

A Curriculum for Excellence Secondary – technologies



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.

Technological developments in society

Advances in transport: Use the space of the outside to study how advances in technology have supported developments in design:

- carbon fibre used to make bikes lighter,
- use of different materials and size of skateboard wheels
- design of trainer soles

Renewable energy: To study how renewable energy can be used in technological developments you need to experience that energy:

- cook using a solar powered oven
- build solar powered cars
- build a water wheel to study hydro electricity production

From my studies of technologies in the world around me, I can begin to understand the relationship between key scientific principles and technological developments TCH 3-01a

Craft, Design, Engineering & graphics contexts for developing technological skills and knowledge.

Large scale construction: Use the outside space to create large scale construction projects:

- raised beds/compost bins to support gardening groups
- bottle greenhouses and/or bike shelters
- earth ovens/bbq areas
- bridges/structures capable of holding a given weight.

I can practise and apply a range of preparation techniques and processes to manufacture a variety of items in wood, metal, plastic or other material showing imagination and creativity and recognising the need to conserve resources TCH 3 -13a



Observe and explore design of outdoor features:

Colour – use paint charts to study variation

Adaptation – use examples of adaptation within and between species to study design.

Relate to human design where possible - e.g. cocklebur seeds and Velcro

Texture – find examples of different textures and discuss reasons for this variation (non slip, shock absorption etc)

I gain inspiration from natural forms, the built environment or imagination to develop a creative idea which could be realised using computer aided manufacture TCH 3 -15b



Choose your needs carefully:

You can set any design challenge for this and include outdoors items:

Outdoor furniture

Tents – both hard wearing and festival styles

iPod/mobile phone cases

Sports equipment

Recycling/compost/wormery bins

Bird/bat boxes or feeding stations

Bike locks

By using problem solving strategies and showing creativity in a design challenge, I can plan, develop, organise and evaluate the production of items which meet the needs at home or in the world of work TCH 3-14a

Business Contexts for developing technological skills and knowledge



Focus your entrepreneurial skills on an outdoors enterprise: Many schools have used outdoor projects to raise money, foster links with the local community and build self esteem:

Urban agriculture: growing projects can be as big or small as you want. One school has transformed playing fields into thriving market garden businesses that supply local markets.

Transforming town centres: links with local town centres can be improved through growing, preparing and providing hanging baskets. One school entered the annual 'in bloom' competition!

Brighten up the garden: Create products for the garden that can be used to raise money for the school – from benches to bird feeders. One school used the liquid fertiliser from their wormery to raise funds for a school in Africa.



When participating in a collaborative enterprise activity, I can develop administrative and entrepreneurial skills which contribute to the success of the activity TCH 3-07a