Science Curriculum Implementation

As a department we want to implement our subject, based on current research, parent voice, pupil voice and reflection on our professional practice and experience. These are considered thusly:

Research

Research shows that **quality teaching is fundamental to student achievement** (Hattie and Timperley, 2007, Louden et al., 2008, Rogers, 2007). According to the literature, characteristics of expert teachers include, but are not limited to, **concern for students, passion, deep knowledge of the field, flexible instructional repertoires, respect** (Matthews, 2009, Rimm, 2009, Van Tassel-Baska et al., 2006) as well as teaching practices that ensure individual progress (Diezmann & Watters, 2000) and emphasise **higher order thinking** (Louden et al., 2008). Importantly, **good teachers challenge students**, they teach **skills of thinking** and **know their subject** (Hattie, 2009).

Parent and Pupil Voice

We want to ensure that both **Parent and Pupil voice** have opportunity to be expressed. Every three years we collate a pupil and parent science survey so that we understand what values and approaches to teaching are considered important to our families. These answers ae collated, ranked and displayed in our '**Science Principles**'. These underpin our approach to teaching and can be found on our website, rolling TV's throughout school and take prominent positioning in our science lab. They are a reminder to us daily how we approach teaching and learning in science, a copy can be found below.

Communication with parents, parental voice and pupil voice are important to us and we aim to strengthen the relationship between home and science through science specific newsletters; this hopefully allows us to increase science capital.

Implementation from Teachers Perspective

We are enthusiastic about our subject and want this to be passed on to all of our learners! We endeavour to maintain a high quality and current scientific knowledge by personal pursuit of the latest scientific developments at a local, national and world wide scale. We are committed to collaborating with others to ensure we maintain best practice and undertake regular reflection

as a department. Work scrutiny, lessons observations and learning walks are regular features of our department; these all inform our professional practice. We seek regular CPD opportunities both within the field of science and wider.

In order to provide all of our children with rich and varied learning experiences through which they can reach their full academic and social potential and develop their self-esteem we adopt a variety of teaching and learning styles. We are committed to learning in an environment of total communication and activities mix kinaesthetic, visual and auditory learning; We also consider individual's EHCP, using adapted resources which best support our learners. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry based research activity, within lessons children are encouraged to work collaboratively and independently. We encourage the children to ask as well as answer scientific questions and key investigation skills underpin all topics. Students have the opportunity to engage with a variety of data, such as statistics, graphs, pictures, tables, photographs and aspects of I.C.T are used to enhance learning where appropriate. The children engage in a variety of problem solving activities, and wherever possible, the outdoor classroom is used to create real life situations for the children to research. Field trips are also an important element in developing the child's understanding and we are committed to achieving the Learning outside the classroom whole school objective. As a department we strive to ensure all pupils have at least one learning outside the classroom experience per half term and that LOtC progressively develops knowledge, skills and understanding depending upon a pupil's individual needs.

All of this combined helps to strengthen our Implementation.