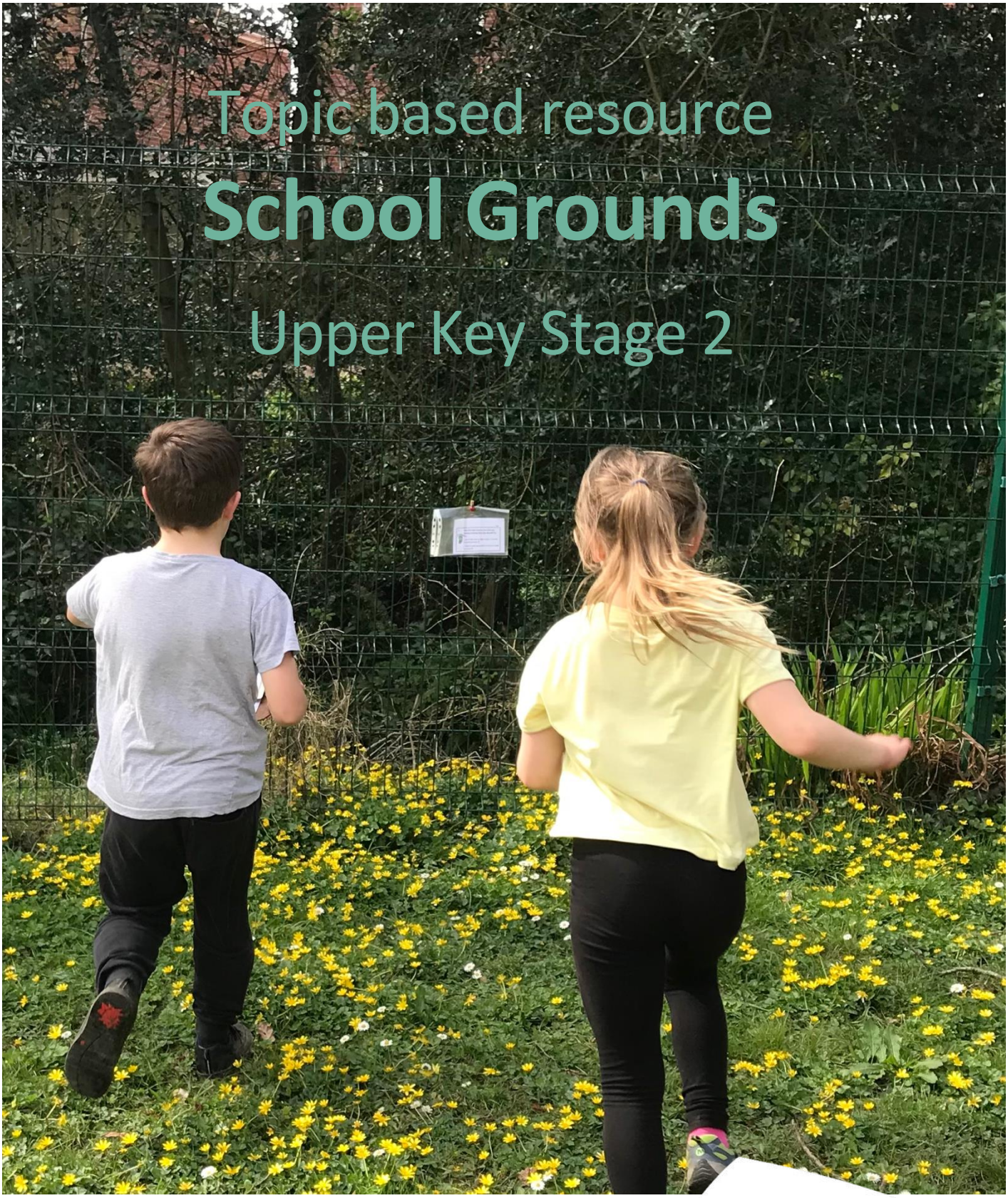

Topic based resource

School Grounds

Upper Key Stage 2

Eco-Schools
Eco-Sgolion

Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

3 GOOD HEALTH AND WELL-BEING

cadwch keep
gymru'n wales
daclus tidy

Background information

School grounds are an important part of school life, they provide a safe and accessible space for children, who are spending less time outside than ever before, have increasingly sedentary lifestyle and less contact with the natural world than previous generations. This can have an impact on children's physical health and emotional and social wellbeing.

Outdoor space in school grounds can offer a wide range of benefits – fresh air, space to move freely, the chance to play and connect with nature, help to raise achievement, and improve self-esteem, behaviour and develop skills. Thoughtfully developed, engaging, well used school grounds can enrich teaching and learning across the whole curriculum and provide opportunities to develop links with the wider community.

Climate perspective

Climate change is the change in weather patterns across the world, contributed to by human activities such as deforestation and burning fossil fuels, which result in the release of carbon dioxide and other greenhouse gases into the earth's atmosphere. Scientists believe that these activities are contributing to global warming. Climate change is already having an impact on the lives of children globally, affecting their food security, access to water, clean air, education, and healthcare. The effects of changing weather patterns are causing rising sea levels, flooding, drought, water pollution, all of which are putting children's health and wellbeing, and ultimately their future at risk.

We have a responsibility to help future generations to care for and protect the natural environment and to understand the challenges of climate change through education.

"No one will protect what they don't care about; and no one will care about what they have never experienced," David Attenborough.

Grow a Wigwam

Upper Key Stage 2

Living den

This activity helps children to learn about what plants need to grow, caring for the environment, providing a place for nature, growing food for pollinators and humans, shade from the summer sun and a great den to hide in! It is possible to grow the beans in large pots or troughs, or in the ground if you have space. The instructions start with germinating the seedlings in smaller pots to be transferred to larger containers or the ground as seedlings when big enough. This activity will also work well with sweet peas or climbing French beans.

Materials needed:

- Re-used plant pots, re-purposed food container or used clean take-away coffee cup – small individual pots per child or large pots per group
- Peat-free compost
- Runner bean seeds
- Hazel rods or bamboo canes
- String/garden twine
- Trowel

Step 1

Fill pots two-thirds full of peat-free compost or soil. Put in the bean seed and cover with more compost. Firm down and water.

Step 2

Put the pots in a tray on a sunny windowsill or in a green house and keep soil damp until seeds germinate and seedlings appear.

Step 3

Work out how much space you will need for your den - ask the children to calculate the diameter and circumference of the circle, how many poles and how long they will need to be to meet at the top, work out how many poles they need for the whole class to plant their bean (e.g. 30 divided by 3 plants per pole = 10 poles.) You could also set the children a challenge to design different shaped structures for the beans to grow up.

Decide where your wigwam is going to grow. Prepare the soil by removing top layer of turf if necessary, removing weeds and adding compost or filling large pots or troughs with peat-free compost.

Step 4

Arrange your hazel rods or bamboo canes in a circle ensuring they are evenly spaced, leaving a gap of a quarter to a third of the circle for the entrance to the wigwam. Push the bottom ends of the sticks into the soil in the ground or in the large pots. Tie the top ends of the sticks firmly together using the string.

Use additional lengths of string to randomly weave between the sticks to create a support for the beans to climb up.

Step 5

Dig holes large enough to fit the bean seedlings and the soil from their existing pot into on either side of the bottom end of each stick. If you are creating a large wigwam structure you could plant a third seedling at the outside edge of the circle at the base of each stick.

You may wish to carefully cover your structure with light fabric until the beans begin to reach the top of the poles to create a den effect, reminding the children to take care of the seedlings.

Step 6

Water the seedlings regularly and check the beans are climbing evenly up the support strings and sticks, weaving in the growing tips when necessary. Watch the pollinators visit the flowers and pick the beans when they are ready!

Photo credits: Jean Van't Hul and Bronwen Parry

Curriculum Links

Areas of Learning and Experience - Science and Technology

Statement of what matters:

The world around us is full of living things which depend on each other for survival

Areas of Learning and Experience - Mathematics and Numeracy

Statement of what matters:

Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world

Next steps and other ideas

- Learn about plant lifecycles by planting your bean seeds in a re-used clear container e.g. a washed-out plastic pot with holes in the bottom. Place the seed where it can be seen at the side of the pot when planting
- Write a story about your wigwam den from the perspective of a tiny person (like Jack and the Beanstalk)
- Write a poem about your den from the perspective of a bee, butterfly, or hoverfly
- Find out more about pollinators and how you can provide food for them
- Look at food chains and how human food production depends on pollinators
- Produce a piece of artwork inspired by your bean wigwam e.g. a collage using newspaper or other materials from the recycling bin
- Design an irrigation system using a water butt/watering can and guttering to water the beans
- Discuss the impact that use of pesticides (slug pellets) can have on the food chain, research other methods of pest control

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