Today’s webinar:

Applying Nature’s Unifying Patterns
JANINE’S LIST

- Nature runs on sunlight.
- Nature uses only the energy it needs.
- Nature fits form to function.
- Nature recycles everything.
- Nature rewards cooperation.
- Nature banks on diversity.
- Nature demands local expertise.
- Nature curbs excesses from within.
- Nature taps the power of limits.

OTHER LISTS
OUR LIST: Nature’s Unifying Patterns

• Builds on Janine’s original list

• Not intended to be definitive or exhaustive of all of life’s patterns.

• Simplified for our design challenges to capture the patterns we feel are most relevant and applicable.

• We call these patterns “unifying” because examples can be found broadly across the majority of life on Earth, and they have profound implications for what and how we design.
Nature’s Unifying Patterns are NOT...
Nature’s Unifying Patterns ARE…
1. Nature uses only the energy it needs and relies on freely available energy.
3. Nature is resilient to disturbances.
7. Nature uses chemistry and materials that are safe for living beings.
8. Nature builds using abundant resources, incorporating rare resources only sparingly.
9. Nature is locally attuned and responsive.
10. Nature uses shape to determine functionality.
Nature uses only the energy it needs and relies on freely available energy.
Nature recycles all materials
Nature is resilient to disturbances.
Nature optimizes rather than maximizes.
Nature rewards cooperation.
Nature runs on information.
Nature uses chemistry and materials that are safe for living beings.
Nature builds using abundant resources, incorporating rare resources only sparingly.
Nature is locally attuned and responsive.
Nature uses shape to determine functionality.
10 of Nature’s Unifying Patterns

1. Nature uses only the energy it needs and relies on freely available energy.
2. Nature recycles all materials
3. Nature is resilient to disturbances.
7. Nature uses chemistry and materials that are safe for living beings.
8. Nature builds using abundant resources, incorporating rare resources only sparingly.
9. Nature is locally attuned and responsive.
10. Nature uses shape to determine functionality.
ACTIVITY

NAME THE PATTERN
What pattern do these examples best represent?

A. Nature optimizes rather than maximizes.
B. Nature is locally attuned and responsive.
C. Nature rewards cooperation.
D. Nature is resilient to disturbances.
What pattern do these examples best represent?

A. Nature optimizes rather than maximizes.
B. Nature is locally attuned and responsive.
C. Nature rewards cooperation.
D. Nature is resilient to disturbances.
What pattern do these examples best represent?

A. Nature recycles all materials.
B. Nature optimizes rather than maximizes.
C. Nature uses only the energy it needs and relies on freely available energy.
D. Nature rewards cooperation.
What pattern do these examples best represent?

A. Nature recycles all materials.
B. Nature optimizes rather than maximizes.
C. Nature uses only the energy it needs and relies on freely available energy.
D. Nature rewards cooperation.
What pattern do these examples best represent?

A. Nature is resilient to disturbances.
B. Nature optimizes rather than maximizes.
C. Nature builds using abundant resources, incorporating rare resources only sparingly.
D. Nature uses chemistry and materials that are safe for living beings.
What pattern do these examples best represent?

A. Nature is resilient to disturbances.
B. Nature optimizes rather than maximizes.
C. Nature builds using abundant resources, incorporating rare resources only sparingly.
D. Nature uses chemistry and materials that are safe for living beings.
PUTTING THE PATTERNS INTO PRACTICE
EXAMPLE

1. Break down product into beginning constituents
2. Recycle all materials

The suggested material for this structure is mainly recycled and processed wood such as particle boards or OSB Panels which are hardly compressed to satisfy structural demands. This material is gained from the nature and returns easily to it.

9. Replicate strategies that works

In desert architecture, curvilinear geometry is commonly applied as it has an appropriate behavior against the sunlight. This is not only found in architecture but the nature of desert applied this geometry as a strategy that is proved to be useful. Also, as a traditional method, building a central court in buildings, makes a micro-climate in which the thermal conditions will be facilitated for life.

10. Integrate the unexpected

Wind is the change agent for the desert. Sand and dust are carried by the wind easily and change the form of sand hills, erode the stones and move dried plants. The scrub in desert helps us in making life possible in desert as it eases the conditions by stabilizing the sand and soil and absorbs the dust in the air besides shading on the floor of the desert.
BIOMIMICRY TOOLBOX

Key Sections to Explore:

CORE CONCEPTS

• Nature’s Unifying Patterns
• Earth’s Operating System

NOTE: you must be registered in order to access the Toolbox.