

## SUMMER 2 2022 NEWSLETTER

*Welcome to the Summer 2 edition of our newsletter. As usual, it is packed with ideas and resources to support you with outdoor learning and PE. As we move into the final half term of the school year and the sun is shining, this is the perfect time of year to teach about the sun and light and even have some 'fun in the sun' performing learning activities outdoors!*

Sunny days are great for experimenting with shadows. What shapes can you make? Can you turn your shadow into an animal? Can you run away from your shadow or make it disappear? Can you play shadow tag? You're tagged if the tagger steps on your shadow!



Making a shadow frame is a great way to experiment with different shapes and types of materials. Try translucent and opaque materials to investigate how the colour of the shadow changes.

### Why not have a go at sun printing?



Cyanotype is a blueprint printing process that uses paper coated with a light-sensitive solution created with ferric salts to produce a cyan-blue print. (Cyanotype paper is available from eg Muddy Faces Shop, Amazon or Baker Ross). When exposed to light the chemicals react to the light. When objects are positioned on top, they block the light and the effect the sun has on the chemicals. Water is then used to stop the process and fix the images. The area protected from the sun by the object will be a pale blue/white and the area exposed to the sun will be a rich colour depending on the type of paper, card or material that you use.

English botanical artist, collector and photographer Anna Atkins was the first person to illustrate a book with photographic images (cyanotype). You can find out more about Anna and her work by visiting the Natural History Museum website.

These and other Sun Activities can be found on our activity sheet on our Trailblazer website.



# Developing Disciplinary Science Knowledge Through Outdoor Activities

By Kevin Neil, County Inspector/Advisor for Science

Outdoor learning is vital in delivering a complete and well-rounded science education. Children require opportunities to experience the natural world and discover how this operates. They need to observe the awe and wonder of how our planet and the life within it have formed a natural synchronization, and also understand how humanity has stepped outside of this synchronization, which has led to the climate issues we now have to face.



We have a moral duty to make sure children experience this as part of their education, in particular their science education. But how can we make sure that alongside the awe and wonder, there is a curriculum focus that means as a result of the outdoor learning, they have learned something new or developed their expertise in something?

Knowledge within the science curriculum is divided into two main areas:

- Substantive knowledge is the facts, theory, laws and definitions that make up the body of current scientific understanding of the universe.
- Disciplinary knowledge is the methodology of science, the apparatus, techniques, procedures and practices of scientists across a range of disciplines, which has over time produced our current body of substantive knowledge.

Cognitive science on how children learn and remember tells that using activities and outdoor learning to try and teach new substantive knowledge is not effective and rarely leads to secure long term remembering. So outdoor activities should play the same role as practical activities in the classroom, they are a vehicle for the instruction and mastery of various aspects of disciplinary knowledge.

Disciplinary knowledge in science is made up of four main areas.

Knowledge of scientific methods	Knowledge of apparatus and techniques, including measurement	Knowledge of data analysis and presentation	Knowledge of how science uses evidence to develop explanations
<ul style="list-style-type: none"><li>• Models</li><li>• Classification</li><li>• Pattern-seeking</li><li>• Fair tests</li></ul>	<ul style="list-style-type: none"><li>• Apparatus</li><li>• Safety</li><li>• Procedures</li></ul>	<ul style="list-style-type: none"><li>• Graphs</li><li>• Tables</li></ul>	<ul style="list-style-type: none"><li>• Evidence</li><li>• Validity</li><li>• Conclusions</li><li>• Peer review</li></ul>

Each of these areas is broken down into various sub-categories. The HIAS science team have created disciplinary knowledge trackers that list out all these various aspects to allow teachers to plan and sequence the coverage of these.

Children should have numerous opportunities to develop fluency in each of these aspects over time and outdoor learning should provide many of these. The disciplinary knowledge trackers are available now via [Moodle+](#).

Disciplinary Knowledge Tracker Sheet Year 9 & 10

Class: \_\_\_\_\_

Working Scientifically Statement	Disciplinary Knowledge	1	2	3	4	5	6	7	8
Investigate and evaluate the range of scientific methods used in science	Scientific methods								
Investigate and evaluate the range of apparatus and techniques used in science	Apparatus and techniques								
Investigate and evaluate the range of data analysis and presentation used in science	Data analysis and presentation								
Investigate and evaluate the range of evidence used in science to develop explanations	How science uses evidence								
Investigate and evaluate the range of models used in science	Models								
Investigate and evaluate the range of classification used in science	Classification								
Investigate and evaluate the range of pattern-seeking used in science	Pattern-seeking								
Investigate and evaluate the range of fair tests used in science	Fair tests								

Not all of these will be covered through practical activities, some will need to be taught directly



# Developing Disciplinary Science Knowledge Through Outdoor Activities (contd.)

Some aspects of disciplinary knowledge lend themselves easily to outdoor learning and the type of environment usually available in schools.



Aspects like classifying, identifying similarities and differences, creating keys, safety in science, taking accurate measurements, and observing. For example, collecting and classifying minibeasts, identifying the differences in seasonal changes or the decay of an object over time. Measurements of the growth of weeds in various places around the school site based on exposure to light using a lux meter for accurate measurements. Growing plants in various conditions in the greenhouse or outside, with music or by talking to them.

Outdoor learning from trips is also important for providing these opportunities for the delivery of disciplinary knowledge but also for the development of science capital. Science capital is the level of exposure a child has to science in their lives. Disadvantaged children are more likely to have a lower science capital and therefore more likely to find it difficult to take in new knowledge in the classroom. By placing a high priority on outdoor learning and science-based trips and fieldwork, we can aim to improve this gap and help all children develop a rich and deep understanding of science.



A lot of outdoor learning in science has been delivered through longitudinal studies. The HIAS Science team is in the process of redeveloping the programme of activities and the structure of the longitudinal studies and will be launching them in the Autumn term to fit with the new Science Learning Journeys. Keep an eye on the Learning Zone in September for this relaunch event.

It's hard to imagine a fully developed science curriculum without outdoor learning. Children need chances to apply the substantive knowledge they have been taught in the classroom and be introduced to or develop mastery in aspects of disciplinary knowledge, and the outdoor environment both in school and on trips provides a rich list of opportunities for this. If you would like some support in developing your curriculum with the sequencing of disciplinary knowledge linked to practical work and outdoor learning then get in touch.

**Kevin Neil**  
**County Inspector/Advisor for Science**  
[kevin.neil@hants.gov.uk](mailto:kevin.neil@hants.gov.uk)

# Free Outdoor Learning Activities and Resources

## Inspire Writing Through Nature



In partnership with the [RSPB](#), the [National Literacy Trust](#) have created new resources for pupils aged 7-13 (Key Stages 2 and 3).



The **Writing From Nature Poetry Resources** are designed to widen access to, deepen knowledge of, and increase appreciation of the natural world just outside your door. The outdoor parts of the resource can be completed in any appropriate green space, whether it's the school playground or a local nature reserve.

The activities and guidance take teachers and pupils through a process of observation, engagement and exploration of nature. By helping pupils to develop an inquisitive approach to nature, the resources use poetry to encourage enjoyment of writing.

By working through the resources, it is hoped that pupils will gain both a greater appreciation and understanding of the natural world, and an increased enjoyment of writing.



## Free Self-led Educational Visits



Did you know that English Heritage offer FREE entry to pre-booked schools at any of the 400+ historic places in their care?

And there are over 15 English Heritage properties in Hampshire?!

English Heritage also offer free planning visits for group leaders once you have made a booking. To help support your planning they also have a wide range of free downloadable [teaching resources](#), designed by teachers, historians and site experts to really help you bring your area of study to life.



[Stonehenge](#), which is also managed by English Heritage, is perhaps the world's most famous prehistoric monument. At Stonehenge on the summer solstice (21 June), the sun will rise behind the Heel Stone in the north-east part of the horizon and its first rays will shine into the heart of Stonehenge.

This year, English Heritage will be running a live stream of the summer solstice on their [Facebook page](#).

# Free Outdoor Learning Activities and Resources



## Sun Safe Schools

Sun Safe Schools is a national accreditation programme providing primary schools with free resources to assist them in their duty of care to safeguard children against UV and prevent skin cancer through education as part of the new PHSE curriculum.

By taking part in the Sun Safe Schools Accreditation programme, schools can access a wide range of quality resources to educate children on the importance of sun safety.

## Outdoor Kids Sun Safety Code - Melanoma Fund UK

The Outdoor Kids Sun Safety Code is a free educational resource for all those who work outdoors with primary aged children. By becoming Sun Protection Accredited you'll find out why sun protection is vital, and how best to implement this into your outdoor sessions.



## British Trust for Ornithology Donates Binoculars and More

Imagine if your school/classroom had its own binoculars and bird ID guides for your learners to use. The BTO's Equipment Donation Scheme provides schools with pre-loved equipment to help give more children across the UK access to nature.

## Tree of Life Wellbeing Activity

Sometimes it's useful to stop for a while and think about what is good in our lives. Take some time out and have a go at Forestry England's Tree of Life Wellbeing Activity, by using trees as a way to think about our lives and all the wonderful things in them.



## Teaching About Water Safety in Drowning Prevention Week 18-25 June 2022.



Every year, 300-400 people lose their lives by accidental drowning. It's the third most common cause of death amongst children and young people. Drowning Prevention Week aims to equip everybody across the UK with the skills and knowledge, to make the right decisions about water safety. As Hampshire has about 230 miles of coastline, as well as many rivers, canals and lakes, it's essential we educate children about water safety. Here are some FREE resources to enable you to do this:

- Royal Life Saving Society UK
- RNLI
- HCC Stay Afloat



# Free Outdoor Learning Activities and Resources

## Farm Discovery

Enquire today about free\* educational visits

\*Free for primary schools with above average free school meals, SEN/D groups and schools/groups supporting disadvantaged children.



Country Trust

The Country Trust a leading educational charity connecting children with the land that sustains us all.

Your Country Trust  
Farm Discovery Coordinator is:

Sophie Khayat

[farmdiscovery@countrytrust.org.uk](mailto:farmdiscovery@countrytrust.org.uk)

Ask your Coordinator about:

- Why we feel a Farm Discovery visit is one of the most important educational experiences for children
- Tailoring the visit to your curriculum or class topic
- Accessibility and provision for additional needs
- Booking a date for a pre-visit and visit
- How we can support your Risk Assessment
- Anything else! We're here to help.

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These trips benefit the children so much, most of whom have never been to a farm in the countryside before.

Thank you to the Country Trust for organising these essential learning experiences which engage hard to reach children, and give even the most reluctant of learners a renewed interest in our curriculum, enrich their vocabulary and give them more of a sense of purpose in their writing.

Teacher, Myatt Garden Primary

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Find out more about our other free, farm-centred programmes:

Food  
Discovery

Countryside  
Residentials

Farm in  
a Box

[www.countrytrust.org.uk](http://www.countrytrust.org.uk)

Country Trust

Registered charity no. 1122103



# New Books Recently Published

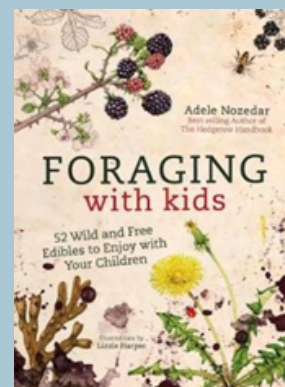
This time of year is a great to go out foraging.

## **Foraging With Kids - Adele Nozedar**

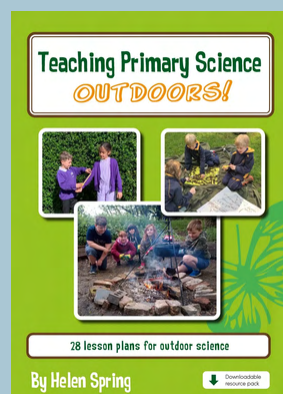
The perfect book for anyone who wants children to get outside, connect with nature and have a lot of fun in the process.

Foraging with Kids is an engaging, practical book for adults and children to work through together to build knowledge and understanding of the natural world through exploration and play.

The projects are based around 52 easy-to-identify plants found worldwide, each one illustrated with a beautiful hand drawing for easy identification that is perfect for colouring in at home.



**Muddy Faces** also have a number of foraging activities and recipes.



## **Teaching Primary Science Outdoors - Helen Spring**

This is a book packed full of activities for teaching science in the outdoor environment. The lessons are designed to cover curriculum objectives and include ideas for assessment, as well as support and challenge suggestions. The lessons are suitable for most school grounds and the majority do not require resources that schools wouldn't normally have access to.

This book will inspire you to take your class outdoors, and provides some simple ideas for activities, as well as a few more ambitious outdoor science lesson ideas!

## **The Map of Leaves - Yarrow Townsend**

This is a debut novel by Yarrow Townsend, who spent her childhood growing up in the New Forest.

It is an enchanting story for our times, introducing the magic of ecology to younger readers and empowering them to fight injustice and heal our damaged world. Reading age: 9 years +.

Set in a world where plants talk, friendship is hard-won and adventure is around the bend of every river...

Orla has lived on her own since Ma died, with only her beloved garden for company. When sickness comes and nature is blamed, Orla knows she must find a cure. Armed with her mother's book of plants and remedies, she steals away on a river boat with two other stowaways, Idris and Ariana. Soon the trio must navigate the rapids of the Inkwater to a poisonous place from which they may never return...





## Sustainability And Climate Change: A Strategy For The Education And Children's Services Systems

In April 2022, the government recently published its **sustainability strategy** to improve the education sector's response to climate change by 2030.

It sets out 4 main aims:

- **Climate education:** preparing pupils for a world impacted by climate change through learning and practical experience (including the pledge to introduce a new natural history GCSE by 2025)
- **Net zero:** reducing emissions from education buildings and providing opportunities for pupils to get involved in the transition to net zero
- **Resilience:** adapting school buildings and systems to prepare for the effects of climate change
- **A better environment for future generations:** enhancing biodiversity, improving air quality and increasing access to (and connection with) nature in and around schools.

Here we look at the key elements of this policy in terms of outdoor education.

The good news is, there is **an aim to increase opportunities for all children and young people to spend more time in nature, learn more about it and become actively involved in the improvement of their local environment.** There is also **a focus on learning in the natural environment** and it is recognised that these this can also aid pastoral work in all educational settings. The physical and mental health benefits of time spent in nature can form part of targeted support.

Children will be encouraged to get involved in the natural world by increasing biodiversity in the grounds of their nursery or school and can take part in a new virtual **National Education Nature Park**. Amazingly, school grounds in England cover an area over twice the size of Birmingham and the National Education Nature Park will encourage children in nurseries and other education settings to think of this land as one whole "park" with vast potential to help halt the decline of biodiversity in the country. All the children involved will be able to upload their progress on the park's digital mapping services. They will then be able to see how the park is "growing" while increasing their knowledge of species and developing other important skills, such as biodiversity mapping, data collection and analysis. The park will be developed in collaboration with children, young people and other relevant stakeholders.

A **Climate Leaders Award** will complement classroom learning and allow opportunities to celebrate and recognise education providers, children and young people for developing their connection with nature and making a real contribution to establishing a sustainable future for us all. Participation will enable children and young people to acquire credits towards the prestigious Climate Leaders Award. This will be recognised and valued as supporting progression to employment and further study.

The National Education Nature Park and Climate Leaders Award aim to ensure that all children and young people have opportunities to get practical experience and turn their knowledge into positive action. They will be formally launched in Autumn 2022.



# STUBBINGTON STUDY CENTRE

*Where learning comes to life*



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EYFS, Key  
Stage 1 & 2**

## **Did you know that we do school day visits too?**

**Only £11 per  
pupil**

We have a wide range of sessions including:

- Seashore experience creating miniature rockpools, fossil hunting and sandcastle building
- Pond dipping and exploring nature in our extensive conservation area
- Animal adaptation and habitats
- Bushcraft, including den building and fire lighting
- Anglo Saxon workshops in our Longhouse
- Natural art and clay sculptures
- Team games and navigation – orienteering, mapping, geocaching
- Traditional tale story strolls

If you would like to bring learning to life, then please get in touch to book. Places are filling up fast!

Contact **Stubbington Study Centre** on 01329 662244  
Or email [stubbington.sc@hants.gov.uk](mailto:stubbington.sc@hants.gov.uk)



# Grants and Training Courses



## Are you planning to take your young people out into our local National Parks?

Here is an update on opportunities for funding for travel for visits to Hampshire's two local National Parks.



### New Forest National Park Travel Grant

The New Forest Travel Grant scheme supports learning outside the classroom for schools in the New Forest and surrounding area. Schools that are either based within the New Forest National Park or within a 20-mile journey of Lyndhurst can claim up to £150 towards the cost of transport to any venue that is a member of the New Forest National Park Educators' Forum. Contact Helen Robinson [education@newforestnpa.gov.uk](mailto:education@newforestnpa.gov.uk) for more information.

### South Downs National Park Travel Grant

The South Downs National Park is facilitating school visits to it or to a site within the South Downs National Park Education Network. Full details of the new grants (virtual visits, in-school visits and school trips - including transport costs) are on their [website](#). They are currently accepting applications in all grant categories for activities planned to take place up to 31 March 2023. Contact [travelgrants@southdowns.gov.uk](mailto:travelgrants@southdowns.gov.uk) for more information.

## Hampshire Outdoors - Supporting you to get outside!



Hampshire Outdoors can help you with planning a variety of school visits and outdoor learning. Our experienced team are always available to offer advice on a full range of outdoor learning and adventurous activities, off-site visits, residentials and the EVOLVE visit management system.

We offer a wide range of courses eg:

- Outdoor and Visit Leader Training
- Educational Visits Co-ordinator (EVC)
- Evolve
- Outdoor Learning (including Trailblazer)
- John Muir training
- Physical education
- First Aid Courses
- Camping in the School Grounds
- Beach and River Studies
- Physical Education
- Duke of Edinburgh Award for participants and training for staff and volunteers

Many of our courses can be offered as bespoke events for your school and can be held on-site at a convenient time for you. Just let us know! Email: [outdoor.education@hants.gov.uk](mailto:outdoor.education@hants.gov.uk) or call 07962 876218. [www.hants.gov.uk/Hampshireoutdoors](http://www.hants.gov.uk/Hampshireoutdoors)

**Outdoor and PE Courses - Autumn dates now available to book!**



# Physical Education

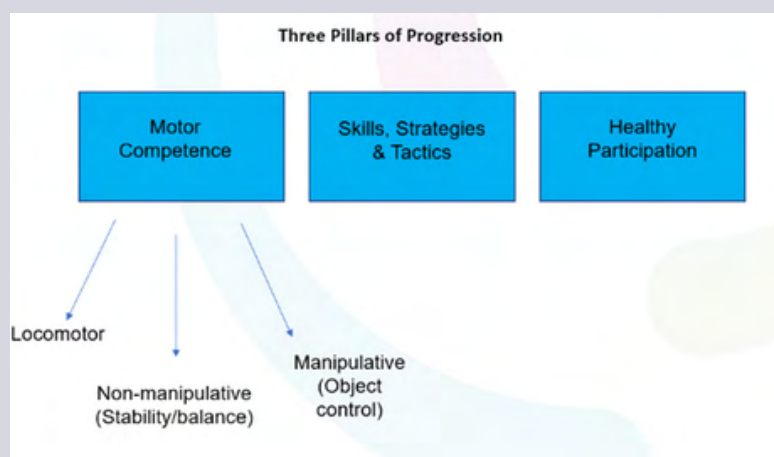
## Ofsted Research Review: PE

The **Ofsted Research Review: PE** was published in March 2022 and I always advise PE subject leaders who are sitting down to read it, to grab a large coffee and slice of cake – it's not an easy read! However it is really useful in shaping our ideas about what the purpose of our PE curriculums are and how we can shape them to ensure they are sequenced correctly to maximise learning, participation and enjoyment.

For those of you who haven't had the chance to read it, we are making this the focus of our first **Primary PE Network** meeting in the Autumn term. The network can be booked via the [Hampshire Learning Zone](#).

One aspect of the report I want to focus on here are the Pillars of Progression.

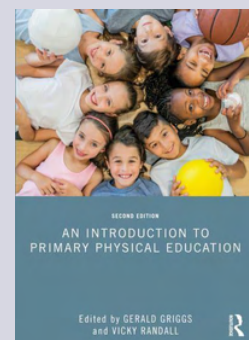
If we just look at the first strand, Motor Competence. The report states 'to have the best chances of establishing and maintaining physically active lives both across a broad range of activities and in the long term, it is important that pupils develop secure foundations for movement.'



It is important that teachers in KS1 and KS2 know what this looks like and how to teach these skills effectively. The report goes on to state that 'a large number' of secondary students are not competent in the fundamental movement skills therefore there must be gaps in knowledge in KS2.

As a result of this report and through work with Dr Vicky Randall at University of Winchester (one of her recent books '[An Introduction to Primary Physical Education](#)', is really useful); we have just revamped our training in multi-skills/fundamental movement skills.

If you are not sure what it means to teach these skills or you would like to have a chat with us to check your understanding, please get in touch with either myself, [jodie.bascombe@hants.gov.uk](mailto:jodie.bascombe@hants.gov.uk) or Jo Hayes from the team at [joanne.hayes@hants.gov.uk](mailto:joanne.hayes@hants.gov.uk)



For those children in upper KS2 who are ready for more sports specific skills, please see here details from **[Hampshire Squash](#)**. There are lots of National Governing Bodies who provide similar taster sessions for children who are ready to experience school sport. I met with Andy May recently who explained how they are able to come into schools to deliver training.

Contact: [andrewmay.squash@gmail.com](mailto:andrewmay.squash@gmail.com) Tel: 07795 270 975

Please do get in touch at [jodie.bascombe@hants.gov.uk](mailto:jodie.bascombe@hants.gov.uk) if you have any PE or PA questions.

# Dates for Your Diary



We have updated our **Trailblazer Calendar of Themes and Days for Outdoor Learning** for the academic year 2021/22 so you can see what's coming up and plan accordingly!



Here are some events and activities coming up that can be used to support getting children active and learning outdoors!

## 1 - 30 June - **Thirty Days Wild**

The Wildlife Trusts' annual challenge where you are asked to do one wild thing a day throughout the month of June that will support wildlife. Why not try litter picking in your local area, bug-hunting or even taking on a fundraising challenge for wildlife?



## 6 - 10 June - **National Fieldwork Week**

Use this week to get children out conducting their geography fieldwork in the school grounds, local area or further afield.

## 6 - 17 June - **Farming Fortnight**

A fortnight focus on British Farming and food production.



## 13 - 17 June - **Scooter Challenge**

Clean Air Scooter Challenge Week to encourage pupils to ride scooters to school.

## 16 June - **Clean Air Day**

Clean Air Day is a great opportunity to raise awareness about air pollution and make the air that we breathe cleaner and healthier.

Clean Air Day activities and resources from HCC.



## 20-26 June - **National Insect Week**

Insect Week encourages people of all ages to learn more about insects.

Take a look at our Trailblazer Mini-beasts Activity Sheet.

## 29 June - **International Mud Day**

Look at Muddy Faces Activities and Trailblazer Mud and Soil Activities for ideas



## 15 July - 7 August - **Big Butterfly Count**

A UK-wide citizen science survey aimed at assessing the health of our environment simply by counting the amount and type of butterflies (and some day-flying moths).

## 16 - 31 July - **Festival of Archaeology**

This year's theme is 'Journeys'. From the processes applied to archaeological finds to transform their meaning, to the evidence of former transport systems - the theme of Journeys resonates through archaeology.

Why not set up your own After School Young Archaeologists Club?

