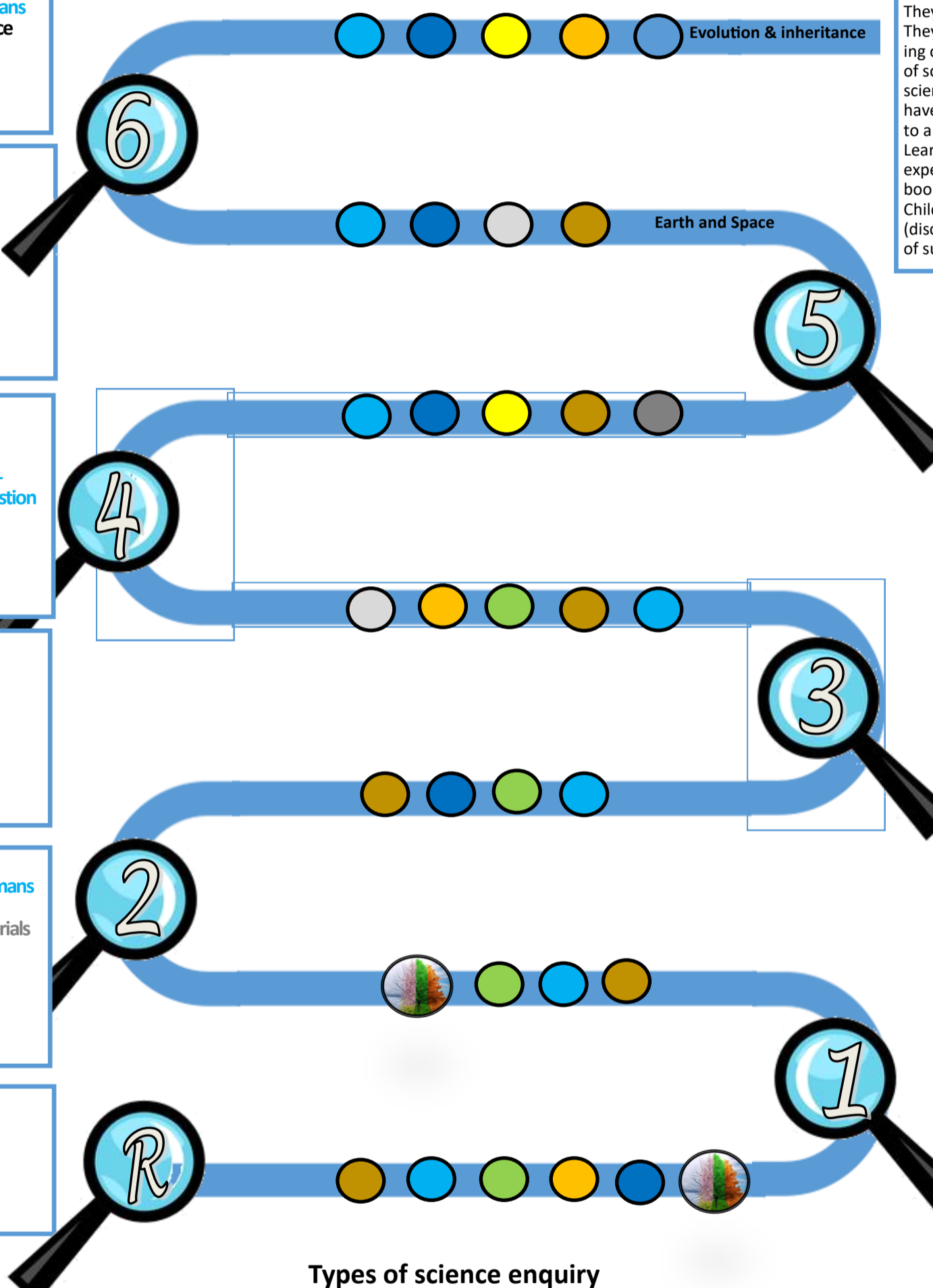
**Year 1**  
Animals, including humans  
Plants  
Seasons  
Materials

**Key Stage 1**  
Children experience and observe phenomena, looking at the natural and humanly-constructed world around them. They ask questions about what they notice. They are helped to develop their understanding of scientific ideas by using different types of scientific enquiry. They begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Learning is through first-hand practical experiences and secondary sources, such as books, photographs and videos. Children are taught to work scientifically (disciplinary knowledge) through the teaching of substantive science content.

**Key Stage 2**      **Lower Key Stage 2**  
Children test and develop ideas about everyday phenomena and the relationships between living things and familiar environments. They ask questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them. They draw simple conclusions and use some scientific language, first, to talk and write about what they have found out.

**Upper Key Stage 2**  
Children develop a deeper understanding of a wide range of scientific ideas. They explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. They encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They begin to recognise that scientific ideas change over time. They select the most appropriate ways to answer science questions using different types of scientific enquiry. Children draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific understanding to explain their findings. Scientific methods and skills are linked to elements of the content.

**EYFS**  
Science at Foundation Stage is covered in the 'Understanding the World' area of the Curriculum. It is introduced indirectly through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. During their first years at school our children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify differences and similarities. They will also learn to use their senses, feeling dough or listening to sounds in the environment, such as sirens or farm animals. They will make observations of animals and plants and explain why some things occur and talk about changes. Children will be encouraged to ask questions about why things happen and how things work. They might do activities such as opening a mechanical toy to see how it works. Children will also be asked questions about what they think will happen to help them communicate, plan, investigate, record and evaluate findings.



### Types of science enquiry



### Disciplinary knowledge for science enquiry:

Key Stage 1	Asking questions
	Simple Tests
	Observing
	Gathering and recording data
	Identifying and classifying
	Answers to questions

Lower Key Stage 2	Asking questions
	Plan Tests
	Observations and measurements
	Gathering and presenting data
	Identify differences, similarities, changes
	Conclusions
Suggest improvements	Raise further questions

Upper Key Stage 2	Asking questions
	Plan Tests
	Observations and measurements
	Gathering and presenting data
	Identify causal relationships
	Show evidence to support ideas
Conclusions using evidence	
Suggest improvements	Raise further questions