

# Pappus

## Plants and Play Promoting Universal Skills

# National Adaption Plan

## Desk Research

### England

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## National Adaption Plan – An Overview

### Aim of Project PaPPUS

Pappus will explore and bring together an innovative approach through plants and play that develops skills and enthusiasm for the natural world, horticulture and botany in both school practice and informal youth learning settings.

### The Role of the National Adaption Plans (NAPs)

The NAPs are driven by desk-based research and will thus reflect how the project will be adapted by each participating country in order to accommodate the specific needs in each partner country, as per the aim of this project. It will contain information on local institutional frameworks; target groups, beneficiaries; barriers and challenges to engagement; hooks that will engage the various beneficiaries and stakeholders; key messages and scientific evidence.

The expected impact is to establish what will engage the attention and interest of children and young people (CYP) and what will support teachers, playworkers and youth workers to use the natural world as an environment and stimulus for their activities.

The NAP's will inform the shape, focus and approaches of two key **project products** that will become the 'Go To' resources for anybody wishing to embrace plants and play in their work with children and young people.

### Project Products

The NAPs form the basis for the development of two project products: 1. A Toolkit of resources and 2) an on-line accredited training resource. The National Adaptation Plans provide a knowledge-base from which to tailor the project outputs to meet the specific educational, cultural and political priorities in each country.

#### 1) Toolkit

##### Questions we need to consider

What is the function of the toolkit? What information should it include?

Who is it for - and how should it be designed digitally to accommodate them?

How detailed should it be? What is the likely content and structure?

What's the nature of the toolkit and how will it be accessed?

What do partner need to consider beyond the project to ensure the ongoing use and value of the toolkit?



## **2) Online Training Course (to be accredited if possible, in respective partner countries)**

What is the purpose of the training?

What is the best way to disseminate the course and ensure ease of access to the course?

Open access Website – considerations

## **Research methodology**

The National Adaptation Plans will be informed by diverse sources of information collated by both desk and field-based approaches. Approaches and sources will include:

- Initial desk research to establish an overview and understanding of the following: governmental framework, target groups, challenges and barriers to engagement; typical beneficiaries and effective ways to approach them.
- The desk-based research will drive relevant field research to be carried out in each partner country. This will be a minimum of 10 interviews with a semi-structured questionnaire on a one to one basis or if preferred, through focus groups to discuss the issues and possible implementation of the two products in partner countries.
- In March 2020, there will be a study visit to UK, to learn from the rich and comprehensive experience in the UK and to reflect, refine and enrich prior research through concrete observations.
- Finally, all partner countries will develop National Adaptation Plans to specify their respective strategy to reach the aims of the project and discuss them with relevant stakeholders in various Multiplier Events.

## **Research Findings**

As a final result of all desk and field research, we will formulate our National Adaptation Plans, which should be used as strategy papers for our National Project Implementations. These will include key findings (about e.g. challenges and barriers to engagement of Youth, Teacher, Youth Workers and others and overview of existing on-line tools and digital technologies in this field).



## 0. Executive summary

In England, Pappus will be developed in partnership with teachers, school support staff and adults working in the informal education and out-of-school sectors.

Our beneficiaries will be children and young people between the ages of 9 and 13, a phase which can sometimes be difficult for young people as they transition from smaller primary schools to large, complex secondary schools. We feel that one of the outcomes of Pappus will be opportunities to help keep hard-to-reach young people engaged in mainstream education, giving them a sense of purpose behind the academic subjects they study.

Schools in England are judged on academic attainment, and it is vital that Pappus in England shows itself to be a driver of attainment, albeit through non-traditional routes such as play, PSHE connected projects and extra-curricular activities.

We are also keen to ensure that Pappus encourages outdoor-based and physically active learning opportunities, as whilst schools in England do know that these are valuable approaches, most are yet to embed them into everyday school life other than through PE (physical education).

The environmental sector in England, and the outdoor learning sector are closely aligned and have a long history of working together to drive environmental education in schools. Consequently, there are many organisations and initiatives providing information, advice and resources to schools, and we must ensure Pappus doesn't replicate these, but instead adds value and brings new and unique approaches for schools to add to their strategies for teaching and learning.



## 1. Institutional frameworks

The education, political and social context in England means we will need to consider:

- The need to connect with possible collaborators and competitors, e.g. Wildlife Trust's Nature Friendly Schools initiative and forest school practitioners. These organisations will have existing tools (and toolkits) or mechanisms for promotion and provision and it makes no sense to replicate these high quality resources.
- Alternative formal education programmes, not just mainstream schools, e.g. Pupil Referral Units, Special Schools, Independent Schools.
- The availability of our own resources for implementation of the programme.
- Whether Pappus would be a better fit with England's non-formal educational systems such as play programmes and holiday or out of school provision.
- The legal framework and requirements for providing Pappus training.
- Potential synergies with the ongoing Erasmus+ funded CAPS project, which members of our team are already engaged in.

Whilst English schools and out of school providers have always included outdoor learning and play in their offering (even if it's just outdoor breaktime / recess at school, or occasional school trips), learning beyond the classroom is still not fully mainstream and it is perfectly possible for schools in England to open with no outdoor space of their own at all. This is rare, but not unknown.

### SECTORS

At this stage, our aim is to focus our work on schools funded directly or indirectly by the Department for Education (DFE), the national government department responsible for schools in England. State schools receive their funding (and oversight) via their local authority. They are often known as 'maintained' schools, and the majority of the funding they receive from their local authority comes from the DFE. Free schools and Academies are funded directly by the DFE. Education at all of these schools is free and is paid for through taxation.

- Within the state sector, we expect our target age range to be between 9 and 13 years of age.
- We have identified this age range, whose year groups are known as Year 5 through to Year 8, because the transition between Primary phase education and Secondary phase education can be a difficult one for many children, and the success (or otherwise) of the transition is known to influence choices children subsequently make about their commitment to school and learning<sup>1</sup>.
- Research already exists that explores approaches to reducing the impact of transition, and keeping children engaged in mainstream schooling. This will help us consider how Pappus resources can add to this portfolio of approaches.

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<sup>1</sup> For example research by the Effective Pre-school, Primary and Secondary Education 3 – 14 Project (EPPSE 3-14) <https://dera.ioe.ac.uk/8618/1/DCSF-RR019.pdf>



We believe that adaptations of Pappus could meet needs at all levels of the education system in England, and that the materials it generates can be of value to any adults working with children and young people. However, opportunities for working with the ‘transition’ phase are not common and we have therefore identified it as a priority.

## FRAMEWORK

The Department for Education (DFE) is a national government department with responsibility for formal education in English schools<sup>2</sup>. It devises the National Curriculum (NC) which is followed by **state** schools between Year One (rising 6) and Year 11 (rising 16); it also publishes the Early Years Foundation Stage (EYFS) framework, which all Ofsted (see below) registered pre-school providers (children aged between birth and rising 5) are required to follow, whether they are wholly, partly or not at all funded by the government.

- **Ofsted**<sup>3</sup> is the government body that inspects state funded English schools; it also inspects the informal education sector – out of school holiday provision, after school clubs etc. Ofsted will introduce a new inspection framework in September 2020, and this presents opportunities for Pappus, as schools will be reviewing their work in the context of the new framework.
- **Independent** schools, which are not state funded, are not required to follow the National Curriculum, or the EYFS, but most choose to do so. They are not inspected by Ofsted, but instead by their own independent inspection service; the quality of these inspections is monitored by Ofsted on behalf of the DFE.

## PHASES

Government funded schools in England might be overseen by the local authority and an individual governing body (state school) or by a board of Trustees (an Academy or Free school). **Primary** and **Secondary** phases are organised differently in local authorities:

- **Primary** phase can include Infant schools (age 5 – 7; Year 1 – 2); Junior schools (age 7-11; Year 3 – 6); Primary schools (age 5 – 11; Year 1 – 6); First schools (age 5 – 9; Year 1 – 4) and the first two years of Middle school (age 9 – 11, Year 5 – 6).
- **Secondary** phase can include Secondary schools with or without a Sixth form (age 11 – 16 or 18; Year 7 – 11 or 13); the final two years of Middle schools (age 11 – 13; Year 7 – 8); High schools (age 13 – 16 or 18; Year 9 – 11 or 13) and Grammar schools, which usually serve children aged between 11 and 18.

## CURRICULUM

Local authority schools in England follow the National Curriculum (NC) which is developed by the Department for Education. The NC is not mandatory for Free Schools or Academies, but most do use

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<sup>2</sup> By formal education, we mean schools that are funded by the local authority, directly by national government (i.e. Academies) or independent schools (also known in the UK as ‘private’ schools). State funded schools follow the English National Curriculum; most independent schools also do. The definition includes schools that provide for children and young people with special educational needs and disabilities (SEND) and alternative provision such as Pupil Referral Units (PRUs).

<sup>3</sup> Ofsted: Office for Standards in Education



the framework. Implementation of the NC is overseen by local authorities, Academy trustees and by Ofsted, which makes and publishes judgements about the quality of education and safeguarding in state schools.

- Compulsory NC subjects at KS2 include English; maths; science; design and technology; history; geography; art and design; music; physical education; computing and a foreign language. Religious education is also mandatory, although parents may request their child is removed from all or part of these lessons.
- Optional subjects at KS2 include personal, social and health education (PSHE) and citizenship.
- Compulsory NC subjects at KS3 include English; maths; science; design and technology; history; geography; art and design; music; physical education; computing, citizenship and modern foreign languages. Religious education and sex education are also mandatory, but parents can request their child is removed from all of part of these lessons.

## TESTING

State funded schools are required to test children in Year 6 of KS2 and the results of these tests are published annually, providing a degree of insight into the quality of education at each school at the end of the Primary phase; other data indicates progress children have made since starting school.

End of Secondary phase examinations include GCSEs, which are most commonly taken at the end of Years 10 and 11. At age 18, some children will sit Advanced Level examinations, and a range of other qualifications is also available encompassing academic, practical and vocational courses and apprenticeships. Results of these end of phase examinations are also published nationally.

Publication of exam data triggers much media scrutiny of schools, with national and local media outlets tending to focus on the less successful schools. In many cases, parents will use this information, however skewed or unreliable it might be, when they choose a school for their child.

The focus on examination results and the programme of inspections puts pressure on schools to prioritise academic progress, with, potentially, detrimental effects on children's mental health and wellbeing, and at the cost of less academically rigorous subjects. The UK shows in the PISA<sup>4</sup> rankings as a whole, rather than individual nations, and its performance is considered by politicians to be an indicator of the success of their education policies.

## POSSIBLE COLLABORATORS

- The **ACEWild** (Alternative Curriculum Education out of the Wild) Erasmus+ funded project aims to demonstrate how Secondary schools can improve their students' learning, skills and life chances through outdoor or environment-themed learning programmes. It is especially relevant for those who support young people with additional needs and where students would benefit from a little extra support to reach their goals. Includes Aylsham (Norfolk) horticulture case study. Their resources include an activity bank, (construction; campfires;

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<sup>4</sup> Programme for International Student Assessment



citizen science; horticulture; ICT; languages; horse assisted learning; human impacts; natural resources) with case studies. <https://www.acewild.eu>

- **CAPS** – The University of Gloucestershire is currently engaged in delivering this Erasmus+ funded project. Pilot schools in Gloucestershire may be interested in partnering if we deliver training to them. There are currently 8 participating schools. Links in the University of Gloucestershire include teacher trainers in the Education Team and Performing Arts drama staff.

Current government policies and priorities being what they are, we do not expect to be able to collaborate directly with the Department for Education, although some local authorities might be willing and interested in doing so.

## STAKEHOLDERS

The target audience, in England, for the materials generated by PAPPUS is made up of the adults who teach or facilitate formal or informal learning, and out-of-school play or recreational activities, and we view these as our main stakeholders.

We intend to use this programme to inform children and young people's life choices and career paths, and our research and own professional experience suggests that there are many routes towards this objective, including working with:

- Teachers and teaching assistants (TAs) delivering the English national curriculum, in mainstream schools, at Key Stages 2 and 3 (KS2 and KS3).
- Support staff in schools with responsibility for emotional wellbeing, special educational needs and disabilities (SEND) and children in receipt of Pupil Premium (PP).
- Adults working with children in Alternative Provision (AP), Pupil Referral Units (PRUs) and Special Schools.

In addition, we believe the following sectors are also potential stakeholders and as such, we will be approaching them for information, advice, feedback and support.

- Out-of-school play and leisure provision, such as after school clubs (ASCs), youth groups, holiday playschemes and uniformed groups such as the Scout and Guide movements.
- Providers of learning outside the classroom (LOTC) experiences, such as activity centres, forest schools, heritage and cultural organisations and environmental educators.

This is not an exhaustive list, and we will continue to explore opportunities to engage with children and young people via the adults who work with, play alongside and provide support for them.

## CHALLENGES AND BARRIERS

### Time and timing

- Timetabling: especially in Secondary schools, which are less flexible than primaries.
- Time: activities need to be broken down to fit timescales and be differentiated to suit learners' specific needs e.g. 20 min tasks.



- Environmental learning / plants / growing is most often given as an afterschool or lunch club option, not mainstream, therefore not seen as a 'core' or vital offer. 'Added value' only.
- Competing pastimes and helicopter parenting: children's lives are very busy with adult led, adult organised extra-curricular activities.

### Perceived Value

- Senior Leadership teams need to be on board with the concept and all of its implications.
- Lack of understanding of value of outdoors for all, by some staff who 'dump' children on teaching assistants with the 'gardening' tasks, particularly children with additional needs, but not necessarily a statement of additional needs, which attracts funding. These can be the 'lost' children who later become disaffected.
- Children's interest in gardens and plants drops off during puberty; however – they are increasingly active in other aspects of environmental conservation.
- Need to be able to 'account for time spent' outside (e.g. not in the classroom where the 'real' learning takes place... teachers, children AND parents can hold this view).
- Make this approach a 'performance management' objective.
- Students consider sports to be 'cool'; environmental pastimes less so.
- Perception that 'grounds are not developed enough to be useful' must demonstrate that any site is likely to have plants somewhere! Even weeds have value – and a weed is just a plant in the wrong place...

### Curriculum pressure

- Curriculum links – PSHE / PDL, problem solving, and real-world projects are thought to be easier to plan than day to day maths and literacy outside.
- EY/KS1 – phonics, speech/language development ideas.
- Fine motor skills, numeracy, space/shape/measure weight etc.
- OFSTED new framework - within the new judgement on quality of education there is a clear statement of intent around the need for a 'broad and balanced' curriculum with examples cited that refer to learning outside the classroom.
- Broad and balanced curriculum should be a progressive and sequenced experience that builds on knowledge. However, teachers want to know that any new programme is linked to the curriculum they are required to deliver, and will add value.

### Practicalities

- Some schools and settings lack any outdoor spaces at all, or operate in severely sanitised concrete spaces; the often has the effect of necessitating off-site visits in order to interact with any kind of natural environment.
- Recognising actual (rather than perceived) risks in planning and carrying out outdoor learning. Using a common sense approach to risk management; school senior management teams and individual teachers can be risk averse.
- Flexibility in wet weather- not all schools have shelter nor outdoor clothing uniform policy!
- Holiday support for growing areas – watering, harvesting, weeding.



- An ongoing climate of austerity in England means that schools and out-of-school providers have limited means to bring in external support. This will be particularly challenging in the playwork and youthwork sectors, which have faced severe budget cuts in the past ten years.
- Young teachers have not had the independence themselves as children, have less knowledge and interest in plants and the environment, therefore they do not pass this on to their pupils.
- Perception that lots of expensive resources are needed to teach outdoors – school budgets are very tight.



## 2. Target group(s)

The **target audience**, in England, for the materials generated by PAPPUS is made up of the adults who teach or facilitate formal or informal learning, and out-of-school play or recreational activities.

We intend to use this programme to inform children and young people's life choices and career paths, and our research and own professional experience suggests that there are many routes towards this objective, including working with:

- **Teachers and teaching assistants** (TAs) delivering the English national curriculum, in mainstream schools, at Key Stages 2 (upper Primary phase) and 3 (lower Secondary phase).
  - The UK offers a range of routes towards qualified teacher status (QTS), including undergraduate degrees, post graduate certificates and in-school training.
  - Teaching assistants, also known as learning support assistants, might have a Level 2, 3 or 4 qualification in an education or child development related discipline.
  - Teachers are expected to engage in a minimum of 5 In-service education and training days (Inset) per school year; some schools also expect their TAs to participate in these. Most schools organise 'Inset days' where the school is closed to pupils so that staff may carry out training.
  - Taking a teacher out of a classroom for training requires 'cover' – another adult who is qualified to teach must take over. There is a cost associated with this, and this is one reason why schools are very clear that training must align with the school's own development plan, or individual teacher needs – or both. Accessing teachers for additional training is difficult, unless it can demonstrate a very clear link with the school's needs.
- **Support staff** in schools with responsibility for emotional wellbeing, special educational needs and disabilities (SEND) and children in receipt of Pupil Premium (PP).
  - Support staff may hold QTS, or may be specialists in other aspects of child development, education or healthcare.
- Adults working with children in **Alternative Provision** (AP), Pupil Referral Units (PRUs) and Special Schools.
  - These adults may hold QTS, or may be specialists in other aspects of child development, education or healthcare.
- **Out-of-school play** and leisure provision, such as after school clubs (ASCs), youth groups, holiday playschemes and uniformed groups such as the Scout and Guide movements.
  - Adults leading these activities and groups may have relevant qualifications, or may not. The most common qualification is Playworker, but adults volunteering to run uniformed groups might be professionally qualified teachers, or may have no professional involvement with young people.
- Providers of **learning outside the classroom** (LOTC) experiences, such as activity centres, forest schools, heritage and cultural organisations and environmental educators.
  - Again, these adults may be qualified teachers, but are as likely to be qualified in specialist areas, such as outdoor pursuits, art history, environmental science.

As can be seen from this list, the range of qualifications and the professional experience of our target group is very wide. Our objective is to ensure the Pappus approach can be applied to as many children as possible, hence our desire, at this point in the programme, to include as many avenues as possible.



This makes the task that much more difficult, given that most of our target audience is unlikely to have horticulture or plant expertise, beyond that of a domestic garden enthusiast or allotment holder. This has two key implications:

- The target audience may not appreciate the value of learning beyond the classroom, or of how the natural world can provide resources, inspiration and a context for high quality learning.
- The Pappus materials must offer an ‘entry level’ so that all participants are able to find a route into using plants for learning through playfulness, regardless of their own personal or professional expertise. It will also be important to ensure that any essential ‘real’ tools (i.e. gardening equipment) is realistically accessible for participants to buy or borrow.

In addition, we would like to think the Pappus materials could be used by parents and carers, although these are not the core audience.

### ACCESSING THE TARGET AUDIENCE

- Training will need to be modular, and partly or wholly self-directed, so that participants can fit it around their other commitments.
- Toolkit materials should include basic level information about plants, which will complement and support the KS2 and KS3 science curriculums.
- Pappus programme outcomes must be clearly stated and attractive to each target sector.
  - Schools and providers within the state sector will want to know that the Pappus approach will improve attainment or wellbeing or attendance for example.
  - Out of school providers will want to see that Pappus helps them deliver their own objectives, for example environmental issues, physical activity, teamwork.

### OPPORTUNITIES TO DELIVER THE TRAINING

We believe a combination of approaches will work best for our wide-ranging target audience:

- A face-to-face introductory module, which could be delivered in a twilight CPD session<sup>5</sup>, or a half day Inset. The purpose of this would be to introduce participants to the Pappus toolkit and online training (see below) in order to build confidence and commitment.
- An online, modular training programme to build skills and develop knowledge. This would be self-directed and managed at the learner’s own pace.
- The online toolkit would be connected to the training programme.

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<sup>5</sup> A twilight CPD session is one that takes place after school hours, typically from 4pm and lasts for 2 – 3 hours.



## 3. Beneficiaries

The ultimate **beneficiaries** of this project, in England, are children and young people engaged in formal and informal<sup>6</sup> learning, and accessing play programmes. In particular, our focus is on children and young people aged between 9 and 13, as this can be a period during which children become disengaged from mainstream formal education.

- Children aged 9-11 are in the Primary phase, in Years 5 and 6.
- Children aged 11-13 are in the Secondary phase, in Years 7 and 8.

### FORMAL EDUCATION

The transition from Primary phase to Secondary phase is widely acknowledged to be a pinch point for young people; in general, they are moving from the top of a smaller school, to the bottom of a much bigger school. The change in learning approach, new teachers, a new curriculum, the responsibilities and expected independence can provide a significant challenge for some children, and without support, they may become disengaged with formal education. Continuity is important during this period, which also coincides with increases in hormonal activity: parents, schools and out of school providers can support children by maintaining participation in initiatives such as Scouts and Guides, church groups, sports teams and so on.

Reaching children in the Primary phase is an easier proposition than Secondary. At Primary school, children generally have one teacher for all subjects, and work with the same group of children, in one class and one classroom for most of the time. This allows teachers a greater degree of flexibility in the way they teach their NC subjects, and when.

- Well planned, curriculum linked programmes, like Pappus, can be integrated into Primary teaching and learning, where teachers feel confident to do so, and can see and explain the benefits to their senior leadership team.
- Whilst teachers might choose to connect elements of Pappus to particular areas of the curriculum, for example science or geography, they could also use PSHE, citizenship or breaktimes to introduce the programme.

In Secondary schools, subjects are taught by specialist teachers, to a focused and time constrained programme. This makes it more difficult, but by no means impossible, to integrate external programmes into the curriculum.

- Opportunities in Secondary schools would be maximised by ensuring elements of Pappus can be aligned with National Curriculum subjects such as science, geography, design and technology or art and design.

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<sup>6</sup> Informal learning takes place during break times (also known as recess) at school, and as part of what are known as Uniformed Groups, such as Scouts and Guides, or Out-of-School provision, such as After School Clubs, Sunday Schools, Holiday clubs etc.



- Extra-curricular clubs are also popular at Secondary schools and this could offer a route into schools.

## INFORMAL AND OUT OF SCHOOL PROVISION

There are a number of playwork settings in the UK that work with and support children's play, normally for children between the ages 5-15. Examples of these informal settings include after school clubs, holiday playschemes, adventure playgrounds, play ranger services in parks and open spaces and hospital and prison play services.

There also exists a number of Uniformed or other groups where the work of PAPPUS would be of interest including the Scouts and Guides, Woodcraft Folk and others.

Youth services exist in the UK for young people aged approximately 11 years and upwards, some of which are run via the Local Authority and others through charities such as the Salvation Army or other church groups.

Many of these services are run through voluntary committees and charities. They do not necessarily have access to their own spaces, transport, funding, expertise. For the adults running these services for children and young people, any resources would have to be freely available. In the current climate, many of these services report that providing free meals for children and young people has become a core aspect of their work as their communities are in dire financial situations. In addition, these services run during the free time of the young people and would need to provide resources and ideas that would provide stimulation and interest for the young people and not appear to repeat the feeling of being 'at school'.

That said, access to nature and outdoor activities would provide a great opportunity to do something different and adventurous for these groups and potentially given the nature and flexibility, they may be more receptive to the work of Pappus than schools with driven agendas. Many of the youth and play services still running in England operate in areas of social disadvantage, where the need for young people to have support in accessing outdoors and nature is the greatest.

As per schools, all of the above settings follow strict guidelines relating to safeguarding and health and safety. All activities are governed by risk assessments. In play and youth settings there has been a significant shift towards managing risk through a risk/benefit process where equal consideration is given towards balancing the benefit that young people will gain from an activity alongside the risks and mitigation actions to protect young people. Where schools have received this training through the 'play-friendly schools' course as part of the 'Children's access to play project' (CAPS), there have been significant beneficial changes to the way schools use their grounds to support play and this would be a valuable inclusion in any programme.

To approach these topics with the play and youth sector, ideal strategies would be to make resources available online and to promote these through national groups such as Play England, Unite (the trade union for the youth and playwork sector) and Ip Dip magazine for the play sector.



## 4. Hooks to approach target group and beneficiaries

Given that our target group and beneficiaries comprise a broad spectrum, the hooks will be different for each group, and we will research and focus our material more specifically as Pappus progresses. The summaries below offer a brief snapshot into some of the programmes and approaches schools and out-of-school providers are already familiar with.

### 1: WILDLIFE TRUST: 30 DAYS WILD CHALLENGE

- <https://www.wildlifetrusts.org/30DaysWild/Downloads>



#### DESCRIPTION

“The 30 Days Wild Challenge has been set up to get everyone, adults and children, out and enjoying nature by committing ‘random acts of wildness’. Anything that involves enjoying the outdoors counts, no matter how small. Even just taking 30 seconds to roll over a stone in the garden to check for bugs or sniffing a wildflower on the way to school can be included.”

#### EVALUATION

- This is a challenge which creates an idea of being a time-limited, manageable focus.
- It is relatively accessible as it is non-prescriptive.
- We do not have current data about the success or otherwise of this campaign.

#### POTENTIAL USE / ADAPTATION FOR PAPPUS

The idea of creating a mission/ or time-limited challenge.

### 2: NATIONAL TRUST: 50 THINGS TO DO BEFORE YOU ARE 11¾

- <https://www.nationaltrust.org.uk/50-things-to-do>



#### DESCRIPTION

“50 activities for you to enjoy, so get out in the fresh air and build a den, make your world spin by rolling down a hill or watch stars glitter in the night sky. You’ll be a seasoned adventurer by the time you’ve managed to try out all 50 activities.”

#### EVALUATION

- Another time bound challenge, similar to above with clearly prescriptive actions to take.
- Influenced the Education Minister to promote a similar scheme in primary schools.

#### POTENTIAL USE / ADAPTATION FOR PAPPUS

A challenge with pre-determined tasks and ideas to ‘tick off’.

### 3: PLAY ENGLAND: NATURE PLAY ACTIVITIES

- <http://www.playengland.net/resource/nature-play-activity-recipes/>



#### DESCRIPTION

“The activity recipes have been developed by Play England’s Nature Play team as part of the Exploring Nature Play project. They are all tried and tested activities with children on the three



adventure playgrounds - the team has worked with in North Tyneside, Haringey and Torbay. They can just as easily be done in a park, in your garden or any open space.”

#### EVALUATION

- Very accessible, fun and playful ideas with good onwards referencing to add on extras.
- Neatly designed and clear resources.

#### POTENTIAL USE / ADAPTATION FOR PAPPUS

Clear design; short, accessible text; images help explain the ideas; signposting other resources.

#### 4: COUNCIL FOR LEARNING OUTSIDE THE CLASSROOM

- [www.lotc.org.uk](http://www.lotc.org.uk)



#### DESCRIPTION

“Whether you are an education practitioner, headteacher, governor or organisation that provides LOTC experiences, we are here to help you provide high-quality educational experiences so more children can learn outside the classroom, more often.”

#### EVALUATION

- Good for teachers and out-of-school providers and excellent connections into the whole learning beyond the classroom sector.
- A plethora of ideas and support resources, including online CPD.
- Also has a lobbying role.

#### POTENTIAL USE / ADAPTATION FOR PAPPUS

Online CPD programmes as well as face to face training provided. Website with lots of downloadable resources and links to other providers.

#### 5: CITIZEN SCIENCE PROJECTS (not a centralised body)

- Bee counting: <https://www.ceh.ac.uk/our-science/projects/pollinator-monitoring>

#### DESCRIPTION

“If you can spare ten minutes to sit and watch insects and flowers you can carry out a FIT Count (Flower-Insect Timed Count)! This simple survey collects data on the total number of insects that visit a particular flower, ideally chosen from our list of 14 target flowers.”

#### EVALUATION

- This work is accessible as it’s done locally and is so different to anything else around – it feels as if it’s part of a bigger picture and that small local interventions can have a huge impact.
- It is a useful way to engage children and young people in something close to home and that they haven’t thought of before.

#### POTENTIAL USE / ADAPTATION FOR PAPPUS

Link to other national calls for engagement as a useful add on.



## 5. Key messages

We are retaining an action research approach to the key messages, as they will become clearer and more purposeful as work in our focus groups and conversations with participants continues.

- The key messages below are NOT listed in order of importance. Each key message has equal value and is likely to be adapted as the focus groups progress.

### Key messages for teachers / playworkers / youth workers/Other

Key message	Reasons for Attractiveness and importance
1.) Pappus can be integrated into existing curriculum programmes, if required, or can be a curriculum-linked voluntary programme.	Schools are more likely to engage if they can see tangible benefits for their students, and curriculum outcomes are of paramount importance.
2.) Pappus can help deliver the PHSE programme, which becomes statutory in September 2020.	Purposeful PSHE topics are of value, especially if they can be connected to other aspects of the school's curriculum or wellbeing objectives.
3.) Pappus is primarily an outdoor programme and lends itself to the acknowledged need to get children more active and connected to the natural world.	Schools understand that children and young people should be more active, but struggle to find ways of encouraging this, given how much time is spent in classrooms.
4.) Pappus will add value to schools' development / improvement plans and provide evidence during inspections.	Parents, as well as Ofsted and local authority inspectors, are keen to identify schools that offer 'added value' to children's experiences and the development of 'soft' skills.
5.) Pappus will broaden young people's understanding of careers connected to plants, horticulture and food.	The environmental sector as a career choice is often misunderstood. If we can show how varied the sector can be, we'll widen opportunities for young people, whether they are academically or vocationally inclined.

### Key messages for young persons

Key message	Reasons for Attractiveness and importance
1.) Pappus provides a way of applying your academic skills to practical tasks that will enhance your environment.	Young people who don't necessarily value the academic subjects they study will benefit from seeing the application of these skills, and the tangible outcomes.
2.) Pappus will offer you an opportunity to engage with environmental and	Young people are becoming increasingly aware of their own impact on the environment, and keen to mitigate



<p>conservation issues in a practical and enjoyable way.</p>	<p>the damage being done. Pappus will provide them with skills and knowledge to take their interest to the next level of action.</p>
<p>3.) Participation in Pappus, which is an EU funded Erasmus + project, will provide stand-out evidence for UCAS, apprenticeship and job applications.</p>	<p>Research<sup>7</sup> shows that young people are overwhelmingly in favour of strong ties between England and Europe. Participation in an EU funded programme will be seen as a way of maintaining and strengthening these links.</p>
<p>4.) Pappus will enhance your knowledge of the huge variety of careers available within the environmental sector.</p>	<p>The environmental sector as a career choice is often misunderstood. If we can show how varied the sector can be, we'll widen opportunities for young people, whether they are academically or vocationally inclined.</p>
<p>5.)</p>	

<sup>7</sup> For example, <https://fullfact.org/europe/how-did-young-people-vote-brexite-referendum/>



## 6. Research review on benefits

A multitude of studies and evidence demonstrate the positive benefits of the natural world on children's mental health and wellbeing; we doubt many teachers or parents really dispute this, so these points are not generally made again here. However, despite this, teachers tell us that it is often too difficult to find the time in a busy school day to take the children outside more regularly, *unless this is related to a specific learning outcome*. So, **we have focussed on evidence linked to the academic attainment of children**, to support our aim to make a compelling case that children should learn outside much more regularly, and not just as part of special 'one off' projects or specific subjects.

### **Student Outcomes and Natural Learning Conference Report; Malone & Waite (2016)**

[https://www.plymouth.ac.uk/uploads/production/document/path/6/6811/Student\\_outcomes\\_and\\_natural\\_schooling\\_pathways\\_to\\_impact\\_2016.pdf](https://www.plymouth.ac.uk/uploads/production/document/path/6/6811/Student_outcomes_and_natural_schooling_pathways_to_impact_2016.pdf)

- This 'evidence to impact' report moves through evidence supporting the many ways children's experiences in natural environments benefits their educational attainment and the development of resilience and confidence as precursors to successful learning through to the policy and practical context for supporting systemic change.
- School students engaged in learning in natural environments have been found to have **higher achievement** (in comparison to their peers or their own projected attainment) in reading, mathematics, science and social studies; exhibiting enhanced progress in Physical Education and drama, and a greater **motivation** for studying science. **Longer term and 'progressive' experiences** appear to result in the greatest benefits and children with below average achievement tended to make progress in learning outcomes to the greatest degree.
- A schools-based learning programme taking place in the natural environment was associated with some improvements in **attendance rates**. Further studies have found improved **behaviour** amongst children at a special needs school, sustained over two months, following learning in the natural environment.

### **The Impact of Children's Connection to Nature; RSPB (2015)**

<https://www.rspb.org.uk/globalassets/downloads/documents/positions/education/the-impact-of-childrens-connection-to-nature.pdf>

- A key finding from this report was "...analysis showed that connection to nature, life satisfaction and attendance were all significant predictors of English attainment. There are a multitude of factors associated with a child's English attainment, but it was found that **connection to nature is as important to children's achievement in English** as life satisfaction and attendance at school."

### **The Scottish "Outdoor Learning Hubs attainment challenge 2017"; Harvey, Rankine & Jensen (2017)**

<https://www.sapoe.org.uk/wp-content/uploads/2018/01/Outdoor-Hub-Learning-Report-Dec-2017-V1.pdf>

- This report found that "Students involved in an outdoor learning project for 2 hours per week over 12 weeks gained an average increase of 6 months for Mental Arithmetic and 2 months for General Maths. They also showed a 20% increase in their attitudes to learning, while the control group decreased by 3% over the same period."



**Wilderness Schooling as reported in the British Educational Research Journal;** Quibell, Charlton & Law (2017) <http://www.wilderness-schooling.co.uk/impact-of-outdoor-education-on-attainment-outcomes-in-Primary-schools/>

- The results of this report indicate that children who participated in the Wilderness School outdoor learning programme **increased their attainment in English reading, writing and maths** significantly more than children who received conventional classroom tuition, compared to controls. Trajectories of impact indicated attainment continued to increase from baseline in the following weeks after the intervention concluded. These results allow the case to be made for the core curriculum to be conducted outdoors to improve children's learning.

**Learning Away: evaluation of the benefits of school residential visits;** York Consulting / Paul Hamlyn Foundation (2015) <http://learningaway.org.uk/wp-content/uploads/LA-Final-Report-May-2015-1-1.pdf>

- Representative excerpt: "Quantitative data provided by partnerships also highlighted the impact on student achievement. Data was provided which showed that secondary students who attended Learning Away residential improved their performance and achieved higher than their predicted grades (in GCSEs and Highers). Students from one partnership who attended a GCSE maths residential outperformed their peers who did not attend the residential (both groups were C/D borderline students). More than a third of students who attended the residential improved their maths score post residential compared to 14% of their peers and more than two thirds (69%) achieved a C grade in their GCSE compared to none of their peers. Both of these results were statistically significant indicating a conclusive positive impact on achievement.

**Education Endowment Foundation – toolkit of best practices in teaching and learning;** website <https://educationendowmentfoundation.org.uk/school-themes/>

- Research based Education Endowment Foundation evidenced 'toolkit'. If Pappus can incorporate elements of these practices (considered to be "high or medium" impact) in its activities and toolkit, we will be able to reference the EEF research to build credibility with schools. A few examples include:
- Peer tutoring <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/peer-tutoring/>
- Meta cognition and self regulation - <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/meta-cognition-and-self-regulation/>
- Collaborative learning <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/collaborative-learning/>



## 7. Any other ideas / suggestions

These ideas were included in our initial scoping for opportunities Pappus could offer to school, and we include them here to ensure they remain current.

### **Medicinal use of plants – history / science curriculum**

- Link to study of Victorians / Mediaeval times
- Battlefield examples, e.g. WW1, WW2
- Tussie mummies and nosegays; herbal remedies
- Survival (I'm a Celebrity...? TV programme)

### **Playful potential of plants – extra-curricular / science curriculum / PSHE**

- Trees – might these be a greater hook for boys than flowers?
- Creating potions in mud kitchens – do older children enjoy this kind of play too?
- Hapa Zome.
- Natural dyes and paints
- Forest School – child led learning through play
- Beach School – child led learning through play
- Camera traps

### **Growing plants for food / foraging native plants for food – science / DT curriculum**

- Vegetarians and vegans – lots of young people interested in this
- Ethical business, e.g. farmers' markets, veg boxes, whole foods; food miles
- Young veg grower (Phil's contact)
- Dig for Victory – history curriculum
- Food around the world to link with geography studies; home economics; health education

### **Dangerous plants - history / science / English literature / PSHE curriculum**

- Including poisonous plants and fungi; invasive plants –
- H&S /RBA / bureaucracy issues in working with these?
- Alnwick Castle poison garden case study – more detail in the Play Learning Life NAP

### **Plants in TV, films, books, fiction, non-fiction, blogs, vlogs**

There are thousands of examples of plants at the centre of books, movies and so on – too many to list here. Here are a few examples:

- I'm a Celebrity
- Harry Potter (herbology)
- The Secret Garden book / film
- Garden of Eden
- Huw's Nursery YouTube Channel
- Many young children's story picture books



### Climate change movement

- Using plants to monitor health and wellbeing of environment – via key indicator species.
- Rewilding - G. Montbiot and others
- Biodiversity loss: 99% loss of Wildflower meadows since WW2
- [State of Nature Report 2019](#) – examples:
  - **15 per cent** of species under threat of extinction and **2 per cent** of species have already gone for good
  - Average abundance of wildlife has fallen by **13 per cent** with the steepest losses in the last ten years
  - **41 per cent** of UK species studied have fallen and **133 species** have already been lost from our shores
  - Butterflies and moths, down **17 per cent** and **25 per cent** respectively. Numbers of high brown fritillary and grayling butterflies, have fallen by more than three quarters
  - The average number of mammals has fallen **by 26 per cent** and the wild cat and greater mouse-eared bat are almost extinct.
- Invertebrate decline – gone are the days of number plate spatters Consequences for pollinators, predators, disease in plants etc.

### Survival techniques

- In addition to foraging...
- Use of plants for e.g. rope making, paper, fires etc.

### Practical uses of plants in past present and future

- Native American ideologies around plants: Canoes from birch, birch bark water carriers
- Basket weaving
- Antiseptic properties e.g. sphagnum moss
- Nettle string, May whistles

### Health / Wellbeing/ Forest bathing

- [Mary Jackson's contact, Claire Latane.](#)

### Culture

Wassail – spiritual connections – possible Christmas / Midwinter activity with local groups

Wild Church – ideas for celebrations outdoors

Plenty of examples of plants in art and design; too many to list here.

The Lost Words movement (Beechwood School involved)

### Careers

- Lots of obvious ones e.g. agriculture, landscape design, gardening, forestry, horticulture etc.
- Secondary children mentoring Primary

### Explorers and plant hunters

- Good curriculum links here, especially if we can find [female explorers](#) and a wide range of examples from different cultures e.g. Marianne North.



## 8. Sources and references

England and the wider UK have a strong record of taking learning beyond the traditional classroom, with a proliferation of providers including outdoor nurseries in the early 20<sup>th</sup> century, through to apprenticeship routes and mid-century polytechnics and now burgeoning forest school and Skogsmulle providers and Global Outdoor Classroom Day, which now involves over 3m children around the world.

The learning beyond the classroom culture has developed through the excellent work of many individuals, organisations and indeed, government departments. Some of the current national initiatives we aim to contact in order to develop and promote Pappus are listed below. For brevity, we have provided hyperlinks and only a very brief description of each.

- [Ambios – training for nature conservation](#)
- [BALI https://www.bali.org.uk/home/](https://www.bali.org.uk/home/) Trade association for landscape industries
- [BBC – various natural history programmes and themes and presenters e.g. Chris Packham, Monty Don, Liz Bonnin who is the latest young thing? Also BBC Wildlife magazine \(Phil has connections\)](#)
- [Blue Peter garden – at Media City in Salford, virtual version online. In the 70s, 80s and 90s, gardening was a regular feature on this stalwart children’s TV programme.](#)
- [Children in Need – huge network into schools and play providers: info / advice / grant / dissemination](#)
- [Children in Permaculture Erasmus+ funded programme across 5 countries](#)
- [Common Ground – tree dressing day](#) A small organisation that works to conserve local distinctiveness, including cultural, social and environmental concerns.
- [Council for Learning Outside the Classroom \(CLOtC\) National umbrella organisation for schools and providers of learning beyond the classroom.](#)
- [Department for Education – government policy generated and monitored here](#)
- [Field Studies Council – support for outdoor learning](#)
  - [Focus beyond school, but some useful blogs including use of school grounds.](#)
- [Forest Education Network - hosted by the Council for Learning Outside the Classroom](#)
- [Forest School Association – membership body for forest school practitioners \(not statutory\)](#)
- [International School Grounds Alliance – global alliance of educators, designers, ecologists, researchers etc.](#)
- [Lantra https://www.lantra.co.uk](https://www.lantra.co.uk) awarding body for land-based industries, job focussed so probably would not be a training partner for play based training but a useful signpost
- [LEAF Linking Education and Farming \(formerly Farming and Countryside Education\)](#)
- [London Play – in particular work on climbing trees](#)
- [National Allotment Society – groups around the UK](#)
- [National Citizen Service – volunteering for teenagers](#)
- [National Geographic Kids – children working across different countries](#)



- [Nature Detectives](#) Extensive programme of learning resources for Primary schools exploring a multitude of environmental issues and encouraging a love for and understanding of the natural world.
- [NOLAP – Nature, outdoor learning and play special interest group of BERA \(British EDuc Research\) https://www.bera.ac.uk/blog/encouraging-educational-research-into-nature-outdoor-learning-and-play Does UoG have contact with them? \(Tracy Hayes/Mark Leather\)](#)
- [Open Air Laboratories - OPAL citizen science surveys](#)
- [Out of School Alliance – supports after school and holiday childcare practitioners](#)
- [Outdoor Citizens http://outdoorcitizens.uk a potentially useful disseminator maybe?](#)
  - Outdoor Citizens is hosted by the Outdoor Council and draws on the networks of Council for Learning Outside the Classroom and over 1000 organisations and individuals who provide high-quality outdoor activities and opportunities for children, young people and families.
- [Outdoor Education Advisors’ Panel – provides guidance and support for outdoor ed providers.](#)
- [Outdoor Play and Learning – OPAL Michael Follett’s organisation, ex-Gloucestershire CC](#)
- [Play England / Play Wales \(we will gather info from Play Wales, PE’s sister organisation which is bigger and more active](#)
- [Play Safety Forum – info, research, case studies focusing on risk and challenge in play.](#)
- [RHS Campaign for School Gardening Curriculum linked learning resources and specific instructions for planting and growing in schools.](#)
- [Royal Forestry Society Teaching Trees initiative](#)
- [Royal Horticultural Society \(RHS\) UK’s national organisation with local and regional groups, learning resources, gardens and partnerships.](#)
  - Their mission is that “in 2035 every 18 year old will be an ‘outdoor citizen’.
- [Wildlife Trust- Nature Friendly Schools](#) A national network of wildlife charities, with local branches, nature reserves, learning resources and also a lobbying role.
- [Woodland Trust – Trees for Schools grant scheme](#) National charity promoting tree planting and preservation of woodlands. Has a respected education and grant-making programme.

#### Existing online tools and digital technologies

- [Geocaching - is there a “biocache” version that focuses on plant foraging?](#)
- [PlantNet – mobile / tablet app and online site that uses crowd sourcing to ID plants. Other apps include PlantSnap, which is poorer quality.](#)
- [Ispotnature - lots of species-specific keys. Would benefit from more beginner entry points.](#)
- [Explorify \(plants section\) - STEM resource for schools from Wellcome Institute / BBC.](#)
- [www.playcore.com/plants - American site.](#)
- [www.coreo.io – a data recording platform; adaptable.](#)
- [YouTube – opportunities for young people to generate materials for a channel?](#)
- [Acewild – Erasmus+ project - Jon Cree / Norfolk](#)
- [Tree ID app](#) – small range of native and non-native UK trees to the UK; quiz for refreshing knowledge.
- [Winter tree ID App](#) – similar to above.