

A Curriculum for Excellence Secondary – science



A Curriculum for Excellence recognises that learning is embedded in experience. Outdoor learning is active, hands-on and can provide a real & relevant context for learning. School grounds can encourage knowledge of and concern for our environment and wider sustainability issues.

Biology

The variety of life.

Undertake field studies in different parts of your school grounds - investigate the plant & animal life each area supports - look for variation and interdependence

I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution. SCN 405B



Changes in the environment.

Research how different areas of your grounds are managed and by whom - are there any alternatives and how might this affect any life the area is currently supporting - compare organic versus inorganic products and the impact this may have. How has the site changed over time and what has affected it - consider weather, development, usage

Using my understanding of plant and animal interactions, I can predict the consequences of environmental change and human activities on biodiversity. SCN 412F



Technology

Creating a solution. Assess the needs of the users of your outdoor space and discover what is lacking. Develop proposals to address these needs such as creating shade & shelter, a seating area or a display or performance area - consider what form this solution might take, where it could be situated, suitable materials to address the weather, sustainability, etc

By using problem solving strategies and showing creativity in a design challenge, I can plan, develop and organise the production of items which meet needs within or beyond my place of learning TCH 309D / HE and Tec Ed



Physics

Affecting motion.

Use the outdoor space to work on a large scale. Using PE equipment, study the flight path and speed of different objects – measure results and record using video & photography - refine technique to achieve optimum performance

I can use appropriate methods to measure the speed of an object, and show how the data can be presented and analysed graphically. I can show how these methods are applied in, for example, competitive sport. SCN 422L

Back down to earth.

Investigate the effect of dropping tennis balls from different heights – estimate and compare heavier and lighter objects and those with different shapes and textures – look at the impact of friction and gravity – experiment in various weather conditions

I have carried out activities to investigate the effect of gravity on objects and can describe its effects to others. I can predict what might happen in different situations on Earth and in space SCN 313L



Chemistry

Natural reactions.

Plan and carry out practical and investigative experiments in different parts of the school grounds – try growing vegetables and compare a control set with ones which have fertiliser added – investigate chemical weathering of different materials around the site – investigate composting with a variety of materials

Through a range of experiments I can identify the clues that indicate a chemical reaction has occurred. I can apply my knowledge of chemical and physical changes to analyse everyday examples of change SCN 328Z

