

## Intro to Permaculture The Permaculture Principles Video Transcript

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We're arrived at the final element of the Permaculture Decision Making Matrix, the Permaculture design principles. Here are my two favorite books, which are the source of the principles. Bill Mollison included a comprehensive list of principles in the Permaculture Designer's Manual, and later on David Holmgren consolidated and repackaged the principles into 12 in his book, "Permaculture Principles and Pathways beyond sustainability." So for simplicity's sake, I'll present to you Holmgren's 12 principles.

Principle 1 is "Observe and Interact," and this is essentially what we've been talking about for this entire course thus far. Where am I? What are the forces present on my site that I need to design for? Climate, topography, water, soils, vegetation, wildlife, wind, fire, people, these are some of the elements that are part of our observations.

Principle 2 is "Catch and Store Energy." Energy is not just electricity, but stored water represents potential energy in the form of irrigation water for future crops. The biomass of a forest represents a living storage of building materials, fuel, nutrients and water. Alternative energy systems can turn wind, sun, and flowing water into electrical energy. So this principle gives us the directive to capture and grow surpluses in our system.

Principle 3 is "Obtain a Yield." This principle promotes self-reliance and gives us the directive to reap a harvest from our Permaculture system, because you can't work on an empty stomach. This principle is relevant when making a choice about which tree to plant in a location. Always choose the one with greater and more diverse yields over an ornamental plant. Yields are not just food. Yields can be building materials, fuel wood, nectar for honey. But plenty of food growing all around you is true security.

Principle 4 is "Apply Self-Regulation and Accept Feedback." This principle directs us to live simply and consciously, limit our own consumption, because no one else is going to do that for us. We need to keep our own consumption and emissions in check because that is our responsibility when we care for Earth and care for people. Accepting feedback means that learning from our successes and mistakes is an imperative, and should lead to better choices as we learn what works and what doesn't.

Principle 5 is "Use and Value Renewable Resources." Renewable resources are those, which replenish with modest use. This could be sustainable forestry or fishing practices. This could mean planting an orchard downslope from a forest to take advantage of the nutrient and water drift that continually moves down the hill. This is the wind, this is the fact that plants and animals breed and if we are responsible and careful, many of these resources can provide in perpetuity.

Principle 6 is "Produce No Waste." This is where we make the waste of one part of our system the food for another. This means we compost, clean and recycle greywater, repair and repurpose broken tools and equipment. Reduce, reuse, repair, recycle. This also means we don't waste people by having them do hazardous and meaningless work.

Principle 7 is “Design From Patterns to Details.” This is one of my personal favorites. It means that first we study the climate, topography, watershed, ecology, and we get a big picture vision of how we can interact with the land and community in a regenerative way, and then our design decisions are based on that. So this road I just drew in is placed in a way where it harvests the water for this pond. The detail of road placement was based on the overall pattern of water flow in the landscape.

Principle 8 is “Integrate Rather Than Segregate.” This principle says that the more relationships between parts of your systems, the stronger, more productive and more resilient your system becomes. This has to do with community as well. I drew a cluster of dwellings where a cooperative community can get much more done than an individual. Many hands make light work.

Principle 9 is “Use Small and Slow Solutions.” I’ve gone ahead and harvested some of the trees on the forest edge to use for fence posts and replaced them with nut trees that will start bearing in about 10-12 years, and will then live for hundreds of years. I’ve planted new trees over here, which will be new fence posts when these ones rot. I’ve also inoculated edible mushrooms into the stumps of the trees I cut, which will produce for years and then spread to others with the fallen wood. These are all examples of playing the long game, using the small and slow design principle.

Principle 10 is “Use and Value Diversity.” You can see we’ve got housing, gardens, wind power, water storage, composting, greywater, forestry, orchards, and now I’ve added in rotational grazing of animals, both here and in the orchard. I’ve also added more trees and gardens around the homestead, and fish to the pond. Diversity is one of the key aspects of Permaculture. We want to conserve diverse native habitats, and make our human habitats rich with an abundance of many productive elements. Diversity is also resilience: if one part of our system fails, there are others that will thrive.

Principle 11 is “Use Edges and Value the Marginal.” I’ve added edible hedgerows around the animal paddocks, and along the road. I’ve also added bamboo down below the pond, which will be sub-irrigated by water that seeps down. The edges and margins are great locations to add more productive species or habitat zones. And I can use them to create further layers of productivity.

Principle 12 is “Creatively Use and Respond to Change.” I noticed that with the orchards and hedgerows growing in, the forest soils growing spongier from mushroom inoculation, and the soils building from the animal rotation, water has begun to move much more slowly down the hillside. So much so, that this area at the bottom of the hill is becoming somewhat of a marsh. Well, that wasn’t what I planned, but I’m going to creatively use that change, and I’m going to carve out some low areas that’ll stay really wet, which I can use to grow edible wetland plants, and then simultaneously build up these peninsulas, full of edge to grow productive trees which will get their roots down in this water table. Wow, I didn’t even see that yield coming, but there you have it. The Permaculture principles in action!