

Biomimicry Retreat Sisters of Earth

Monday, March 27, 2023

LIFE CREATES CONDITIONS CONDUCIVE TO LIFE

WE-Site

- What did Nature/Life teach us this past week?
- What are we noticing?



Industrial

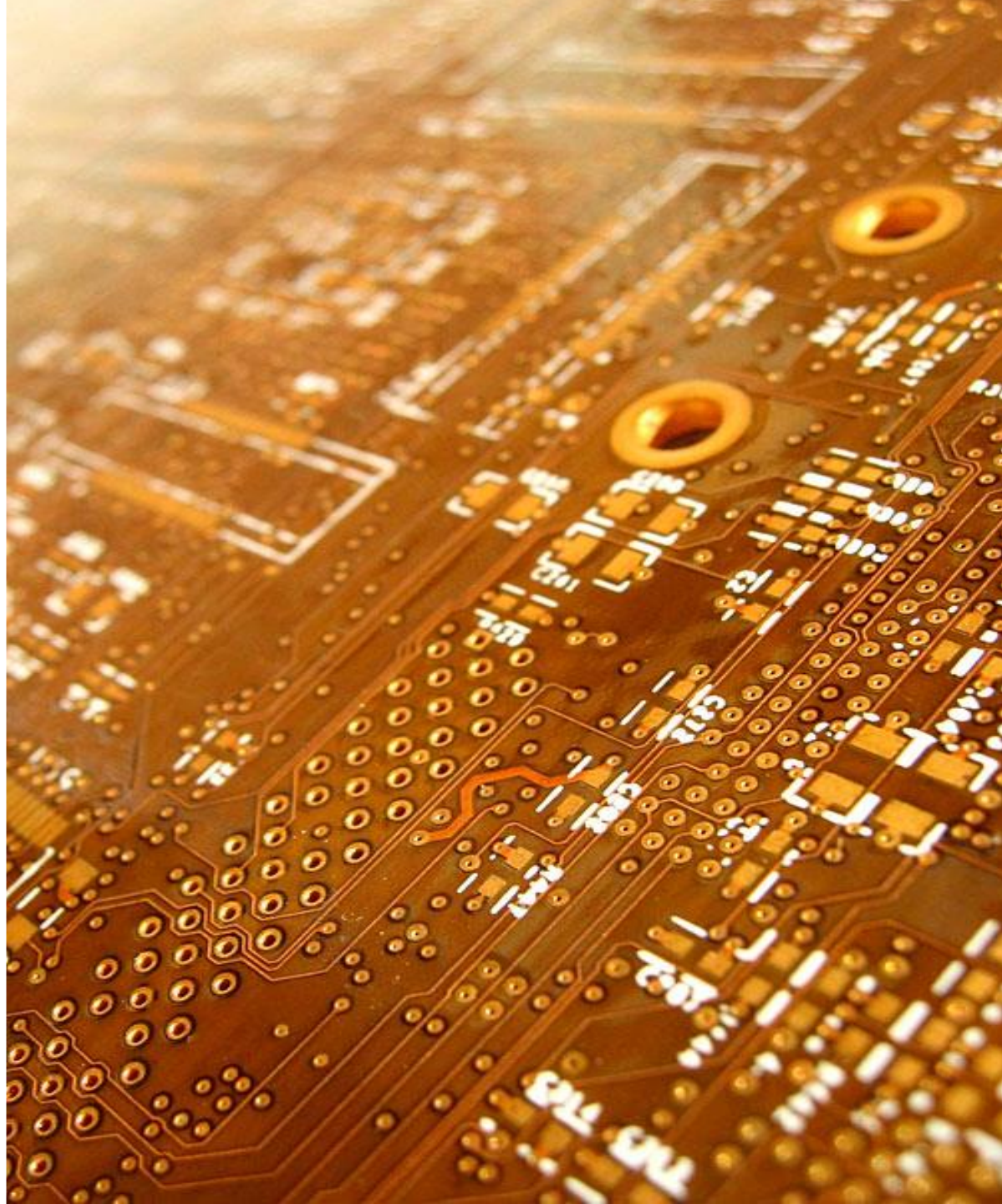
- Linear
- Win-lose
- Extraction/exploitation
- Technology controls people/nature
- Mechanistic
- Remote
- Uniformity
- Control manipulate
- Economy of scale
- Cash flow...

Ecological Societies

- ✓ Cyclical
- ✓ Win-win
- ✓ Symbiosis/Harmony
- ✓ Nature/People-designed technology
- ✓ Organic
- ✓ Community/context oriented
- ✓ Celebrate diversity
- ✓ Nurture Creativity/Feedback
- ✓ Ecology of scale
- ✓ Life Flows

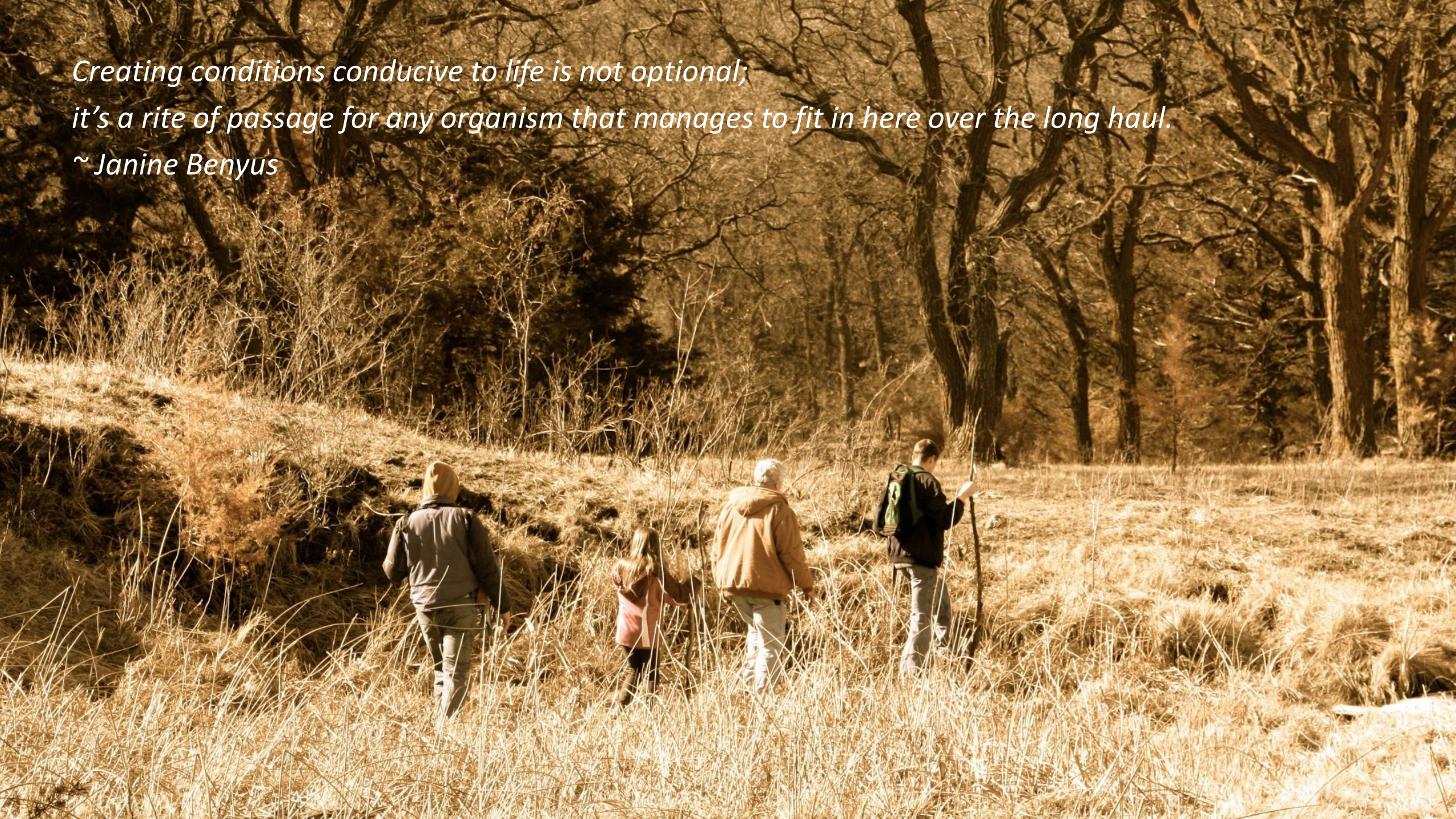






*Creating conditions conducive to life is not optional;
it's a rite of passage for any organism that manages to fit in here over the long haul.*

~ Janine Benyus



Life's Principles

- ❖ Lessons from Nature
- ❖ Design lessons from Nature
- ❖ Life is interconnected and interdependent
- ❖ Life has evolved a set of strategies that have sustained it over 3.8 billion years
- ❖ These principles represent overarching patterns found amongst the species thriving and surviving on Earth

Life's Principles (cont.)

- ❖ By learning from these deep design lessons, we can model innovative strategies,
- ❖ measure our designs against these sustainable benchmarks
- ❖ and allow ourselves to be mentored by Nature's genius using this principles as our inspirational ideals.

LIFE CREATES CONDITIONS CONDUCTIVE TO LIFE

Life's principles

EVOLVE TO SURVIVE

Continually incorporate and embody information to ensure enduring performance.

Replicate Strategies that Work

Repeat successful approaches.

Integrate the Unexpected

Incorporate mistakes in ways that can lead to new forms and functions.

Reshuffle Information

Exchange and alter information to create new options.

ADAPT TO CHANGING CONDITIONS

Appropriately respond to dynamic contexts.

Incorporate Diversity

Include multiple forms, processes, or systems to meet a functional need.

Maintain Integrity through Self-Renewal

Persist by constantly adding energy and matter to heal and improve the system.

Embody Resilience through Variation, Redundancy, and Decentralization

Maintain function following disturbance by incorporating a variety of duplicate forms,

BE LOCALLY ATTUNED AND RESPONSIVE

Fit into and integrate with the surrounding environment.

Leverage Cyclic Processes

Take advantage of phenomena that repeat themselves.

Use Readily Available Materials and Energy

Build with abundant, accessible materials while harnessing freely available energy.

Use Feedback Loops

Engage in cyclic information flows to modify a reaction appropriately.

Cultivate Cooperative

INTEGRATE DEVELOPMENT WITH GROWTH

Invest optimally in strategies that promote both development and growth.

Self-Organize

Create conditions to allow components to interact in concert to move toward an enriched system.

Build from the Bottom Up

Assemble components one unit at a time.

Combine Modular and Nested Components

Fit multiple units within each other progressively from simple to complex.

BE RESOURCE EFFICIENT (MATERIAL AND ENERGY)

Skillfully and conservatively take advantage of resources and opportunities.

Use Low Energy Processes

Minimize energy consumption by reducing requisite temperatures, pressures, and/or time for reactions.

Use Multi-Functional Design

Meet multiple needs with one elegant solution.

Recycle All Materials

Keep all materials in a closed loop.

Fit Form to Function

Select for shape or pattern based on need.

USE LIFE-FRIENDLY CHEMISTRY

Use chemistry that supports life processes.

Break Down Products into Benign Constituents

Use chemistry in which decomposition results in no harmful by-products.

Build Selectively with a Small Subset of Elements

Assemble relatively few elements in elegant ways.

Do Chemistry in Water

Use water as solvent.

Adapt to changing conditions...

Incorporate diversity....

Alpine wildflowers bloom at different times in the season. The greater the diversity of species in a meadow, the higher the chance a passing pollinator will find life-sustaining nectar throughout the summer.

How can you incorporate diversity, increasing success in a variety of conditions?



Be locally attuned and responsive

Use feedback loops

During childbirth, the body releases oxytocin, a hormone that eases the mother's pain while also increasing contractions, which then releases more oxytocin. The 'feedback loop' of signal and response continues until the baby is born.

Can you name some feedback loops you use that result in effective responses?



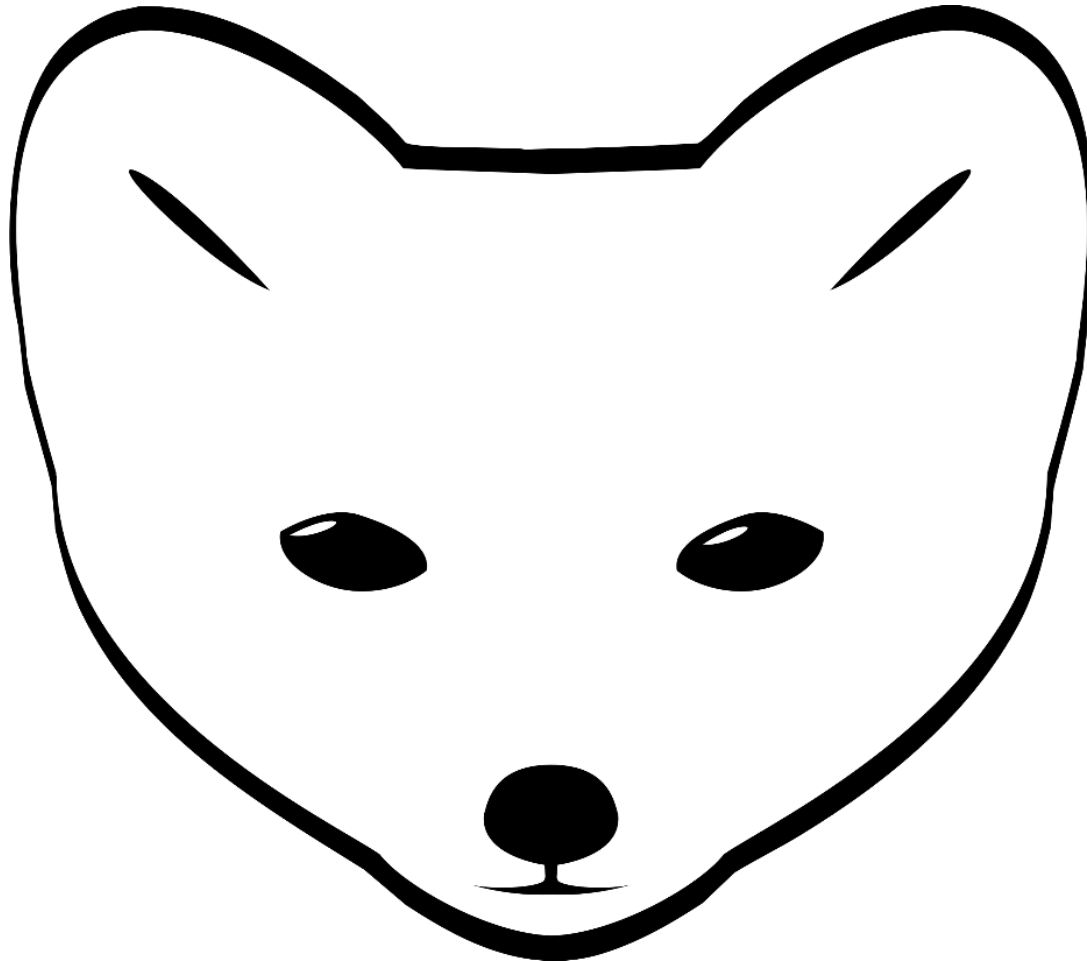
Cooperative Behavior

- Consider cooperative behaviors
 - Mutual benefits



Evolve to Survive: Integrate the unexpected

How can you integrate 'mistakes' that may provide surprising benefits?



Use short, simple feedback loops

Engage in cyclic information flows to modify a reaction and turn to a response appropriately





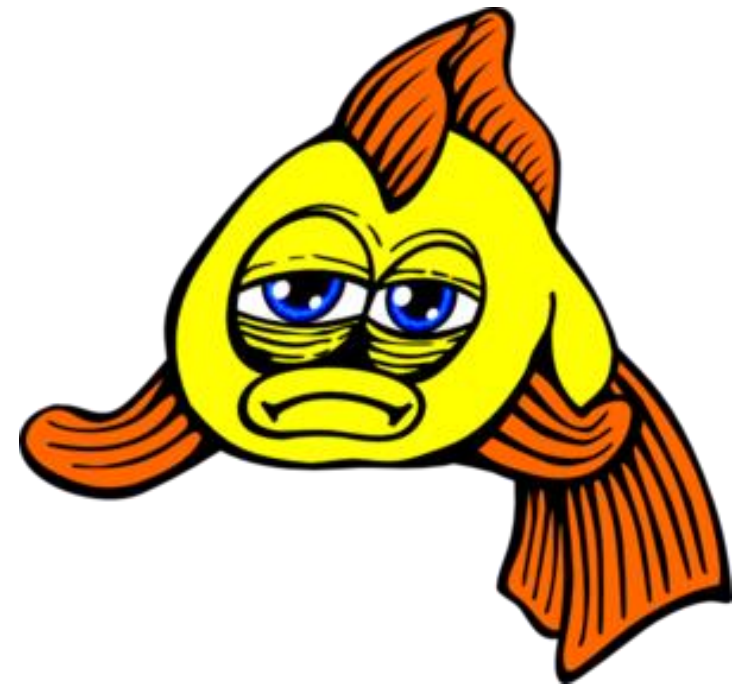
Humans Trying to act like birds!



Photo credit: Bowine Wijffels

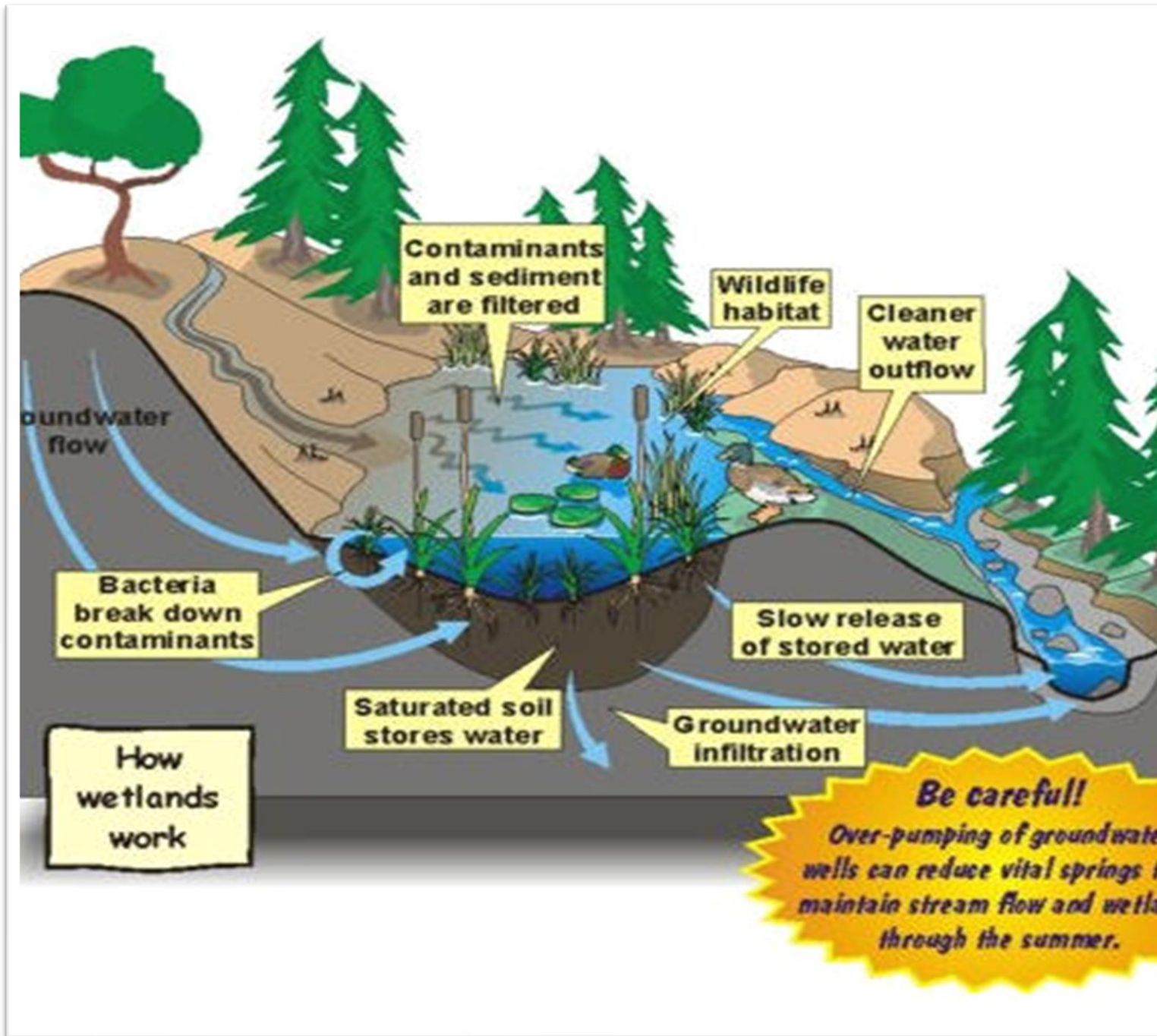
MUTUALISM
(+) (+)





Good news!

- Life has spent 3.8 billion years learning
- Life has come up with some amazing systems
- Life has a set of Life's Principles and we can find them in this wetland ecosystem



A group of people are riding orange stationary bikes in an outdoor public space. The bikes are arranged in a line, and the riders are engaged in conversation. The scene is bright and sunny, with shadows cast on the ground. In the background, there are other people, tents, and a modern building with large windows. The text "an eco-system is about relationships ...nature is always collaborating" is overlaid in white on the image.

an eco-system is about relationships
...nature is always collaborating

Review

- We're moving from an **industrial era** to an **ecozoic era**, and we, our communities and organizations must adapt.
- Nature can be an inspiration, a mentor, and a model in this process.
- This shift requires a whole-systems approach: structures, behaviors, hearts and minds.



Life's Principles for Evolution

As we ponder we:

- ① Affirm what is working well
- ② Integrate the unexpected
- ③ Reshuffle information...mix it up
- ④ Let go of what doesn't work

We do so with integrity, in a reflective collaborative way, with humor and humility. Knowing that Nature is willing to teach us.

What are you thinking, feeling?

- TIME TO PONDER



How do we...

- Invite Nature to be a **teacher**, a **mentor**, and a **model** for our spiritual journey?...
- I-site What am I learning?
- WE-site What are we learning?
- Treasure these in your hearts...





What a Wonderful World!

- ✓ Continue with your 20 minute (or more) I-site which we will use as our opening ritual/prayer next Monday
- ✓ For those in the Catholic Christian tradition who are observing Lent, what connections can you make to this treasure of your spiritual journey?

https://www.youtube.com/watch?v=rBrd_3VMC3c