

## Permaculture Design Course in Chester, 2017-2018

Week 1

### OBSERVE AND INTERACT

Evolution's been going 3.8bn years.

David Holmgren came up with the 12 principles of permaculture.

- observe and interact
- catch and store energy
- obtain a yield
- apply self regulation and accept feedback
- use and value renewable resources and services
- produce no waste
- design from patterns to details
- integrate rather than segregate
- use small and slow solutions
- use and value diversity
- use edges and value the marginal
- creatively use and respond to change

(<https://permacultureprinciples.com/principles/>)

Introductions:

Claire: a contemporary performance artist at the Cathedral, she's worked with issues of social justice, so started refugee support and foodbank. Started last year's PC course. She's interested in PC activities.

Helen: read a bit, heard Steve talk on PC. Has lived in Chester 25 years, she's in FoE, works in ethical finances. Her son does FoE posters. Likes learning, and going into deeper, wider principles.

Debra: the World needs to be more sustainable. She's a banker, likes nature and sports and new skills.

Alison: single

Liz: interested in 'no dig', works as a gardener.

Christine: used to work on the land and farm, now a gardener seeking knowledge.

Kate: knows a little about PC. In the Green Party, would like to know more about green issues.

Chris: interested in sustainable agriculture and organics. A cyclist – cycled here. Would like to use his PDC.

Simon: cyclist. Would like to use PC in life.

Kate: PC is natural systems, being resourceful, sustainable living. She'd like to gain ideas and meet like minds.

Joanne: knows a fair bit on PC. Works with children. Would like to use PC in lifestyle. Lives off-grid and isolated, so this may be a way of connecting.

Ben: works in the Mersey Forest. Would like to introduce PC to woodland, and introduce it to children.

Helen: knows a bit about life, she's 5 grandchildren. Would like to apply PC to the family.

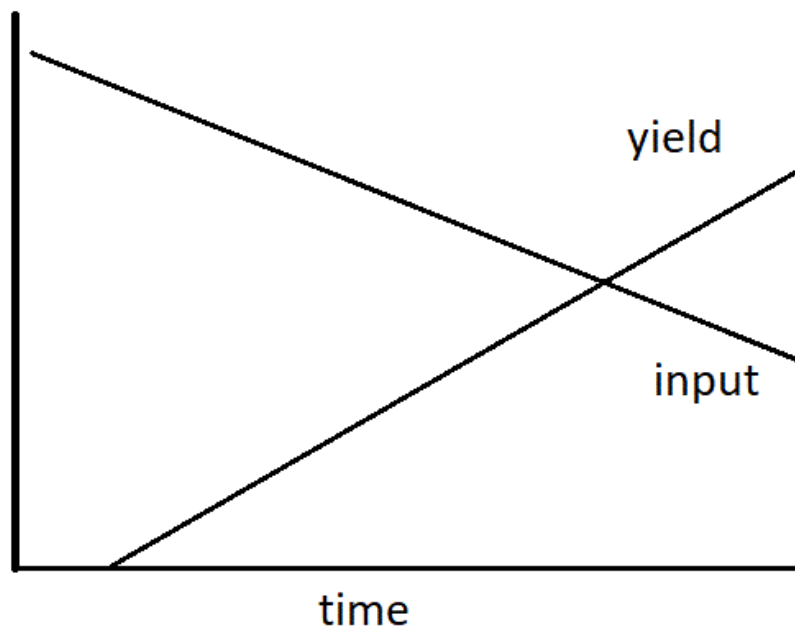
Steven: in forestry, imminently to graduate in sports psychology. Hoping to use PC.

Hilary: chartered landscape architect

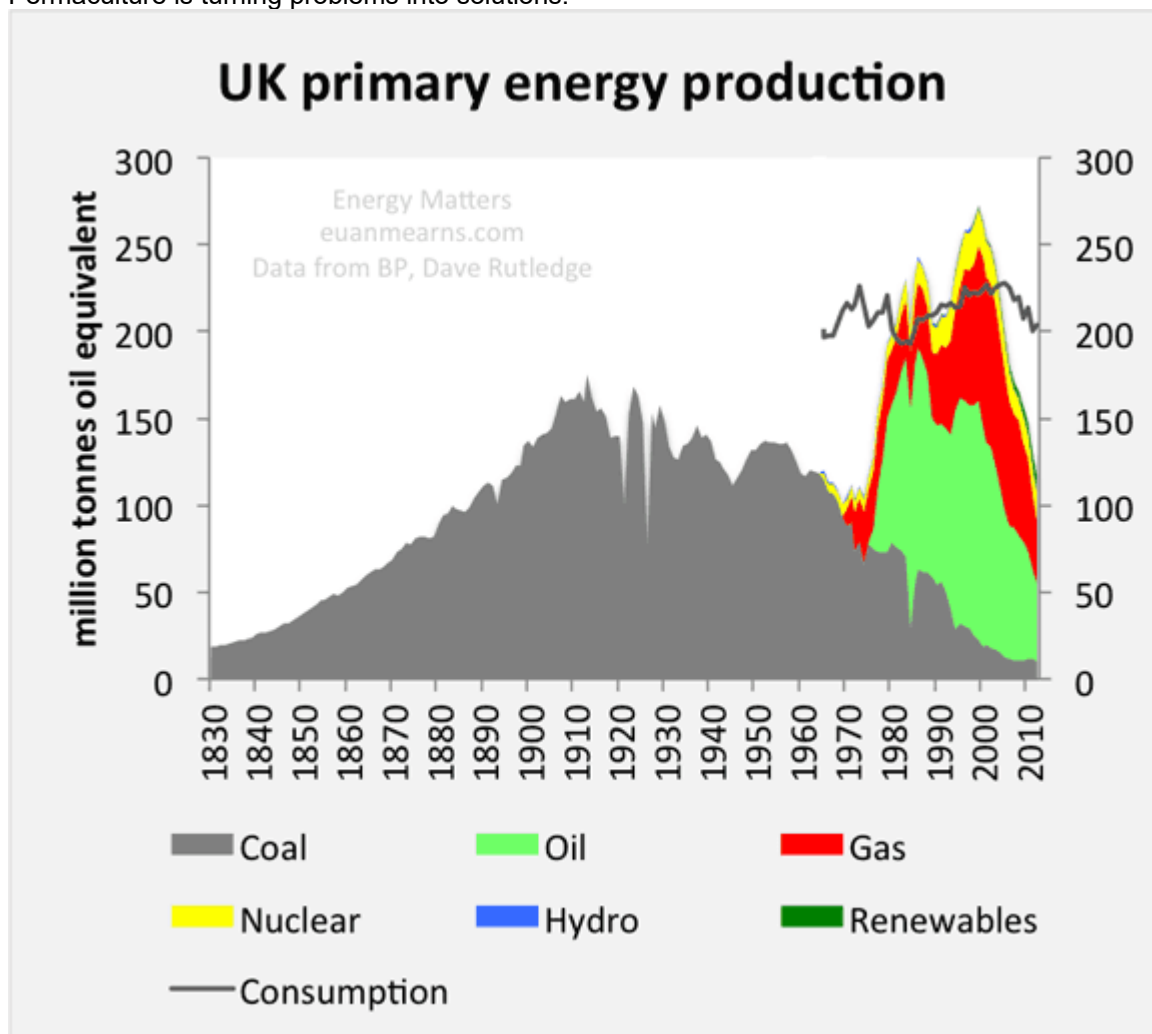
Jackie: PC is sustainable systems. She's a theologian from Zimbabwe. Would like to apply PC to agriculture in Africa.

Hannah: lack of connections. Has 2 small boys, wants her own land and design it.

Cynthia: works in caring, a forest school educator.



Permaculture is turning problems into solutions.



200 years ago, CO<sub>2</sub> was at 285ppm; it's now 406.

In 1907 Churchill decided new ships should run on oil. There were diminishing returns on coal as it got deeper. So we started importing oil. There's a talk in the internet on the oil industry. The real cause of WW1 was not the killing of an obscure duke, but access to oil resources. Nature uses local resources.

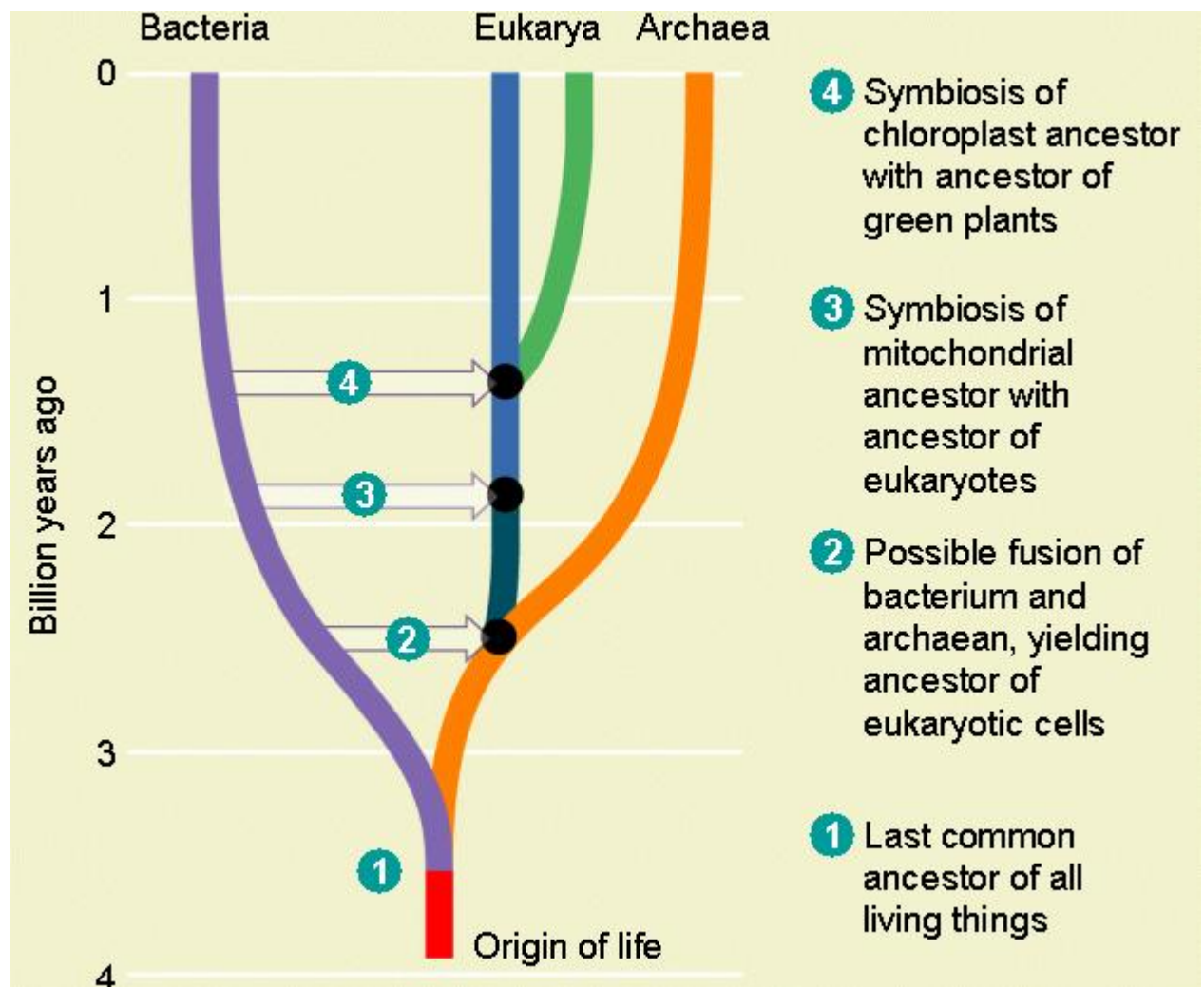
Steve came across PC in Zimbabwe in 1997, in the agricultural context. They were having difficulty with erosion. They needed to rebuild complexity, with no bare soil and no monocultures.

In Chikukwa, Zimbabwe, lowland grazers were displaced by farmers onto the hillsides and mountains. Hillside forest was cut down, and the animals ensured it didn't come back. Dry weather left dry grass vulnerable to rain erosion, leading to soil loss. Collectively they cut swales across the landscape, along the, planting elephant grass on the lower edge. 20 years on it's a more verdant landscape, and people have ceased emigrating to cities – they're coming back.

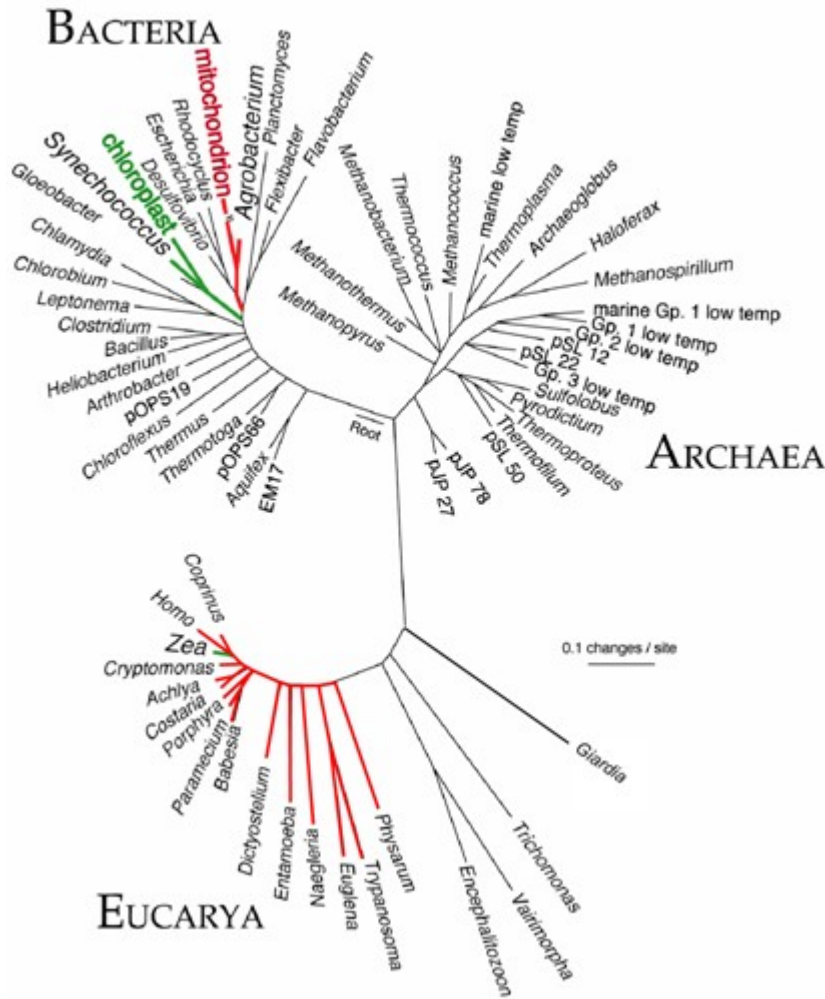
Nature uses solar energy, natural resources, recycled, becomes more diverse and interconnected with time, is robust, self-sustaining and productive, of mainly perennial plants and fungi.

Arthur Hollins of Market Drayton is probably the first deliberate organic farmer. He saw the damage artificial chemicals did to his sandy soil.

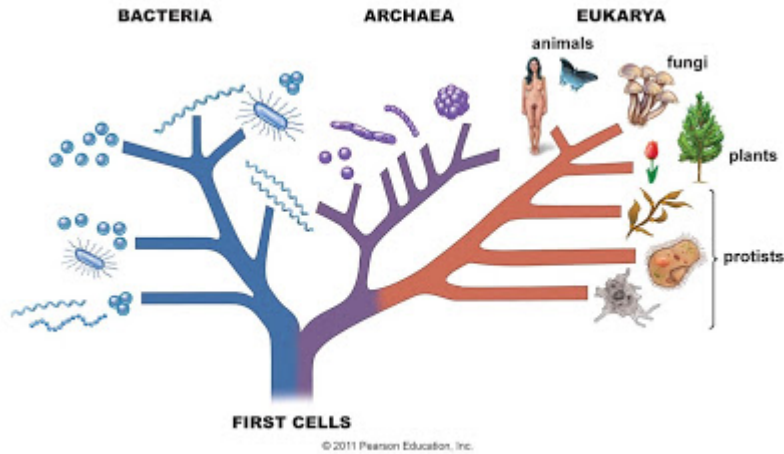
Elegant solutions are simple, even invisible.  
Make the smallest intervention required.



[http://bio1151b.nicerweb.net/Locked/media/ch25/25\\_18TreeOfLife.jpg](http://bio1151b.nicerweb.net/Locked/media/ch25/25_18TreeOfLife.jpg)

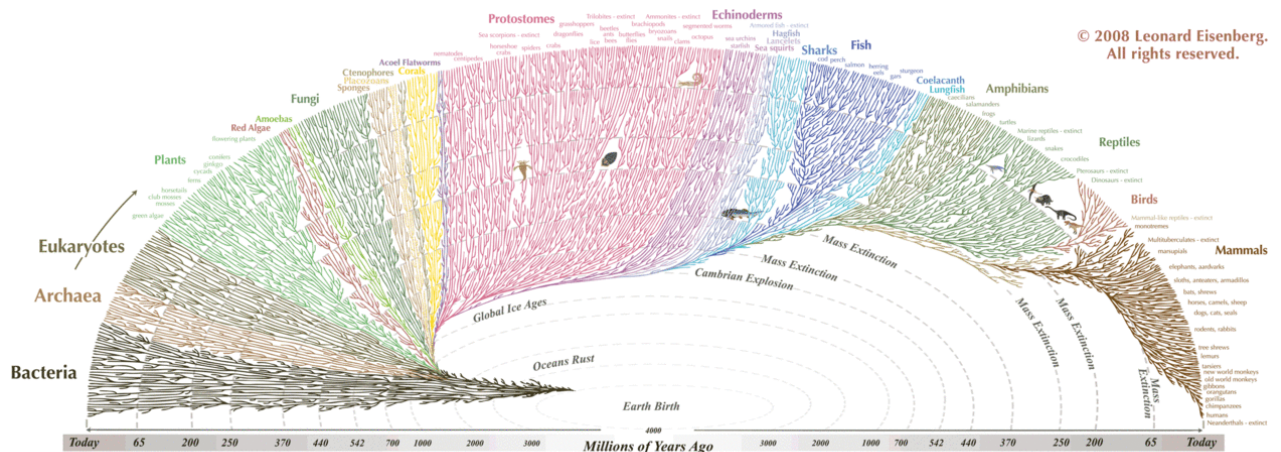


<http://slideplayer.com/slide/6893293/>



<https://sites.google.com/site/davidbirdscience/Home/courses/honors-biology/day-80-phylogeny-and-taxonomy>

Stromatolytes were among the first organisms. Production of oxygen turned soluble ferrous ions to iron ore, and that's been the basis of life for the past 300m years.  
Leonard Eisenberg



All the major and many of the minor living branches of life are shown on this diagram, but only a few of those that have gone extinct are shown. Example: Dinosaurs - extinct

[http://78.media.tumblr.com/tumblr\\_lptll40pMH1qbh26io1\\_1280.gif](http://78.media.tumblr.com/tumblr_lptll40pMH1qbh26io1_1280.gif)

H/W: look at some uncultivated land.

🕒 [In Grave Danger of Falling Food \(Video 50 mins\)](#)

Bill Mollison - The co-ordinator of permaculture in this seminal video giving insight into his vision of permaculture.

To see permaculture through the eyes of Bill Mollison is a shift in ones thinking from problems to solutions.

Although poor sound quality in places and with scratchy 80's graphics this is still well worth watching and is really an essential gateway into the world of permaculture - enjoy this, it is an absolute treat.

I first saw this in a mud hut in Zimbabwe in 1991, it changed the course of my life!

🕒 [Arithmetics of population and energy](#)

Dr. Albert A. Bartlett Professor Emeritus Department of Physics University of Colorado, Boulder

This brilliant lecture perfectly illustrates how growth can never be a sustainable objective.

Pure maths perfectly illustrating how everything we take for granted about our current economic objectives needs to be thought through again.

🕒 [Toby Hemenway - How Permaculture Can Save Humanity and the Earth, but Not Civilization](#)

Toby sadly passed away in 2016, but he remains permaculture biggest selling author. His explanations are clear and concise and this brilliant hour long lecture opens up the world of permaculture and its many possibilities perfectly.

This is a great start of your permaculture studies.

@51.00 Toby talks about painting a traffic intersection to slow down traffic

@53.20 Toby shows an example of a reed bed system

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Bring diaries next week

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