



Growing among Trees Project Report

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Growing among Trees is part of the Children and Nature programme funded by the
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comprises the Nature Friendly Schools project, the Care Farming project and five
Community Forest and Woodland Outreach (CFWO) projects, of which Growing among
Trees is one.

The report on this 12-month pilot project precedes a full evaluation of the Children and
Nature programme in 2022. The purpose of this report is to inform future practice on
CFWO delivery in urban schools, for other CFWO projects to incorporate learning into
ongoing delivery and to outline findings and recommendations to funders.

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CREATE A MODEL FOR EFFICIENT, EFFECTIVE, TRANSFORMATIONAL CHANGE IN URBAN SCHOOLS

Executive Summary

Growing among Trees is a 12-month pilot project which involved the delivery of community forest and woodland outreach (CFWO) interventions in urban schools.

The aim of the project was to create a model for efficient, effective, transformational change in urban schools, which gives pupils the opportunity for everyday connection with trees and woods.

The project engaged nine schools in Islington, Greenwich, and Reading, comprising six primary, one secondary, and two special schools. The project was delivered by a consortium of five practitioners: Trees for Cities (project lead), Nature Nurture CIC, The Garden Classroom, Sensory Trust and Green Schools Project.

Project objectives were to:

1. Test what works well (and what doesn't) through delivery of CFWO with nine urban schools;
2. Create an evidenced package of CFWO interventions that creates transformational change within one academic year, which is sustainable and replicable at scale for urban schools across the UK;
3. Develop the knowledge, skills, and capacity of schools and project partners to deliver CFWO in London and South East England.

Specifically, the project was testing:

1. How to embed low-cost, high-impact outdoor learning into everyday class teaching in urban schools (particularly primary, secondary and special schools).
2. How to use school grounds and "hyperlocal" (within walking distance) community forest and woodland settings in urban schools.
3. Whether teacher training was more effective being delivered in school or off-site.
4. The level of investment required from schools (i.e. time, financial) to deliver the package of CFWO interventions.
5. The processes that assist or hinder the delivery of a 12-month outdoor learning intervention.

“We strongly believe that outdoor learning will encourage the children to want to be outdoors more frequently and ask to be part of more outdoor activities. This in turn will improve their health.”

Primary school teacher

“We don’t have much space to go outdoors and it is challenging to go off site unless it is for a full trip. We are doing our best but we would like to do so much better!”

Primary school teacher

“Our barriers are expertise, time, and money. I believe you can help us overcome all of these”

Primary school teacher

Due to the onset of the Covid-19 pandemic and the closure of schools, delivery was halted prematurely. For this reason and the small scale of the project, evaluation methodology was restricted to qualitative baseline and endline assessment through surveys and interviews with teachers and delivery practitioners.

The key recommendation sets out a minimum 18-day delivery framework comprising a blend of upskilling teachers and pupil interventions using the deliver, co-deliver and supported delivery model across the academic year. Other recommendations relate to project planning such as ensuring sufficient lead in time with schools, baseline monitoring and an audit of school grounds, and practicalities such as providing a starter pack of practical equipment. Lastly, to overcome barriers such as restricted teacher time, it is vital to ensure that all teaching resources are aligned to the national curriculum and prioritise core subjects.

1. Needs, opportunities, and barriers prior to delivery

Introductory meetings with schools identified many reasons for taking part in the project. Schools were aware that children lacked access to nature, and they sought to address this. They recognised this would improve the children’s health, wellbeing, and development. They understood how outdoor learning could complement the school’s vision and learning objectives, and aspired to develop the knowledge of staff and pupils.

There was a broad mix of existing natural assets in and around schools, and a range of existing outdoor learning provision offered to pupils. Most schools felt they had at least some natural assets that could be used for outdoor learning; however, they lacked the resource and expertise to utilise them.

The barriers to implementing CFWO that were most frequently identified by schools were lack of staff time, lack of money, and lack of expertise. Schools expressed interest in the Growing among Trees project in the hope that the input of expertise from practitioners would help to address these barriers. The project was therefore designed to overcome these barriers i.e. by supporting teachers throughout the project and particularly during the early stages of the interventions; by involving the whole class; and by delivering the interventions within school grounds and/or hyperlocal settings.



**GIVE PUPILS THE OPPORTUNITY
FOR EVERYDAY CONNECTION
WITH TREES AND WOODS**

“I can’t believe I planted 5 trees today!”

Pupil

It poured with rain all day, but I went away feeling excited, enthusiastic and eager to apply the knowledge learnt.”

Primary school teacher

“One teacher said she had chaired a meeting with parents of SEN children and they all commented how much their children were enjoying the session.”

Growing among Trees practitioner

2. Project impact and improvement processes

The data collected after each of the CFWO interventions was delivered revealed important insights into the impact on teachers and pupils, and identified whether the processes worked well or needed modification to improve future sessions.

Primary school outcomes

The outcomes achieved at each school reflected the level of delivery that took place. Schools that received a higher level of delivery reported a number of positive outcomes, whereas those that received minimal delivery reported just a few, albeit important, benefits. Tables 1 and 2 show the outcomes and insights generated at the “high” and “low” delivery primary schools respectively, described below:

1. Positive effect

Pupils and teachers across all six primary schools reported a breadth of positive emotions following the activities, such as happiness, appreciation, and excitement.

2. Creativity and imagination

The sessions were influential in sparking creativity and imagination among pupils. This is illustrated by the following discussion, which was held between year 1 pupils after ‘meeting’ six different trees.

3. Strong engagement

The interventions engaged pupils and staff in a way that staff felt was unique to outdoor learning.

4. Enhanced learning experience, skill, and knowledge development

Teachers in all schools reported that the level of engagement through the outdoor sessions delivered by Growing among Trees practitioners enhanced the learning experience for pupils.

5. Excitement for future sessions and knowledge application

Throughout the outdoor learning activities, pupils and teachers were excited to apply what they had learned. The practitioners saw evidence of this throughout their time at the schools.

6. Pedagogical impact

Growing among Trees project activities had a wide-ranging, immediate impact on teaching in all the high delivery primary schools. In certain cases, the learning benefitted teaching practices, with one school adapting sessions to a nursery class.

In another school, the Growing among Trees session generated a boost in attendance, which was linked to the level of engagement and enjoyment that the sessions had achieved.

In all schools, the skills and practices learned were shared across the whole school. One school took the decision to use the natural space created for regular teaching outdoors.

7. Processes

Through thematic analysis of the observation notes and feedback from teachers, pupils and practitioners, several processes were identified that required careful adjustment to increase the effectiveness of the interventions. These processes fit into three categories: operational planning (logistics of time and equipment), teacher engagement, and support to increase teacher confidence in replicating CFWO to the same high standard.

Teachers suggested that the provision of bespoke, practical teaching resources would help guide them in replicating the CFWO activities. This would complement teacher training and facilitate the transition from practitioner-led to teacher-led delivery so that activities could continue beyond the duration of this project.

Special school outcomes

As a result of the Covid-19 restrictions, both special schools only received one of the planned interventions, whereby both schools were visited by a Growing among Trees practitioner to assess the potential for CFWO within school grounds and hyperlocal natural settings. This minimal level of delivery enabled us to understand the outcomes that could be achieved solely through a single visit to identify the level of natural resource available to each school (‘audit’). **Table 3** shows the outcomes and insights generated at each special school (see page 11).



Elder:

“Bumpy, hard, scary, it’s going to die, grainy.”

Beech:

“Handsome, strong, it’s an eye looking down on us, is there a dinosaur in there? It looks very smooth, is it a boy or girl?”

Willow:

“The mummy tree, with all the hair! The one with the brown, green hair!”

Silver Birch:

“Sharp, white, grey”

Cherry:

“Sticky, stripy, dark”

London Plane:

“Animals live there, wow, flaky, big.”

“When they are learning outdoors it is so totally engaging for them. They can look directly, feel it, discuss it. It gives them a sense of belonging in the natural world, this is for everybody. Nature promotes equality.”

Primary school teacher



IMPROVE THE CHILDRENS' HEALTH, WELLBEING, AND DEVELOPMENT

Table 1: Summary of interventions and outcomes at high delivery primary school (PS)

School	Delivered Interventions	Outcomes and Insights
PS1	1. 4 half day sessions with pupils 2. Forest School teacher training 3. Tree Identification 4. Tree Planting 5. Tree Assembly	1. Positive effect (students and teachers) 2. Boosting creativity and imagination 3. Strong engagement 4. Enhanced learning experience, skill, and knowledge development 5. Excitement for future sessions and knowledge application
PS2	1. 6 half day Wild Teaching sessions with pupils 2. Audit of species and defining Wild Teaching zones 3. Tree Planting Workshop	1. Positive effect (students and teachers) 2. Boosting creativity and imagination 3. Strong engagement 4. Enhanced learning experience, skill, and knowledge development 5. Pedagogical impact 6. Improvement processes
PS3	1. 5 half day Wild Teaching sessions with pupils 2. Wild Assembly 3. Audit of species and defining Wild Teaching zones 4. Tree Planting Workshop (x2) 5. Wild Teacher Training	1. Positive effect (students and teachers) 2. Strong engagement 3. Enhanced learning experience, skill, and knowledge development 4. Excitement for future sessions and knowledge application 5. Pedagogical impact 6. Improvement processes

"(The pupils) were so focused, (displaying) fine motor skills, communication skills, using tools, sharing, collaborating, and working together.

I was watching their faces, they were so determined, and everyone joined in. They were completely engrossed in making music (using) gross motor skills.

There was some real talent emerging. These activities are important for writing too. It gives them so many ideas, it helps them to be more creative. They were inspired by nature, by music, by the trees."

Primary school teacher

"I'm going to see if my mum will take me to the park after school, then I can get more sticks!"

Pupil

“The teacher commented how much they talked about it following last week’s session and also that several parents had also commented about how much their children had loved it; with many asking if they could do more of this sort of thing”

Growing among Trees practitioner

“A few children asked if they could do this session every day! Whilst I was clearing up, lots of the class were asking questions about their creatures and if I could leave the habitats there so they could show their mates, siblings and grown-ups.”

Growing among Trees practitioner

“All schools should send their teachers and TAs on this training as not only can it be applied outdoors but also in the classroom”

Primary school teacher

1. Increased recognition of benefits

In one school, the survey of school grounds helped teachers understand the benefits of outdoor learning for their pupils.

Table 2: Summary of interventions and outcomes at low delivery primary school (PS)

School	Delivered Interventions	Outcomes
PS4	1. Urban Forest School teacher training	1. Positive effect (teachers) 2. Strong engagement 3. Excitement for knowledge application 4. Pedagogical impact
PS5	1. Urban Forest School teacher training	1. Positive effect (teachers) 2. Strong engagement 3. Pedagogical impact
PS6	1. Audit of species and defining Wild Teaching zones	1. Positive effect (teachers) 2. Strong engagement 3. Pedagogical impact

2. Improved awareness of provision

In the other school, a walk around natural environments in the hyperlocal area helped to build the schools understanding of what was possible within proximity to the school.

3. Processes

Two significant barriers arose throughout the delivery at the special schools: lack of natural resources and lack of teacher confidence. At one school, the level of natural resource was limited, and staff lacked confidence to make the school grounds more natural due to the perceived health and safety risks to pupils. Without natural assets, this school faced real challenges to delivering CFWO.

Given these barriers, it was deemed necessary to embed CFWO within the school grounds. The school needed clear guidance on how to create a more natural environment that would help build teacher confidence to teach outdoors. These barriers may have been overcome if pupil interventions had been able to take place.

Table 3: Summary of interventions and outcomes at each special school (SpS)

School	Delivered Interventions	Outcomes
SpS1	1. Audit of natural assets	1. Increased recognition of benefits 2. Improvement processes
SpS2	1. Audit of natural assets	1. Improved awareness of provision 2. Improvement processes

Secondary school outcomes

The secondary school that took part in this project received a high level of delivery and achieved a number of benefits. The outcomes achieved at this school are detailed below:

1. Positive affect

Similarly to the primary schools reported above, pupils and teachers reported a range of positive emotions throughout the activities, such as affection and enjoyment.

2. Strong engagement

The interventions engaged pupils and staff in a way that staff felt was unique to outdoor learning. In one case, this level of engagement spread beyond the classroom and school to home environments.

3. Enhanced learning experience, skill, and knowledge development

The level of creativity generated in primary schools was replicated in older children.

4. Pedagogical impact

Resonating with the feedback from primary schools, there was evidence of impact on teaching practices emanating from the secondary school interventions. The interventions provided teachers with the knowledge and confidence to apply a new way of teaching.

“You have all been so supportive and the attendees are full of praise and excitement following the sessions. (The practitioner) has even taught me a new game which we adapted and played with nursery.”

Primary school teacher

“The teacher regularly has around 8 children absent in her class, but noticed that attendance has improved since the Growing among Trees sessions started; for the past 2 weeks we have had 100% attendance for the sessions.”

Growing among Trees practitioner

“They decided that they would use this space as the ‘mini-beast safari’ at least one morning a week. They made a note of the equipment I had so they could source similar. In a ‘penny drop’ moment [the Deputy Head] noted: ‘we don’t need to go to a woodland elsewhere as we have that right here in our school grounds’.”

Growing among Trees practitioner

“At the end of the session, the teacher said ‘I really enjoyed the session and wish my class had done the session as I could not run it as well as you do.’”

Growing among Trees practitioner

One school was inspired to embed outdoor learning as an essential component of teaching children with special educational needs within mainstream education.

5. Processes

The interventions delivered in the secondary school, like those delivered in primary and special schools, identified several processes that required careful attention to ensure the benefits of outdoor learning could be realised. In one instance, a teacher lacked confidence in replicating activities without hands on guidance on how to deliver them with pupils present.

Echoing findings from other schools, the secondary school felt they lacked equipment, specifically clothing and footwear, to teach in a natural environment and felt children would behave badly or disengage during outdoor lessons. These barriers lowered teacher confidence to teach outdoors.

Table 4: Summary of interventions and outcomes at each secondary school (SS)

School	Delivered Interventions	Outcomes
SS1	1. Launch assembly 2. Tree Planting 3. Teacher training (4 sessions)	1. Positive affect (students and staff) 2. Strong engagement 3. Enhanced learning experience, skill, and knowledge development 4. Pedagogical impact 5. Improvement processes

3. Sustainability and replicability of outdoor teaching

All schools involved in the project had a positive experience. There was a general agreement that the interventions were well organised and delivered smoothly to a high standard. The passion and excitement of the Growing among Trees practitioners were key to the positive experiences felt in each school. This enthusiasm transferred to the pupils and led to them forming strong bonds with the practitioners. The likelihood that nature-

based learning would continue beyond the pilot varied based on the level of delivery that took place at each school.

High delivery primary schools

In the primary schools that received a high level of delivery, there were several indicators that suggest outdoor learning will continue.

1. Changing perceptions

The activities had helped teachers overcome perceptions they held about outdoor learning. Initially, some teachers did not see the value of outdoor learning and worried that children would behave badly when taking part in unfamiliar activities. As the project progressed, it became clear to teachers that these perceptions were unfounded.

2. Building teacher confidence

Initially, some teachers lacked confidence in taking children outdoors. During the early stages of the interventions, the practitioners provided extensive support to teachers and mainly delivered the sessions themselves with teachers watching and learning. Over time, the practitioners gradually reduced the level of support as teachers become more able and confident. This structured approach was essential for building teacher confidence.

Some specific challenges lowered teacher confidence during the early pupil interventions, for example, getting pupils dressed quickly in wellies and waterproofs. Over time, however, these issues were resolved as pupils and teachers became more familiar with what was required. The process of overcoming challenges as they occurred through a supportive delivery approach was vital for helping teachers build confidence to overcome initial barriers.

3. Overcoming barriers through planning and preparation

Robust planning and preparation, by practitioners and teachers, was fundamental to the success of the interventions. During the early stages of delivery, practitioners lacked time for forward planning and preparation, which was detrimental to the activities.

Over the course of the pilot project, however, the practitioners and teachers swiftly integrated early learning to improve their planning and preparation for future interventions. Practitioners need sufficient time to work with teachers to prepare so that the limited time available for delivery of interventions is best utilised.

“Many of the teaching staff said although they recognise the value of learning outside the classroom, they do not have the time to research relevant [teaching] resources. Even when they have tried to do so, they are ‘swamped’ by all the resources that are available online.”

Growing among Trees practitioner

“The staff felt that using the outdoors could bring real benefit to their students, especially those that struggled with a classroom environment.”

Growing among Trees practitioner

“The staff are very keen to be part of the project. They have great grounds which they would like to use more but are unsure how. They are also keen to see how they can use nearby woodland spaces and would be keen for this to be included in the project. The woodland across the road is a real benefit to the school and project. It is within safe, easy walking distance and can be reached in under ten minutes.”

Growing among Trees practitioner

“The school grounds are very limited and not natural. Staff confidence was very low when it comes to using the outdoors. They also raised concerns about going off site to nearby spaces and the challenges this would present. The roads surrounding the school are busy and provide many distractions for the students.”

Growing among Trees practitioner

4. Sustainability and replicability

There was a strong expectation that outdoor learning would be embedded beyond the project at the high delivery primary schools.

This sustainability stemmed from the positive experience generated in each of the schools, the smoother delivery over time, and the altered perceptions of school staff. There was a strong sense, however, that bespoke teaching resources such as lesson plans would be vital to help the transition from facilitated to independent delivery. Despite becoming more confident in delivering outdoor teaching themselves, teachers felt that these resources would be a useful bridge to help them remember and apply what they had learned.

Low delivery primary schools

The findings from the primary schools that received a low level of delivery due to Covid-19 were mixed. The teachers had a positive experience, however, the longer-term sustainability of outdoor learning at these schools is uncertain.

At one school, teachers felt they were struggling to maintain their current teaching provision and would try to continue with outdoor learning when normality returned to schools, whereas others expressed a desire to continue the programme.

At another school, however, having taken part in Forest School teacher training, staff had already begun to implement outdoor learning with children of key workers who had continued to attend school throughout the pandemic.

The bespoke resources that were sent to the school to help them transition to independent delivery, had an immediate impact on practice. This school now saw outdoor learning as integral to their long-term plans and there was a tangible impact arising from the intervention.

The intriguing difference between these schools, one of which saw outdoor learning as a solution to the Covid-19 situation, whilst the other saw it as an additional burden in an already daunting situation, required further interrogation. Strong buy-in from the highest level of decision making at this school may have been influential as it helped them overcome barriers throughout the project. The deputy head explained that staffing was a substantial barrier for them, however, this was overcome by a strong

and visible commitment from the Senior Leadership Team. Furthermore, delivering the interventions locally helped to minimise the staff time required and ensured that the project could be easily planned with limited staff resource.

Special Schools

The level of delivery that took place at each special school was minimal; however, the interventions that were delivered led to some notable outcomes and highlighted important barriers that these schools face. There was a tangible impact on current teaching practices: the interventions made schools aware of how to use the limited natural provision they had, and one school had begun to utilise their outdoor space since taking part in the project.

Without also undertaking practitioner-guided activities, however, teachers expressed that they would require support to take the initial step into a new way of teaching.

Secondary School

The secondary school reported an all-round positive experience and the interventions that were delivered helped to build appetite to deliver more outdoor learning in future. The secondary school felt outdoor learning would become a significant part of the curriculum going forward and had also already developed an action plan to guide their delivery when schools return in full, following the Covid-19 lockdown measures.

The school drew attention to the amount of staff time required to take part in the project. The teacher was a strong promoter of outdoor learning and felt it was necessary to engage with similar individuals who share these same values in other schools. Targeting these advocates for outdoor learning to act as gatekeepers to the school could be vital to maximising engagement.



“I’m going to give this tree so much love”
Year 7 pupil

“It is hard to choose the most enjoyable element as all elements were engaging. My personal highlights included the scaffolded process of writing a poem about a willow tree and the evolution timeline activity linked to the science and history curriculum. I found myself getting deeply engrossed in these activities.”

Secondary school teacher

“In the days after (the school assembly), I had a steady stream of students asking questions with many expressing an interest in being a part of the eco team.”

Growing among Trees practitioner

“Here’s a picture of my son at the park today. If nothing else, your input will lead to teachers’ kids being extremely well connected to nature.”

Secondary school teacher

“When trees communicate with each other through their roots it’s like texting!”

Secondary school pupil

“The training has inspired me to read more widely about outdoor education and nature-based learning, and to consider how this approach can be integrated into the curriculum we deliver to our students.”

Secondary school teacher

“I now feel confident to lead outdoor learning / nature connection sessions with groups of young people. My newly developed knowledge and understanding of nature connection pedagogies, theories and ideas has equipped me with the knowledge and skills necessary to deliver a much broader range of outdoor learning opportunities than I currently offer my students.”

Secondary school teacher

4. Pilot facilitators and areas for improvement

Three main factors facilitated the delivery of the pilot and led to the wide-ranging outcomes reported above:

1. Whole school approach

The Growing among Trees partners valued the whole school approach to supporting schools to introduce or increase outdoor learning in natural spaces. The level of buy-in across the school was paramount to the success of the programme and increased the likelihood that outcomes would be sustained.

2. Partnership working

There were positive outcomes from working in collaboration. This approach allowed partners to share learning in response to challenges and adapt delivery in other schools.

3. Evaluation

The process evaluation approach, whilst demanding on time, was perceived to be valuable for improving the delivery of interventions. In-depth note taking and reflection empowered practitioners to adapt the delivery approach and enhance the experience of schools, teachers, and pupils.

This pilot also identified two factors that could streamline the delivery of outdoor learning interventions in future:

1. Planning time

The pilot would have benefitted from more lead-in time for planning and preparation. Given the amount of pre-term and pre-school year planning that takes place in schools, a September start date for the project meant that schools struggled to plan the interventions into their existing plans for that academic year. Earlier engagement with schools would reduce the risks of this lag and enable more activities to take place within each school.



2. Partnership structure

The structure of the pilot was complex as it aimed to test a range of interventions delivered by different partners within a short period of time. Future iterations of CFWO would simplify the delivery model by adopting the processes that worked well, and by setting a structured delivery timetable. This would enable greater comparison and co-operation between different schools, interventions, and approaches. This would allow greater scope for cross-school delivery and collaboration, rather than mainly an exchanging of feedback and recommendations.

Summary

The pilot set out to create a model for efficient, effective, transformational change in urban schools, which gives pupils the opportunity for everyday connection with trees and woods.

Due to the delayed project start and the closure of schools in response to Covid-19, 44% of the planned interventions were delivered and there was insufficient time for full testing. Despite this, a wealth of data was collected and so this, combined with wider practitioner expertise, provides valuable evidence to inform future practice on CFWO delivery in urban schools, for other CFWO projects to incorporate learning into ongoing delivery and to outline findings and recommendations to funders.

The pilot set out to answer five questions. Each of these is reported against below.

1. How to embed low-cost, high-impact outdoor learning into everyday class teaching in urban schools (particularly primary and special schools).

Despite the restricted delivery period, the Growing among Trees Project demonstrated useful insights into processes that could be replicated in everyday teaching and sustained from year to year.

The package of interventions, which included identifying current provision and scope to increase, upskilling teachers, and delivering pupil-facing activities, combined to achieve a range of outcomes for school staff and pupils.

During delivery the practitioners learned that a phased approach of delivery, co-delivery and supported delivery with bespoke teaching resources was effective in overcoming lack of teacher confidence during the academic year.

“I found the session genuinely rewarding and inspiring. I’m really looking forward to turning many of these ideas into the bedrock of our new SEN hub. I’m finding all the theory fascinating. I envisage nature-based learning to be a core element of the curriculum we offer. I envisage it being used as a tool to support our students in working towards a variety of outcomes, some directly curriculum related and others more related to soft skills e.g. language and communication, interpersonal skills, teamwork, self-awareness.”

Special Educational Needs teacher

“Some students are very antagonistic; how do you engage them without making the whole session about them?”

Secondary school teacher

“A lot of the children from our area don’t have (waterproofs and wellies).”

Secondary school teacher

“Before it started I was apprehensive, but when the practitioner was doing activities and I saw how independent and how capable (the pupils) were, it made me realise that I could have pushed the boundaries a little bit more with them.”

Teacher

“As time has gone on, other teachers and different year groups have gotten really curious about it. I noticed a lot of our children didn’t really have the skills originally to work cooperatively with each other, but as it as it unfolded they started to develop those skills.”

Teacher

Other processes are captured in the recommendations listed below, including ensuring that the senior leadership team is on board from the start of the project, engaging whole classes and taking a whole school approach, and ensuring sufficient lead-in time for planning and preparation with the school.

2. How to use school grounds and “hyperlocal” (within walking distance) community forest and woodland settings in urban schools.

Each of the schools was visited by a Growing among Trees practitioner, who was able to assess the extent of tree and woodland resource available for teaching. This was a vital step to gain site-specific information that could be used to develop a programme of CFWO interventions suitable for each of the schools. The site visit also helped to build relations between the school and practitioners.

Interventions that are delivered as local as possible to the school can help reduce key barriers such as staff time and resources, both of which can be mitigated against by minimising travel time. Special schools faced additional barriers to leaving the school grounds and therefore delivery within school grounds is considered preferable, both from a logistical perspective and to increase staff confidence.

3. Whether teacher training was more effective being delivered in school or off-site.

Due to restricted delivery time, the project did not generate sufficient evidence to identify whether teacher training was any more or less effective when delivered in school as opposed to off-site. Practitioners noted, however, that common barriers of limited school staff time can be mitigated by delivering teaching training in school.

4. The level of investment required from schools (i.e. time, financial) to deliver the package of CFWO interventions.

Due to restricted delivery time and varying levels of delivery within each school, the project did not generate sufficient evidence to identify the level of investment required from schools. Practitioners noted, however, that an investment of 11 days of school staff time by the high delivery primary schools produced a breadth of outcomes and influenced teaching practices.

5. The processes that assist or hinder the delivery of a 12-month outdoor learning intervention.

This pilot demonstrated that the following processes all help to evaluate and improve outdoor learning interventions:

- A whole school approach and engaging whole classes in pupil interventions
- Delivery in collaboration with partners to bring added value
- Regular monitoring of delivery with in-situ observations and note taking to enable an ongoing process of learning.

The main hindrance to delivery was the limited time for planning with schools.

Recommendations

Based on the findings, the following recommendations would ensure that the outcomes achieved through Growing among Trees could be replicated at other schools and increase the likelihood that outcomes are embedded within a school beyond the lifespan of future CFWO interventions.

A delivery framework with a minimum of 18 days per practitioner per school comprising three key elements: 1) identify current provision and scope to increase, 2) upskill teachers, 3) co-deliver pupil interventions. This will increase the likelihood that outdoor learning is replicable and sustainable. A suggested breakdown of the 18 days per school is set out in the table below. Within this framework, schools should expect to contribute 11 days of school staff time.

Further recommendations below address specific barriers or facilitators to delivery and outcomes.

Recommendations for building teacher confidence

1. During school recruitment, engage the senior leadership team through clear messaging about the benefits to physical and mental health and well-being, school learning objectives and visions, and pupil development. Align to existing frameworks such as Healthy Schools and Character Education.
2. Initiate the project with basic mapping or audit of the school grounds (and hyperlocal area if required). This can be delivered by a practitioner with the relevant expertise, and could be delivered as an intervention with teachers and/or pupils to help teachers understand the resources at their disposal for teaching.
3. If a workshop programme can only be offered to one class, offer all teachers in the school a 30-60 minute meeting to offer them tailored support or suggestions for tying outdoor learning into their schemes of work.

“At first, I was thinking of ways that I could have supported them but after (the Growing among Trees project) I thought no, I’m going to let them take ownership and lead the project themselves. I think I’m more resourceful with how I can use basic things in nature rather than trying to plan a lot of resources.”

Teacher

“I’ve always been really keen on outdoor education but I’ve become really nervous about how to actually implement it. I personally wasn’t confident in taking them outside. But I’ve learned how easy it is to do it. And I’ve learned to be more resilient as a teacher.”

Teacher

“I remember that chaotic first day of putting on their wellies and their waterproofs. But it was amazing to see that they actually did get so quick at it, they were so independent. And it makes me feel like it’s something that we can now do as teachers. I feel confident about how to plan for it, about little mistakes that happen when you’re outside. I think we can use those as teachable moments. It’s definitely helped me with confidence and understanding of how it can apply to everything.”

Teacher

Project activity	Days per school (practitioner)	Milestones
School recruitment	1	1. Signed partnership agreement
Planning phase – visit school and grounds, identify key staff including members of the senior leadership team.	3	1. Baseline survey to identify current level of provision 2. Agree target level of provision 3. Bespoke delivery plan and dates
Teacher training	2	1. Completion of delivery with collection of monitoring data from teachers
Practitioner-led delivery of direct interventions with pupils	5	1. Completion of delivery with collection of monitoring data from practitioners
Embed into school policy and practice through deliver, co-deliver, supported delivery model	3	1. School Improvement Plan 2. Lesson plans including CFWO
Project management (includes planning for all sessions, monitoring, administration and client liaison with school and funders)	4	1. Project report for school including bespoke plan for sustained outdoor learning to be led by school staff
Total	18 days	

4. Use a phased deliver, co-deliver and supported delivery model across the academic year, with decreasing practitioner involvement over successive terms to gradually build teacher capacity over the academic year. For example, the autumn term could start by providing opportunities for teachers to shadow the delivery of interventions by practitioners, to

demonstrate in practice how natural assets could be utilised. Delivery of teacher training, and sharing of the same resources used, would then encourage teachers to deliver sessions themselves in the spring and summer terms, furthering their learning through doing. The emphasis throughout is to upskill teachers to teach their subject and curriculum outdoors, not to become environmental education experts themselves.

5. Ensure all teaching resources contain bespoke elements to ‘cut through’ the overwhelming range of resources that are online.
6. Use the same locations during early weeks to build familiarity with the new surroundings and teaching practices.
7. Provide a pathway for enthusiastic teachers (for example Forest School, accredited teaching or basic outdoor CPD upskilling) and signpost to an outdoor learning or conservation organisation who can provide resources and support.
8. Signpost schools to platforms where they can obtain permission to use urban parks and greenspaces e.g. Council website.

Recommendations for improving efficiency of delivery

1. For projects starting delivery with schools in September, initiate project planning from the start of the preceding summer term (~April). This will ensure sufficient lead in time to build collaboration and allow for planning with schools for the following academic year. It is particularly important to arrange teacher training sessions early, as they can get booked up a year in advance.
2. Through training, invite staff to share their barriers so that these can be addressed early in the project.
3. For schools that require it, provide a starter pack of practical equipment (e.g. tools, gloves, waterproofs, and wellies) for staff and pupils and minimise the need for costly equipment.

Recommendations for reducing school/teacher burden

1. Delivery within the school grounds, or “hyperlocal” park or woodland, is preferable. This will reduce travel time and logistics, thus relieving pressure on the school timetable and reducing concerns about teacher workload and capacity.
2. Ensure all resources are aligned to the national curriculum and prioritise core subjects. This will ensure that the project has a high degree of fit with learning objectives and that teaching outdoors is integrated into lesson planning, rather than adding to it.

“The first barrier was that it was like getting (the children) ready for school because they are so small. It was raining and we got them all in their wellies and waterproofs. But we got into the swing of things, the children got used to what they needed to do, and it was fine by the end.”

Teacher

“It was really good that we could build up their independence. Each week, it started to get quicker and quicker. We realised the ones that are independent, and the ones that struggle.”

Teacher

“We’re already planning next term that is part of every curriculum subject.”

Teacher

“You’ve got resources all the time to help teachers in the classroom, but there’s not really anything for outdoor education.”

Teacher

“They (pupils) are still very young, so it’s a bit overwhelming for them when they’re actually there and sometimes the information doesn’t sink in. Whereas if we had pictures, it would cement it for them.”

Teacher

“The programme was really well organised... the communication was brilliant. I personally can’t say that there was anything that I feel could be improved on. I really actually felt very privileged to have been invited to be able to do it.”

Teacher

“It is really difficult just dealing with (Covid 19). There’s hope that we can still do (outdoor learning) later on.”

Teacher

- 3. Work with a whole class to deliver sessions, recognising that smaller groups pose staff cover challenges.

Recommendations for generating a whole school approach

- 1. Encourage the senior leadership team to build outdoor teaching into teacher objectives, so that all staff are expected and supported to deliver regular outdoor sessions to enhance and complement the curriculum. This would ideally be once per week, but regularity is more important than high frequency. There is value in taking small steps, where sessions could be on a less frequent but regular basis, with a plan to increase frequency where possible. This will ensure that all pupils in all year groups will participate in regular outdoor learning sessions.
- 2. Include the opportunity for pupils to share their experiences with children across the school, for example a whole school assembly.
- 3. Value and encourage participation of all staff. Include caretaker or grounds support staff as they can help develop outdoor learning areas and may need to know about changing practice to manage ‘wilder’ areas of the grounds. Include wider teaching staff and senior leaders who are able to influence school policies and integrate outdoor learning into lesson planning.

Recommendations for maximising outcomes

- 1. Sessions to be weekly wherever possible, in order to build up and embed outdoor learning into the school timetable.
- 2. Teachers and teaching assistants to be present in the learning sessions with a specialist facilitator encouraging co-delivery in order to find out how they can translate the learning into their own practice.
- 3. Support schools with parent outreach. This will ensure that the wider school community understands the benefits, and value of their child’s participation and the school’s transformation into a setting that embraces nature-based education.

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“Even though we only had our key worker children in, we used the practitioner’s teachings and resources. We actually had a week of outdoor learning with the teacher who was on the training. Every afternoon she did a small activity in our playground.”

Teacher

“In September, I’m hoping that we see schools back to greater normality. The vision is that this is a whole school project moving forward and the principles of Forest School learning and everything that Growing among Trees has given us is something that I would like to see disseminated (across) the whole school so that we become more forest school focused in everyday learning.”

Teacher

“It does open your mind to using your spaces more effectively; you start to recognise that learning happens very well in green outdoor spaces. I have put that into practice already.”

Teacher

“These are particularly challenging people; you need to capture their attention. So those initial lessons and that bit of on-site training would have been very valuable to just to test it out and see what would have worked, and then tailor after that. I think that’s how you gain confidence, by just putting your foot in the water and seeing what works.”

Teacher

Appendix 1: Summary of background research

A wealth of evidence shows that exposure to the natural environment and nature-based learning can benefit children’s physical, mental, social, and emotional health ^{9,11,12,13}. Immersion in nature can have a positive impact on health, wellbeing, creativity, attention capacity and one’s ability to connect with others ^{1,3,4,7,14}. Despite this, children are spending less time in nature and nature-based learning remains an underutilised pedagogical tool ^{8,10}. Several barriers are frequently reported by teachers, including curriculum and time pressures, confidence, safety, cost and access to training and resources ^{2,5,6}. There is a need to better understand and address these common concerns if nature-based learning is to be implemented more widely.

Appendix 2: Project Partners

The pilot was delivered by a consortium of five organisations:

1. Trees for Cities www.treesforcities.org
Trees for Cities is a multi-award-winning charity that engages people to plant and care for trees in cities across the UK and around the world. Since 1993, Trees for Cities has engaged over 100,000 people to plant 1 million urban trees, creating tree-lined streets, community woods and orchards, nature-friendly schools and leafy parks. Urban trees are vital to help clean and cool the air, provide shade and create wildlife habitat. Trees for Cities’ Generation Tree strategy mobilises volunteers of all ages to make our cities happier, healthier places to live.

Trees for Cities was the project lead, and led on delivery of tree-planting interventions.

2. The Garden Classroom www.thegardenclassroom.org.uk
The Garden Classroom is a multi-award-winning charity in Islington, London, which delivers high quality learning in natural environments activities in natural spaces. Since 2008, it has delivered over 2,500 outdoor education sessions and benefited over 75,000 people. Since 2015, TGC has worked



in partnership with Islington Council’s parks department to create better fairness of access to Islington’s greenspaces by working with school groups. Islington has the lowest amount of open access greenspace in England. The Garden Classroom led on delivery with primary schools in Islington.

3. Nature Nurture CIC www.nature-nurture.co.uk
Nature Nurture CIC is an award-winning social enterprise on a mission to ensure that everyone has access to the wild spaces on their doorsteps. They have drawn from environmental education, Forest School and the creative arts to develop ‘Wild Teaching’, empowering schools to embed nature-based learning into their curriculum. Nature Nurture CIC collaborates with health, education, conservation, and heritage sectors to achieve improved access, health and wellbeing, stronger communities and increased environmental awareness and action. Their particular specialism is engaging urban communities in areas of deprivation with hyperlocal green space.

Nature Nurture CIC led on delivery with primary schools in Reading.

4. Sensory Trust www.sensorytrust.org.uk
Sensory Trust is a national charity that works to ensure that everyone can enjoy access to the outdoors, regardless of age, ability or social circumstance. Through creating accessible, engaging outdoor experiences their work has brought significant social and health benefits to people whose lives are affected by social disadvantage, particularly disabled children and adults, older people, their families, and carers. Sensory Trust led on delivery with special schools and advised on accessibility of interventions for children with special needs in mainstream schools.

5. Green Schools Project www.greenschoolsproject.org.uk
Green Schools Project enables young people to fulfil their potential by providing resources and support to schools to engage them in environmental projects, building their skills and aspirations while encouraging them, their community and wider society to live in a more sustainable way.

Green Schools Project have partnered with Dynamic Education, a leading provider of secondary school outdoor experiential learning, to complement school ground programmes by expanding the capacity of schools to deliver student learning in nature.

Green Schools Project led on delivery in secondary schools.

“What we do envisage is that when we get back to a more normal school timetable, the nature-based learning will definitely be a significant part of what we are delivering, particularly the students that I work with. We’ve put together a session plan so that we’ve got something that we can move forward with straightaway.”

SEN teacher

“It’s quite time consuming, engaging with everybody on the on the project. It’s not stopped me from doing it, but it is something that I would imagine could prevent other schools engaging with it.”

Teacher

“I’ve seen what happens when you have that level of buy-in across the schools, so that marks this project as very distinct. It’s certainly the way forward, because I can see huge whole school impact, which is very much as a result of the whole school approach.”

Growing among Trees practitioner

“This shared knowledge, the urban focus and then the dedicated skills of people who have such in depth knowledge; that’s been a fantastic collaboration. Being able to utilise the skills of other partners has been great.”

Growing among Trees practitioner

Appendix 3: Evaluation Methodology

A 12-month assessment examined the experiences of teachers, pupils, and project practitioners at various stages throughout the project. A project monitoring framework was used to collect the required information and utilised a breadth of data sources including meetings and observation notes, school records, baseline and endline surveys, and photos.

The evaluation examined the following research questions:

- 1. What factors supported or hindered the recruitment of schools?
- 2. How can low-cost high-impact outdoor learning be embedded into everyday class teaching in urban schools
- 3. How can school grounds and hyper-local community forest and woodland settings in urban schools be best utilised to maximise delivery, engagement, and outcomes?
- 4. What investment (time and financial) is required from schools?
- 5. Do factors such as school ground versus off-site delivery support or hinder delivery, engagement, and outcomes?
- 6. What processes support or hinder the delivery of a 12-month intervention?

To answer these questions, there were four phases of evaluation:

Phase 1:

Prior to interventions taking place, introductory meetings were held with each participating school and each school completed a baseline assessment of the needs, opportunities, and potential barriers. This established baseline data for measuring the impact of the pilot project.

Phase 2:

Throughout the delivery of each individual intervention, extensive feedback from participants (teachers, pupils, and practitioners) was recorded. This captured the participant’s views of each intervention, the impact of each intervention, any unforeseen benefits, any areas for further development, and any barriers that were either perceived or explicitly reported.

Phase 3:

Following the conclusion of the entire programme of delivery, teachers from each participating school completed a post-delivery questionnaire and took part in a semi-structured interview. This phase explored the impact of the project on the school, the teachers, and their pupils. Further, it examined any issues that arose throughout the project, any barriers which this project helped to overcome, and any barriers which were present before the project and remained.

Phase 4:

To conclude the evaluation, each partner organisation took part in a focus group. These focus groups sought to understand the implementation of the Growing among Trees project. Specifically, they probed the factors that supported or hindered delivery, and the replicability and sustainability of the model.



“I wish I had written more after each session, because it is such a beneficial and enriching experience to do that. That’s definitely worth (doing) going forward. Not only is it really rich from the evaluation perspective, but also in terms of developing and improving the project.”

Growing among Trees practitioner

“If we’d started engaging with a school around Easter time, looking to start (delivery) in September, we might have had more opportunity to get those days to plan it. Maybe there’s a way of doing some preparation work with a school determined before the next academic year. I spoke to the first school early in September, but they couldn’t fit in until end of May.”

Growing among Trees practitioner

Appendix 4: Barriers and limitations to delivery

There were two external factors which negatively impacted the level of delivery that could take place: time constraints resulting from a delayed project set-up phase, and school closures following the Covid-19 outbreak.

Time constraints

The project set-up phase was later than originally timetabled and therefore constrained the time available for project planning. This made it more difficult to enrol schools in the project, given that school planning and preparation takes place well in advance of the academic year.

Covid-19

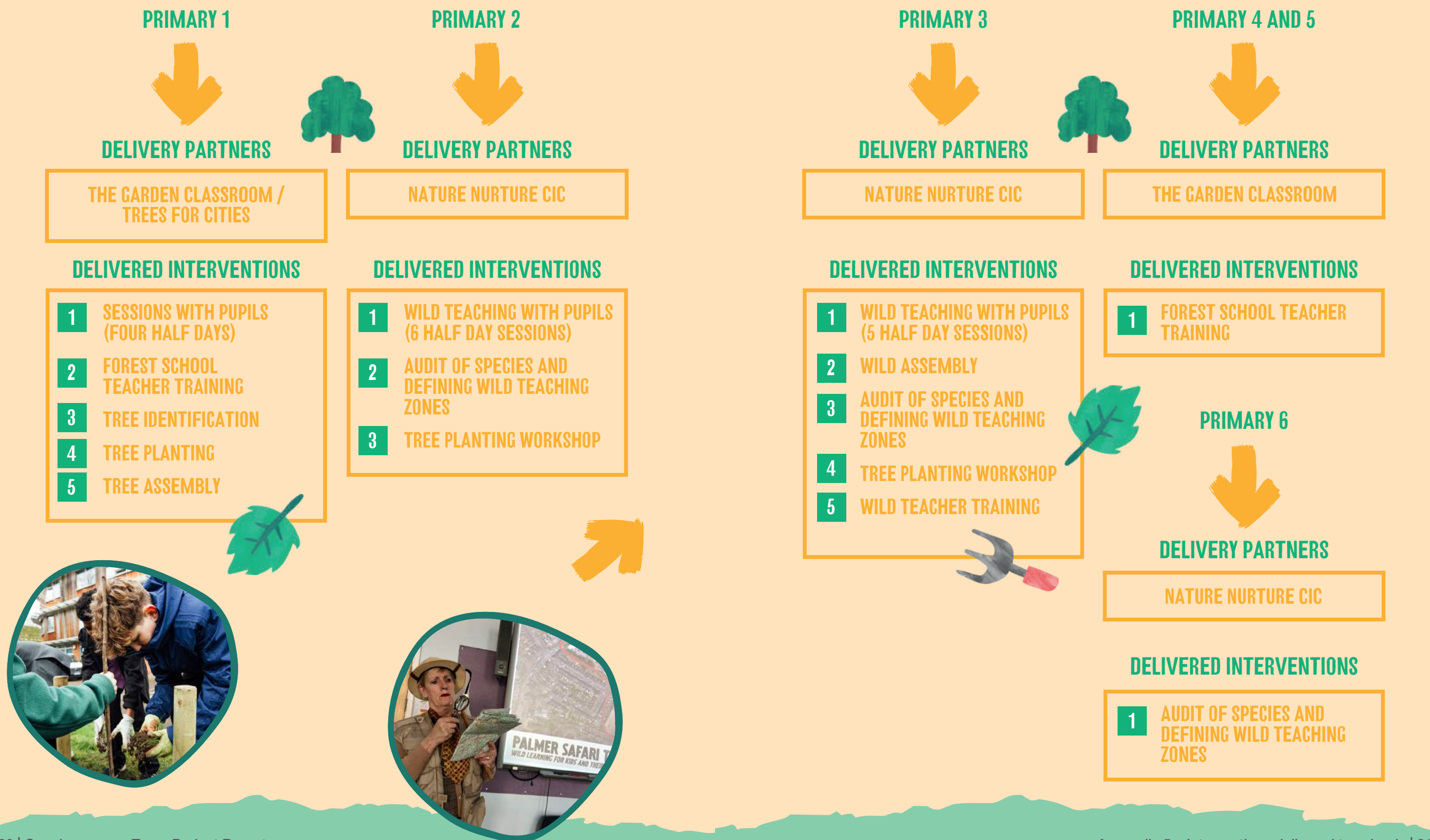
In March 2020, schools in England were closed to help prevent the spread of Covid-19. This forced an abrupt end to the delivery of interventions prior to their completion. At the time of school closures, 44% (28/63) of the planned project interventions were completely or partially delivered across all nine partner schools. 15 pupil interventions and 13 teacher interventions had been delivered successfully. The interventions that were delivered engaged 883 individuals (840 children and 43 school staff).

A broad spectrum of delivery took place across all nine schools. The level of delivery at each school is presented in appendix 5. Primary schools 1-3 received a high level of delivery, whereas schools 4-6 received just one of the planned interventions. The single secondary school received a high level of delivery. Both special schools received a school grounds audit only.

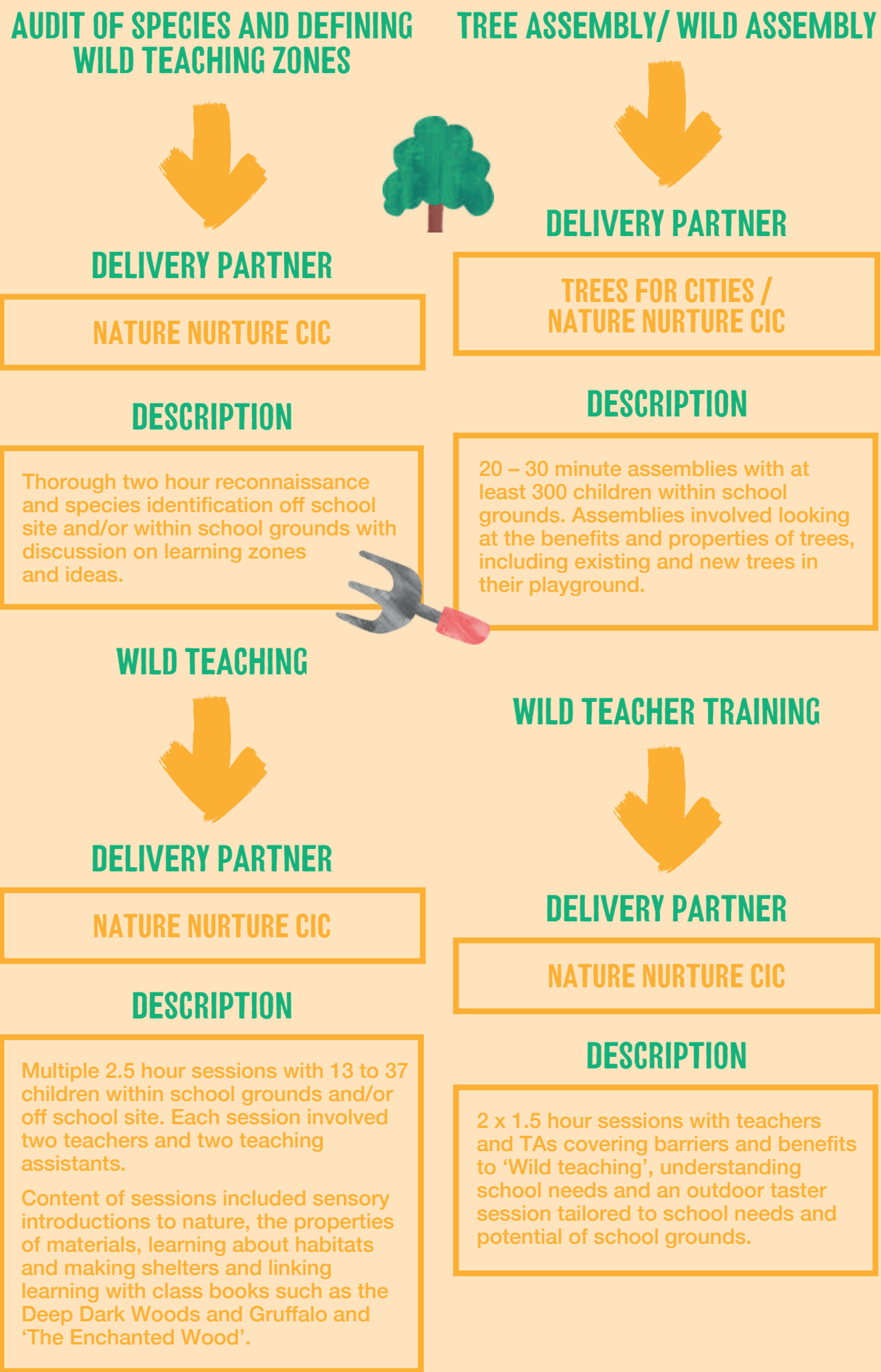
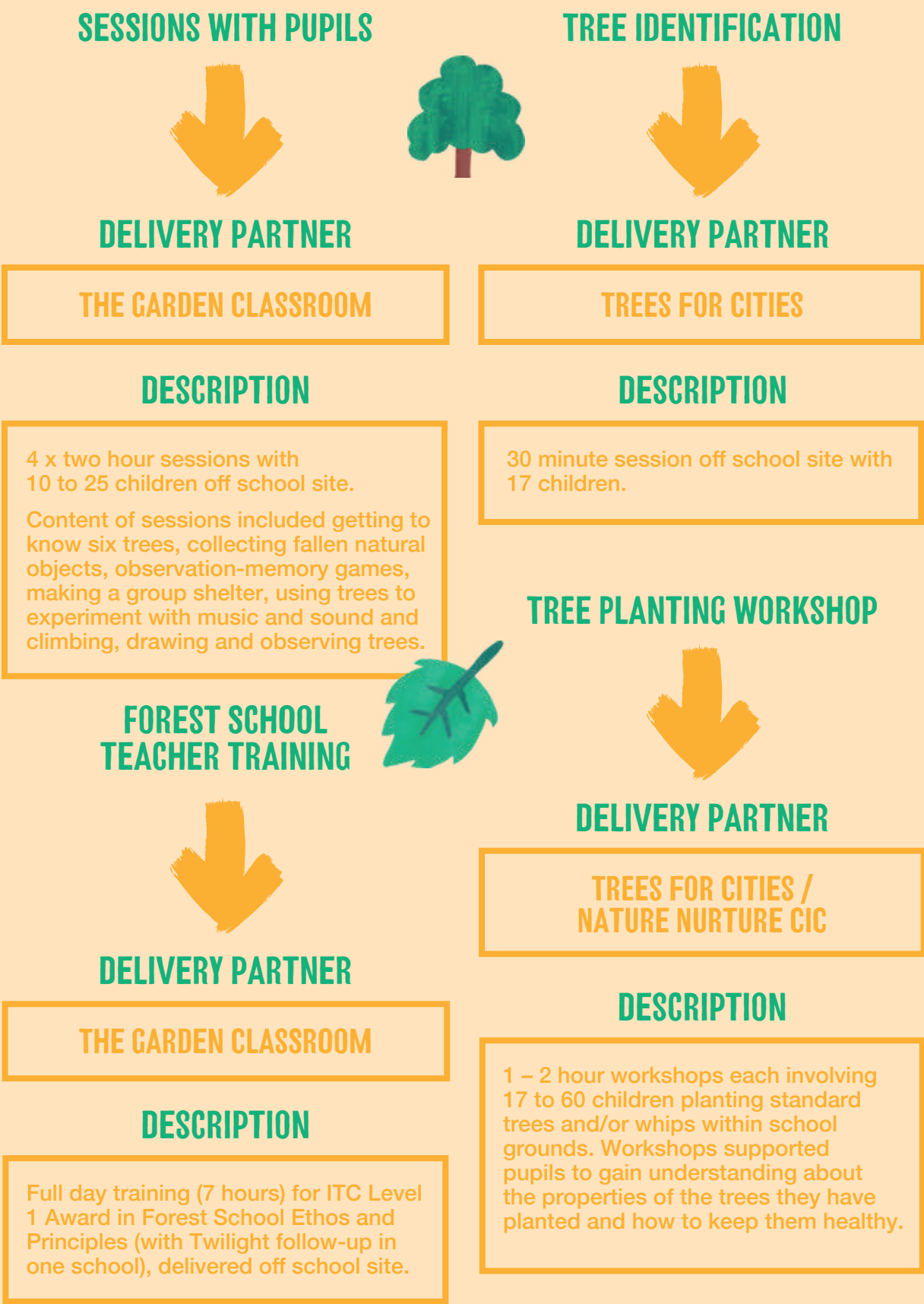
Although unfortunate, the varied level of delivery that took place at each school allowed comparisons to be drawn between schools. These comparisons explored whether varying levels of delivery resulted in differing outcomes to pupils, teachers, and schools.



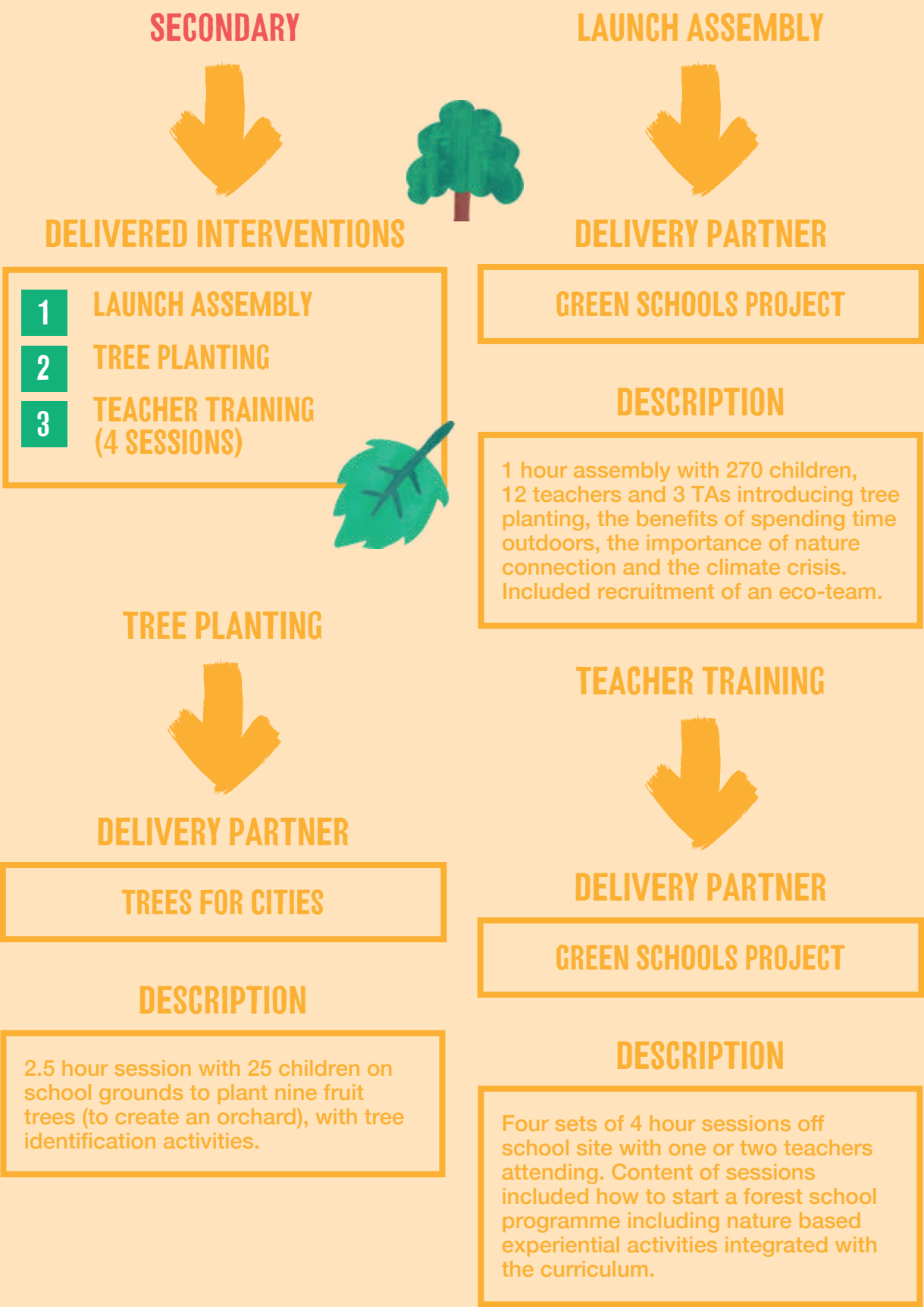
Appendix 5a: Interventions delivered to schools



5b: Interventions delivered to Primary Schools



5c: Interventions delivered to Secondary Schools



5d: Interventions delivered to Special Schools



Appendix 6: Growing among Trees Project Resources

Please click the resources to active link:

Resources for Practitioners

[School Introductory Letter](#)

[School Partnership Agreement](#)

[Example of interventions offered to schools](#)

Resources for Schools

[Tree Curriculum Guides and Assembly](#)

[Tree Planting Guides and Resources](#)

[Wild Teaching Pack](#)

[Special Educational Needs \(SEN\) Tree Planting Pack](#)





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