

# Science Policy



## Intent

At Delph Side Community Primary School, we aim to provide creative high-quality Science lessons to inspire and motivate our children to prepare them for their next stage of life.

Our Science curriculum provides children with opportunities to develop their scientific skills, knowledge and understanding to allow them to work as scientists. Our curriculum aims to allow children to make sufficient progress in all areas of science, including biology, chemistry and physics. Throughout all of this, science is to be made real through all key stages. We want our young scientists to enjoy science through fun and engaging lessons that bring science into the real world. We want children to embrace challenges and be curious – to ask questions and actively seek answers through a range of scientific enquiry. Through this, we believe that our children will evolve into scientists with the knowledge, understanding and skills for science beyond Delph Side.

Throughout KS1, our aim is to provide children with opportunities to experience and observe phenomena, looking closely at the natural and human-constructed world around them. We encourage our learners to be curious, to ask questions and to use a range of scientific enquiry to help them answer these questions. This includes observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative tests and finding things out using secondary sources of information. Through KS1, they begin to use simple scientific language to talk about and communicate their ideas in a variety of different ways. Most science learning is done through first-hand, tangible experiences to immerse and expose our learners to real life science.

Throughout LKS2, our aim is to provide children with opportunities to broaden and enhance their scientific view of the world around them. They develop their scientific skills further by exploring, talking about and developing ideas about everyday phenomena. They begin to explore the relationships between living things and familiar environments. They are to use observations to ask questions and to make decisions about which types of scientific enquiry are likely to be the best ways of answering them. In LKS2, children will observe changes over time, notice patterns, group and classify, carry out simple comparative and fair tests and find out things using secondary sources of information. They will begin to draw simple conclusions and use some scientific language to talk and write about what they have learnt.

Throughout UKS2, our aim is to provide children with opportunities and experiences that will develop a deeper understand for a wide range of scientific skills. They will achieve this by exploring and talking about their ideas and asking their own questions about scientific phenomena. Science in UKS2 includes opportunities for children to explore abstract ideas and begin to recognise that scientific ideas change and develop over time. Questions should be answered using the most appropriate form of scientific enquiry using a vast range of key scientific vocabulary. Science is explored by children observing changes over time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things about using a wide range of secondary sources of information. Our learners will begin to draw conclusions based on their data and observations, they will use evidence to justify their ideas and they will use their scientific knowledge and understanding to explain their findings.

## Implementation

As part of this planning process, subject leaders and teachers will plan the following for in preparation of teaching the lessons:

- Science Curriculum Map and Progression of skills (including year group specific Working Scientifically documents). This outlines knowledge and skills (including vocabulary) all children must master.
- A series of lessons, which carefully plans for progression and depth.
- End of topic quiz which is tested regularly to support learners' ability to block learning and increase space in the working memory.
- Working Scientifically experiences to be embedded into the teaching of all science lessons.
- Opportunities for pupils to ask their own questions about scientific phenomena.

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- Opportunities for pupils to use scientific enquiry to answer their own questions.
- Enrichment opportunities to enhance the learning experience.
- Celebrating the pupils' scientific discoveries in their class, around school and in the wider community.
- STEM week to provide all pupils with opportunities to enrich their scientific knowledge, understanding and skills and to apply these in a range of different contexts.

## **Impact**

Our Science Curriculum has been well-structured and sequenced to demonstrate progression of skills, knowledge and understanding through year groups and key stages.

We measure the impact of our curriculum through the following methods:

- A reflection on skills achieved against the planned outcomes.
- Pupil discussions about their learning; which includes discussion of their thoughts, ideas, processing and evaluations of work (PAQ).
- Learning Walks
- Book Monitoring
- Staff Attitudinal Questionnaires.

## **Aims**

- Children to enjoy and show interest in science through lessons that engage and motivate.
- Children to embrace challenges by using scientific enquiry to find answers to their own and others' questions.
- Children to evolve by making progress in science with key skills and their knowledge and understanding.
- Children to be able to articulate their learning using scientific vocabulary.
- Children to develop positive attitudes which encourage collaborative learning and perseverance.
- Children to develop an understanding of how science influences and affects our everyday lives.

## **National Curriculum Coverage**

Our science curriculum map indicates where and when science topics are taught across key stages. Our science curriculum includes all areas of the Science National Curriculum with opportunities for pupils to work scientifically. Learning builds upon prior knowledge to ensure sequenced learning that results in pupils being confident primary scientists at the end of key stage 2. Our coverage is indicated through our bespoke science scheme of work.

## **Teaching and Learning Style**

Our science lessons have an emphasis on real life, practical learning. Our aim is to provide our learners with a vast array of opportunities to work as scientists through a range of scientific enquiry. We ensure that our learners have opportunities to be curious scientists by asking and searching for answers to their own questions.

## **Special Educational Needs**

The study of science is planned and differentiated to provide pupils with a suitable range of activities and support appropriate to their abilities and needs. Curriculum planning ensures that all pupils have an equal opportunity to take part in every aspect of the science curriculum. In the planning and organisation of enrichment activities, specific needs of individuals are taken into consideration to ensure that all pupils benefit from science enrichment. Our SEND policy provides more specific information on how we ensure that this is the case.

## **Parental Involvement**

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Parents are kept up to date with their child's learning of science through regular updates on Seesaw, the school website and on social media websites such as Facebook and Twitter.

## **Health and Safety**

It is the responsibility of the class teacher to ensure that risks are assessed prior to, and during, science lessons. Prior to a science lesson, the class teacher is to inform any additional support staff of any potential risks or hazards to be aware of. Pupils are to be made aware of potential risks and hazards.

## **Resources**

The monitoring of science resources is the responsibility of the science leader. An audit of science resources is to be done on a yearly basis by the science leader. Class teachers are to make the science subject leader aware of resources that may be damaged or additional resources that may be needed.

## **Role of the Science Leader**

- To undertake monitoring of standards in science and use this to inform the science action plan.
- To identify key groups to support specific children through extra-curricular activities.
- Provide leadership in science to secure high quality teaching and learning.
- Play a key role in motivating, supporting and modelling good practice for all staff, including the organisation and presentation of school INSET.
- To take a lead in policy development and review.
- To liaise with outside agencies and attend subject specific courses.
- To report to the head teacher and governing body on science achievement and provision.
- To plan and organise the allocation and purchase of resources in accordance with the available budget.