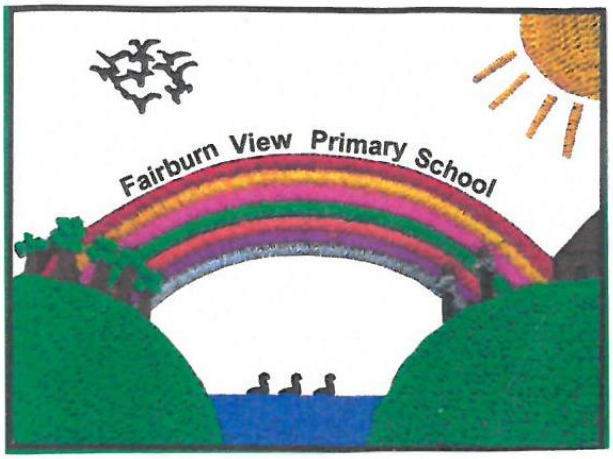

Fairburn View Primary School

Science Policy

September 2023

Signed by: _____

Chair of Governors

Review Date:

Intent

At Fairburn View Primary School, the Science curriculum develops student's knowledge in order to prepare them for further education and to develop a life-long appreciation of the subject. We believe that developing our scientific knowledge gives us the tools we need to understand the world around us. It can enable us to interpret the world around us, predict how things will behave and analyse causes. We utilise real experiences whenever possible to allow children to discover their own learning. Science education offers practical opportunities for careful observation, measurement, experimentation and communication in a variety of forms. Through the teaching of evolution, the human body and living things, our children develop an appreciation for the diversity of our planet and our local community. The challenging aspects of science help to further develop our schools core ethos of 'WE CAN and WE WILL'.

In addition to the school's main drivers, the Science curriculum aims to:

1. To give children many different experiences which can be recorded in many different ways.
2. To help children to develop scientific vocabulary, skills and knowledge.
3. To teach children to use equipment safely.
4. To enable children to understand the world around them, through subject knowledge.
5. To be taught in a way that allows children to be able to work both independently and collaboratively to develop enquiring minds.
6. To help build children's confidence to select the most appropriate tools, techniques and materials themselves.
7. To promote children's understanding and use of scientific language.
8. To foster confidence in and enjoyment of science.
9. To prepare children for further education and the ever-changing work places of the future.

Implementation

'We Can and We Will!'

Within EYFS, Science is taught through 'Understanding of the world' and is delivered at the beginning of each topic and then throughout continuous provision which enhanced weekly. Science is delivered weekly within every year group within KS1 and KS2. It is taught through a variety of means.

For younger children there are opportunities for taking their education outside, for example observing the weather, searching for the signs of spring or learning about human senses, by seeking out sounds, smells, etc. Children are given the opportunity to predict upon, carry out and evaluate experiments, such as:

Predicting the height of a bean seed, planting, watering and managing the seed and then measuring, evaluating and recording. Pupils are taught how to use a variety of equipment safely and appropriately, as well as working with children of different abilities. Children also learn the foundation knowledge across a range of scientific areas, which will then be built upon through KS2.

In KS2 we further develop the skills which were first introduced in KS1, introducing more scientific language and promoting more independence during experiments and the practical aspects of the subject. In KS2 the subject of forces is introduced, opening up a world of discovery for pupils who often have yet to be exposed to the concept. Subjects such as forces are taught in such a way as to promote self-discovery of knowledge, allowing children to become active participants in their education.

Throughout school teachers promote pupils to actively question their learning. Teachers use this to prompt further learning, following pupils interests outside of the curriculum. There are many cross-curricular links within science to Mathematics such as: recording data, creating graphs (bar, pie, etc.), measuring and making calculations. We also promote strong links to literacy and reading through our written observations, labelling, key word handwriting, spelling and our write-ups of key experiments. All Science work is marked with our literacy mark scheme.

Class trips and inviting visitors in to our school to enrich the teaching of our curriculum will be a staple in all year groups, allowing pupils to be inspired and develop a thirst for knowledge.

Additional Needs:

Science in our school is made accessible for all, regardless of SEN or ability. Children who require a one to one will be supported by this staff member throughout all lessons. Other children who require additional support in the subject may work in a small group, work with an adult or be provided with additional equipment or scaffolding to aid their learning.

Higher-ability:
Children who are higher-ability in the subject will be challenged throughout lessons through higher-level questioning and be provided challenge and mastery problems.

Impact

'We are brilliant!'

As a result, we have a community of enthusiastic, brilliant scientists who have a love for the discovery of new scientific knowledge, especially when done so practically. Our children, use their exceptional subject knowledge to explain the world around them and also have confidence to ask questions about it.

By the end of KS2, as a result of our aims, we believe all children will:

- be able to record their experiences in different forms.
- be able to use and understand a range of scientific vocabulary, skills and knowledge.
- be able to use equipment safely and appropriately.
- have a well-rounded understanding of the world around them.

- be able to work both independently and collaboratively within a group.
- have a confidence in and enjoyment of science.
- will be aware of the uses of science within future workplaces.

Whole school overview

Subject Overview – Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer2
EYFS	Senses and the body parts	Nocturnal animals Light and Dark Sound	Forces Space	Animal names Mothers and their young Habitats	Growing and changing Life cycles of a butterfly	Everyday materials Changes of state
Year 1	**Plants** What are the parts of a plant?	**Animals including humans** How can I compare animals and what do they eat?	**Animals including humans** How can I group animals including humans? **David Attenborough**	**Everyday materials** What do we use different materials for?	**Seasonal change** How do the seasons change?	**Plants** What do we know about plants and trees?
Year 2	**Living things and their habitats** Why do different animals live in different habitats?		**Uses of everyday materials** Why do we use certain materials?		**Animals including humans** What do animals and humans need to survive?	**Plants** How do plants grow? **George Washington Carver**
Year 3	**Animals, including humans.** How are we like animals?	**Rocks** What is under our feet?	**Light** How can we use light? **Thomas Edison**		**Plants** What do plants need to grow?	**Forces and Magnets** How can we make things move?
Year 4	**Living things and their habitats** How can we classify living things?		**Electricity** How do I construct an electrical circuit? **Nikola Tesla**	**Animals, including humans** How does my digestive system work?	**Sound** How does sound travel?	**States of matter** How can I change the state of materials?
Year 5	**Earth and space** How does the solar system shape our planet? **Neil Armstrong and Katherine Johnson**	**Forces** How do certain forces impact everyday inventions?	**Living things and their habitats** How do the life cycles and processes of different species compare?	**Animals, including humans** How do humans develop from foetus to old age?	**Properties and changes of materials** How do we use our understanding of the properties and states of matter to create new matter?	
Year 6	**Living things and their habitats** How are living things classified?	**Inheritance and evolution** How and why do organisms evolve? **Charles Darwin**	**Electricity** How does electricity work and how has it changed our world?		**Light** How can light be manipulated?	**Animals including humans** How does our heart work?

Hook or WOW

Science has introduced a hook or WOW lesson, where appropriate, to begin each new cycle of learning. This is a creative activity that allows pupils to 'hook' the learning onto a memorable experience which they will remember and be able to recall information from. A Hook or WOW lesson aims to:

- Hook children into the new topic
- Be fun and promote engagement
- Promote learning

Progress

In Science and non-core subjects, a test is not always applicable when measuring pupil progress. Therefore, as a school we use 'What do we know?' sheets or another appropriate assessment measure. Using these shows immediate progress within each topic and allows teachers to give summative assessment, which is built up over the year.

Inclusion/SEN

Adapted activities and support packs are available to support less able and to extend more able pupils. Children with barriers to learning, who are identified, will have provision made for their particular needs. Pupils may be supported within small groups or individually. They follow a structured, but stimulating programme within the guidelines of the Early Years Foundation Stage Curriculum / National Curriculum. Some pupils may require a personalised curriculum to support their needs. Parents are kept informed through meetings with the class teacher and SENCO when appropriate.

Area of need	All pupils where appropriate	Pupils at wave 2 interventions	Pupils at SEN Support
Cognition and Learning	Adaptive curriculum planning, activities, delivery, support. Increased visual aids/modelling, use of IWBs Illustrated dictionaries Use of writing frames. Access to word processor In class support from Teacher/TA's Blue trays Recall of prior learning Flashback	Specific teaching of individual targets. Catch up Numeracy, Catch up English Precision Teaching Additional reading Lowest 20% Additional Phonics Support with teacher or TA Small group teaching of basic English/numeracy skills with teacher or TA. Pre teaching Memory Training	Intense English or Numeracy support. Specific teaching- individual/Agency targets. Catch up English/Numeracy Precision teaching Additional individual reading Thinking skills Visual Timetables Rock Routines Intensive Interaction Early People Games
	Focused group work with TA's	Coloured overlays WALLS-Dyslexia Programme Rainbow words Colourful Semantics	Walls-Dyslexia Programme/Coloured overlays RLI-Reading Language Intervention Toe by toe
Communication and Language	Adaptive curriculum planning, activities, delivery and outcome Increased visual aids, prompts, modelling etc. Structured rules and class routines Group work activities Drama Pupil Voice School council WELCOMM language screener	Specific teaching of individual targets In class support from Teacher / TA with some focus on supporting speech and Socially Speaking Listening skills Music interaction Additional use of ICT Time to talk with Learning Mentor Listening skills	SALT Therapist 1 day per fortnight Specific teaching of individual targets Time to Talk/Socially Speaking Support from Occupational Therapy Music interaction Additional use of ICT Time to talk with Learning Mentor Visual Timetables Input from WISENDSS RLI-Reading Language Intervention (Downs) Objects of Reference Timmy Tongue Drawing and talking Therapy
Emotional, Behavioural and Social	Whole school behaviour policy based on Restorative Practice Whole School/Class rules Whole School/Class rewards/sanctions systems Circle time Lunchtime play worker Buddy System Librarians Presentation Evening Whole school approach to attendance	Specific teaching of individual targets Small group circle time School/class rewards systems Support for unstructured times Music Interaction Social Stories Circle of Friends Socially Speaking/social monitoring Time To Talk Individual counselling/mentoring/behaviour plan Good to be me	Teaching of individual/Agency targets Small group circle time/Circle of friends School/class rewards systems Support for unstructured times Lego Therapy, Good to Be Me Social Stories/Socially Speaking Social Monitoring, Anger Management Boxall Profile/Beyond Boxall Profile RLI-Reading Language Intervention(Downs) Time To Talk/Wishes and Feelings Counselling /mentoring /behaviour plan CAHMS, ELSA, ECAT, SULP Boxall Profile Bereavement, loss, transition support

Sensory and Physical	Flexible Teaching arrangements Staff aware of implications of physical impairment Medical support Specific seating arrangements Health care plan Lift	Specific teaching of individual targets Additional handwriting practice Enlarged text Specific seating arrangements/Health care plan Fit to learn It's in a bag	Specific teaching of individual targets Additional handwriting practice Seating arrangements visual/hearing impaired Enlarged text Individual support for PE / Fit to learn Health care plan It's in a bag / It's in a little bag Movement and Handling plans Adapted Keyboards Writing slopes Hoist, Specialist toileting seat Standing frames, Functional seating Floor sitter, Bench Balance cushions

Assessment

Assessment in Science takes place in the following ways:

- A summative judgement will be made at the end of each academic year (Below, At or Above) – this will be recorded on Target Tracker (B+, W+, S+).
- Children will complete an appropriate form of assessment at the end of each topic. These could be a 'what do you know?' sheet, low stakes quiz, digital quiz or brain dump etc.
- Staff will use samples of work (books/assessments) they have kept to ensure a uniform level of expectation running through the school.

Monitoring and evaluation

Monitoring and evaluation take place in the following ways:

- The subject leader along with SLT will complete a 'deep dive' with their subject once a year and complete a subject evaluation form.
- Subject leader will monitor the implementation of the progression map, through book scrutiny.
- The SLT plus the subject leaders monitor Science within school each term which includes lesson observations, work scrutiny and pupil voice. The subject leaders are responsible for overseeing Science across school.

Safeguarding

At Fairburn View Primary school we take the safeguarding of our staff and students seriously. Any concerns raised within the teaching of Science must be directed to a member of the DSL team, in line with the schools safeguarding policy.

Parental Engagement

At Fairburn View, we endeavour to involve parents with the children's learning at every possible opportunity. Through our school website and Facebook pages, parents/carers are kept up to date with school life, and where appropriate this can be Science specific. Parents, during consultations and reports, are kept up to date and involved with their child's attainment.