

# CDP Los Molinos November 2013

<b>Session title</b>		<b>Ecology Basics</b>	
<b>Date, time and location</b>		<b>Sunday 4<sup>th</sup> 10.15-11.45</b>	
<b>Learning objectives</b>			
<p>By the end of the session, participants will be able to:</p> <ul style="list-style-type: none"> <li>• Say what Ecology means, how it differs from other fields, and understand their and human role in it.</li> <li>• Describe Main Principles of Ecology with examples for human design</li> <li>• Explain in more detail 3 of ecological processes</li> <li>• Draw a typical cycle of materials</li> <li>• Draw different producers and consumers and decomposers in the Trophic Pyramid</li> <li>• Understand the importance of webs, networks, relationships and cooperation in Ecosystems</li> <li>• Explain the S-curve graph in terms of time, diversity, stability, succession</li> <li>• Consider the task of pc designers to create a cultivated ecology</li> </ul>			
<b>Resources needed</b>			
Posters of cycles, paper and colourful pens, Poster of S-curve, poster of some ecological principles, safety pins, big red round cushion			
<b>Session Plan</b>			
<b>Activity</b>	<b>Time</b>	<b>Teacher / facilitator</b>	<b>Students / participants</b>
Introduction	4	1.Explain why Ecology a key unit in PC Ethical Task: design ecosystems that maximise no. of productive species use energy and matter effectively move toward ecosystem perpetuation	1.Listen 2. Contribute, reflect
What is Llife	6	Briefly tell the story of life on the planet Together make the biosphere, this planet, <i>Gaia home oikos-ecos- home</i>	Reflect Contribute
Think and Listen	6	Get group into pairs to share a close encounter with Nature	Share- 2 mins each
Brainstorm	6	Natural principles- draw on paper Circle relevant ones and add any not suggested	Contribute- word or phrase (not description)
Focus on Cycles	20	Share example of Cycling of Materials eg. Nitrogen cycle poster, Carbon Cycle Organise groups of 3 to think about a cycle  (incl. Pollution: human design failure)	In groups of 3 drawor mime a cycle from nature- what is being cycled?
Focus on energy efficiency	15	Food is relationship: Game Hand out roles to stick to back- plants, insects, birds, fox etc Who is eating who?  What makes an ecosystem resilient? Discuss connections, links	Volunteer organises several players into a food chain. Another volunteer organises group into a web. Group adds details to Trophic Pyramid poster

Focus: Succession	10	Poster to demonstrate time/succession/stability/diversity Q. Why don't all ecosystems become forests? What are limiting factors?	Discuss limiting factors, refer to abiotic factors (Trophic Pyramid above)
A cultivated Ecology	20	Define 'Cultivated Ecology' Q. What do gardeners do? Q. How can their work be replaced by including plants and animals in a design? Q. Seen that we are consumers (in TP) but are we anything more? What is the role of humans now? With our capacity for reflection, evaluation, creativity? Ecological Principles here x4 or 5 on poster, form basis for discussion	(Looking for, stacking, use of ecotones, microclimates, making guilds) In Go3 Contribute, reflect
<b>Terms</b>		<b>English</b>	<b>Spanish</b>
Biomass		Total Plant and animal matter per unit area by weight	Biomasa. Total de materia animal o vegetal por unidad area por peso
Climax communities		The plant/animal communities which have reached stability	Comunidad Climax
Community		Any naturally occurring group of different organisms inhabiting a common environment and interacting with each other especially through food relationships	Comunidad
Diversity		Difference in character or quality, variety, different kinds	Diversidad
Ecology		The science dealing with the relationships of living organisms to their surroundings	Ecologia
Ecosystem		The interrelationships of biotic and abiotic factors, giving rise to identifiable systems	Ecosistema
Ecotone		The transitional area between two or more ecosystems; an intergrade area. Also called edge.	Ecotono
Habitat		The locality in which a plant or animal naturally grows or lives	Habitat
Limiting factors		The limit of potential of a system or organism. In this context factors which prevent ecosystems achieving forest status eg, wind, rainfall, frost	Factores limitantes
Monoculture		Large scale planting of a single crop	Monocultivo
Pollution		The action of defilement, impurity, or uncleanness. Excess to any system, not absorbed. Unused resources	Contaminacion
Stability		Resistance to displacement; stable equilibrium; power of resisting change of structure	Estabilidad

