Treverbyn Academy

Teaching and Learning Principles

Subject: Science

Aspiration, Perseverance, Collaboration, Compassion

School Vision:

Our school will be an exciting place to learn!

We will:-

Provide a safe, challenging environment
Value each individual, to build positive foundations for learning for life.
Promote team-work, cooperation and responsibility.
Foster healthy relationships between our pupils.

School Mission Statement:

To work in close partnership with the children, their families and the wider community to nurture:

- Aspiration
- Perseverance
- Collaboration
- Compassion

Subject Intent- Science

We define curriculum as the totality of a child's experience at Treverbyn Academy. This includes not only what activities and learning they are immersed in but also the processes involved in how the child learns.

At Treverbyn Academy, we have developed a Science curriculum which develops Aspiration, Perseverance, Collaboration and Compassion.

Treverbyn Academy

To ensure curriculum quality we have addressed the following:

- To focus on investigation-based learning, which incorporates different scientific enquiries and shows a progression of skills- creating a love of learning.
- To develop scientific vocabulary and aspirations linked to STEM careers available.
- To offer a varies science curriculum in EYFS, which incorporates the Early Learning Goals to provide the necessary foundations for scientific enquiry.
- To raise the profile of science within the school so that pupil voice demonstrates that children are enthusiastic about lessons.
- To increase the Science Capital within school and the community to allow closer working partnerships and projects.

Subject Implementation:

- Each pupil to have access to 2 hours of high-quality science provision each week.
- Science units taught to follow the school's curriculum coverage plan.
- All Forces and Materials related content to be taught using the Ogden Trust planning and resources.
- Marking and feedback in science to adhere to the school's marking policy
- Each teacher to have a copy of the 'working scientifically' skills and enquiries to ensure pupils are provided with opportunities to apply these skills during lessons.
- KWL grids in each book at the start of a new unit to show an initial assessment of pupil knowledge and to identify areas of interest. Will also provide an end of unit assessment of pupil's understanding of what has been taught. For KS1, this can be a mind map.
- Each lesson to have a clear LO and Marking ladder to show the desired pupil outcome for the lesson.
- Each marking ladder to provide a challenge for greater depth and breadth of the subject.
- Each unit to include at least one investigation, where students can work on different scientific inquiries and skills for progression.
- Each class to have a Science display which will include a copy of your shared write KWL chart (or a laminated 'fixed in place' grid that can be added to as needed), unit specific vocabulary and examples of work. It will display questions and areas of interest students may have during the unit.
- KS2 teachers to provide an opportunity each half term for students to peer assess a piece of work in books.
- EYFS teachers to implement and use the Early Years Science talk cards for investigation.

- Each year, classes to participate in science week with a culminating science fair to display work.
- School to provide assemblies in science
- School to provide a science display board.
- School to provide opportunities for parents and the wider community to get involved with science in the school.
- School to provide speakers in STEM to promote career awareness.
- School to provide an up-to-date science page on the school's website.

Subject Impact:

We aim for every child to be able to:

- Develop excitement and curiosity about the world around them and question why different phenomena occur.
- Have a better understanding of the world through science.
- Understand and implement the key aspects of science including the knowledge, methods and processes used to investigate.
- Develop an awareness of careers in STEM

Skills Progression:

At Treverbyn Academy, we use the objectives from the National Curriculum to ensure good coverage and challenge for all. We carefully track the objectives to ensure that new learning builds on prior knowledge and consolidates understanding showing sound progression across the depth and breadth of the subject.
Within lessons and topics, we ensure sufficient time is given to recall prior learning so that children are able to see and develop links within their learning.

For further information, please see the subject overview grid and the skills progression document.

Teaching and Learning Expectations:

- Lessons will promote a love of learning
- Activities/questions will promote curiosity
- Links within English and Maths, as well as Drama and ICT links
- Regular opportunities for AfL through a range of activities
- Recall of prior learning - quizzes, topic maps, verbal discussion

Working Walls/Displays:

- Key Vocabulary/ words
- Examples of work linked to topic
- Copy of shared write KWL chart (or laminated grid that can be added to as needed)
- Unit specific vocabulary and examples of work
- A 'wonder wall' which displays questions and areas of interest pupils may have during the unit

Monitoring/Assessment:

- Exit Points (eg: quizzes, performances, writing links, KWL grids)
- Summative Assessment - EYFS, end of KS1 and the end of KS2 (and end of year)
- Pupil Conferencing
- Learning Walk/Lesson Observations
- Work Scrutiny