


Outdoor learning & learning for sustainability in a changing world

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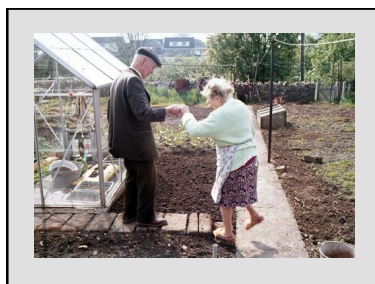
Outline of session

- Do we live in a changing world? How shall we know?
- Preparing young people for a changing world:
- A pedagogy for global intimacy?
- Carbon, CO2 and global climate change. What's it real and relevant?
- Education policy issues: Outdoor learning
- Education policy issues: Learning for sustainability



Climate change Sustainability
Socio-economics – distilleries, agriculture etc.
Geology/glaciation History – Cultural heritage Folk lore
The law, access etc. National parks
Recreation – fishing, canoeing, walking & economics
Sporting estates / land ownership
Literature – prose, poetry, art Renewable energy
Physical activity – skills/health
Forests – history/management Hydrology / meteorology
Ecology/natural heritage

Do we live in a changing world?
How shall we know?



A proposition ...

In science, being wrong is only just second best to being right

(after Thomas Huxley)

... and for me this isn't just about 'science' - it is really about 'rigorous thinking'



Preparing (young) people for a changing world

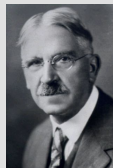
Why am I (as a teacher) doing *this activity* with these kids *here, now*?





If you are a child born today (in the 'developed world') you will probably live beyond 2100 ...
 ... What will you see in your lifetime?
 ... And how should we prepare young people for this future?

Education is a social process. Education is growth. Education is not a preparation for life; education is life itself.



John Dewey (1859-1952)
 American philosopher, psychologist and educational reformer

Some more propositions

- The education systems of the world will have to adapt to prepare us to deal with complexity, uncertainty and change.
- We will need to be prepared in terms of knowledge and skills, critical awareness, attitudes, personal and social qualities, and above all the capacity to continue to learn.

The 'Three Rs'
 Reading, wRiting and aRithmetic

If education is life itself ...

... what should be at the core of our knowledge?
 ... and what does this mean for education?

... and by that I mean *all* education not just outdoor learning

Education for life itself ...


- Understand how we are all dependent on planetary systems – a *part of* rather than *apart from* the environment.
- Develop respect for self, others (current and future generations; other species) and the environment

Education for life itself ...


- Understand how we are all dependent on planetary systems – a *part of* rather than *apart from* the environment.
- Develop respect for self, others (current and future generations; other species) and the environment
- Be confident in critique – of everything!
- Learn how to deal with complexity and change ... and to do so with realism and optimism
- Learn how to contribute to our own development
- Endeavour to pass on a lasting positive legacy to future generations



Experiential learning is essential but has limitations -

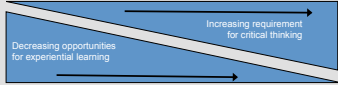


The world is a complex place – and it is not always possible or educationally desirable to simplify it.

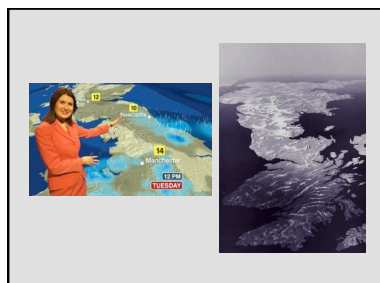
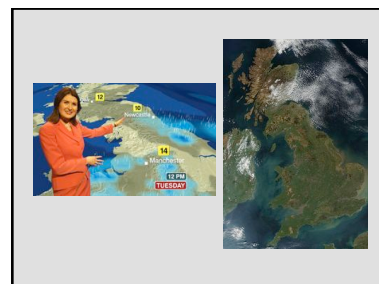


Decreasing opportunities for experiential learning

Keeping up your 'critical guard'



<p>grotty dull bright miserable pleasant atrocious</p>	<p>linger hopefully on and on and on looking up not too good enjoy</p>
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'Wicked' problems


... are difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognise.

... Because of complex interdependencies, the effort to solve one aspect of a wicked problem may reveal or create other problems.

Rittel and Webber (1973)

A pedagogy for 'global intimacy'?

Learning Outside the Classroom
Theory and Guidelines for Practice



Simon Stebbins, Peter Higgins, and Robina Hull





"To be honest, and I don't want to hurt your feelings, but I started reading this and I stopped after the first paragraph – it was boring"
Ella Higgins (aged 11)



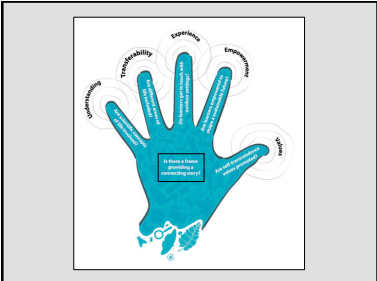
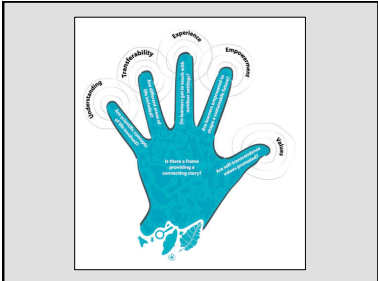
Understand how we are all dependent on planetary systems – **a part of** rather than **apart from** the environment



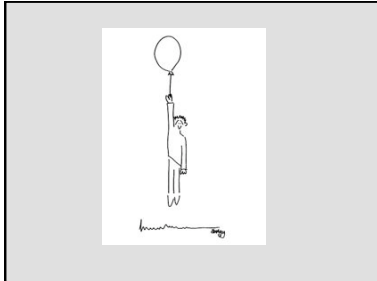
The 'Three Hs'
Education for Heart, Hand & Head

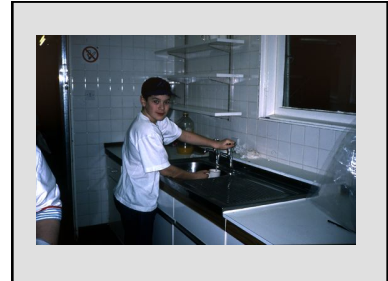
Sir Patrick Geddes (1854-1932)
Scottish biologist, sociologist, educator, town planner, diplomat, peace campaigner



The answer is '4 minutes' - what is the question?



The answer is
'4 days' -
what is the question?



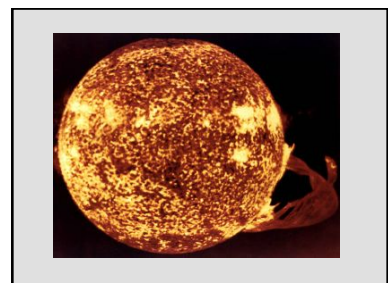
The answer is
'4 weeks' -
what is the question?



The answers are ...
'4 minutes, 4 days and 4 weeks'

The key elements are ...
oxygen, hydrogen and carbon

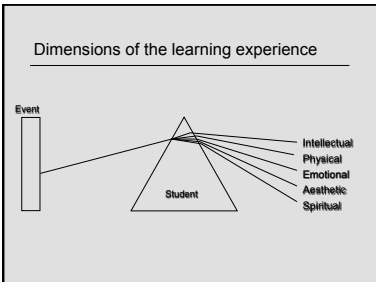
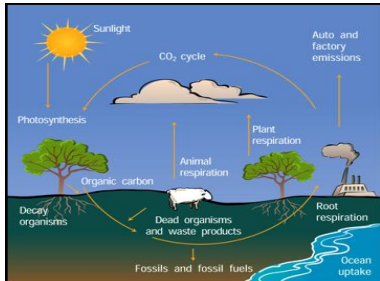
But what 'force' is needed to
organise all these elements into
the air we breathe, the water we
drink and the food we eat (and so
much more)?



An elemental approach to learning and teaching ...

- Air
- Water
- Earth (biodiversity)
- Fire (energy flow)
- Oxygen
- Hydrogen
- Nitrogen
- Carbon

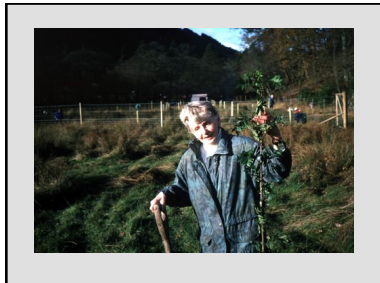
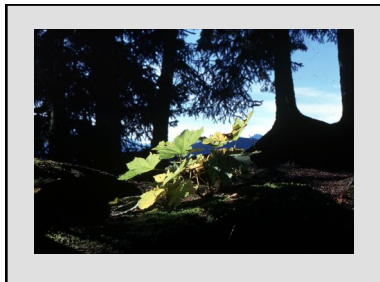
Carbon, CO₂ and global climate change:
Making it real and relevant



By Leaves We Live

This is a green world, with animals comparatively few and small, and all dependent on the leaves. By leaves we live. Some people have strange ideas that they live by money. They think energy is generated by the circulation of coins. Whereas the world is mainly a vast leaf colony, growing on and forming a leafy soil, not a mere mineral mass: and we live not by the jingling of our coins, but by the fullness of our harvests.

Sir Patrick Geddes



Rearrange these into a well known equation ...

Carbon Dioxide

Water → +

Oxygen + Plant growth


... and baffle many politicians, advertising executives, financiers ...

The Carbon Cycle and Photosynthesis


Water + Carbon Dioxide → Plant growth + Oxygen

Education policy issues:
Outdoor Learning (Scotland)

Why outdoors?




Why indoors?




A framework for learning outdoors

"The journey through education for any child in Scotland must include opportunities for a series of planned, quality outdoor learning experiences."

Learning & Teaching Scotland 2010 p. 5



Outdoor learning – the school as centre of the community – 'concentric circles' model



Recent trends in outdoor learning – the past 5 years (research & observations)

- Emphasis on the Primary Phase
- More school provision is locally based
- Closer links to curriculum
- Closer links to communities and 'place'
- Health and well-being focus
- Environment and sustainability focus
- Residential provision – more providers, more diversity, more competition

Education policy issues:
Learning for Sustainability

'Did you enjoy your holiday?' Can residential outdoor learning benefit mainstream schooling?
 Beth Christie*, Peter Higgins and Pat McLaughlin
 University of Edinburgh, UK

Education for Sustainable Development (ESD) in the UK – Current status, best practice and opportunities for the future

March 2012

sustainability
 www.sustainability.gov.uk

Article
 Divergent Evolution in Education for Sustainable Development Policy in the United Kingdom: Current Status, Best Practices, and Opportunities for the Future
 Stephen Morris*, James O'Hara†, Peter Higgins*, Carl Peers† and William Scott†*

Residential outdoor learning experiences and Scotland's school curriculum: an empirical and philosophical consideration of progress, connection and relevance
 Beth Christie and Peter Higgins
 University of Edinburgh

Policy Brief 9

Outdoor Learning can help young people engage with biodiversity and understand and care about complex issues – e.g. 'ecosystem services', sustainability & climate change



Scottish commitment to outdoor learning is internationally recognised, but it is nowhere near meeting its potential.

Outdoor Learning can both be encouraged by and support multiple integrated policy connections.

Policy drivers for Learning for Sustainability

- Historic/longstanding interest in 'sustainability education' in Scotland
- Commitment to recycling and renewable energy – and related education
- Endorsement of UN Decade of Sustainable Development
- Demonstrate policy distinctiveness and divergence from rest of UK
- Independence Referendum (September 2014)

REPORT
 2012

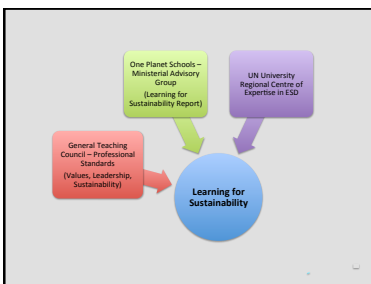
Conservation Climate Change Sustainability

One planet schools: connecting school and community

Research findings

Learning for Sustainability

"If everyone in the world consumed natural resources at the rate we do in Scotland, we'd need three planets to support us".
 WWF Briefing Paper (2010).
 Defining One Planet Schools



Professional Standards for Teachers in Scotland:
 Valuing as well as respecting social, cultural and ecological diversity and promoting the principles and practices of local and global citizenship for all learners

The General Teaching Council for Scotland's concept of 'learning for sustainability'

General Teaching Council for Scotland

"Learning for Sustainability has been embedded within the Standards to support teachers in actively embracing and promoting principles and practices of sustainability in all aspects of their work." (GTCS) 2013

- All teachers are expected to commit to including 'Learning for Sustainability' in their practice
- Applies to the whole Scottish teaching profession

'This is about who you are and what you do'
 (Rosa Murray, GTCS)

LEARNING FOR SUSTAINABILITY
 The report of the One Planet Schools Working Group

23 November 2012

One Planet Schools Ministerial Advisory Group Five Key Recommendations

- all learners should have an **entitlement** to Learning for Sustainability;
- every practitioner, school and education leader** should demonstrate Learning for Sustainability in their practice;
- every school should have a whole school approach** to Learning for Sustainability that is robust, demonstrable, evaluated and supported by leadership at all levels;
- school buildings, grounds and policies** should support Learning for Sustainability;
- a **strategic national approach** to supporting Learning for Sustainability should be established.

Scottish Ministers accepted all 31 recommendations in March 2013

Learning for Sustainability Implementation Group


The role of the Implementation Group is to drive forward the 31 recommendations of the *Learning for Sustainability Report* and thereby support the implementation and development of Curriculum for Excellence.

The group is convened by the Scottish Government, co-chaired by Peter Higgins & David Leng, and will report progress to Scottish Ministers by the end of 2015.

Secretariat is provided by Scottish Government and the UN Centre of Expertise in ESD (LISScotland)

A report for UNESCO to mark the end of UNDESD – exploring associations between schools that commit to LIS/Outdoor Learning and improved measures of attainment

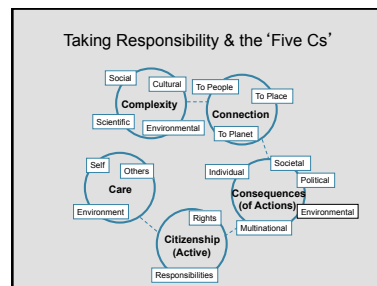
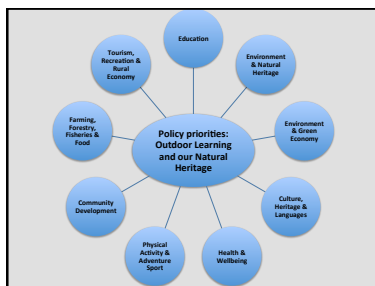
October 2014



Template User Guide to Enhance Biodiversity and Promote Ecology in Sustainable Schools



This document should be used as a guide for meeting the criteria set out within Section 7 (Sustainability) of the Scottish Building Standards Non-Domestic Technical Handbook



Why am I (as a teacher) doing *this activity* with these kids *here, now*?



The goal of education is to form the citizen. The citizen is a person who, if need be, can re-found his civilisation.

Eugene Rosenstock-Huussy (1888-1973)

Key websites for these developments ...

- GTCS Review of Professional Standards: <http://www.gtcs.org.uk/about-us/consultation/consultation-revision-professional-standards.aspx>
- One Planet Schools Ministerial Advisory Group: <http://www.scotland.gov.uk/Topics/Education/SchoolsCurriculumACE/OnePlanetSchools>
- UN University Regional Centre of Expertise in ESD: <http://unesd.unu.edu/en/>
- UNESCO Re-orienting Teacher Education to Address Sustainable Development: <http://www.unesco.org/new/en/education/teacher-education/>
- Our website, programmes, resources and publications: <http://scotland.gov.uk/about/efsd/>
- Conversations about learning for sustainability Case studies of schools and early years centres to mark the conclusion of the United Nations Decade of Education for Sustainable Development (2005-14): Education Scotland report for UNESCO: <http://www.education.scotland.nhs.uk/resources/learning/resources/learning4sustainability/2014/10/14/1019.asp>
- Education Scotland Website – extensive outdoor learning and learning to sustainability resources: <http://www.education.scotland.nhs.uk/>

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