WESTFIELD PRIMARY SCHOOL

2020

Science Subject Report

Subject	Science	Date	September 2021
Report prepared by	Olcay Tokunaga		

Overview of the year: Sept 2020 – July 2021

This year has again been impacted by COVID 19, with the school going into another Lockdown after Christmas, and various bubble closures. Despite this, the main aim was to continue to raise the profile of Science as a subject throughout the school, with teachers engaging with planning and delivering good quality lessons using the progression of skills for support.

This year, we have provided the Collins Connect scheme as a resource to be utilised by teachers to help them provide good quality resources alongside the use of Twinkl, whilst also encouraging lots of practical and outdoor learning. In the Summer Term, all classes participated in a 'Hands on Science' workshop where there were opportunities for practical exploration of a chosen topic.

During the lockdown, we strived to continue to deliver varied Science activities to all pupils learning from home via Seesaw, our online learning platform, and had much successful feedback. Some teachers also provided the chance for children to collect resources from school for given investigations, allowing them to fully participate.

At Westfield Primary School, we continue to set high expectations for children to be confident and enthusiastic Scientist.

Curriculum: Intent, Implementation, Impact

Intent

At Westfield, we value Science as an important part of the children's entitlement to a broad, balanced and enriched curriculum. Science provides the children with the opportunities to develop and extend skills and an opportunity to express their individual interests, thought, ideas and allow them to have a depth and breadth of scientific knowledge and understanding with experiences using scientific enquiry skills. In doing so, pupils will be able to take it with them into future life, with a love of learning and the necessary skills and knowledge appropriate to their individual needs; and a curiosity and interest in Science.

Implementation

Each year group receives up to 60 minutes of Science teaching from the class teacher every week.

The planning of Science is intrinsically connected to the promotion of curiosity, alongside the necessary skills and knowledge to ensure a strong foundation for a successful scientific future. Our curriculum is implemented through discrete teaching, within a thematic framework, where appropriate. Teachers then ensure that the children apply their knowledge and understanding when developing ideas, investigating and discovering new ideas, and then evaluating them.

Within lessons, the children have the opportunity both to work on their own as well as in small groups and to collaborate with others, listening to other children's ideas and treating these with respect. Since the beginning of this academic year, we have subscribed to Collins Connect (Snap Science) for the next 3 years which will allow all teachers to access different and more broad resources. It is a great scheme and it offers lots of hands on Science experiments for children. Most of the lessons offered are more experiment based, moving away from the use of worksheets for topics offering practical opportunities. All teachers are being encouraged to incorporate this within their planning across the school, as it is being used as a resource, it does not have to be followed in all lessons.

Impact

In Science, we aim to create and cover children's curiosity. This involves giving children opportunities at school that they may have not had before. For example: in school workshops, school trips and creating creative curriculum links with other subjects and topics.

Pupil voice demonstrates children are fostering an enthusiasm and curiosity for Science. One child from

Year 4 said, "I love Science! We get to do experiments and test stuff. It's really interesting and I found out new things."
Our curriculum progression documents, overviews and rationales provide an overview to enable the subject leader to monitor implementation, using the skills progression document alongside the QA procedures to monitor impact. Seesaw has also allowed us to build up a clear body of evidence in Science, so that teachers can evidence progression as the children move through the school. Future planning should continue to contain these opportunities as well as allowing pupils to learn skills from their experiments.

Next steps:
Next year, we will look at more opportunities to enhance learning, and awe and wonder are given through additional experiences, such as themed Science week which will take place, national initiatives (e.g. Outdoor classroom day), workshops, Bird Box project and clubs.

The focus will be on productive assessment, planning monitoring and looking for differentiation in our Science books.

We will encourage more teachers to incorporate the activities and resources offered on Collins Connect, ensuring a wider variety of Teaching and Learning resources that support topics in the new Primary Science Curriculum are being provided across Years 1 to 6.

In addition to this, we will be introducing the "Bird Box Project" across the school, which is already installed and will be in use when bird season arrives, which is an exciting way to inspire and connect children with nature. Over the next academic year, we will be encouraging classes to watch the live video stream from the bird box and feeder station.

We will also ensure children are able to articulate and explore a wider variety of open-ended questions.
We will encourage more independent enquiries conducted by children across year groups.
We will continue to monitor recorded evidence in Science books.

5 Key messages of the year:	**What Performance Information is monitored? What are the 3 questions are you considering for future developments?**
1. Children need to access more practical science opportunities and first-hand experiences. 2. Continue to carry out QA on books, pupil voice and learning walks. 3. Develop a consistency of teaching in 6 week blocks for 60 minutes. 4. Begin to vary the resources used to support the teaching of Science (Collins Connect, Twinkl, etc.) 5. Ensure that cross-curricular links continue across the school.	Key Questions: 1. How do we reflectively assess Science across the school? 2. What Science opportunities do we provide for Westfield children including DAP and SEND? 3. How do we ensure there is enough time to cover the Science curriculum each half term?

What is progress like within this subject?	How much funding did you receive this year and what was it spent on?
This year there continues to be evidence to show the children's engagement and enjoyment of Science has improved, thus promoting better progress within the subject. Our new Science subscription will allow children to show and develop a sense of natural curiosity. We will continue to use Scholarpack to evidence that all the targets set by the national curriculum are covered in planning, taught and achieved by the end of the year. This will be monitored by the Science Lead throughout the academic year.	£2500 in total which includes the Wild Garden. £1000 was spent on resources £1000 was spent on Hands on Science Workshop £500 was spend for Wild Gardening – Bird Box
How does your subject area help to further develop SMSC (Learning for Life) in and around the school?	**How are Fundamental British Values promoted within your subject?**
• Developing a love of Science, so children approach lessons with a positive attitude. • Children share their predictions and misconceptions and are treated with respect by others, who understand that we learn at diverse rates. • Giving children real-life experiences of investigations and opportunities for learning outside the classroom, utilising our Wild Garden. • Differentiating methods of recording their predictions/conclusions, supporting the diverse needs of all learners in our classes. • Children are provided with the opportunity for collaborative learning, promoting their social skills.	• Mutual respect – working as a team in investigations, sharing ideas and questions, accepting other's points of view Individual liberty – opportunities to express their ideas freely
If you could change/ develop one thing in this area what would it be and why?	**What will be the three key resources you will be bidding for this year and why?**
Promote teacher confidence in planning and delivering Science lessons, across all topics, and varying the activities provided, to ensure that practical opportunities are offered.	1. Carry on with the Bird Box project in the Wild Garden 2. CPD for staff 3. Workshops for 2022 (inc. Science week)
Subject Web: Subject Web: Why do we teach what we teach? Every child is entitled to a broad and balanced curriculum. We aim to provide the highest quality of education for all our children, in an environment that is challenging, motivating, disciplined, caring and moral, where children can acquire the scientific skills and knowledge appropriate to their individual needs through the delivery of a creative Science curriculum. This provides opportunities for individuals to acquire knowledge, skills and understanding; promote the moral, cultural and mental well-being and development of	

our pupils; and prepare pupils for the opportunities, responsibilities and experiences of adult life. Through our pledge we promise a range of exciting learning and life experiences in Science.

6 key skills:

1. Scientific knowledge
2. Investigative skills
3. Thinking skills
4. Understanding and explaining the world around them
5. Developing a sense of natural curiosity
6. Open up the possibility of scientific careers in later life

How do you ensure every skill is taught within your subject?

There is a clear skills progression document and Curriculum Overview and rationale for Science that ensures knowledge and understanding required is covered, alongside the necessary skills development.

Quality Assurance (recorded in Subject Leader files and using SeeSaw,) provides evidence through book looks and planning, that children are learning skills and not just the topic knowledge.

Topics taught across each year group:

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
1	Seasonal changes	Everyday materials	Animals Inc. humans	Plants	Child-led investigations	Child-led investigations
2	Every day materials	Child-led investigations	Plants	Animals Inc. humans	Living things and their habitats	Child-led investigations
3	Rocks and Soils	Forces and magnets	Animals Inc. humans	Child-led investigations	Plants	Light
4	Electricity	Sound	Animals Inc. humans	Living things and their habitats	States of matter	Child-led investigations
5	Properties and changes in materials	Living things and their habitats	Earth and Space	Forces	Animals Inc. humans	Child-led investigations
6	Animals Inc. humans	Living things and their habitats	Electricity	Evolution and Inheritance	Light	Child-led investigations

Overview and Rationale for curriculum organisation ensures statutory content for skills and knowledge is covered.

Up to 60 minutes per a week.

Describe what a good learner of this subject looks like when they leave Westfield Primary School?

What are the 7 key components of a good learner in your subject?

1. Children to become confident in their relevant and innovative thinking.
2. Children to have a positive and enthusiastic attitude towards the subject.
3. Children to have acquired a range of skills, which they can talk about when presenting their investigation.
4. To have curiosity to learn more through Science.
5. Risk taking- willing to try new things.
6. Understand that fair test is the key
7. Resilient- they won't give up if something is difficult.

What does Fast Feedback look like in your subject? How do you know this has been effective for children's progress?	**Is your subject an SDP priority? Has there been school training and / or development related to your subject / specific SDP objectives? Have you taken part in any individual research? What has been the impact of this on the children and staff?**
Evidence of children self-correcting their work and re-drafting, if appropriate. Evidence of fast feedback policy in place in which pupils' work is seen to improve as a result. **How do you know this has been effective for children's progress?** Quality assurance checks by the Subject Leader Evidence of children self-correcting their work and correcting/explaining their conclusion, if appropriate. Evidence of fast feedback policy in place in which pupils' work is seen to improve as a result.    	Science is not an SDP priority. Subject Folder holds any information pertaining to QAs, subject networks, informal networks, moderation, training PowerPoints etc), research activities. **What has been the impact of this on the children and staff?** Ideas shared in staff meetings about in school workshop ideas and how to best use the resources we have in school. Pupil voice carried out in Yr 4 and 5 and QA Autumn 2020