

NAFSO PROFESSIONAL DEVELOPMENT EVENT



5 to 7 January 2011

in partnership with

Cambridgeshire Environmental Education Service

at **GIRTON COLLEGE, CAMBRIDGE**



OPENING DOORS TO LEARNING: Curriculum development in the outdoor classroom Event Report



This event report has been compiled and assembled by Richard Green of CEES. Delegates who attended the various workshops, visits and keynote presentations have kindly contributed reports on every aspect of this 3-day professional development event. Our thanks go to them for ensuring that this document provides a comprehensive overview of the event. The report also contains links to relevant websites, presentations and other supporting documents where appropriate. Please note that although some articles have been edited for layout reasons, none have been edited for content, so the views and opinions expressed are those of the contributors and do not necessarily reflect those of NAFSO or of CEES. A separate file contains the extensive archive of ideas and information that delegates contributed to the "Showcase" display area during the event.



Department for
Education



OPENING DOORS TO LEARNING: Curriculum development in the outdoor classroom

A professional development and training opportunity

The title of each presentation or workshop is hyperlinked to the report of that event.
Click on the title to go straight to the report.

PROGRAMME

WEDNESDAY 5 JANUARY

[OFFICIAL OPENING AND WELCOME chaired by NAFSO President, Peter Smith](#)

Chas Matthews, NAFSO Chairman

Bill Graham OBE, Director, Farming and Countryside Education

Shailesh Vara MP for North West Cambridgeshire

Cllr Martin Curtis, Cambridgeshire County Council

Rosie Edwards, Event Director, Head of CEES

Half-day options:

[W1. A WASTE OF TIME?](#)

[W3. GROWING GARDENS FOR SCHOOLS AND CENTRES](#)

[W4. INTERPRETING THE ENVIRONMENT THROUGH ART](#)

[W5. IT IN THE ENVIRONMENT](#)

[W6. "IT'S NOT JUST A MUSEUM, IT'S THE WHOLE WORLD!"](#)

[W7. LEARNING FROM PLANTS AT CAMBRIDGE BOTANIC GARDENS](#)

[LESSONS FROM THE SUSTAINABLE SCHOOLS STRATEGY](#), Dr Jake Reynolds, Head of Wellbeing, Sustainable Development Commission

[INSPIRATIONAL ENVIRONMENTS](#), Dr Helen Phillips, Chief Executive, Natural England

THURSDAY 6 JANUARY

Full day options:

[T2. FENLAND LANDSCAPE, WILDLIFE AND HERITAGE](#)

[T3. LAKESIDE LEARNING](#)

[T4. SUSTAINABLE ENERGY EDUCATION IN FENLAND](#)

[T5. SUPPORTING LEARNING AT BURWELL HOUSE](#)

[T6. WHAT A WASTE!](#)

[T7. LEARNING THROUGH THE ENVIRONMENT AT STIBBINGTON CENTRE](#)

[a. RIVERS AND RUN-OFF REVISITED](#)

[b. EVACUATION DAY](#)

[c. GEOLOGY ROCKS](#)

[d. IF YOU GO DOWN TO THE WOODS TODAY . . . BEWARE OF THE GRUFFALO!](#)

FRIDAY 7 JANUARY

[FIELD STUDIES FOR THE FUTURE](#), Rob Lucas, Director, Field Studies Council

[QUALITY LEARNING OUTSIDE THE CLASSROOM](#), Leszek Iwaskow, Her Majesty's Inspector, National Adviser for Geography

Workshops / focus groups

[F1. CLIMATE CHANGE AND SCHOOL COMMUNITIES](#)

[F2. DIVERSITY IN OUTDOOR LEARNING](#)

[F3. LITERACY AND NUMERACY – PRIORITIES AT PRIMARY](#)

[F4. MANAGING RISK IN OUTDOOR SETTINGS](#)

[F5. MUSIC AND STORYTELLING IN THE OUTDOORS](#)

[F7. SPIRITUALITY IN OUTDOOR LEARNING](#)

Official Opening & Welcome



NAFSO President, Peter Smith

Peter welcomed the 130 delegates to the 150 year old setting of Girton College with a reminder of the interesting weather experienced a year ago at the Conference in Swanage. He made particular reference to newcomers to the organisation and to the 14 people on bursary places. He also gave a particularly warm welcome to Sara and Eleanor, the two delegates that had come all the way from Italy.

NAFSO Chairman, Chas Matthews

Chas welcomed all the delegates especially the 14 delegates who received bursaries through Growing Schools funding, reminding us that it is support that NAFSO and this Professional Development is all about. He expressed his admiration for the venue and the staff of Girton College, not least for their providing a print out of the latest Ashes Test Match Information! He gave particular thanks to the sponsors of the event: TIC insurance, our members insurance policy providers, who provided us with event insurance at a discounted rate, and Growing Schools who's generous sponsorship allowed so many people to attend on bursary. Growing schools is administered by FACE (Farming & Countryside Education) and Chas went on to introduce FACE CEO Bill Graham



NAFSO Chairman, Chas Matthews with Event Director, Rosie Edwards

Bill Graham, CEO FACE

Bill reiterated the importance of the partnership between Growing Schools and NAFSO, reminding us that the success of any organisation is due to the sum of its parts, which is why partnership is a key element of Growing Schools. Bill went on to remind us of the importance of cooperation and avoiding the pressure for competition.

Councillor Martin Curtis, Cambridgeshire County Council

Councillor Curtis welcomed delegates to Cambridgeshire. Due to National Press Interviews, he had come in early, allowing him time to talk to delegates. He was particularly impressed by the passion people showed. He was delighted that the County is able to host an event to showcase Cambridgeshire Education. As a school governor, Councillor Curtis has been privileged to attend a number of residential experiences involving children from his school. This has left him very aware of the importance of what organisations such as CEES do. He urged us not to lose sight of why we are in this business, illustrating this sentiment with the story of a PGCE student doing a specialist study in the rise of the Nazis in Germany, and how these studies were brought alive in the most vivid way by a visit to Auschwitz. Councillor Curtis went on to introduce Gayle Gorman, Director of Learning for the County Council Children and Young People's Services.

Gayle Gorman, Director of Learning, Cambridgeshire County Council

Gayle welcomed delegates on behalf of Cambridgeshire's Learning Community. As a relative newcomer to her post, she was both surprised and delighted to find that CEES was part of that community, as this underlines Cambridgeshire's commitment to the importance of outdoor learning and real life experiences.

She went on to give some examples of feedback she'd heard after local schools had made use of CEES opportunities, including some of the best writing ever done by one particular Year five class after they took part in an Evacuation Day at Stibbington. Another example was when a Year six teacher saw some of her class begin to understand maths associated with right-angled isosceles triangles when using them to measure tree heights on a habitats course.

Gayle went on to wish all delegates a most informative and productive event.

Rosie Edwards, Head of CEES and Event Director, Cambridgeshire County Council.

In addition to welcoming all the delegates and explaining some of the essential domestic arrangements, Rosie went on to introduce the Event Organising team. She then introduced the aims of the Event:

This Professional Development Event aims.....

1. to inspire creative, innovative approaches to the curriculum outside the classroom.

.....reminding us that we need to demonstrate to schools how outdoor learning can assist them to fulfill curriculum needs, particularly in the light of there being no direct mention of LOtC in the Education White Paper.

2. to develop the potential of outdoor learning for narrowing the attainment gap and raising achievement for all.

..... It is up to those of us who work in the sector to demonstrate that learning experiences outside the classroom CAN make a significant contribution to narrowing the gap in key priority areas: between boys' achievement and girls'; and between children from disadvantaged backgrounds and others. From September 2011 the Pupil Premium will be available and Headteachers might be encouraged to use it to support educational visits if the contribution of those visits to narrowing the gap for children from disadvantaged backgrounds is clear.

3. to improve, extend and update knowledge, skills and experience for teaching outdoors.

4. to provide opportunities for networking and sharing ideas with other professionals in field studies and outdoor learning.

With this fourth aim in mind she went on to introduce an ice-breaker activity that delegates could take part in on the way to lunch. The activity 'Networking-o' was designed to ensure people would talk to as wide a range of delegates as possible. A further encouragement was the offer of a prize for completed activity sheets handed in that day!

Reporter: Richard Green

Half Day Options

W1 A Waste of Time?

Leaders: Nick King & Em Ritchie, Recycling Bus teachers, Cambridgeshire County Council

This session was based inside one of the Cambridgeshire County Council Recycling Buses with Nick King and Em Ritchie, our Recycling Bus teachers for the afternoon. The buses, stocked full of rubbish as well as bespoke tools and interpretation panels, are taken into schools to deliver sessions based around local and global waste awareness, and of course a chance to play and make things out of junk.

Stepping inside the mobile classroom you are transported to a magical place full of twinkling fairy lights (using colourful drinks bottles), and hanging mobiles and models made from a variety of recycled materials. Their activities follow a cross-curricular approach, covering subjects such as design technology, science, geography and history, always with a waste awareness message.



Aboard the Recycling Bus

Nick and Em showcased a number of the activities that they offer to schools, from creating paper/card based insects to larger models such as a rotating windmill. Hanging mobiles made from tin cans or plastic bottles also hung around our heads providing inspiration. It was great to see so many possibilities from using waste material.

Each of us had a chance to make a couple of the models including a newspaper sword (using tightly rolled up newspaper for strength and coloured wool and tape for decoration), and a wooden dragonfly (which requires using a saw and a hand drill).

Before the session ended we were all given a couple of templates with instructions to take back to our centres for use with our own school groups/events, and these were very well received. Thank you Nick and Em for a very fun and inspirational session – I hope to take back a number of your messages and enthusiasm to my own park. If you want to find out more the website is, www.cambridgeshire.gov.uk/environment/recycling/campaigns/bus/.

Reporter: Leanne Atkinson

Workshop W3 - Growing Gardens for Schools and Centres

Leader: Alison Findlay, Regional Adviser, RHS Campaign for School Gardening



Making biodegradable planting pots

Alison Findlay, Regional Representative for the RHS 'Campaign for School Gardening' combined theory on the benefits of gardening as a teaching tool, with practical advice and a range of hands-on activities.

Based on her experience gardening within schools, Alison described how a garden can be the setting for all kinds of learning: gardening can be used to enrich the school curriculum, to develop life skills and to promote emotional and physical health in children of all ages and abilities. A working garden can be a valuable resource within a field centre, allowing children to participate in seasonal activities or in one-off projects. Alison gave advice on working safely in

the garden and shared the RHS' list of top 10 crops for schools which includes plants that can be harvested before the end of the summer term.

Hands-on activities in the workshop included harvesting seeds, making plant pots out of newspaper and a windowsill propagator out of tin foil and a cardboard box. We got stuck in investigating soils samples and making soil cakes. These were very simple, satisfying activities which would be easy to adapt for different learners and different settings.

The workshop was inspiring and informative and the RHS provides many resources, online and elsewhere, which are useful to anyone planning a garden or seeking to make best use of a garden as a tool for learning.



Preparing seeds

Reporter: Esther Pozzani

Workshop W4 - Interpreting the Environment through Art

Leaders: Becky Aston and Brian Hutchings, CEES teachers.

Brian gave an outline of the variety of work that CEES undertake, much of which has art as an element.

We began by looking at a series of images and discussing the artistic themes that these demonstrated. For example a photo of a tree at sunset showed a striking silhouette, while a blue coloured image had a cold feel to it.

Distance could be shown with darker colours in the foreground and texture, contrast and camouflage were all seen in nature.

Brian showed photographs by artist Andrew Goldsworthy, who uses materials in a natural setting, and some children's work inspired by him.



Goldsworthy Inspired Art Activity



Developing Photograms

We headed outside equipped with journey strips. These are pieces of card with double sided sticky tape along their length. Our challenge was to find a selection of leaves to collect on the strips. While foraging we discussed the variations and themes that this activity offers.

After comparing leafy strips we created Goldsworthy inspired artwork. It became apparent that even in the short time we had, and with limited natural materials available a good standard of artwork could be achieved!

The final outdoor activity used small safety mirrors which children can angle to find their favourite view. This focuses their attention well on a small area. Natural frames can be created around the positioned mirror.

Back indoors other activities to try, using nature as inspiration were;
Photography - effective images of leaves using photographic paper and either sunlight, or developer and fixer combinations.

Wool winding – focussing on colours in natural objects

Fossil making – shell imprints on clay

Block printing, batik and watercolour painting – taking shape and pattern from nature.

This was an enjoyable, practical workshop, with opportunities to discuss and share ideas. Becky and Brian gave information on resource suppliers, and indicated that activity instructions should be available on CEES website.



Batik

Reporter: Catherine Foreman

W5: IT in the Environment

Leaders: Helen Johnston, CEES teacher, Cambridgeshire County Council, & Lynn Hughes, WildKnowledge

Smart boards, visualisers, interactive pupil response systems, smartphones and androids....all in a day's work...or not, as the case may be!

This workshop was led by Helen Johnston, who has responsibility at Stibbington to develop their IT use, without detracting from learning outside the classroom objectives (and being easy to use by staff!). It was good to see how IT is used in reality at Stibbington, although I definitely see more scope on residentials, due to time and logistical limits on many day visits.

Those of use, quite literally, working 'in the field' (with no centre or classroom) couldn't lug around any extra equipment, although most people own mobile phones now and more and more with smart phones, which can use the WildKnowledge 'apps' we tried out. These were

pretty easy to use...except by me and working partner for the session, Simon, who managed to complete our outdoor task at least twice; by not realising it was saved! We followed a route on Knowledge map and had to choose a building at a certain point, answer a questionnaire and take photos etc., to record the building. This data can be compiled back in the classroom and used for follow up work. The only difficulty we really encountered was the incredibly small space on screen for selecting the right menu options.



Children using WildKnowledge



Using the Response System

Thanks to Lynn Hughes from WildKnowledge, who attended and discussed very knowledgeably the products. She easily talked about different settings and projects using the equipment, to bring the idea to life.

For me and others, use of IT will be limited by a lack of money to fund such resources. I guess I often ask, why introduce IT into an environment that I just want children to experience away from everything at home and school? Visits I ran in November highlighted, through the use of the

NNR I work on, how important to the children it was being out in what, to them, is a wild environment with nothing but a few tools, a fire and some mud and puddles to enjoy. However, understanding how things work, what is available in and for schools and how we can adapt opportunities at our sites to tie in with ever changing technology, can only be a positive thing.

Quizzes, using the response systems are a different way for teachers to test understanding of a subject, in a different setting, not just written work or formal tests. Photographs, videos and data collected using WildKnowledge can all be incredibly good resources for work back at school and bring together a learning experience in a more diverse way. There are definitely some uses I can think of for our nature reserves, if I had the technology!

Reporter: Carrie Bewick

W6: It's not just a museum, it's a whole world

Sedgwick Museum of Earth Sciences

Leader: Annette Shelford, Education Officer, Sedgwick Museum



Delegates discussing Victorian version of 'Jurassic Park'

Fifteen minutes drive from Girton College into the heart of Cambridge found NAFSO delegates entering the oldest museum in the city – and not just because it contained items from (almost) the beginning of time on earth. Sedgwick's fossil and rock records date back to the time of John Woodward (1665), and a period before words like 'geology' or 'fossil' had even entered the language. Although not the first person to collect fossils, Woodward was one of the first to do so in an organised fashion, together with meticulous cataloguing. He therefore almost founded the science, and thus paved the way for those who followed, including Sedgwick.

Annette greeted us by the main door and immediately began to share her enthusiasm and knowledge about the museum and, more importantly, the learning that could flow from what may, at first glance, appear to be a dusty collection of 'old rocks and bones'. Chas Matthews mentioned that he'd visited the museum 'a long time ago' – maybe when the dinosaur skeleton had had flesh on it ...? Despite that, Annette was keen to reveal how she turned a fairly traditional environment into an exciting place of learning for young people.

After an opportunity to simply walk around the museum and explore, Annette explained how she tries to engage children and schools in real thinking, by asking them not just to look at items, but to then ask the question "how do we get from that (a fossil record) to this (a picture of a real, if weird looking, animal)". The process of scientific enquiry takes on a creative air, and Annette talked about how items such as old photos can be used to expand on a story – eg, three men standing around an excavation of a woolly mammoth skull. Who is in charge, who's doing all the work, who takes the credit, what are

they interested in, why??? The questions unfold in a literary fashion and enhance the understanding of the young people she works with.

Annette has some concerns about the position of geology within the current curriculum, and spoke about the drop off in secondary groups (with lots of nodding from those listening). However, the approach she is taking at the museum – introducing creative and lateral approaches to study and understanding – are having very positive effects.

Annette finished by introducing us to story telling around geology and exploration. Maps of the world, kon tiki like models of boats, dice to move them by, and a voyage of exploration which revealed treasures – amethyst, ropey lava, trilobites and much more (Peter Smith was keen to open the biggest box of course...).

All in all, a great couple of hours in which we were able to see how a fairly traditional museum structure has been opened up to young people and a very inspirational and enthusiastic educator.

Reporter: Stuart Nundy



Wonderful textile art used as a map to illustrate childrens' exploration

Option W7 – Learning from plants at Cambridge University Botanic Gardens

Leader: Judy Fox, Education Officer, Cambridge University Botanic Gardens

We were welcomed to the education centre of the gardens by a wonderfully warm and enthusiastic education officer, Judy Fox. She quickly had us engaged in an indoor ice-breaker exercise based around poisonous plants and famous poisoners. We found ourselves exchanging lots of scientific information whilst chatting through the data cards and questions.

Next we were taken on a garden tour, much in the same way that any school group visiting the gardens would be. En-route we were encouraged to pick up examples of 'dropped material' that interested us, mainly cones and leaves. Judy stopped us at strategic points to tell us snippets about the special features of the gardens and their history. A particular highlight was the Winter Garden which, even in the depths of January, had plenty of colour and texture to inspire us. As cloud turned to drizzle we entered the glass houses, a wonderful resource for gaining the global perspective on botany with sections containing a wide diversity of plant life from architectural cacti to flamboyant rainforest species.

Back at the education centre we were shown a quick presentation about seeds and still had time

for some hands – on activities of pot making, using newspaper and wooden pot formers, into which we planted seeds.

This was a thoroughly enjoyable and timeless afternoon, it felt relaxed but lots of information was packed in. As well as a feast for all the senses the gardens gave us a link back in time to the plant hunters of history especially Prof. John Henslaw whose vision and drive led to the opening of this special 40 acre garden in 1846.

To find out more about the gardens and what they offer for schools visit www.botanic.cam.ac.uk or contact Judy direct jmf62@cam.ac.uk



The Winter Gardens

Reporter: Alison Steele

Key-note Presenters

‘Lessons from the Sustainable School Strategy’

**Presenter: Dr Jake Reynolds, Head of Wellbeing,
Sustainable Development Commission**

Jake Reynolds has been instrumental to the Sustainable schools framework. He assured us that work on Sustainable schools has changed, but not ceased, despite halting last summer. ‘We still face global challenges such as climate change, so it is obvious that we need to engage children in schools about these problems.’ We also face national challenges such as obesity, travel to school. Young people show interest and concern about these issues.

Since SSS’s inception in 2006 many settings got involved and created change - 40% of schools now do **something** towards Sustainable schools strategy. Research (Bill Scott, University of Bath, March 2010) identified many far-reaching benefits for participants including increased standards, behaviour, well-being and community cohesion, with young people actively engaged in learning. Direct benefits include reduced energy and water consumption, so the strategy has been good value (saving £90 million on a budget of £3 million) as summarised in SDC’s latest publication : ‘Improving Young People’s Lives’ (Nov 2010) eg gaining green skills for employability, healthier lifestyles, safer, cleaner communities, resilience to future food and energy price rises. Also evidenced in ‘The Key to tackling Health Inequalities’ (2010).

Until 2008 school energy consumption increased as a result of more ICT, extended hours, external lighting etc. With the scrapping of the BSF programme it will need a radical approach to turn this around, possibly using private-public partnerships.

There is now no national sustainable development action plan and the SDC itself will close in March 2011. But SD **WILL** be incorporated into core business planning at local government level. DfE states that ‘schools should make their own judgements...based on sound knowledge and local needs.’

So what is the future of Sustainable development?

- A – Sustainable Schools Alliance –SEEd etc represents over 500 organisations in a coherent unit
- B – Lesser role for DfE, but more linkage with other departments
- C – National Energy Services for schools which must cut energy bills by May 11.
- D - Schools will value SD for its own apparent benefits?

So what have we learned?

- Central steering gave ‘permission to take action’ and created system change.
- The SDC created partnership working between NGO’s and cross-departmental, but the role of key individuals is vital.
- It is an exemplary project, a model which other countries want to follow.
- There is a new language in schools of ‘caring’ for the community , framed as an education agenda.
- Progress is possible despite political indifference!

Reporter: Sandi Bain

“Inspirational Environments”

Dr Helen Phillips, Chief Executive, Natural England

Following on from Dr Jake Reynolds discussion on the lessons we could learn from the sustainable schools strategy was Dr Helen Phillips. Her talk was spirited and inspiring as she brought us up to date with her thinking on using the environment. This is an area that is under utilized by schools within their teaching. Today's children do not have the easy access to the countryside as those in the past. In fact in the news today, it was reported that there has been a rise in the number of cases of rickets in among young people, purely because they do not go outside enough.

During the presentation, we covered why there is a need to get people outdoors. If we are to preserve our planet then we must experience what it has to offer. To promote sustainability, we need to appreciate what we have to lose (the economists among us will know this as “willingness to lose”). We should be doing this throughout their school lives, but in particular during primary school. Not only does this bring it into their way of life, to be a norm; but means that you can add pressure to parents. It is possibly the way to get a family to think green.

As providers of outdoor learning, it may be up to us to ensure that the messages in Dr Helen Phillips speech are carried out. Do we allow children time to discover the environment and make their own links? How can we make this more accessible to their leaders? Can we educate them whilst we educate their group?

Reporter: Michelle Rogers



Full Day Visits, Thursday 6th January

T2 Fenland Landscape, Wildlife and Heritage

**Leader: Louise Rackham, The Great Fen Education and Community Manager,
The Wildlife Trust**

Back home after the NAFSO event, I started to tell my family about what I'd been doing and about the trip out to Holme and Woodwalton Fen. 'Oh I've been there said my husband'.....and proceeded to tell me how he and his father (who is very keen on butterflies) had travelled from Cardiff over 30 years ago in search of Large Coppers and had spent a hot summer's day at Woodwalton Fen amidst the dancing dragonflies and yes, they found the butterfly too!

It wasn't hot and sunny on the day we went (but at least it was dry) and as my first visit to a fenland habitat, I loved its stark winter beauty. The two

fens are still managed as National Nature Reserves by Natural England but their future is now looking more secure with the launch of the Great Fen Project and a large grant from the Heritage Lottery Fund.

**The Eel
Catcher**





Sybil, the Wise Woman

The project aims to link the two existing nature reserves and include them as a part of 9000 acre fenland haven. This will take many years as it involves land purchase and land recovery from its current use as farmland.

Our first stop was at Ramsey Heights Countryside Classroom to meet Louise Rackham and her team from the Wildlife Trust who are responsible for education and community work on the project. They are using a range of methods to engage, including a successful partnership with local museums. The activity we took part in brought together the heritage and wildlife of the site as we time travelled and met characters from the past including Sybil the wise woman who had cures for the various ailments of the NAFSO folk. We made ourselves a 'safe-keep' to ward off the bogarts

lurking in the area and dug up artefacts from an archaeological dig which nicely formed a timeline of the site's history – a great activity.

On to Woodwalton Fen after lunch to learn about how it was established by Charles Rothschild, who built himself a bungalow on stilts (to avoid periodic flooding) to use when he was visiting the area. The fen is rich in wildlife, particularly insects and birds and once it is part of the Great Fen area, the mosaic of fenland habitats will hopefully secure their future. The history of the site is fascinating and we learned about how land levels changed after the fens were drained and peat was removed and how the site is managed now to maintain wildlife habitats.

Thanks to the enthusiastic and knowledgeable staff at the site – they are engaged in a great project.



Reporter: Sara Findlay

T3 Lakeside Learning: Grafham Water Centre & Paxton Pits Nature Reserve

Leaders: Ian Downing, Head of Grafham Water Centre & Debbie McKenzie, Education Manager, Paxton Pits, The Wildlife Trust BCNP



Kitting up for the Water

The first of two visits today was to the Grafham Water Centre, located on the shore of this very large, and notably calm, reservoir a few kilometres west of Huntingdon. Our greeting and introduction came from Head of Centre, Ian Downing (who, after 20 years at Grafham, was about to leave to run a hotel in Devon!). He explained that the original Centre was a 1960's building that was a little tired, having had little investment from its local authority owners – Cambridgeshire County Council. It currently receives no funding, but is able to 'break even'. In recent years, there has been significant investment in the facilities, in particular with the accommodation which also has a fully equipped disabled

respite suite thanks to some external funding. The Centre has managed much of this through borrowing £2M!– and in fact owing such a large amount of money now seems to offer some 'security' for the Centre in the future. An interesting side-effect!

Next we met Teresa Thorp – Curriculum and Course Manager - and Chief Instructors Tom and Roger. Teresa explained more about the wide range of activities offered at Grafham Water including sailing, kayaks and open canoes, Mountain Biking around the reservoir and many other predominantly outdoor options – often captured using ‘Flip’ video cameras, as we saw in an example clip. We also learned about the ‘Invasion of the Killer Shrimp’ – an aggressive, non-native species that has made Grafham Water its home, with the result that precautions now have to be made to prevent its spread elsewhere.



Delegates get to paddle their own canoe!

Then, suitably kitted-out, we headed onto the water in three doubled-up open canoe rigs to explore the area from the perspective of one of the many water birds who, for at least part of the year, call this SSSI home. As we paddled (only slightly competitively!) we learned about the digging and construction of the reservoir in the mid 1960's, how its 3x1 mile expanse is filled from a not very adjacent river, and how it is shared with a sailing club and an angling club. A short stop at a beach gave the opportunity to look for some of the plentiful fossils exposed by the washing away of the Jurassic clay layer – belemnites and ‘Devil’s toenails’ proved easy to find. After returning (slightly more competitively!) to the Centre, we transferred to the RIB powerboats, normally used as safety boats and for training, for a (not always) gentle whizz around the far side of the reservoir where, in between hanging-on tightly and encouraging Chas to ‘lean back jus a little further’ as we bounced across the other boats’ wakes, we saw bank reinforcement, the aeration tower, large numbers of geese, cormorants, coots and grebes before returning back to shore at the Centre. I’m pleased to report that nobody fell victim to ‘Killer Shrimp’ during the morning.

After a pleasant and filling lunch, we headed-off to our afternoon visit at Paxton Pits Nature Reserve. Here we were met by the very enthusiastic Debbie McKenzie from The Wildlife Trust BCNP. The site is the result of lakes formed after gravel extraction, an activity that continued until recently when operations were mothballed due to the recent decline in the construction industry. It is planned to eventually more than triple the current size of the site once extraction is finally completed nearby. The quarry owners are conservation-minded and helpful. Although owned by Huntingdonshire District Council, the site is now managed since 2007 by the Trust along with lots of volunteer help, including the running of the visitor centre. The site attracts 120000 visitors a year. A brand-new Education Centre, complete with ‘green roof’, suntubes and a wood burning stove has been constructed thanks to aggregates levy funding. Schools have been able to make use of this building since June 2010, with its facilities including displays, local artefacts (including locally found mammoth fossils!) and great toilet/ handwashing provision. There is a thriving WATCH group here at weekends – having won several national awards for innovation and excellence. The grounds around this building are in the process of being landscaped for educational use, including an amphitheatre, giant ‘otter holt’ shelter and a meandering pathway awaiting planting-up.

A pleasant walk around the site gave the chance to see some of the hides, routes and inspirational features such as the ‘Saxon boat’ used to promote themed learning. Unfortunately, the frozen lakes meant that we saw only a few brave moorhen, a tufted duck and some (probably hungry!) herons – and we had visited at the wrong time to hear the nightingales for which the site is famous, but we all still enjoyed the scenery and hearing about how it is used for education and leisure.

After a welcome cuppa and as the light dwindled, we headed back to Girton after a full and very enjoyable day. Many thanks to all of those who showed us around.

Reporter: Ian Bailey



Our Chairman Hanging on for Dear Life at Grafham Water

T4 Sustainable Energy Education in Fenland

Leaders: Nicky Ayscough, CEES teacher; Fiona McCallum, Headteacher, Elm Primary School; Martin Field, Teacher, Neale Wade College, Cambridgeshire County Council

Wind Farms Background:

Fenland is perfect for wind farms – no hills, lots of wind, agricultural landscape with no special designation (AONB etc.), few people. Thus it is an important part of the drive to produce 15% of the nation's energy from renewables by 2020. Land wind farms have been operating since 1991, off-shore since 1992, and now ~3,000 turbines supply ~2.9m homes. Fenland is 98% 'self-sufficient' from its 35 turbines, all established since 2005.

Coldham Farm, visited by Nafso members, has 8 turbines, within a multi-crop Co-operative farm.

The site is unique as the Co-op part-financed the turbines and thus gets revenue from SSE for the electricity produced; usually the electricity company pays rent to the landowner. SSE delegates operation to Natural Power, and maintenance is provided by Vestas.

There are proposals for 7 more Coldham turbines, but the implementation is experiencing delays.

Two other potential Fenland wind farms are subject to planning enquiries, but local enthusiasm is waning: "If Fenland is almost self-sufficient, why do we need more?" The Fenland landscape allows visibility from long distances, but Planners observed that groups of turbines are often more acceptable than single ones.

Delegates arrive at the Wind Farm





Listening to the Generator

Turbine facts and figures:

Land-based turbines have a life span of 25 years. The Danish Coldham horizontal axis ones are guaranteed for 25 yrs, with a 60m steel mast, and 3 glass fibre vanes of 40m, total maximum height 100m. Each turbine requires a major concrete foundation, but the first year of generation pays back the carbon cost of the concrete. The financial cost of a turbine is repaid within 11 – 15yrs, leaving 10-14yrs totally free. The Coldham site powers approximately 9-11,000 homes per yr. The generator within the nacelle rotates ~100 times faster than the blades. Wind speeds of >4m/s will generate electricity, but at 25m/s the blades assume park position to avoid damage. Concerns are often raised about bird kills. Some pigeons and game birds have flown directly into the towers, but it was also suggested that the white surface of a turbine being warmer than the surrounding air attract insects, and their bird or bat predators, leading to some further casualties. However, the incidence of such problems is low, and the Coldham site is also used as a shoot anyway!

Energy Education at Coldham:

The education facility at Coldham is the result of a partnership between the Co-op (the landowner), Scottish Power Renewables/SSE, Fenland District Council, and CEES. The centre is a base for visits from KS1 to A Level, with activities tailored to the school's needs. There are various kits available including 'Make your own turbine', devised by Nick King of the Recycling Bus. Visits are free, and schools from Fenland can reclaim transport costs from the District Council. Funding from the Co-op

two years ago meant that schools outside Fenland can now be accepted (also free), and those schools are encouraged to negotiate with their local Co-op store to arrange store visits and perhaps get their coach costs to Coldham paid as well. CEES staff stressed they try not to indoctrinate students about climate change, but with frequent press assertions that (a) "it isn't happening", and (b) "it isn't our fault anyway", some 're-education' seems appropriate; accompanying adults are often more of a challenge to convince than the students. In the first 3 years 5,500 students have been accommodated. The activities are linked to Cambridgeshire County Council Climate Change programme. CEES staff note that Eco-School bronze awards on their patch have risen by 30% to 107 in 18 months, and carbon emissions from school buildings have fallen by 13% in a year; they would like to claim some credit for that.



Delegates by Turbine 3 at Coldham Wind Farm

Elm C-of-E Primary School:

Nearby is Elm Primary School, with a wind turbine and photo-voltaic panels. A group of Y6 pupils presented a brief account of the process of installing their renewables and the technical outcomes. Starting in 2007, funding was sought from the Low Carbon Buildings Trust and the Co-op. The Askra turbine on the school field is rated at 5kWh, stands 12m high, cost ~£28k, and has generated nearly 3,000kWh. The 32 PV panels (out-of-site on the flat roof) were installed in 2009 at a cost of £35k (mostly from grants from the Low Carbon Buildings Programme, now accessed via Salix, and the Co-op Green Energy for Schools Programme), provide 42.9m², are rated at 5kWh, and are angled at 20°; they have already generated over 6,000kWh.

The children provided a commentary to a power-point presentation put together by the previous head teacher, showing the components, the process of installation, the monitoring panel, and also graphs and data of the generation in the context of the school's consumption. They were happy to share their thoughts with us, and were well-informed. The monitoring panel is in the school entrance area, but the electricity meters are not accessible to the children, so the data collection relies on adults. There was a culture of energy-saving ideas throughout the school, and we were assured that an imminent major curriculum review would enable energy education to be fully integrated, and that sustainability would become a major theme. The school is registered with Eco-Schools but has yet to achieve an award. As the recently appointed Head said, "We've done the expensive bit – now to embed the behaviour!" We wish them well!

Neale-Wade Community College, March:

A fortunate college, with BSF construction in progress! Within the building-site context, there are two significant groups of students tackling environmental issues. 'That Eco Thing' is a group of several dozen students, mainly Y7-9, who manage the school garden (now re-located because of the building works) and spearhead recycling, partly in curriculum time and partly in lunch times and after school. After an initial grant of £200 they are now self-funding, selling their produce as well as supplying variable amounts to the college kitchen. Apart from the well-maintained

raised beds, the extensive compost area and water collection and storage systems were seen. The students' enthusiasm was all-too evident.

The Sustainability Group is a small team which emerged from a G&T summer school, initially getting involved in the new building design. They focussed on Landscape, Renewables, Sound proofing, Learning for the future, and the Planning Process. Having carried out an Eco-school-type audit, they homed in on energy and climate change, and achieved support from the SMT to stage an event to show 'Age of Stupid', with cake sales and discussion. Another initiative produced light switch signs, and they now monitor the school's energy performance and give the teachers targets! Sustainability has a high profile, appearing on the college's website Home page. Although the school has registered with Eco-Schools, they have yet to gain an award, and it will be easier when the building work is complete.

Leaders/contributors:

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Nigel Brown, Development Delivery Manager,

Fenland District Council and colleagues

Fiona McCallum, Head Teacher, Elm Church of England Primary School, and children

Martin Field and Janice Holdich, Neale-Wade Community College, March, and students

Reporter: David Kemp

T5 SUPPORTING LEARNING AT BURWELL HOUSE

Leaders: James Dawkins, Head of Centre and Faye Brickel, Deputy Head of Centre, Burwell House, Cambridgeshire County Council



Orienteering Challenge

9 of us set off from Girton in the capable hands of James Dawkins to investigate Burwell House, a Cambridgeshire residential centre sleeping 55. Once there and after a quick how do you pronounce the name of the village Quy (turns out it is pronounced as kwai). After arrival we were shown into the Fen room where Faye Brickel had a really detailed and very informative session prepared for us on the operating and strategies employed by Burwell House to meet their goal of being self-funding. What really impressed me was the fact that the centre is almost fully booked with an average group size of 37 staying for 2 nights/3 days.

Whilst we were inside James had been running around setting up for a series of map work challenges. Ranging from a simple method of teaching orientation using shapes on the ground through to a full Norwegian Orienteering event (which we all attempted). After being shown the delights of mini-clipboards (A6 size) and running round the grounds much like the school group on site we returned inside to see how the Burwell House staff integrates the Victorian heritage of the site into their educational programs.



Child Friendly Compass

We were also introduced to an invention of the centre's using a silva clip compass which when paired with a coaster that had been

printed with the points of the compass became a brilliant, child friendly compass. We tried out this invention by following trails around the grounds. Another highlight was seeing Burwell House's television studio – a rarity for the environmental sector!

In the afternoon we tried out the team challenges used by the centre and shared ideas by creating challenges for our colleagues. The day finished with the use of Racoon Circles and reviewing techniques.

Thanks to James and Faye for a brilliant, informative, up-building day and I hope Burwell House continues its success in the future.

Reporter: Chris Luckhurst

T6 WHAT A WASTE!

Leaders: Nick King & Em Ritchie, Recycling Bus teachers, Cambridgeshire County Council, Karen Brenchley, Education Manager, Donarbon



Donarbon, Seiving Compost

Donarbon waste management facility is Cambridgeshire's "Local Answer to a Global Problem". As strap lines go, that's quite catchy! Donarbon is the main waste contractor for Cambridgeshire, and occupies a 200 Ha site in Waterbeach. It may not sound like much of a day out to you, but my goodness, this place works miracles! But I may be weird... in Paris I went to the catacombs and the sewers before I visited the Louvre, so there's no accounting for taste!

The scale of the site is quite astonishing to those of us from the provinces... but not as astonishing as what lies inside. The pièce de la resistance is the 41 million pound Mechanical Biological Treatment facility which takes all household waste not placed in recycling bins and rips open the bags before mechanically separating out glass, metals (ferrous using magnets and non-ferrous using an eddy current separator) and finally plastics before finely shredding all that's left and leaving it to compost for seven weeks in vast composting halls.

We toured the site with the fabulous Karen Brenchley, who, after explaining and demonstrating Cambridgeshire's sometimes baffling domestic waste recycling system, also toured us round the site's green waste section. Here, delicately and somewhat bizarrely perfumed with 'Eau de Vanille', municipal garden waste and domestic

Mechanical Biological Treatment Facility



Sculpture made from Crushed Cans and Plastic Bottles

green bin material is transformed into saleable compost (unlike the 'compost-like material' which finally emerges after 7 weeks in the composting halls, which is heavily contaminated with shredded plastics and so is currently landfilled).

In the afternoon, after having made plastic milk carton elephants and bulb-pots with Karen, we



Urbanisation on the Recycling Bus

embarked upon Nick King and Em Ritchie's recycling bus. What fun! The bus was festooned with tin-can-men, insects made from recycled materials, tetra pack and plastic bottle wind chimes; the children who come on board cannot fail to be enchanted. We took part in a KS2 exercise to in changing settlements, from the Jurassic to the present day. After placing our Hadrosaurs, Pterosaurs and Tyrannosaurs, we entered into an imaginative world where we could place our homes, castles and eventually supermarkets, according to the limitations of landscape and materials. An excellent exercise which translates to any centre's setting. A grand day out!

Reporter: Sam Hillcox

T7 LEARNING THROUGH THE ENVIRONMENT AT STIBBINGTON CENTRE

Delegates attending this visit chose one morning and one afternoon option from a choice of four:

a. RIVERS AND RUN-OFF REVISITED

Leaders: Caroline Worth, CEES teacher, Cambridgeshire County Council, Rosie Edwards, Head of CEES, Cambridgeshire County Council

The morning workshop was held at the CEES Stibbington Centre with a field visit to Sacrewell Farm and Country Centre to visit a tributary of the River Nene.

The morning was split into three parts, an introduction to the rivers and run-off day course offered at Stibbington and a PowerPoint and introduction to rivers for years 3 through to 8, an outdoor session looking at river study techniques in the field; both run by Caroline Worth and an indoor session looking at river and run-off modelling in the classroom, run by Rosie Edwards.

The opening session was based on the introduction to rivers for students and used plenty of actions to reinforced terminology through kinesthetic learning.

Topics covered included human use of rivers, water supply, flooding and flood defences. The outdoor session looked at a real section of river and terms were reinforced through annotated field sketches and delegates were invited to partake in some hands on learning with flow measurements and data collection for a valley cross profile.

Back in the classroom delegates looked at river channel modelling for years 3 upwards including a model of a meander using builders sand that created an oxbow lake and sections of concrete and turf for a great visual comparison of run-off on different surfaces, which could be used to facilitate discussion on sustainable urban drainage systems.

Participants were also given a tour of the centre, including its war time classroom, centre grounds and accommodation. Everyone enjoyed lunch provided by the centre and 'Geological Cakes' such as Sedimentary Sponge and Oolitic Limestone Krispie Cakes with their tea!



Run-off Model Used at Stibbington

Reporter: Lucy Cansfield

b. EVACUATION DAY

Leader: Brian Hutchings, CEES teacher, Cambridgeshire County Council

Like the school groups, we role-played the evacuees in 1940, and were given real names and ages.

The centre is fortunate to have some appropriate facilities, such as a neighbouring preserved railway complete with an old coach with wooden seats, and a complete Victorian school room.

'Mr. Stafford', Headmaster of Stibbington School in 1940, welcomed us in the railway coach, checked our gas-mask boxes, inspected our hair and hands, and then walked us through the village, where dangers and facilities were pointed out, and we were each shown the house where we would live. We visited the church and saw the post box whose special paint would warn us of a gas attack. In the classroom we had gas-mask drill, spellings and filled out our identity cards with dipping pens and ink wells. We heard realistic sounds of spitfires taking off nearby, and then an air-raid siren. Mr Stafford led us into a narrow,

damp and dingy shelter where we sat on a bench and sang war-time songs to try to drown out the noise up above.

On our return to the classroom, we were shown the rations we could expect, and did sums in pounds and ounces. Finally we listened to an ancient radio, hearing an encouraging message from Princess Elizabeth.

The children would stay all day and have a war-time lunch, play with old-fashioned toys, and do quizzes on war-time posters.

It was fun but also moving, and undoubtedly makes a big impact on the children. The final touch was a photo of 'my' evacuee, on a recent visit with her brother, both pleased that their story is being told.

Recommended books:

Carrie's War – Nina Bawden

Puddles in the Lane – Alan Garner

Goodnight Mr. Tom – Michelle Magorian

Reporter: Kate Cashmore

c. GEOLOGY ROCKS

Leader: Eddie McDonnell, CEES teacher, Cambridgeshire County Council

This was an interactive workshop, BUT the technology was limited to one digital microscope and was it so much the better for it. In this day and age when everything seems to have to be electronic and singing and dancing, this was an almost "old fashioned" approach to this complex subject. IT WAS GREAT!

Lead by Eddie McDonnell from CEES whose calm, gentle approach took us through what can be a bewildering topic. Each participant was given a box of 12 sample rocks. Starting with simple techniques, such as colour and feel, and then bringing in more technical terms such as texture, grain size, hardness and permeability we were soon able to classify and identify all the samples. Nothing hard, but truly engrossing, rubbing two pence coins against rocks to see which scratched which, dropping water on to see if it was absorbed. This was real discovery learning.

Then it was outside to see the real thing. First to the graveyard, yes the graveyard, well where else can you find so many easily dated samples, close to hand and with a variety of rock types. Here the concept of differential weathering was obvious to all (local limestone's weathered quickly, whilst 18th century granite looked almost new). Quick chat about lichens (a symbiotic relationship between an algae and a fungus), then off to a disused quarry at Old Sulehay to see something never before seen by people! Eddie picked up a chunk of Oolitic limestone, taking care to be safe (safety goggles and we all stood well back), he split open the rock, revealing a surface which has not been exposed for 135 million years. A quick fossil hunt, then it was back to see the Geological garden at Stibbington including its fossil of a pliosaur.

Then we got some real singing with the geology song (including actions) and finished off with some geological cakes.

There is a view that geology is boring (friends who did it at university say you have to get through the first two years before it gets interesting) and certainly as a GCSE or A level subject it seems in decline. However this workshop showed just how much fun it can be. Geology Rocks!

Reporter: David Jackson

d. IF YOU GO DOWN TO THE WOODS TODAY . . . BEWARE OF THE GRUFFALO!

Leader: Deb Laurie, CEES teacher, Cambridgeshire County Council

The passion and enthusiasm that Deb Laurie showed in this visit was infectious – an ex Early Years and Foundation teacher she was adamant that the ‘little ones can do just as much as the big ones, but at their level’.

During this session Deb showed how different activities outside the classroom could be used to enhance the telling of a story (in this case the children’s favourite ‘The Gruffalo’) in order to develop vocabulary and language skills whilst raising awareness of the environment.

A simple walk to the nature reserve was enhanced through various activities such as journey sticks, using senses, or finding things that begin with certain sounds. A trail following a map around the nature reserve enabled us to find clues and undertake a variety of activities at various points. E.g. observations to find something; listening to hear things; rainbow chips to focus on colour; finding things of different shapes; collecting words

to describe views, feelings, things; making up a riddle; smells and potions. At each station there was also a line from the story to collect. These were to be put in order on return to the classroom to reinforce sequence.

Throughout the walk links were made to the Gruffalo story e.g. is that the log pile where the snake lived?; the owl box where the owl in the story lived?; or the hole where the fox lived? All these activities encouraged children to talk in order to develop good quality, ‘Premier League’ vocabulary to describe what they have discovered and to ask questions. The need to provide these opportunities for children to talk and develop good vocabulary is vital as without these building blocks, they will not be able to develop reading and writing skills.

An enjoyable and interesting afternoon. Thank you.

Reporter: Tricia Zimmerman

Friday 7th January Key Note Presentations

FIELD STUDIES FOR THE FUTURE

Presenter: Rob Lucas, Director, Field Studies Council

State of the Natural Environment Sector

National trends show that bookings in the sector are on the increase although there are funding issues in some areas. The Holidaybreak Group which includes PGL made a healthy profit in 2010 of £15.8m through its outdoor education programmes.

Importance of quality

As a sector it is important that we continue to champion the benefits of outdoor learning. As such the quality of these experiences is key and it is important that outdoor learning providers meet the needs of users through safely delivered learning experiences.

Opportunities for the future

We need to provide children with the skills and knowledge to tackle the key issues, such as climate change, carbon reduction and sustainable development. By expanding our provision to secondary age students we can improve understanding of these issues and help young people to make informed decisions for the future.

A lot of secondary school ecology fieldwork looks the same today as it did thirty years ago. We need to bring it up to date by making the best use of modern technology, such as mobile phone Apps, bridging the gap between teaching and industry.

Cost is often blamed for a lack of learning outside the classroom, so we need to provide creative and affordable learning experiences. This includes outreach to schools and using alternative venues, such as the Olympic stadium in London. Through teacher training we can help to develop competent, committed classroom teachers who are confident working with children outdoors.

Finally we must work together as a sector to grow stronger by sharing expertise, experiences and resources. The NAFSO Professional Development Event is an opportunity to do just that!

Reporter: Simon Woodhouse

QUALITY LEARNING OUTSIDE THE CLASSROOM

Presenter: Leszek Iwaskow, Her Majesty's Inspector,
National Adviser for Geography

'I hear and I forget, I see and I remember, I do and I understand.'

The above quote from Confucius was used to set the context for an inspirational address by Leszek Iwaskow, entitled 'Quality Learning Outside the Classroom'. The quote was used to reiterate that a deeper understanding materialises from using the outdoor classroom, and in recent inspections of schools this was confirmed by comments from pupils who, when asked about their learning in Geography, stated that they 'wanted to go out more'.

First hand experiences in the outdoor classroom improve learning. We were posed with the question, how often are pupils asked to write creatively about something they have not seen or experienced? By putting theory into practice and drawing on experiences, pupils' learning becomes all the more relevant.

Some alarming statistics were shared from a survey carried out for documentary TV channel, Eden. Of 2,000 children surveyed, three quarters watch television more often than they play outside and two out of three sit indoors playing video games every day. Sixty four per cent of children play outside less than once a week and one in five have never climbed a tree or visited a farm. The attitudes of some parents with their lack of familiarity and hang-ups with the countryside could play a large part in this behaviour. With this reluctance from parents to allow their children to take risks and get dirty, children are deprived of the opportunity to develop essential life skills. Quality learning outside the classroom should teach the children about staying safe. If they are

faced with the dangers of the environment they will learn how to avoid them and manage risks, whilst developing an interest in and practicing a healthy lifestyle.

'It is not only about what we learn but importantly how and where we learn.'
Lotc Manifesto, DfES, 2006.

The final part of the address highlighted the need for quality fieldwork and emphasised that it is a requirement of the National Curriculum. A report by OFSTED on Geography in primary and secondary schools, due out in the coming months, will make significant reference to fieldwork and what it means to children. The majority of primary and secondary schools do not recognise the value of fieldwork sufficiently. Effective fieldwork enhances learning in geography and supports motivation, whilst adding detail and depth to learning. Quality outdoor learning can raise aspirations and the quality of learning.

It is our responsibility and privilege as educators and providers of outdoor experiences to ensure that all children are given this important life chance and the closing quote reinforces this.

'Setting an example is not the main means of influencing others; it is the only means.'
Albert Einstein

Reporter: Helen Johnston

Workshops and Focus Groups

F1 CLIMATE CHANGE AND SCHOOL COMMUNITIES

Leader: Nicky Ayscough, CEES teacher, Cambridgeshire County Council

As an Eco-School assessor I find primary schools often struggle with energy issues, and yet it is clearly one of the most important topics. Schools in Cambridgeshire have been identified as a major contributor to carbon emissions with 35,000 tonnes annually and so the CC launched an educational project running initially from April 2009 until April 2012. Promoting the sustainable schools framework as well as the value of Eco-Schools, the project supports schools in embedding sustainability across 'campus, curriculum and community' and thus contributing to reducing carbon.

Nicky is the lead officer but all CEES staff are involved with links to existing CEES courses including the Energy Works programme at Coldham Wind Farm. Activities include staff and governor training, innovative Eco-Council conventions for young people, green events for schools such as climate week, and pupil workshops. 80 schools have already been involved with an increased number of Eco-Schools in the County, and importantly carbon emission from school buildings fell 13% from in the year to March 2010; hopefully as a result of the project! A new approach piloted in Cambs is the opportunity for schools to work in partnership local Co-Op Stores to look at their energy saving initiatives.

The practical part of the workshop allowed participants to try various KS2/3 activities, including Renewable Energy kits (e.g. wind turbine kit and solar water) from Eco-Style (www.ecostyle.co.uk). We looked at various games and ideas about environmental issues affecting climate change including food miles and we were challenged to contribute our own. I was particularly taken with Christian Aid's paper bag game <http://learn.christianaid.org.uk/TeachersResources/primary/pbag.aspx> which aims to '....question our use of the world's resources and debate the ways in which work is organised and the economic systems that exploit vulnerable communities.'

We heard earlier in the Conference from Jake Reynolds on the lessons learnt from the strategy for Sustainable Schools and the need now for local initiatives to take this forward. This excellent Cambridge project is clearly a good example; the challenge now will be to secure funding to ensure it survives.

Reporter: Simon Perry

F2 DIVERSITY IN OUTDOOR LEARNING

Leader: Drew Wilkins, Traveller Education Team, Cambridgeshire Race Equality and Diversity Service, Cambridgeshire County Council

It is easy for educators to treat our classes as 'groups', in fact we often use this term in the daily lives of our centres. However it is important to remember that within these groups is a considerable diversity in participants' backgrounds, interests and abilities. Focusing on Gypsy, Roma and Traveller culture, we looked at

**Gypsy Migration
across Asia and
Europe**



how we might integrate and acknowledge this into our teaching.

A starter card sort exercise made us think about traveller language, and Drew followed this by illustrating the history of traveller culture, through the first recorded movements to Britain in 1505 through their persecution to legal recognition in the UK. We learnt about traditional occupations and lifestyles, looking at models of various types of accommodation including the wagons and the importance of horses, and traveller education and values.

Drew took us through some of the resources he uses when working with traveller children. We learnt about peg making, and heard a traditional traveller story which can be linked to orienteering activities, while being able to examine a variety of horseshoe props he used to keep listeners engaged. We looked at a recipe for Joey Gray Stew, and templates of traditional artwork for decorating wagons, to use with students in creative activities. We used one of Girton's impressive quads to build a bender tent, using hazel and tarpaulins. This is a very useful extension to shelter building activities, providing a hands on opportunity to experience an aspect of

traveller culture, while practising teamwork and understanding how woodland resources are used. The fantastic workshop closed with a quiz, and gave us some very important thoughts about the role of prejudice and stereotyping in our approach to travellers. We left with knowledge, understanding, resources and inspiration – a model NAFSO workshop!

Reporter: Susan Edwards



Bender Tent in use



Delegates in a Bender Tent

F3 LITERACY AND NUMERACY – PRIORITIES AT PRIMARY

Leader: Rosie Edwards, Head of CEES and Hazel Lambert, CEES teacher, Cambridgeshire County Council

The Friday morning workshop began with a task to get us thinking before moving on to the main session content.

Hazel delivered the numeracy section of the workshop. This section concentrated on addressing the experience balance between teachers and centres each of whom respectively have the strengths of strategies and the outdoors. The focus of the session was learning about the environment through numeracy and gave useful ideas on how to implement this such as collections of objects, numbers in objects, looking at objects mathematically, maps, angles in the environment, den construction, time and mazes. This was all backed up with ideas for progression between key stages along with activity sheets and ideas from CEES, website addresses (<http://nrich.maths.org> and gwydir.demon.co.uk) and a copy of NAFSO's publication 'Numeracy through the Environment'.



One of the Collections of Objects

Rosie then delivered the literacy section of the workshop discussing simple ways to introduce literacy curriculum content into our sessions. Ideas presented included instruction cards on how to pond dip to put into the correct order before pond dipping, map based poetry trails, sentence structure tasks – giving children a verb, adjective and noun and asking them to create a sentence using those words to describe an aspect of their session, and creative writing through producing an estate agents advert to sell a habitat. Once again handouts and the forward of the NAFSO's 'Literacy and Fieldwork' publication were provided.



Structuring Sentences

Overall the session provided us with a useful insight into the ways we can make small changes to our sessions to broaden the curriculum content of what we deliver.

Reporter: Rachel Barry

F4 MANAGING RISK IN OUTDOOR SETTINGS

Leader: Stephen Brown, Outdoor Education Adviser, Cambridgeshire County Council

Stephen Brown, Outdoor Education Adviser for Cambridgeshire County Council summarised work by the Outdoor Education Advisors Panel (OEAP) to put into action ideas raised in recent publications including Play England's 'Managing Risk in Play Provision' and English Outdoor Council's (in association with OEAP) 'Nothing Ventured' and provide standardised guidance to schools planning outdoor learning. Their approach uses a graph with distance from site increasing along the horizontal axis and complexity of visit increasing along the vertical axis (due to a range of factors such as activity, challenging groups, session leader inexperience, etc). For on-site low complexity activities normal operating procedures can be used to cover all activities. Risk assessment and greater consideration is required as complexity and

distance from school support increases. To help decision makers not lose sight of the importance and benefits of the activity taking place generic benefits and specific outcomes sections are added at the top of the risk assessment and benefits/ value of allowing that activity are listed for each hazard. The Panel is trying to create standard advice so schools in different counties can work to a similar set of guidelines. This will not be mandatory so different areas may decide whether to opt in now or in the future, but many councils are already behind the scheme. The website will be launched soon and will provide different advice sections for head teachers, visit leaders, etc, so watch this space so you can signpost your schools!

Reporter: Karen Wheeler

F5. MUSIC AND STORYTELLING IN THE OUTDOORS

Leader: Kirsty Body, Cambridgeshire Music, Cambridgeshire County Council

At last I'm a musician! After many ear abusing attempts with recorder, spoons, kazoo and other random instruments, I can play a drum. I admit I abandoned the more technical 'stick it up your jumper' or 'up your jumper stick it' routines for the single beat experience, but I am proud to report that like many a less than musical child, I contributed a vigorous, resounding, rewarding and even rhythmic boom on a splendid dundun* base drum that 'added value' (I think) to the NAFSO tribe event. With infectious enthusiasm, Kirsty did not wait for anyone to utter 'I can't.....' but with drums secure between our knees had us beating out musical sequences in seconds. Fantastic. Sadly there was only time for a tantalisingly tiny tit-bit of story telling, an introduction to Anuncie the spider and a reminder of Brer Rabbit tales that whetted the appetite for another workshop. Kirsty also gave a brief demonstration of a 'drum conversation', a wonderful idea for getting children to communicate with drum sounds instead of words that has enormous potential for allowing less articulate or shy children to express themselves, plus great fun for everyone to interpret the 'sound story'.

Kirsty explained that drums are used outside to send messages, sometimes a long way, all the time in Africa. It seems so effective I was wondering why we don't do it here 'in the field' until I stepped outside and remembered the last few weeks. A stick striking a sodden skin might not have such a satisfactory resonance and in minus 3 degrees (as it was recently for one of my Forest Schools) I suspect the skin might crack instead of boom. Still I'm sure we can try similar things with logs and sticks and I can't wait for some hot weather to try another 'dunoo'*.

Thank you Kirsty, a great workshop.

(*Apologies for drum names, so busy drumming couldn't make notes on correct names and spellings!)

Reporter: Sarah Laura White

F7 SPIRITUALITY IN OUTDOOR LEARNING

Leader: Roger Orgill, Trustee, The Wrekin Trust

The Spirituality Workshop was sensitively led by Roger Orgill, a trustee of the Wrekin Trust, which sets out to 'further the spiritual awakening of humanity'. It explores a sense of 'underlying unity in human life', and 'diversity of expression'. Roger made it clear that spirituality and religion are not coterminous, and that the sort of experiences that encouraged or developed spirituality are personal and not particularly replicable between individuals. No definitions were offered. We were given a very interesting pack of materials to browse later, from a wide range of sources such as the SMSC Report from the Learning and Skills Improvement Service, The Foundation for Holistic Spirituality and a survey on The Values and Beliefs of Young People. The Trust has over the years supported its educational philosophy with inputs into schools based on the Steiner principles.

The group briefly gave their backgrounds and some their own experiences of a spiritual event or activity that had affected and benefited them. Roger spoke of some of the general features that seemed to provide the background to spiritual development. He stressed the importance of values being developed in young people, and noted the way in which some particular experiences had noticeable and good outcomes. These were being outdoors, solitude, night-time and the quality of personal relationships. Other contexts are also beneficial, but may be quite specific to an individual.

The group briefly discussed some of these points, heard some poetry ['The Glory which is Earth' by Evelyn Nolt] and then quietly dispersed from the fresh flowers as the candle burned down.

Reporter: Peter Smith

On Hospitality and Entertainments and Spirit

Although outside the scope of this report, it would be greatly remiss not to mention the superb hospitality offered by the Staff of Girton College. The College itself was a wonderful building in which to work and added further inspiration to the whole event. The catering was just fantastic, in particular at the annual dinner. It has long been a tradition of NAFSO event that if one hasn't eaten for a little while, then good food must be offered in profusion. In this context Girton College certainly did not disappoint!

I'm sure everyone would join me in congratulating Nick King and Em Ritchie for motivating everyone, despite very full stomachs, to get up onto the dance floor after the annual dinner and to remain there until gone midnight.

Last and by no means least, every delegate deserves heartfelt thanks for the great spirit of cooperation, fellowship and fun, without which any event would be greatly diminished, no matter how good the speakers and workshops. It is impossible to overstate how important an ingredient this is, especially in these worrying times for our industry.

Reporter: Richard Green