

## **KS2 Springboard Science Policy**

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### **Purpose and aims of study**

At the Raedwald Trust, we follow the Department for Education, National curriculum for England statutory guidance for Science at lower and upper Key Stage 2. The purpose of our Springboard Science programme of study is to focus on working scientifically. This is accomplished via teaching specific topics derived from the National Curriculum sequentially, but working scientifically skills are revisited through each topic. At Alderwood Academy we feel improving a pupil's ability to work and think scientifically, will significantly improve their capacity to engage with and progress through the wider Science curriculum upon their return to mainstream schools.

KS2 Springboard pupils are dual-placed and will attend Alderwood Academy for two days a week. As Springboard pupils will be accessing a 12 week part time placement, the curriculum is time limited and the expectation is that the learning will be revisited by the mainstream schools upon their return. Learning may be revisited organically during the placement as it arises in new projects. Scientific topics and vocabulary are revisited wherever possible to build up further understanding and retention of information. Alongside this, through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes with an emphasis on a respect for evidence.

Emphasis is also placed on practical Science work to facilitate each child's learning, as this creates excitement for learning and encourages first-hand experience, confident and safe use of equipment and resources, co-operation, enquiring minds, the enjoyment of discovering surprising results and the development of investigative skills. For our pupils it is essential that they have the opportunity to learn in kinaesthetic, practical ways and to learn to use equipment safely and with confidence.

As with many of our subjects, we actively encourage a cross curricular learning environment. Pupils will be encouraged to draw on skills from their spoken language, reading & writing; pupils should be able to use technical terminology accurately and precisely and they should build up an extended specialist vocabulary. By creating exciting, rich and engaging learning activities that enable our pupils to become actively engaged in Science and the world of scientific enquiry, we build pupils' curiosity in the world around them.

The Science Programme of Study outlines the key objectives that will be taught and assessed, with a focus on working scientifically. As agreed with pupils' mainstream settings, Alderwood Academy will teach the agreed objectives, but will not be responsible for teaching the unit in its entirety. Science will be taught and assessed during a 3 week unit each term. Pupils will access one hour session each week.

Due to the wide variety of learners that attend our varied provisions, we do not apply a one size fits all model. Many students have missed large gaps in their education, and students also join us at

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various points across the academic year. Alderwood Academy works closely with mainstream settings during induction to identify starting points and any specific strengths or difficulties, helping create a picture of each learner's individual ability. All Science sessions are pitched at varying abilities; from EYFS, where necessary, to UKS2. This is essential in order for the children to receive the level of learning required for them to succeed.

### **Science and the wider curriculum**

The Raedwald Trust Science curriculum supports the teaching and experiences of British Values, SMSC and cultural capital along with supporting a trust-wide priority to raise the profile of reading skills, links to careers and the understanding of life beyond education.

#### British Values, SMSC, RE and PE

The Science curriculum is an opportunity to link with strands of SMSC and British Values, here are some examples;

- Role modelling respect and tolerance between staff and students.
- Clear rules for lab style practical sessions and classroom behaviour.
- Listening to the opinions of others.
- Learning to be responsible for our own health.

#### Cultural Capital

It is extremely important to raise cultural capital opportunities for our pupils in order to; help them overcome any social disadvantage or adversity, widen their horizons, raise aspirations, ensure a positive future and provide the best possible outcomes. The Science curriculum gives us an ideal opportunity to broaden Cultural Capital through trips, for example to museums, animal sanctuaries and the school nurse. During lessons continuous discussion, vocabulary, video clips and imagery from the wider world provides Cultural Capital for our pupils.

#### Literacy skills

Reading Skills are consistently used and progressed within the Science Curriculum as detailed below;

- Researching online and in books to find information from a variety of secondary sources.
- New scientific vocabulary used regularly within lessons and qualifying accurate definitions.
- Create a Science word wall of this new terminology and vocabulary.
- Reading and comprehension of questions and written work.
- Scanning, to find key information in a text.

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### Careers

Every topic within the Science curriculum can be linked to a plethora of jobs and future careers, making learning experiential and relevant.

- health workers, GPs, nurses, carers, surgeons, anaesthetists, dieticians, dentists, paramedics
- park keepers, arborists, grounds keeper, farmers, agriculturalists, landscapers, gardeners
- engineering; aerospace, electrical, chemical, automotive, civil, mechanical, computer hardware, industrial, energy, biomedical
- veterinary surgeons, veterinary nurses, zoo keepers, animal husbandry, conservationists
- lab technicians, forensic scientists, pharmacists, botanists
- astronomers, astronauts,
- archaeologists, historians, zoologists, naturalists, biologists
- fitness coaches, personal trainers, PE teachers, Science teachers
- photographers, cinematographers
- police officers, firefighters