



SCIENCE POLICY

Aims and Objectives

In teaching Science at Tor View School we aim to:

- ✓ Encourage natural curiosity and develop a scientific approach to problem solving.
- ✓ Build self-confidence to enable students to work independently.
- ✓ Develop social skills to enable students to work cooperatively with others.
- ✓ Develop effective communicators of scientific learning.
- ✓ Foster concern for, and active care for, our environment
- ✓ Encourage self-assessment, perseverance and responsibility.

Classroom Organisation / Teaching and Learning Style

The science curriculum follows the National Curriculum Programmes of Study and the Early Years Foundation Stage. The content and delivery has been modified to ensure appropriately challenging learning opportunities for students with moderate, severe and profound multiple learning difficulties.

Through their planning teachers provide students with opportunities to develop the skills associated with 'doing science' including; exploration; experimentation; observation; problem-solving; prediction; critical thinking; decision making and discussion. To facilitate a structured approach to the teaching and learning of these science skills each topic / unit of study carries with it a particular science skill focus. Modelling of the skill combined with activities designed to encourage its application ensures that by the end of the topic / unit students are moving towards independence in this science skill area.

Teachers plan activities that are multi-sensory in their approach giving students opportunities to access the lesson in their preferred learning style and minimizing the limitations of any particular sense a student may have. As such activities contain aspects of each of the following learning styles:

- ✓ Visual – e.g. pictures, symbols, signs, models;
- ✓ Auditory – e.g. discussion, sound-effects, scripted role-play;
- ✓ Kinaesthetic – e.g. practical, hands-on experience.

Teachers ensure they identify strategies to support literacy or numeracy difficulties students may have, for example:

Literacy

- ✓ Pictorial support for text;
- ✓ Word cards;
- ✓ Simple font;
- ✓ Phrases or short sentences.

Numeracy

- ✓ Difficulty using numbers e.g. replacing numerical temperature scales with pictures.
- ✓ Difficulty using appropriate measures e.g. using non-standard units of time such as an egg timer;
- ✓ Difficulty handling data e.g. omitting tables and displaying results as a pictograph or block graph.

The Foundation Stage is taught as a mixed ability class group by their teacher. Science is integrated into daily teaching and learning under Knowledge and Understanding of the World.

In Key Stages 1 and 2 classes are taught in mixed ability class groups by their teacher. Sessions run twice a week based on half units of study.

Classes in Key Stages 3 and 4 are taught in the Science Laboratory by the Science Teacher based on half termly units of study. Key Stage 3 classes have two sessions per week. Key Stage 4 classes have 1 session per week.

Lesson Outline

Lessons follow a three-part structure: the introduction sets the context for the lesson, outlining a particular science problem that needs to be solved. This is age appropriate, motivating, engaging and related to familiar experiences and interests of the students.

The main activity offers the opportunity to investigate a possible solution to the problem. Activities:

- ✓ Are differentiated so as to match the conceptual and practical demands to student ability.
- ✓ Have clear cut results so as to offer a solution to the science problem.
- ✓ Ensure it is possible to reach a satisfactory endpoint in the time available.

The plenary enables the class to come together as a group to discuss their findings and identify the solution to the initial problem.

Assessment

Students are assessed using PIVATS and National Curriculum level descriptors on a yearly basis in line with the school's assessment policy. This information is used to identify a top, middle and bottom student from each class for target setting. These students are set an individual Science Skill Target for each topic / unit of study. Lesson objectives focus on a smaller aspect of the skill so as to scaffold learning over the half term. Teachers use observations of each student at work to ensure lesson objectives are appropriate and modify them as necessary to ensure students can progress towards achieving their Science Skill Target. At the end of the half term assessments are carried out against PIVATS and National Curriculum level descriptors by the teacher based on observations and a piece of work. This information is used formatively to identify future targets.

Monitoring

Termly evaluations are completed by the teacher along with samples of student work. These are collated by the Subject Leader who compares these against a portfolio of levelled work to ensure that progress is being made in line with expectations.

Cross-Curricular Links

This subject links directly with all curriculum areas.

	Name/Initials:	Date:
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