Evaluate: Nature's Unifying Patterns - Design Checklist

Use this checklist to assess your design against nature's unifying patterns and consider how well-adapted to Earth's operating conditions it is (or could be).

**Nature uses only the energy it needs and relies on freely available energy.**
- Can you manufacture locally?
- Can you incentivize user shifts in energy usage?
- Can you build on existing code, tools, or templates?
- How can you leverage the community?
- Are you utilizing networks and experts to your advantage?

**Nature recycles all materials.**
- Can you design to the recycling infrastructure? Incentivize recycling?
- Can you close a technical or biological loop?
- Can you make use of a current waste stream?
- Is your product designed for disuse, disassembly, and reconfiguration?

**Nature is resilient to disturbances.**
- Can your company withstand disturbance while maintaining function? (E.g. Do you have the right experience/employees/trust?)
- Can your product/company heal after a disturbance?
- Does your product/company incorporate diversity and/or redundancy by design?
- Are information and resources decentralized and distributed?

**Nature tends to optimize rather than maximize.**
- Can you accomplish multiple functions with one design/business element?
- Can you use information rather than material and energy?
- Are you leveraging information to take the energy path of least resistance? (e.g. stakeholder/customer feedback, analytics, research, etc.)

**Nature rewards cooperation.**
- Can you reframe competitive advantage to one informed by nature's strategies?
- Does your company foster symbiotic, cooperative, community-based relationships?
- Will the success of your design/company create conditions conducive to all life, human and otherwise?
- Does your design/company cooperate with other parts of the system to make the most of what is available?
- Does your design/company create opportunities (niches) for more life?
Nature runs on information.
- Are you using feedback loops to inform marketing and branding?
- With your customers?
- Within your technology?
- Within your company? (personnel)
- Are you looking at the right data or measuring the right metrics?
- Are there simple rules you can follow to lead to complex results?
- Are you fostering emergent behavior?
- Are mistakes encouraged as a means of continual idea generation?

Nature uses chemistry and materials that are safe for living beings.
- Is your solution built to shape?
- Is chemistry done in water?
- Are processes done at ambient temperatures and pressures?
- Is manufacturing based on self-assembly?
- How are things along your supply and customer chain disposed of?
- Are your company policies life-friendly?
- Are you avoiding the most toxic/most polluting materials?

Nature builds using abundant resources, incorporating rare resources only sparingly.
- Are you using simple (common) building blocks in your design? In your business model?
- Does your design reuse materials or use readily available life-friendly materials?
- Are you leveraging common skills?
- Are you tapping an abundant market?

Nature is locally attuned and responsive.
- What materials/resources can you access within your own "backyard"?
- Are you taking into account cyclic factors?
- How can you design your business model to be responsive to changing conditions? (Technology, markets, climate, etc.)
- How well do you understand your customer and partner needs?

Nature uses shape to determine functionality.
- Can you manufacture by building to shape?
- Does the design use shape and information rather than materials and energy?
- How can you make the most of limited resources to accomplish multiple functions?
- How can your company be somewhat self-organizing?