



Lessons From Nature

APPLY

UNDERSTAND

DISCOVER

INSPIRE

**Using insights from nature to
inspire and build a brighter future**

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Using insights from nature to inspire and build a brighter future

The Lessons from Nature Project aims to challenge traditional assumptions about how things are made and how systems in the human world operate.

Lessons from Nature is aimed at young people. The learning supports a range of subjects including: Science, Geography, Design Technology and Business Studies.

The project aims to inspire young people and provide learning that will equip them with the skills, knowledge and understanding for jobs in the future.

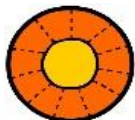
Learners discover insights from nature and apply these to issues in the human world



Nature can be abundant



Nature works on the basis of multiple benefits



Nature runs on renewable energy



Nature shows that diversity is strength



In Nature waste equals food



Nature adapts responding to feedback

Through first hand experience and activity-based learning, learners are connected with nature and discover that nature can be a mentor that reveals enduring principles, systems and structures that can inspire the building of a brighter future.

“It has helped me to realise the potential of using nature to solve future problems”

Learner

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MODULE OBJECTIVES

- Discover that nature provides multiple benefits
- Discover that in nature waste equals food
- Discover that in nature diversity gives strength
- Understand the problems with current production systems
- Understand that nature can be used as inspiration for designs and products (biomimicry)
- Apply lessons from nature to improve current products and production systems

KEY COMPETENCIES

- Critical thinking
 - questioning
 - analyzing information
- Creativity
 - using imagination
 - using initiative
 - coping with uncertainty
- Sharing
 - communicating ideas
- Reflecting & Evaluating

LEARNING WALL

Identifies the Key Competencies and enables learners to track progress against these.

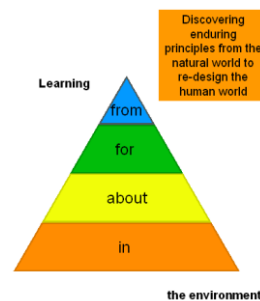
Learning modules take learners on a journey of discovery that enables them to consider the immense potential of the consistent application of enduring principles of nature to the design of products and industrial and economic systems.

In the UK there is an introductory module and three core modules (each based on an insight from nature). This first introductory module provides an overview of Lessons from Nature, a foundation on which understanding will be built.

The activities are focused on three key insights from Nature (*Waste equals Food, Diversity gives Strength and Multiple Benefits*) and how they can be applied to real-world issues such as product design.

“These are really valuable materials which fill a gap in provision, giving teachers much needed support to help them tackle the big issues faced by society, and engage young people in real life learning.”

***Beth Gardner, Chief Executive
Council for Learning Outside the Classroom***



Real World Learning

Learning Outside the Classroom can be utilised to foster inspiration and to stimulate a desire for understanding and offers:

- a systematic and holistic approach
- more subject areas in Learning Outside the Classroom
- motivates for teachers and students
- links with the real world economical and social issues
- an opportunity to feel and not just learn
- a extremely powerful learning environment

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Responses to **Lessons from Nature**

A genuine progression from first principles through to a deeper insight and understanding of closed loop systems'

Teacher

We can learn how nature uses closed loop systems and how it can preserve its resources

Learner

Lessons learnt

In a future project with such a high level of innovation we would recognise that:

- developing a significant package of material takes much longer than for familiar programmes
- shifting paradigms takes a lot of time with most educators
- one to one communication is significantly more effective than electronic communication
- most secondary teachers can't accommodate new learning within a term or even an academic year.

Nevertheless we are delighted to have a project that has been well received by educators who share our belief that the project will be of increasing value with increasing impact.

I have been hugely impressed by its innovative re-presentation ESD and Learning Outside of the Classroom. LfN is designed to empower learners and provide a sense of optimism for the future. This is powerful and commendable message.

The resources...are excellent. They allow the learners to explore unusual and complex ideas through a coherent set of activities. Each of these activities represents a part of a tapestry of ideas around sustainability. The activities...frequently pose very challenging questions.

**Cris Edgell, Qualifications Manager
Science, AQA**

Development officers at Education Scotland were impressed by the focus on environmental, social and economic well-being which builds on strategies for developing ecological literacy and skills for learning, living and working in a complex and changing world.

**Julie Wilson, National Development
Officer Outdoor Learning
Education Scotland**

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Case Studies

Woodford County High School

"I understand how we can learn from nature and use it as an inspiration"

Student



"I applied my knowledge to re-think the way we design the future" Student



Students discussed their own concerns for the future before applying lessons from nature to real world issues

The Skinners' School



"We applied our knowledge to society and technology and how new things could be developed using natural solutions" Student



Students discovering 'closed-loop systems'

"A genuine progression from first principles through to a deeper insight and understanding of closed loop systems"
Class teacher



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Project Objectives

To improve the capacity of schools and organisations working with young people to address sustainable development through the outdoor classroom in new and innovative ways, and integrate this into different curriculum areas.

The Successes

Do teachers consider our modules to be different from their experience of Education for Sustainable development and Environmental Education?

“

Emphasis on closed loop and LfN was the big differentiator here Teacher

LfN has inspired me a lot because instead of thinking we are running out so use less, we can take from nature the abundance idea and think positively about the future Learner

Enabling students to understand the ways they can learn and that by working with nature we can create a better world in which to live Teacher

It has shown me that everything isn't doom and gloom Learner

Yes: 1) Digestible; 2) Cross-curricular; 3) Not preaching; 4) Positive ('fabulous futures'); 5) Thought-provoking for pupils' future careers – empowering Teacher

”

Are the learning modules student-centred and approach-based?

“

Students were encouraged to learn for themselves, draw their own conclusions and learn independently. There was no / little subject specific focus – which worked well Teacher

Analysing nature more carefully and interactive learning Learner

Do learning modules inspire students to dream about their future?

It has helped me to realise the potential of using nature to solve future problems Student

Is the outdoor classroom prominent in the modules?

Yes being outside was important, as was the good range of examples used eg. Biomimicry Teacher

”

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Project Objectives The Successes

“

We applied our knowledge to society and technology and how new things could be developed using natural solutions Learner

It has taught me how nature can help future generations of technologies and help us and the environment to save our planet Learner

We understand the way that nature has only closed loop systems where as society uses mostly linear systems which depletes resources Learner

I have never thought that so many products that we use today were originally inspired by nature Learner

”

Gap Filling

Much (outdoor) ESD has been ‘eco-light’ with do less harm messages that do not adequately address the ‘big issues’

Learning for systems thinking can be challenging and inaccessible in the absence of direct experiences and motivation.

A disconnect from nature makes it challenging to re-make the human world to meet the aspirations of human beings and the ecosystems on which they depend and to which they are inextricably connected.

Lessons from Nature Impacts

Discussions with school teachers have indicated that they will continue to use Lessons from Nature in their teaching and incorporate it into their regular work programmes.

We thought it was an excellent experience for the girls and I have already been using some of the information gained to help my Year 10 students prepare for a GCSE exam
Teacher





This project has been funded with support from the European Commission. This module reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Lessons From Nature (LFN) ©2012

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