TREE PLANTING

ACTIVITY:

LEARNING AIMS:

- To take effective action to limit climate change by tree planting
- Describe the carbon cycle and how an imbalance leads to climate change
- Explain how trees, as part of the carbon cycle, can limit the extent of climate change
- Plan appropriate tree planting on school grounds
- Carry out tree planting
- Demonstrate appropriate after care for newly planted trees

TIME:

1 hour (a separate session planning tree planting could take an additional 30-60 minutes or form a larger research project)

RESOURCES:

Trees (we recommend bare-root sapling trees for ease and cost-effectiveness. You can purchase these locally from www.treesplease.co.uk/

You can also apply for free trees annually from Woodland Trust (www.woodlandtrust.org.uk/plant-trees/schools-and-communities/) or TCV (www.tcv.org.uk/communities/i-dig-trees) - each of these can help identify appropriate species too)

- Appropriate area for planting
- Spades
- Tree guards
- Stakes
- Woodchip (optional - contact a local tree surgeon to see if they will drop some off for you - see www.southtyneside.gov.uk/article/36344/Tree-surgeons)

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GROUNDWORK CHANGING PLACES CHANGING LIVES

ACTIVITY DESCRIPTION:

Introduction – The Carbon Cycle

- Pupils work in pairs to identify sources and sinks of carbon (i.e. things that emit carbon into the atmosphere and things that remove carbon from the atmosphere).
- As a class, share what the pupils have come up with
- Prompts for discussion:

- Sources: burning fossil fuels (includes transport, heating and electricity generation), making concrete, burning wood and forests, respiration in plants, animals and humans, decomposition of organic matter (composting/rotting) (Note: animals such as cows also produce methane - this is a potent greenhouse gas, but not a simple part of the carbon cycle)
- Sinks: plants including forests, trees, grass, plankton and other producers, carbon dissolved in ocean, carbon trapped in shells.

- Explain that the carbon cycle is normally balanced, with carbon 'sinks' taking in the same amount of carbon as is released by the 'sources'. However, since humans began burning fossil fuels, clearing forests, and increasing agriculture at the start of the industrial revolution, carbon sources have exceeded carbon sinks, so the concentration of carbon dioxide in the atmosphere has increased. This is causing the earth to warm, because carbon dioxide in the atmosphere traps heat. This in turn is affecting weather patterns. This is known as climate change. One way of limiting how much the climate changes is by increasing the carbon sinks. This can be achieved through planting trees. (For more info, see https://earthobservatory.nasa.gov/features/CarbonCycle)

Tree planting plan - this could be discussed in more depth as a separate session, or pre-planned by staff

- If doing this during the session, you may wish to pre-plan 3 potential planting locations and present these to pupils to debate. Or go to a single area you have identified and ask pupils to work out the appropriate planting spots for individual trees
- Pupils can establish, through research, how big the trees will grow (height and width) and how much light they need.
- In small groups, pupils can also identify appropriate spaces for the trees to be planted; considering the sunlight and space they need to grow, the impact of shade when fully grown, benefits to wildlife (e.g. connectedness), potential impact on buildings, ease of access for maintenance, educational use, as well as benefits of creating an area of woodland vs. individual trees vs. a small hedge.

Tree planting

- In your identified location, push a spade fully into the ground, around 20-30cm deep.
- Wiggle the spade around to create a small, thin gap in the ground.
- Place the roots of the tree directly into this gap, ensuring all roots are in and pointing downwards.
- Using your feet, press the hole shut around the roots and push down to ensure there are no air pockets remaining.
- Push a stake (bamboo cane) into the ground right next to the tree, ensuring it is vertical.
- Wrap the tree guard around the stake and the tree.
- Water the newly planted tree.
- For best results, apply mulch such as woodchip in a 50-100cm diameter circle, 10cm deep around the tree

A note on Health & Safety when tree planting:

- When digging, do not jump on spade, simply push firmly with ball of foot.
- Wear gloves throughout and take extra care when handling trees such as holly, blackthorn, hawthorn or other spiky trees.
- Wash hands afterwards.

For a video guide to tree planting: www.tcv.org.uk/communities/i-dig-trees/how-plant-your-trees

For additional tree planting advice: www.woodlandtrust.org.uk/plant-trees/advice/

Care plan

- Discuss the care your new trees will need and work out a rota for providing this care.
- Tree care is not essential but best practice includes:
- Watering well each week during dry spells
- Re-mulching the area around the tree each May and October
- Checking the tree guards are secure from time to time