Trees for Change: Primary Teacher's Guide

Keep Scotland Beautiful has partnered with the Clyde Climate Forest (CCF) and Trees for Cities to bring the Trees for Change Challenge to schools and youth groups throughout the Glasgow City region.

CCF aim to plant 18 million trees across eight local authorities: East Dunbartonshire, East Renfrewshire, Inverclyde, Glasgow, North Lanarkshire, Renfrewshire, South Lanarkshire and West Dunbartonshire.

Schools from these councils are invited to engage in the Trees for Change Challenge, which seeks to introduce young people to the benefits of trees in their local area, for people and the planet. This challenge and resources are aimed at upper Primary.

This Challenge provides an entry point to discussions around environmental and social issues associated with trees, as well as acting as a gateway to a school beginning the process of achieving an Eco-Schools Green Flag Award.

Teachers are invited to work through a series of three lessons and. associated activities. These will contribute to creating an entry for the Trees for Change Challenge, which offers schools a chance to share their work, be celebrated, and win prizes.

Curriculum links:

HWB 2-25a, **HWB** 2-13a, **SCN** 2-02a, **SCN** 2-02b, **LIT** 2-06a, **LIT** 2-10a, **LIT** 2-26a, **ENG** 2-27a,**MNU** 2-11b

Learning for Sustainability links:

Target 2030 4Cs: Culture, Curriculum, Community, Campus

SDGs: Goal 4 (Quality Education), Goal 11 (Sustainable Cities and Communities), Goal 13 (Climate Action), Goal 15 (Life on Land), Goal 17 (Partnerships for the Goals).



UNHCRC: Article 12 (Respect for the views of a child), Article 13 (Freedom of expression) Article 29(Goals of education).

Meta Skills: Innovative, Communication, Collaborating, Curiosity, Creativity, Critical thinking.

Introduction to the Challenge

The Trees for Change Challenge comprises of three video lessons accompanied by a practical research task to complete with your class. Optional extensions are also included to expand learning. On completion of lessons and research tasks pupils are challenged to use their research to create a report about urban trees and their area. They are tasked to respond to the question: **'Where should trees be planted and why?'**.

There is no expectation for teachers to be 'experts' in this area, but the challenge is structured to instigate conversations that link with Learning for Sustainability. Lessons outline key learning and this guide should be used to support in the facilitation of the research tasks.

Trees for Change Challenge Structure

Lesson Focus	Research Activity	Page
Lesson 1: Investigate Carbon	Carbon Calculations	Page 4
Lesson 2: Investigate Canopy	Canopy Scavanger Hunt	Page 5
Lesson 3: Investigate Connectivity	Connectivity Creative Writing	Page 6

Using the Resources

The Trees for Change Challenge comprises of three video lessons. These should be completed in numerical order. The videos involve questions that will prompt pupils to engage with the content. Mini whiteboards or jotters could be used to support pupils in developing their thinking and note down ideas. Alternatively, ideas could be captured in a mind map on the class whiteboard.

After each video there is a follow up activity which is explained in the video but is expanded upon in this guide.

Each pupil should be provided with a Trees for Change Pupil Workbook to use when completing the research activities. Clipboards would also be useful for pupils when working outside.

Video Lessons:
Lesson 1: Carbon https://youtu.be/RoknhMysneo
Lesson 2: Canopy https://youtu.be/ClXREKRSyus
Lesson 3: Connectivity https://youtu.be/FK2Bh6wT6VI

Gathering Feedback

Each video contains a QR code linking to a Microsoft form. This contains questions for pupils and for teachers. The pupil questions are contained within the form and video lesson. When completing the form if you could estimate the most common response to these questions: Confident, fairly confident, more to learn.

There are also questions for teachers and space to provide feedback.

The feedback forms are linked as part of the individual lesson guides and can also be found here:

Lesson 1: Carbon

Lesson 2: Canopy

Lesson 3: Connectivity

Outdoor Learning

Research Activities offer an opportunity for pupils to apply the learnings from the lessons to active Outdoor Learning.

If you are new to Outdoor Learning or want some further support in preparing and completing a risk assessment, see this resource:
Outdoor Learning Support

Mapping your School

For the following activities, your pupils will need a map of the outdoor area where you plan to complete the activities. This could be the school grounds or nearby outdoor space. There is a space in the Pupil Workbook where your pupils can draw a map of the school grounds.

Lesson 1: Carbon

This lesson will introduce the concept of climate change. It will outline why trees are important and how they can help mitigate the impacts of climate change by absorbing greenhouse gases and reducing air pollution.

Research Activity 1:

Introduction:

The goal is to calculate how much Carbon Dioxide your local trees have absorbed in their lifetimes so far. This task can be adapted depending on access to resources or trees within the school grounds or chosen area. If there are lots of trees in your chosen area and you have access to several measuring tapes, the class can complete this task in small groups, or alternatively it can be completed as a whole class.

Remind pupils of the link between carbon dioxide (CO2), trees and climate change. CO2 is a greenhouse gas that contributes to climate change. Trees absorb CO2 from the atmosphere. Trees store some of this CO2. They use some CO2 to grow, and they turn some into oxygen, which we breath.

Additional Equipment:

Measuring tape or meter sticks and string.
Calculators to support pupils with numeracy.

Activity:

Step 1: Divide the class into small groups depending on the size of the class and the number of trees in the area. Pupils choose a tree and give it a name.

Step 2: Pupils take a measuring tape and measure the circumference of the tree at chest height or 130cm. Using the chart, pupils should identify the 'Dry weight of the tree' by matching the circumference with this number on the chart on their worksheets. This should be divided by 2 to find the carbon content of the tree. This number is then multiplied by 3.67 to find the amount of carbon this tree has absorbed in its whole life.

Step 3: Pupils should also try to identify areas where there might be lots of CO2 being produced in their school grounds, such as the car park or a road. They should observe and document how many trees are present in these areas.

Video Lesson:

Trees for Change Challenge: Primary Lesson 1 Carbon

Class and Teacher Feedback:

Trees for Change Challenge: Lesson 1: Carbon – Fill in form

Extension:

To expand on learning, try this experiment to link the lesson content to introducing pupils to Photosynthesis: Extension Experiment

Lesson 2: Canopy

This lesson will reinforce what climate change is and introduce how trees can help us with climate change by sheltering us from strong heat and heavy rain.

Research Activity 2:

Introduction:
Pupils will complete a scavenger hunt-style activity around the school grounds. The aim of this activity is to support pupils in identifying areas where canopies provide protection within their school grounds or areas that would benefit from having more trees. Linking with the video lesson, pupils are encouraged to think about the different ways that canopies can offer protection from sun, rain and wind and observe this within the school grounds.

Step 1:
Pupils should split up into groups, pairs or individually and try to find the listed places on the worksheet.

Step 2:
Based upon what they have found from their investigation, pupils can highlight some areas on the school grounds that they think would benefit from trees to offer protection from the weather. They should add this to their maps and be confident in explaining why they think their chosen spot would be a good place to plant trees.

Video Lesson:
Trees for Change Primary: Lesson 2: Canopy

Class and Teacher Feedback:
Trees for Change Challenge: Lesson 2: Canopy – Fill in form

Extension:
To expand on learning around the protective benefits of trees against extreme weather, try this experiment with your class: How trees prevent flooding and pollution.

Lesson 3: Connectivity

This lesson will outline the importance of trees in providing protection and enabling nature connections within our towns and cities. It will introduce ideas of biodiversity and ecosystems, as well as linking to the benefits of more nature in our built environments on people and communities.

Research Activity 3:

Introduction:
Connectivity refers to the links that exist for nature between green spaces. Pupils are encouraged to consider how connected their school grounds are. As part of this activity, they will identify possible nature highways within their school grounds or identify where placing trees could help nature. They will also be encouraged to empathise with nature and use creative writing to put themselves in the place of a small animal trying to move through their school grounds.

Step 1:
As a class, go to an area on your school grounds. Pupils should be encouraged to use their senses to describe the space that they are in. Getting pupils to crouch down when doing this will give them a new perspective.

Step 2:
Pupils should find a route through the school grounds and use the descriptions of their senses to write a short story about an animal of their choosing moving along this route. They should consider any threats or gaps in green space that might pose a risk to animals when moving through this space. One of these threats could be litter. Is there any litter in the way of the route? If your school is working towards an Eco-Schools Green Flag Award, this activity could be paired with a litter pick.

Step 3:
Pupils should add their chosen route to their map and indicate any areas that would benefit from more green space or trees to support nature within their school grounds.

Video Lesson:
Trees for Change: Primary Lesson 3: Connectivity

Class and Teacher Feedback:
Trees for Change Challenge: Lesson 3: Connectivity – Fill in form

Extension:
Linking with learning about nature connectivity, complete this Wildlife Watch activity to see how much nature can be spotted in your school grounds or local area:
https://www.keepscotlandbeautiful.org/media/gtjfdrly/wildlife-watch.pdf

Recommended Reading and Activity:
https://www.keepscotlandbeautiful.org/media/cfuay5om/a-year-of-tree-stories.pdf

Trees for Change Challenge: Report

Where should trees be planted in your local area and why?

Building on learning from the three lessons and activities, pupils will be encouraged to create a Trees for Change Report, explaining where trees should be planted in their local area. This report should take the form of a video or poster. Entries will be judged by experts from Clyde Climate Forest and Trees for Cities, who can influence local authorities regarding where more trees are needed and can be planted. Prizes will be awarded to the classes that show their learning and clearly explain where and why trees should be planted.

The poster or video should:

- Describe your local area.
- Explain the importance of trees in relation to climate change, biodiversity and wellbeing.
- Explain where and why more trees should be planted linked to each of the three lessons: carbon reduction, weather shelter and to help nature.
- Video shouldn't be longer than 3 mins, filmed landscape.
- Posters should be submitted as a high-quality photograph or scanned copy.
- Only one entry per class.

For more information about creating video reports, access resources here: Video Report Resources.

Entries will be judged on how clearly, they explain the benefits of trees to their area and identify where trees should be planted.

Sharing Trees for Change Challenge Reports:
Once your class have completed their reports, select one that will represent your whole class. Every class can make one submission, but multiple classes can enter from the same school. To enter submissions, use the link on our website.

Every submission must have full consent to be shared; this is included in the entry form on our website.

The deadline for submissions is the 29th 2027.

The winning school will receive an in-person session from storyteller Alison Gilbraith.

Extra Readings

Use these books to extend understanding and learning linked with the Trees for Change Challenge.

- 'Toby Alone' and 'Toby and the Secrets of the Tree' by Timothee de Fombell
- 'The Girl Who Became a Tree' by Joseph Coehlo (poetry)

Eco-Schools Links

This Challenge offers schools, teachers and pupils a chance to engage with ideas of Climate Action which they can then build upon over the following year to achieve their own Eco-Schools Green Flag Award. It offers an entry point for schools that are new to Eco-Schools or have previously held a Green Flag and want to re-engage with this process.

Eco-Schools is an internationally recognised accreditation that demonstrates the commitment of a school community to sustainability. It provides a framework for educational settings to embed Learning for Sustainability and progress towards the commitments outlined within Target 2030.

If your school wants to build on the Trees for Change Challenge and begin the process of gaining an Eco-Schools Green Flag Award, see below for the next steps.

- Complete an Environmental Review. You might want to focus only on some of the Eco-Schools Topics that are relevant to the Trees for Change Challenge: Climate Action; Litter & Waste; Biodiversity, Health & Wellbeing; School Grounds; Transport; Water
- Using the results of your Environmental Review and thinking about what you have learned from the Trees for Change Challenge, decide on some aims that you want to achieve in your school by taking action. These ideas should be compiled into an Action Plan.
- You can see some examples how you Trees for Change Challenge Report and associated actions can form part of an Action Plan on the following page.

If you want to find out more about Eco-Schools or require any support with beginning an application please contact: ecoschools@keepscotlandbeautiful.org.

Keep Scotland Beautiful

Your charity inspiring action for our environment

Example Eco-Schools Action Plans

Eco-Schools Action Plan SCHOOL NAME: CCF School
Eco-Schools Topic: Transport Date Range of this Plan: October 2026 to September 2027

Your school's Sustainable Development Goal: Climate Action

Aim(s) What do we aim to achieve? Why? You can have the same aim for all actions, or different aims for different actions.	Actions How are we going to achieve our aims? What actions will we do? Minimum 3 actions per topic.	Who? / When? Who is responsible for the action? Who else will help?/ When will it happen?	Measuring: What, how and when will we measure to monitor any changes?	Evaluation/Development: What did we learn from our monitoring? How far did our actions go towards achieving our aims? Could we have done anything differently?
To reduce greenhouse gas emissions from transport near our school	Hold an assembly about pollution and greenhouse gases caused by transport and the importance of active travel	Eco-Committee/P6 class taking part in Trees for Cities challenge	Survey the school before the assembly to see what children know about pollution caused by transport and active travel and repeat survey afterwards to see if they know more after the assembly	
	Understand how our pupils currently travel to school by carrying out a simple survey to see which methods of transport pupils use to get to school.	Eco-Committee	Carry out survey in each class at the star of working in this topic, again after week of action and again later in the school year to see if behaviours have changed.	
	Hold a week of action where pupils are encouraged to take active travel routes to school. Put up anti-idling posters in the car park	Whole school with Eco-Committee leading	Count the number of active travels taken out each day in each class.	

Eco-Schools Action Plan SCHOOL NAME:
Eco-Schools Topic: School Grounds Date Range of this Plan: October 2026 to September 2027

Your school's Sustainable Development Goal: Climate Action

Aim(s) What do we aim to achieve? Why? You can have the same aim for all actions, or different aims for different actions.	Actions How are we going to achieve our aims? What actions will we do? Minimum 3 actions per topic.	Who? / When? Who is responsible for the action? Who else will help?/ When will it happen?	Measuring: What, how and when will we measure to monitor any changes?	Evaluation/Development: What did we learn from our monitoring? How far did our actions go towards achieving our aims? Could we have done anything differently?
To increase wildlife and biodiversity in our school grounds by creating new habitats for nature.	Carry out a wildlife watch in your school grounds to see which birds, minibeasts and mammals visit the grounds	Eco-Committee/P6 class taking part in Trees for Cities challenge	Carry out a survey before choosing a habitat to create and again afterwards to see if there has been an increase in the number or variety of animals visiting the school grounds.	
	Choose a type of animal that you want to see more of, or that you don't see any of at the moment, and create a new habitat for that animal e.g. plant wildflowers for bees; create a log pile area for insects	Led by Eco-Committee/P6 class taking part in Trees for Cities challenge but involving multiple classes	Take before and after photos of the area where habitats are created.	
	Carry out regular litter picks in the school grounds to ensure that animals cannot be harmed by litter. Implement rota for class litter picks	Whole school	Monitor the number of bags of litter collected during each pick, aiming to see a decrease in litter collected over time.	

Eco-Schools Action Plan SCHOOL NAME: CCF School

Eco-Schools Topic: Climate Action Date Range of this Plan: October 2026 to September 2027

Your school's Sustainable Development Goal: Climate Action

Aim(s) **What do we aim to achieve? Why?** You can have the same aim for all actions, or different aims for different actions.	**Actions** **How are we going to achieve our aims? What actions will we do?** Minimum 3 actions per topic.	**Who? / When?** **Who is responsible for the action? Who else will help?/ When will it happen?**	**Measuring:** **What, how and when will we measure to monitor any changes?**	**Evaluation/Development:** **What did we learn from our monitoring?** **How far did our actions go towards achieving our aims?** **Could we have done anything differently?**
To understand the causes of climate change and the role of trees in helping to combat climate change	Take part in the Trees for Cities Challenge	P6 Class	We will know if this has been achieved by successfully completing the Trees for Change Challenge, making our final report and reflecting on what we have learned	
	Share our knowledge about climate change and trees with the whole school via an assembly	Eco-Committee/P6 class taking part in Trees for Cities challenge	Survey the school before the assembly to see what children know about climate change and do another survey afterwards to see if they know more after the assembly	
	Encourage all classes to make carbon reducing actions during a week of action. Collect points from each class according to the number of actions that have been carried out.	Whole school with Eco-Committee leading Use carbon challenge resource from Keep Scotland Beautiful	We will count the number of carbon saving points each class collects through the week.	