



## **SMSC Statement - Science**

### **Spiritual Development in Science**

Science is using evidence to make sense of the world. It has the ability to make us feel both enormously insignificant (compared to the scale of the visible universe) and enormously significant (we are genetically unique). It helps us understand our relationship with the world around us (how the physical world behaves, the interdependence of all living things). Making new discoveries increases our sense of awe and wonder at the complexities and elegance of the natural world. For scientists, this is a spiritual experience and drives us onwards in our search for knowledge understanding.

### **Moral Development in Science**

Whether it's the ethics behind certain medical treatments, the environmental impact of industry, or how government funding is allocated to scientific projects; moral decisions are an important aspect of Science. Scientific discoveries and inventions need to be used responsibly, and decisions made based on evidence (not prejudice). As teachers, we encourage pupils to be both open minded (generating a hypothesis) and critical (demanding evidence) and to use their understanding of the world around them in a positive manner.

### **Social Development in Science**

Scientists are collaborators. Sharing ideas, data, and results (for further testing and development by others) is a key principle of the scientific method. We encourage pupils to work together on scientific investigations and to share results (to improve reliability). Science has a major impact on the quality of our lives. In Science lessons, pupils consider the social impact (both positive and negative) of science and technology upon our everyday lives e.g. x rays, vaccination, fertilisers, GM crops, renewable energy sources and stem cell research.

### **Cultural Development in Science**

Science permeates modern culture and has played a key part in developing it. It is (both currently and historically) an international activity. In Science lessons, we explore and celebrate research and developments that take place in many different cultures, both past and present. We explore how scientific discoveries have shaped the beliefs, cultures and politics of the modern world.

### **Democracy:**

Scientific collaboration is inherent upon the democratic process whereby evidence and conclusions undergo peer review by fellow Scientist.

**Law:** Science works within and in support of the law e.g. forensic science, Animal research and human stem cell research.

**Liberty:** Within our Science department we welcome free speech and free choice without bias towards any particular creed, colour or religious affiliation.

**Respect:**

We respect and value the opinions of others and welcome their contribution to our scientific community.

**AUDIT: SMSC**

Examples of Spiritual, Moral, Social and Cultural Education in Science include:

- Gaining an insight into the chemical nature of natural changes in the lithosphere, hydrosphere, atmosphere and biosphere Debating the ethical issues surrounding current issues such as stem cell cloning to cure diseases
- Learning about the future implications of the use of finite resources and landscape changes
- Learning about theories concerning the creation of the universe and evolution of life with consideration of religious beliefs
- Looking into the future options for the production of electricity, alternative fuels, and methods to reduce pollution with discussion of how these can improve people's lives and the environment in general
- Investigating the historical impact of scientists from around the world in numerous famous discoveries
- Considering how scientific perceptions can alter across the planet; from the phases of the moon, the safety of food additives and the local importance of recycling.

**AUDIT: British Values**

Examples of British Values in Science include:

- Students following laboratory rules for the safety of all
- Understanding of the need to have speed limits (speed, force, change of momentum)
- Alcohol, tobacco and illegal drugs
- Practical activities in science require students to engage in team work and show mutual respect for each other.
- Democracy is taught through student debates in issues such as:
- Where to place limestone quarries
- examining issues such as whether smoking and drinking should be made illegal
- Resilience and self-esteem are developed through students building independent learning skills, experiencing