

Sixteen Things You Should Know About Life

From: *The Way Life Works* Mahlon Hoagland & Bert Dodson - Chapter 1 Patterns

“To see life as a whole... requires a shift in the way we normally look at things. We must look at the individual insect or tree or flower and seek a more panoramic perspective. We need to think as much about **process** as we do about **structure**. From this expanded viewpoint, we can see life in terms of patterns and rules. Using these rules life builds, organizes, recycles and re-creates itself.”

Sixteen Life Patterns: apply from the smallest organism to the most complex. These invite us to look at life not only from the perspective of what makes each living thing unique and different, but also what it is that unites all.

1. Life Builds from the Bottom Up

Example: single cell to multi-cellular organisms. Bacteria invented all Life's essential chemical systems. “We exist as ‘corporate elaborations’ composite communities of cells built out of the accomplishment of our one-cell forbearers.” **How can life teach you/us to revisit the initial dream and vision of our organization/school so we can recapture the energy of our forbearer's accomplishments & build on it?**

2. Life Assembles Itself into Chains

Example: chain molecules fall into two main classes: information chains, which store and transmit information and working chains which carry out the business of living. (Other examples: Morse code, a sentence, computer language.) **What are the information chains and the working chains in our organization/school?**

3. Life Needs an Inside and an Outside

Example: Musk oxen when threatened gather in a circle: heads and horns to the outside and tails to the inside thus sheltering their vulnerable calves in the center. (Other examples: cell membranes, bark, Earth's atmosphere). **How are we learning or can learn from Nature how to protect the most fragile in our community and create conditions conducive to life for them?**

4. Life Uses a Few Themes to Generate Many Variations

Example: Life hangs on to what works but it also likes to tinker and explore. When cells divide they do so in **concentric rings** (tree trunks); **spirals** (shell fish); **radials** (flowers); **branches** (human lungs). Thus simple rules used in different contexts, produce great variety. **When we look at our organization/school and its systems what are the themes that predominate? How helpful, supportive or redundant are they?**

5. Life Organizes with Information

Example: DNA stores information in its genes which contain information on how and when to make proteins. The rest is up to the proteins. **How is information organized and stored in our organizational/school system?**

6. Life Encourages Variety by Reshuffling Information

Example: Sexual reproduction. **How can we reshuffle information that results in new ways of communication among us, new processes that support life?**

7. Life Creates with Mistakes

Example: Elephants use to have smooth skin, something happened and the skin cells began to assemble into wrinkly and bumpy patterns. This type of skin provides more surface thus helping the elephant with overheating by exposing more surface to air and water. This example changes ones attitude toward mistakes, does it not? **How can Nature teach us to look at our “mistakes” as building blocks for a more whole organization/school?**

8. Life Occurs in Water

Example: Water has two hydrogen molecules (a positive charge) and one oxygen molecule (a negative charge). This gives water high viscosity and high surface tension (i.e. its wetness). Water is most suited for encouraging living chemistry. **How can we learn from Nature to eliminate whatever is toxic in our organization/school community?**

9. Life Runs on Sugar

Example: Glucose is life’s central sugar. It is the fuel that drives the engine of life and the basic material from which much of life is constructed. Each year plants, marine algae and certain kinds of bacteria convert 100 billion tons of CO₂ and hydrogen extracted from water into sugar, using energy from sunlight in a process called photosynthesis. The waste product of this massive conversion is oxygen. **What is the “sugar” that helps run our organization/school?**

10. Life Works in Cycles

Example: Life loves loops. Circulation of blood, nervous system sense and response, menstruation, migration, mating, cycle of birth and death. All looping back to a new start. Loops provide self-correcting tendencies. Information flows throughout the system and makes necessary and purposeful adjustments along the way. **How can we create feedback loops in our organization/school not only for efficiency, but also for quality of life?**

11. Life Recycles Everything It Uses

Example: manure, hermit crabs, carbon dioxide to oxygen. Recycling is so smooth that there is little distinction between production and consumption and between waste and nutrient. **How can we “recycle” or “upcycle” the human and material resources in our organization/school?**

12. Life Maintains Itself by Turnover

Example: Each day about 7% of our own molecules are turned over. Thus 100% have “turned over” in about two weeks. This also provides flexibility. “Keeping a living system in a state of high organization necessitates the continuous building and destroying of its parts”. **How can we build and rebuild our organization/school to create conditions conducive to life?**

13. Life Tends to Optimize Rather than Maximize

Example: Less is better. Occasionally organisms may drift from optimizing to maximizing from adaptation to addiction. Humans try to maximize wealth, pleasure, security and power. However one value that life maximizes is the transfer of its DNA to the next generation. **What do we need to minimize or maximize in order to optimize our organization/school?**

14. Life Is Opportunistic

Example: a rotting tree in the forest is the beginning of an explosive new stage: mosses & lichens; carpenter ants, beetles and mites; fungi, roots and microbes; insects, spiders; sidling trees and shrubs; moles and shrews feed on the mushrooms and truffles. Thus life flourishes in the most challenging conditions. Opportunists don’t wait around for the right conditions. They adapt to what is, and they make use of whatever they find around them. **How can we adapt to present conditions in order to pass on our “DNA” to future generations?**

15. Life Competes Within a Cooperative Framework

Example: wading birds feeding side by side, each eats a different diet using its unique bill. Nature has a desire to get along and each species occupies its own niche in the ecosystem where they live. Behaviors: symbiosis, mutualism. **How can we emulate Nature’s cooperative patterns?**

16. Life is Interconnected and Interdependent

Example: Coral reef – a multilevel integrated system: crabs encourage sponges to grow on their backs as a protection from octopi; cleaner fish and shrimp remove parasites

from predator fish, even entering their gills and mouths with complete safety. The reef is an integrated system. Patterns of organization are what survives and evolves. Everything in the reef connects with everything else. Any successful change of strategy by one organism will create a ripple of adjustments in the reef community. Called coevolution, this is the kind of creative force at work everywhere life has taken hold.

Humans are the only species capable of self-reflection. As such we have the responsibility and a tremendous opportunity to help bring about “one human family, one earth community with a common destiny”. How can Nature guide us to move in this direction?

Earth Charter Preamble

We stand at a critical moment in Earth’s history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth Charter The Way Forward

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

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