KNUZDEN ST OSWALD'S CHURCH OF ENGLAND PRIMARY ACADEMY

SCIENCE POLICY

MISSION STATEMENT

Encouraging God's Children with Courage, Compassion and Creativity

OUR CORE VALUES

Kindness, Politeness, Patience, Respect, and Self-Control, all firmly rooted in Agape, Love

KINDNESS/POLITENESS

To teach our children to be kind and polite to all in good times and in adversity, as one has no idea what others are going through #justbenice

PATIENCE

To develop a community where God's love and grace can be reflected upon, and a positive peace of mind and purpose in life can be found

RESPECT

To foster respect for all in our school community, and compassion for those in the local and global communities

SELF-CONTROL

To teach our children to face challenges, developing resilience and empathy, whilst fostering self-confidence and a positive approach to learning

Our Vision

Through and with our biblical quote, *'Stand firm in the faith and do everything with love'* 1 Corinthians 16.13, we aim to create a loving school and work family community where everyone is valued and can flourish. Our quote is an affirmation that we are part of God's huge plan, and that, although the road may not always be smooth, we must be strong and be courageous. We stand firm in the faith, doing the right thing, not the easy thing and we do everything with love at the core.

1. Intent: Our Vision for Science

At Knuzden St Oswald's, our vision is to nurture children who are curious, confident, and caring stewards of God's creation. We believe that Science is vital for understanding the world around us. Our curriculum is designed to spark curiosity, encourage critical questioning, and foster a sense of awe and wonder at the complexity of the universe.

In line with our ethos of **"Achieving Together"**, we aim to provide a high-quality science education that provides the foundations for understanding the world through the specific disciplines of biology, chemistry, and physics.

We incorporate our **"Fruits of the Vine"** values into our scientific practice:

- **Patience:** Persevering when experiments do not go as planned.
- **Self-Control:** Handling equipment safely and working cooperatively in groups.
- **Respect:** Caring for living things and the environment during fieldwork.

2. Implementation: Curriculum Delivery

To ensure a robust, progressive, and coherent curriculum, Knuzden St Oswald's has adopted the **Twinkl PlanIt Science** scheme of work. This scheme supports our teachers in delivering the National Curriculum (2014) for England, ensuring full coverage of knowledge, conceptual understanding, and scientific enquiry skills.

2.1 Planning and Progression

- **Scheme of Work:** We use Twinkl PlanIt units to structure our learning from Year 1 to Year 6. These units are sequenced to ensure that knowledge and skills are built upon year-on-year (spiralling curriculum).
- **Long-Term Planning:** The subject leader maps Twinkl units to the school's long-term plan to ensure cross-curricular links (e.g., studying *Plants* when learning about *Rainforests* in Geography).
- **Short-Term Planning:** Teachers adapt Twinkl lesson plans to the specific needs of their class. While Twinkl provides the core resource, teachers exercise professional judgment to differentiate and extend learning where necessary.

2.2 Working Scientifically

Scientific enquiry is at the heart of our teaching. We use Twinkl's embedded "Working Scientifically" strands to ensure children are not just learning facts, but *becoming scientists*. Every unit includes opportunities for:

- Pattern seeking.
- Identifying, grouping, and classifying.
- Comparative and fair testing.
- Observing over time.
- Research using secondary sources.

2.3 Early Years Foundation Stage (EYFS)

In Reception, science is delivered through the **"Understanding the World"** strand of the EYFS framework. We utilize Twinkl EYFS resources to create continuous provision activities that encourage exploration—

such as water play (floating/sinking), planting seeds, and observing seasonal changes—preparing children for the formal National Curriculum in Year 1.

2.4 Vocabulary

Scientific vocabulary is explicitly taught. We utilize Twinkl **Knowledge Organizers** at the start of every unit. These are shared with the children and pasted into books/displayed on working walls to ensure children can spell, understand, and use technical terminology correctly (e.g., using "transparent" instead of "see-through").

3. Impact: Assessment and Monitoring

We measure the impact of our curriculum to ensure every child is "Achieving Together" and making good progress.

- **Formative Assessment:** Teachers use "Assessment for Learning" (AfL) strategies during lessons. This includes questioning, observing practical tasks, and reviewing the "Success Criteria" provided in Twinkl slides.
- **Summative Assessment:** At the end of each unit, teachers utilize the **Twinkl Unit Assessment Packs** (quizzes and checking grids) to verify understanding.
- **Tracking:** Data is recorded to identify children working towards, at, or exceeding age-related expectations. This data is used to inform future planning and interventions.
- **Monitoring:** The Science Subject Leader monitors the quality of education through:
    - Book scrutinies (checking for progression and marking).
    - Pupil voice interviews (do children enjoy science? Can they recall prior learning?).
    - Learning walks.

4. Inclusion and SEND

We are committed to ensuring all children can access the science curriculum. Teachers adapt the Twinkl resources to support pupils with Special Educational Needs and Disabilities (SEND) by:

- Using Twinkl's **differentiated worksheets** (typically rated by stars *, **, ***) to allow access for different ability levels.
- Providing visual aids and concrete resources (manipulatives) alongside abstract concepts.
- Ensuring "Science for One" or small-group interventions are available for children who need pre-teaching of vocabulary.

5. Health and Safety

Safety is paramount. All staff must adhere to the school's Health and Safety Policy.

- **Risk Assessments:** Teachers are responsible for consulting **CLEAPSS** regarding any practical activity. Twinkl lesson plans often include health and safety prompts, but these **must** be cross-referenced with school-specific risk assessments.
- Equipment is checked regularly. Broken resources are discarded immediately.
- Children are taught specific safety rules (e.g., wearing goggles, washing hands after handling soil) as part of their "Self-Control" value.

6. Resources

Science resources are organized centrally [Location: The Science resource area in the downstairs library].

- Resources are boxed and labelled using Widgits to help all staff and pupils access them easily (e.g., "Electricity", "Light", "Rocks").
- The Subject Leader audits these annually to ensure consumables (batteries, seeds, iron filings) are replenished.

7. Spiritual, Moral, Social, and Cultural Development (SMSC)

As a Church of England school, we link science to our Christian distinctiveness:

- **Spiritual:** Developing a sense of awe at the vastness of space or the intricacy of a leaf. Reflecting on Creation and our role within it.
- **Moral:** Discussing bio-ethics (e.g., pollution, conservation) and our responsibility to protect God's world.
- **Social:** Working collaboratively in investigations.
- **Cultural:** Learning about diverse scientists from history and the present day (using Twinkl's "Scientists" reading comprehensions) to show that science is for everyone.

Signed: _____ (Headteacher)

Signed: _____ (Chair of Governors)

Danielle Marshall – Science Lead – September 2025