One Voice
Science at Torkington Primary School

nurturing potential, inspiring excellence

INTENT

At Torkington, it is our intention to:

- Develop a practical and engaging high-quality science curriculum which enables the children to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in.
- Support the children to think scientifically, learn scientific skills and build up specialist vocabulary for topics taught.
- Support the children to become engaged learners who develop a sense of excitement and curiosity about our universe.
- Provide a stimulating environment, where children can work in an investigative way and can communicate their findings in a variety of ways.
- Provide rich and engaging science lessons which provide challenge for all learners.
- Teach children to use equipment safely and sensibly.
- Monitor children's progress in science.
- Support teachers and provide ongoing development of science across the school.

IMPLEMENTATION

EYFS

- Science in EYFS is taught discretely, through enhancing the children's independent play and everyday experiences. We encourage them to look at the world around them using the key skills of observation, problem solving and team-work. They are also encouraged to develop their communication and language skills to aid them in explaining their knowledge and understanding. This is supported by teaching staff introducing and frequently using new vocabulary, which the children then adopt.
- Quality questioning from teaching staff to children is a big emphasis in EYFS, and especially in developing the key scientific skills previously mentioned. Children are encouraged to be inquisitive about their own learning to further deepen their knowledge and understanding.

IMPLEMENTATION

KS1 & KS2

At Torkington, science topics are taught within each year group in accordance with the National Curriculum. We teach science as a distinct weekly lesson and where applicable, make cross curricular links to other subjects.

- Every year group builds upon the learning from prior year groups, therefore developing depth of understanding and progression of skills.
- Children explore, question, predict, plan, carry out investigations and observations as well as conclude and compare their findings. Children present their findings and learning using scientific language, observations and diagrams.
- Teachers model key vocabulary within lessons and explain word meanings.
- Teachers embed the skills required to work scientifically during lessons.
- Working walls in our classrooms reflect topics and display vocabulary. Children are encouraged to refer to these.
- Throughout the year groups, we provide enrichment activities including trips, visits and workshops to enhance learning experiences.
- Teachers assess through marking and feedback. The children complete pre-assessments to ensure any misconceptions of a topic are addressed and post-assessment questions to assess children's learning.

Year 2 Plants

What I already know	What I want to know

Subject Knowledge Targets:	Pupil Assessment
Observe and describe how seeds and bulbs grow into mature plants	Emerging Meeting Exceeding
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Emerging Meeting Exceeding
Scientific Skills Targets:	**Pupil Assessment**
Observing closely, using simple equipment.	Emerging Meeting Exceeding
Performing simple tests.	Emerging Meeting Exceeding
Using their observations and ideas to suggest answers to questions.	Emerging Meeting Exceeding

Scientific Vocabulary

seed disperse pollination wind bulb hydroponics
warmth nutrients growth germination

IMPACT

EYFS

- As the children progress through EYFS, we start to see their interrogation skills develop as they begin to look critically at the world around them. We also begin to see a progression in their desire to know more, as well as an increase in their independent working skills.
- Through taught input and further questioning, children also begin to develop a rich vocabulary and understanding. This is then taken with them and developed throughout their school career.

IMPACT

KS1 & KS2

Once we have developed and implemented our improved science curriculum at Torkington, we expect to see the following:

- Children's knowledge will be strong and children of all ages will be able to articulate their science learning clearly to others.
- There will be a clear progression of knowledge and skills evident in children's work and books across the key stages.
- The children will enjoy and be enthusiastic about science.
- Science vocabulary will be evident in written conclusions and verbal discussion.
- Children will be confident, curious learners who ask questions and are able to reason scientifically.
- Marking and feedback from teachers will have an impact on attainment and will provide next step questions to push learning on further.

Next Steps:

What we have already done and plan to implement next half term:

- **Overview:** We have created a whole school yearly overview for science.
- **Action plan:** We have created an action plan which outlines what we would like to achieve this year in science.
- **Assessment:** We have developed a more in-depth assessment scheme for the whole school.
- **Equipment:** We have looked at the science equipment that we already have in school and have asked teachers to create a list of equipment that they would like school to purchase.
- **STEM:** We have registered with STEM and receive weekly science updates. After discussing science with other primary science leaders, we have decided to enrich our curriculum using resources from STEM, Explorify and Plan Bee.

Next Steps:

Other next steps:

- **Equipment:** Purchase new equipment for the school.
- **Displays:** Develop the science working walls so that they are being used purposefully and consistently across the school.
- **Staff Inset:** Update other members of staff on changes to our science curriculum. Introduce staff to the STEM, Plan Bee and Explorify resources and discuss outdoor learning activity ideas (PLAN). Explain how we will assess knowledge and skills in science and discuss expectations for displays.
- **Pupil and staff voice:** Conduct teacher and pupil questionnaires.
- **Science subject audit:** At the end of the year, conduct a science audit. Carry out a book scrutiny and lesson observations.