

SMSC in Science

Spiritual education in Science involves the search for meaning and purpose in natural and physical phenomena. It is the wonder about what is special about life, an awe at the scale of living things from the smallest microorganism to the largest tree and the interdependence of all living things and materials of the Earth. It concerns the emotional drive to know more and to wonder about the world and aesthetically appreciate its wonders including for example the enormity of space and the beauty of natural objects or phenomenon, plants, animals, crystals, rainbows, the Earth from space etc.

Moral education in Science encourages students to become increasingly curious, to develop open mindedness to the suggestions of others and to make judgements on evidence not prejudice. Students realise that moral dilemmas are often involved in scientific developments. When considering the environment the use of further natural resources and its effect on future generations is an important moral consideration.

Social education involves group practical work which provides opportunities for students to develop team working skills and to take responsibility. Students must take responsibility for their own and other people's safety when undertaking practical work. Science has a major effect on the quality of our lives. Students are encouraged to consider the benefits and drawbacks of scientific and technological developments and the social responsibility involved.

Cultural education in Science involves thinking of scientific discoveries as as much of a part of our culture as great music and films. Credit is given to scientific discoveries of other cultures. Science is also seen as a contemporary activity and developments are made all over the modern world. It is therefore an activity undertaken by a wide range of men and women in many different cultures both now and in the past. The interdependence of the world in environmental issues is central to science.

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

- Students debating the ethical issues surrounding current issues such as stem cell cloning to cure diseases. This also helps develop a sense of how citizens can influence decision making through the democratic process by considering the way in which controversial scientific techniques are approved.
- Learning about the future implications of the use of finite resources and landscape changes for example by looking at different methods for generating our energy. This also links to local facilities and services should as the nearby power station.
- Learning about theories concerning the creation of the universe and evolution of life with consideration of religious beliefs. This is seen when we study the Big Bang Theory in Year 9 and 10.
- 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. Discussion on the impact of wind turbines also develops British Values such as student's sense of respect for others in the community.
- Students investigating the historical impact of scientists from around the world in numerous famous discoveries, for example Marie Curie's discovery of radioactive elements.
- Students considering how scientific perceptions can alter across the planet; from the phases of the moon and visible, the safety of food additives and the local importance of recycling.
- Students will consider local issues that develop British values, such as light pollution in Year 9 in Astronomy or Recycling in Chemistry lessons during Year 9 and Year 10.