Using Biophilia to Solve Today's Workplace Design Challenges

eMERSion

DESIGN

ARCHITECTURE

INTERIORS

ECOCONSULTING

PLANNING

ENGINEERING

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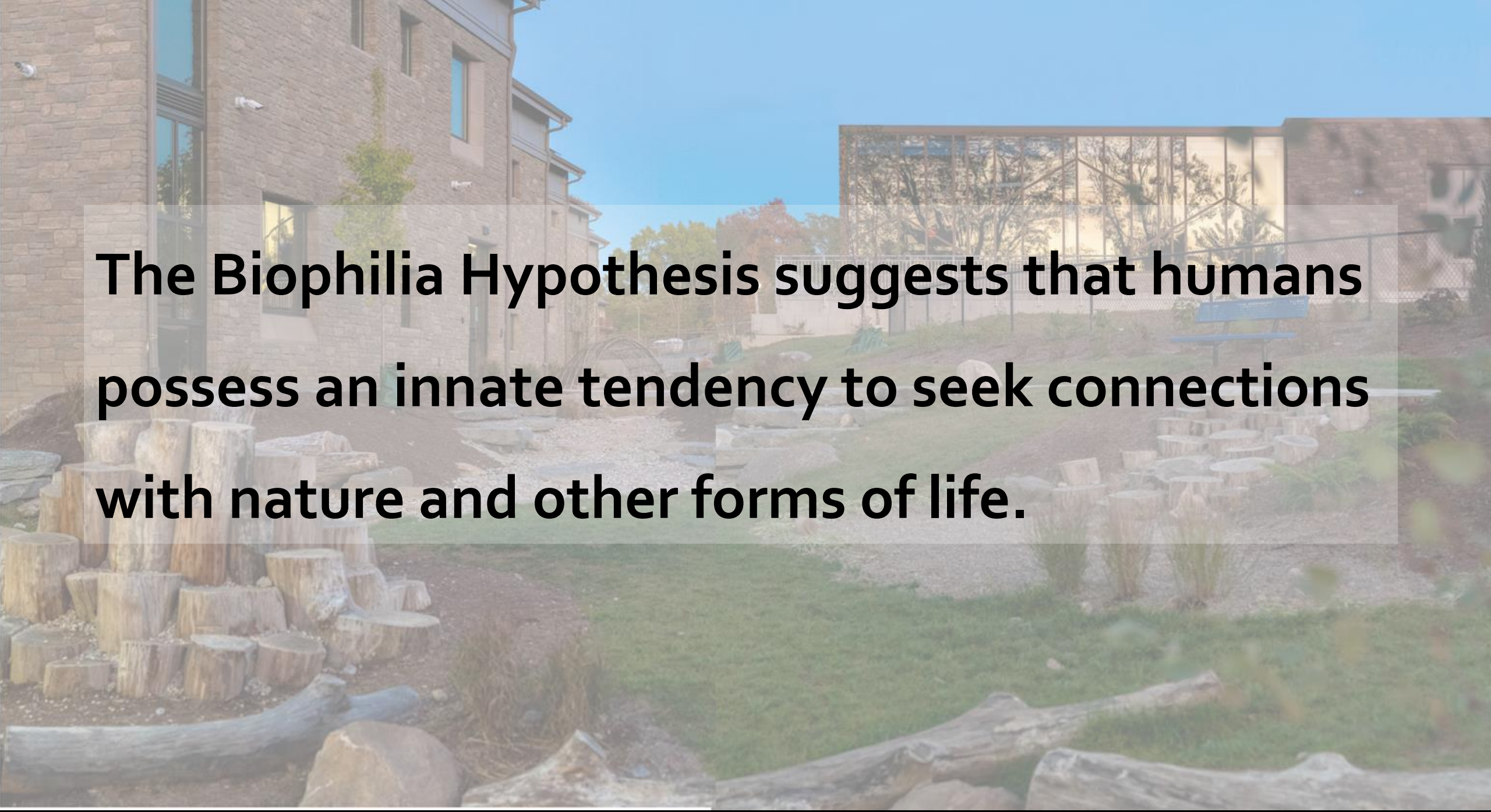
Brief overview of Biophilia.

Identify design challenges in today's workplace environments.

Understand how to utilize the Biophilic Card exploration technique.

Learn how to use nature to solve design problems.

Learning objectives. Typically, a full 8-hour workshop to establish Biophilic goals and outcomes that address each project's opportunities and challenges.



The Biophilia Hypothesis suggests that humans possess an innate tendency to seek connections with nature and other forms of life.

This is about the human experience. Some ties into saving the natural world, but this is about human health and performance.

Project Initiation

Share
Biophilic Design Framework, desired outcomes and expectations with design team

Project Kickoff

Develop
Biophilic Design Intent

Prioritize
which biophilic design elements to focus on

Identify
additional stakeholders and subject matter experts

Biophilia Goal

Schematic Design

Onboard
additional experts and stakeholders

Develop
biophilic design strategies and IEQ integration

Loop back
to confirm adherence to biophilic design intent and design principles

Preliminary Design Strategy

Design Development

Coordinate
with IEQ plans

Loop back
to confirm adherence to biophilic design intent and design principles

Preliminary Plans & Illustrations

Final Design Strategy

Construction Docs & Construction

Track
implementation of biophilic design strategies; verify goals

Final Plans & Illustrations

Closeout

Biophilia Closeout Case Study

Biophilia design activities by project phase

What outcomes are you trying to achieve? PURPOSE

Where should these be focused? MOMENTS OF FOCUS

Which tactics or cards does the group suggest and why?

Worksheet

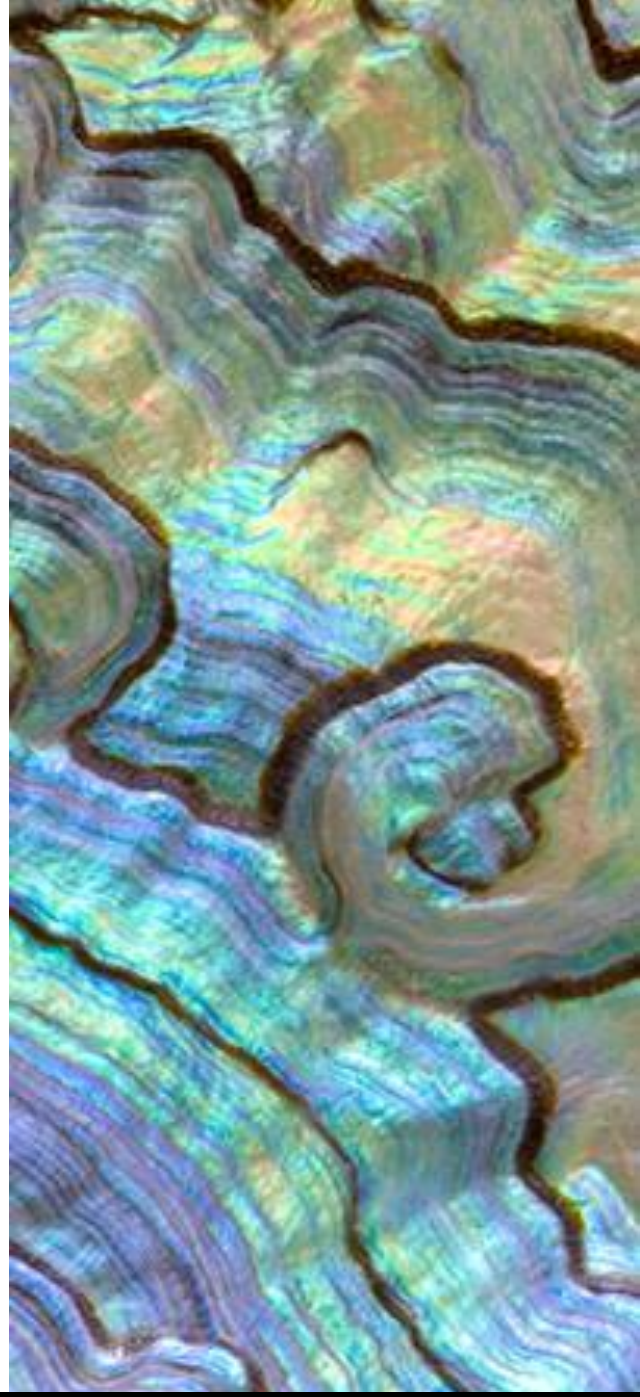
Purpose and Outcome

This tool helps design teams identify their core biophilic design purpose and value propositions.

Identify Purpose Consider the below outcomes that biophilic design projects have used to guide their efforts. Prioritize two or three outcomes your team hopes to achieve by integrating biophilic design. Add any unique outcomes to the blank boxes. Are any of the outcomes related to one another?

Increase employee retention	Reduce healthcare or insurance costs	Reduce climate risk	Increase productivity	Reduce stress	Reduce regulatory risk	Increase collaboration
Increase positive mood	Heighten appreciation of nature	Increase recruitment	Improve cognitive function	Increase brand identity	Decrease turnover costs	Enhance problem solving
Reduce absenteeism	Increase positive media	Increase biodiversity				

Next Step Use the desired outcomes identified for the project with the worksheet to define project specific outcomes that would indicate success. For example, reduce absenteeism by 10% among administrative staff.



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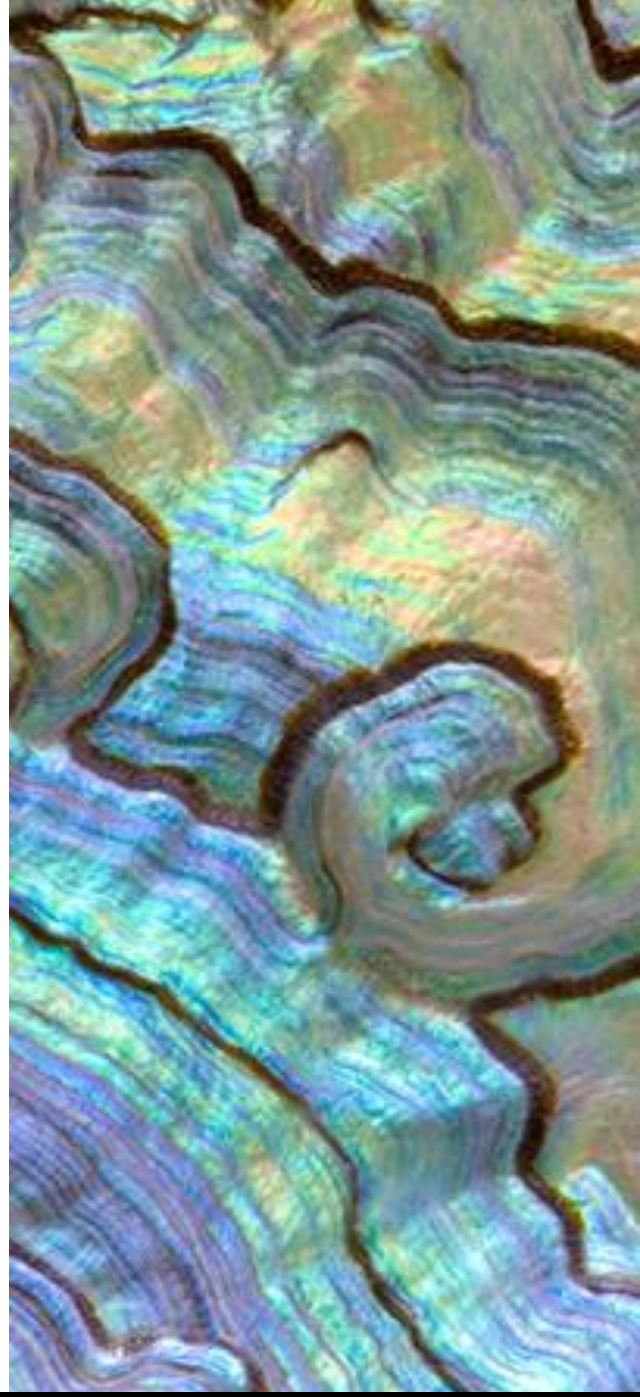

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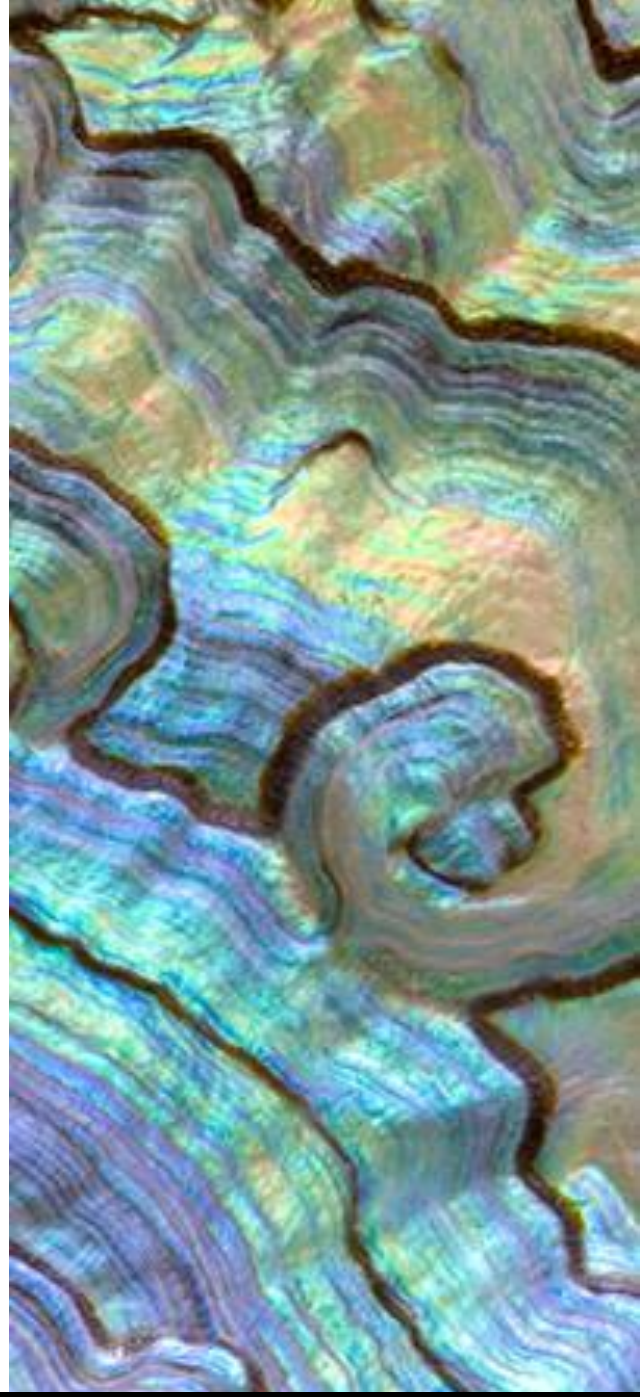

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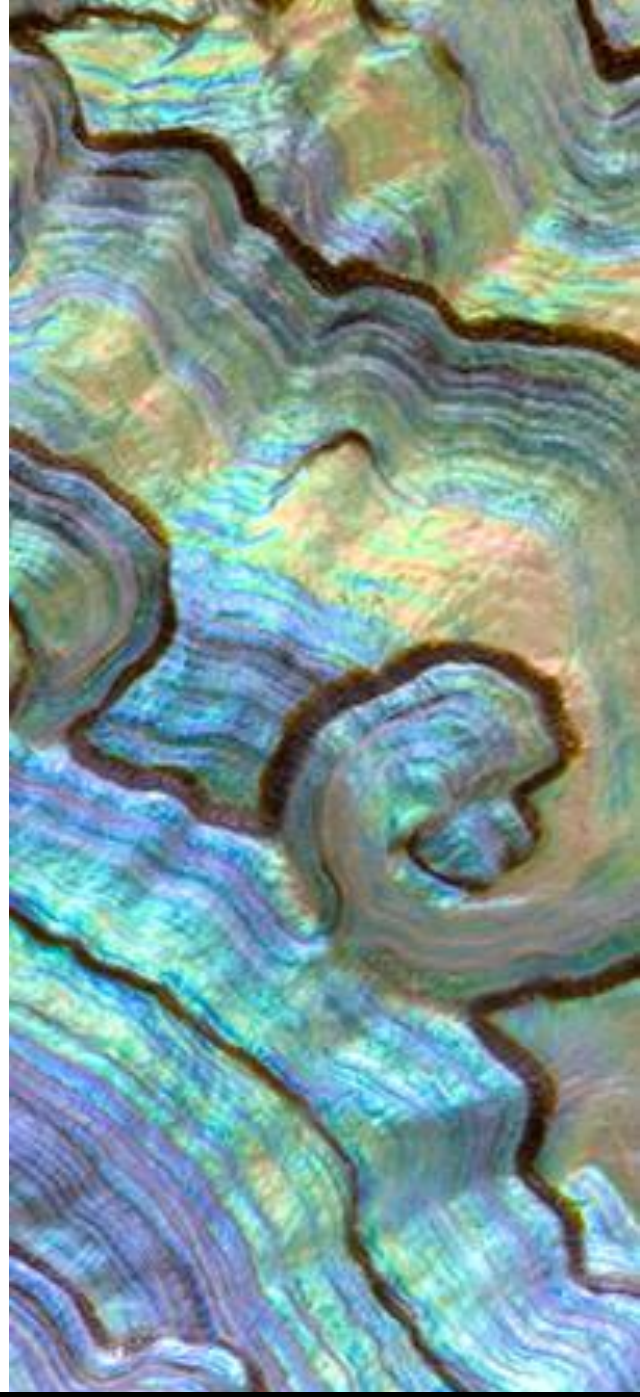

Resource

Moments of Focus

There are often areas of a project where biophilic design can have greater impact. As you define the project scope, these might help you determine places to start, consider the different areas of your project where strategies might align, or interact. You might consider:

Work Environments Support individual focus as well as dynamic team needs	Meeting Spaces Support a variety of privacy and collaboration opportunities	Transitional Spaces Support way-finding and unique connections to place	Food Spots Support through connection to place through food and experience	Outdoor Rest Area Support rest and recovery opportunities in nature	Wellness Spaces Support calm environment and sense of privacy or intended separation
Outdoor Recreation Support playful engagement with surrounding nature	Aesthetic Pleasure Support sensory experiences outdoors that are pleasing	Physical Activity Support structured activities with surrounding nature	Trails & Pathways Support movement of human and nonhuman between spots of attraction	Intellectual Stimulation Support diverse habitat and interaction types	
Conservation & Restoration Support ongoing human engagement to restore habitats	Environmental Education Support engagement of environmental issues of local region	Cultural Enrichment Support cultural connection to the land and practices of place	Safety & Maintenance Support safe exploration and activities of the outdoors.	Transient Common Areas Support experiences that connect people to place more broadly	

Which areas should we focus? *Reduce stress.*

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Worksheet

Discover Place - Learn

Every project location has a unique biological, geological, and cultural history. A project that can connect to these traditions and features of the site will feel 'of the place' and inherently enables better biophilic design outcomes. The goal of this activity is to discover important and meaningful insights about the project and place. This worksheet is intended to prompt understanding about what is critical to the place and how it might impact the biophilic design strategies for the project.

CONSIDER THESE QUESTIONS:

1. What existing qualities of the project site are obvious?

2. What qualities might you leverage or enhance to achieve the project's goals and purpose?

3. What is the regional material palette?

4. Which other senses could come into play: color palette, tactile palette, auditory palette, etc.?

5. How do current occupants (if a built site) respond to both climate and weather? Time of day?

6. How does this ecosystem work? What is unique about it?

7. How can people be connected to the climate and ecosystem of this place?

8. What ecosystem services are available, and what other values do they bring (aesthetic, physical, auditory, etc.)?

Next Step Use what you learn about your project's place to establish biophilic design goals. These goals can be a reminder throughout the process of the potential to design a space that reflects the unique qualities of the place.

Which tactics do we use? Do any of these questions provoke a biophilic response to gain particular outcomes?

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Thumbnails


1
Scale Not Set


2
Scale Not Set


3
Scale Not Set


4
Scale Not Set


5
Scale Not Set


6
Scale Not Set


7
Scale Not Set


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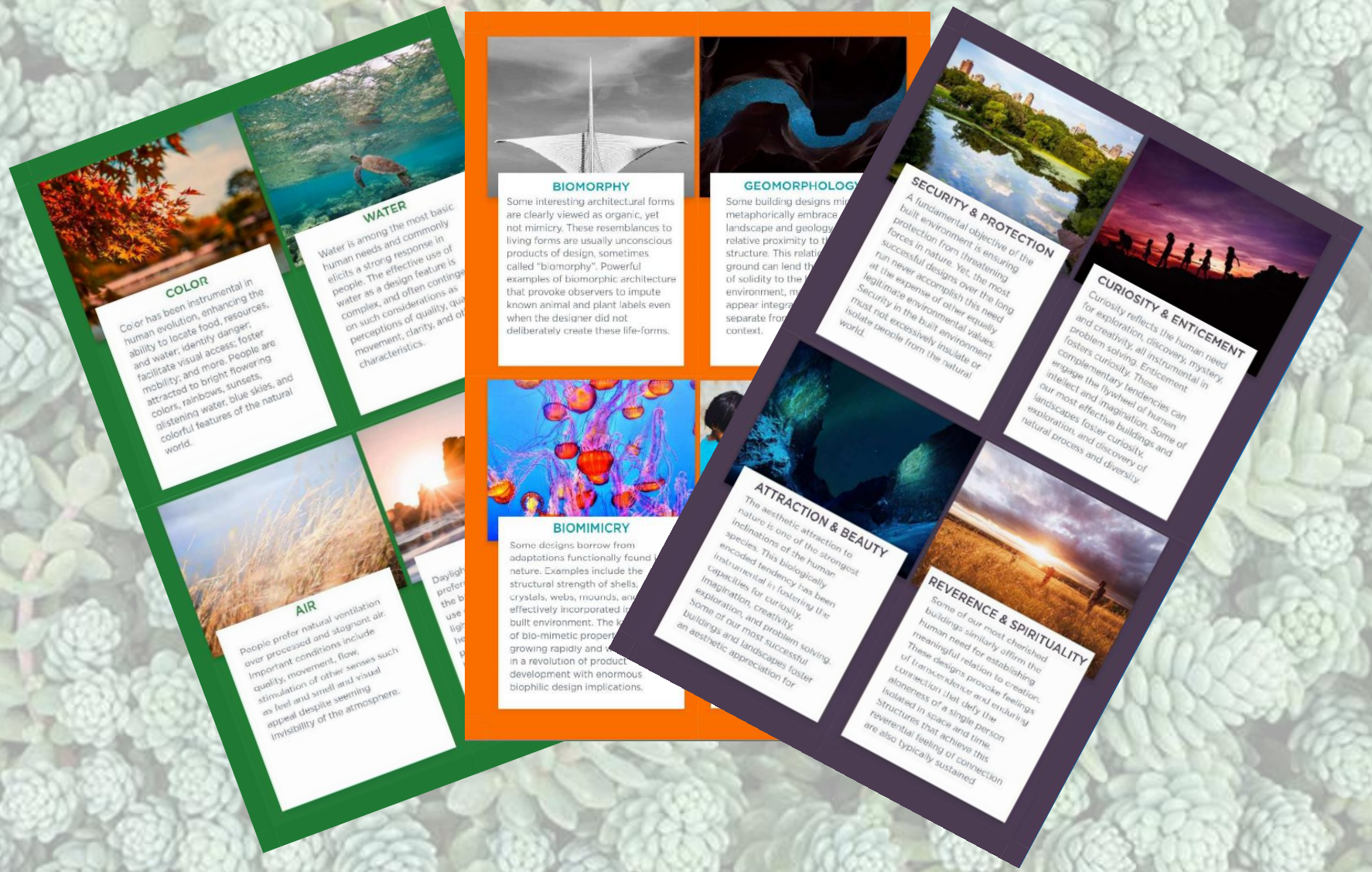


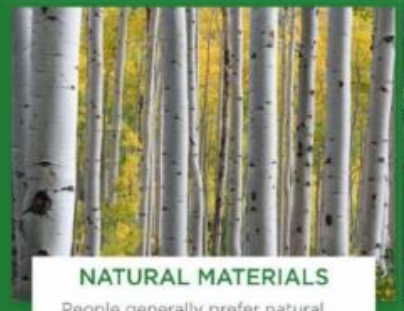
3 Main Categories of Biophilic Design Elements: Direct Nature/ Natural Patterns/ Place & Culture

PLANTS

Plants are fundamental to human existence as sources of food, fiber, fodder, and other aspects of sustenance and security. The mere insertion of plants into the built environment can enhance comfort, satisfaction, well-being, and performance.

ANIMALS

Animals can represent sources of food, resources, protection, companionship, and occasionally as precipitators of fear and danger. Animals in buildings are typically representational rather than literal form, many through the use of ornament, decoration, art, and highly metaphorical disguise. The presence of animal forms, provokes satisfaction, pleasure, stimulation and emotional interest.

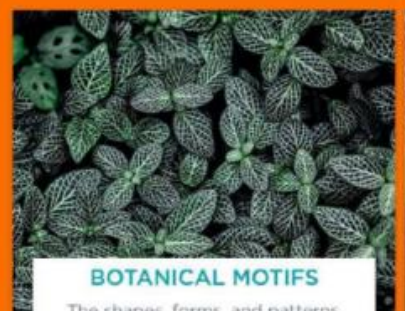


NATURAL MATERIALS

People generally prefer natural over artificial materials, even when the artificial forms are close or seeming exact copies of natural products. Parts of the aversion is likely due to the inability of artificial materials to reveal the organic processes of aging, weathering, and other dynamic features of natural materials, even inorganic forms like stone.

VIEWS + VISTAS

People express a strong and consistent preference for exterior views, especially when the vistas contain natural features and vegetation. These views are often most satisfying when the scale is compatible with human experience - for example, not overly restricted or confined, unfamiliar, or out of scale or proportion (e.g., too large or too high).



BOTANICAL MOTIFS

The shapes, forms, and patterns of plants and other vegetative matter are a frequent and often important design element of the built environment (Hersey 1999). These representations often mimic or simulate plant forms such as foliage, ferns, cones, shrubs, and bushes, both literally and metaphorically.

TREE & COLUMNAR SUPORTS

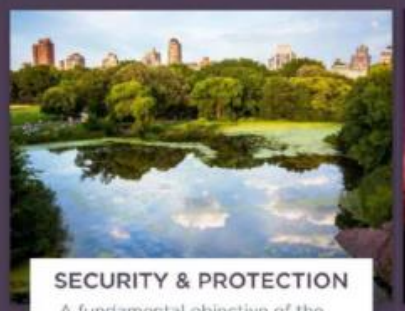
Trees have played a vital role in human affairs as sources of food, building material, paper products, heating supply, and more. The appearance of treelike shapes, especially columnar supports, is a common and often coveted design feature in the built environment. Appealing structures contain tree forms and shapes that frequently include leaf capitals. When revealed in multiples, they sometimes suggest a forested setting.

PROSPECT & REFUGE

Refuge reflects a structure or natural environment's ability to provide a secure and protected setting. In the built environment, this often occurs through the design of comfortable and nurturing building interiors and secreted landscape places. Prospect, on the other hand, emphasizes discerning distant objects, habitats and horizons, evolutionarily instrumental in locating resources, facilitating movement, and identifying sources of danger.

SHELLS & SPIRALS

Simulations and depictions of invertebrate creatures are widespread design features in the built environment, particularly shell and spiral forms of actual and imagined mollusks. The shapes and forms of bees (and their hives), flies, butterflies, moths, and other insects, as well as spiders (and their webs) and other invertebrates, are also common.



SECURITY & PROTECTION

A fundamental objective of the built environment is ensuring protection from threatening forces in nature. Yet, the most successful designs over the long run never accomplish this need at the expense of other equally legitimate environmental values. Security in the built environment must not excessively insulate or isolate people from the natural world.

CURIOSITY & ENTICEMENT

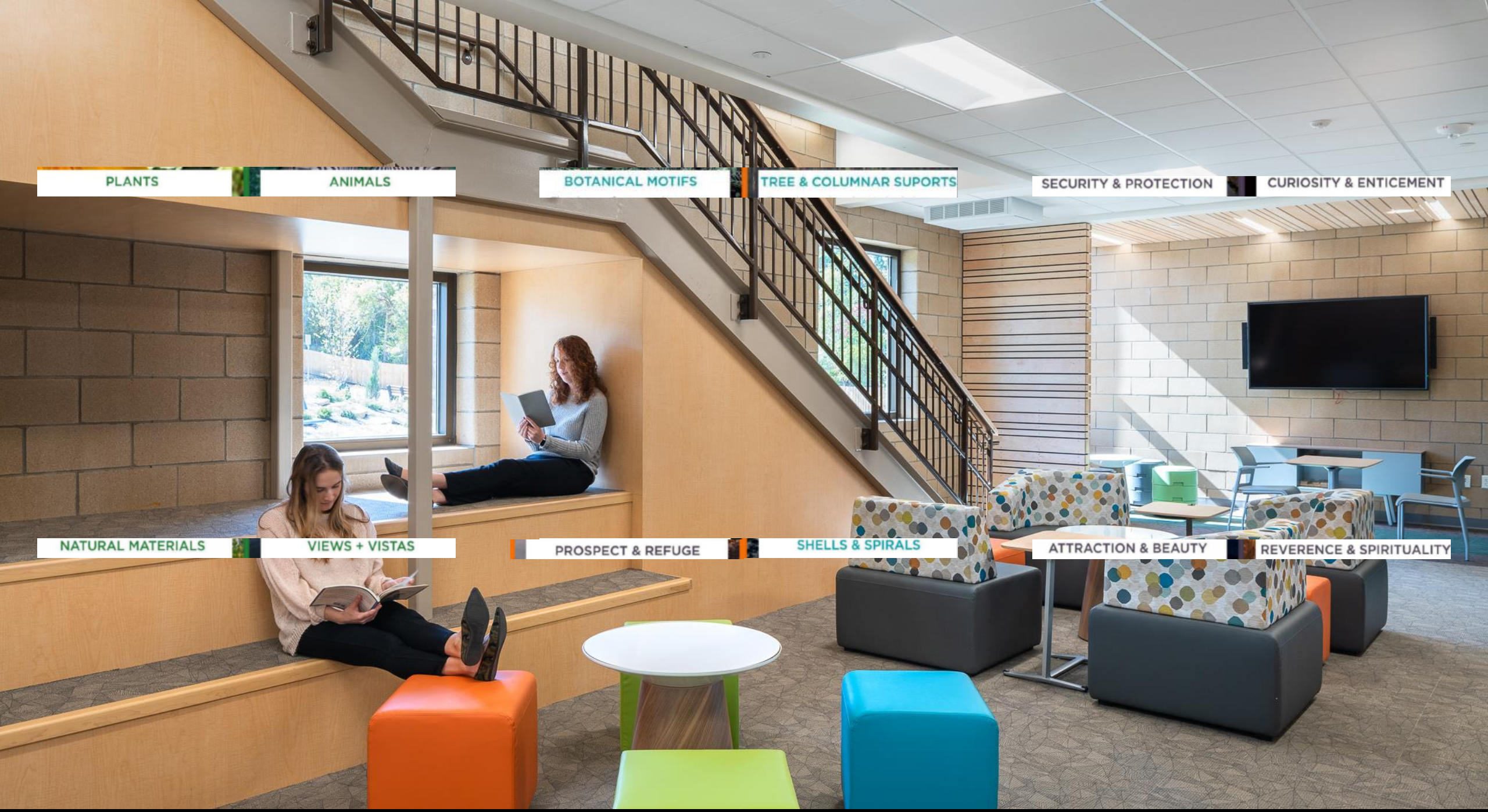
Curiosity reflects the human need for exploration, discovery, mystery, and creativity, all instrumental in problem solving. Enticement fosters curiosity. These complementary tendencies can engage the flywheel of human intellect and imagination. Some of our most effective buildings and landscapes foster curiosity, exploration, and discovery of natural process and diversity.

ATTRACTION & BEAUTY

The aesthetic attraction to nature is one of the strongest inclinations of the human species. This biologically encoded tendency has been instrumental in fostering the capacities for curiosity, imagination, creativity, exploration, and problem solving. Some of our most successful buildings and landscapes foster an aesthetic appreciation for

REVERENCE & SPIRITUALITY

Some of our most cherished buildings similarly affirm the human need for establishing meaningful relation to creation. These designs provoke feelings of transcendence and enduring connection that defy the aloneness of a single person isolated in space and time. Structures that achieve this reverential feeling of connection are also typically sustained



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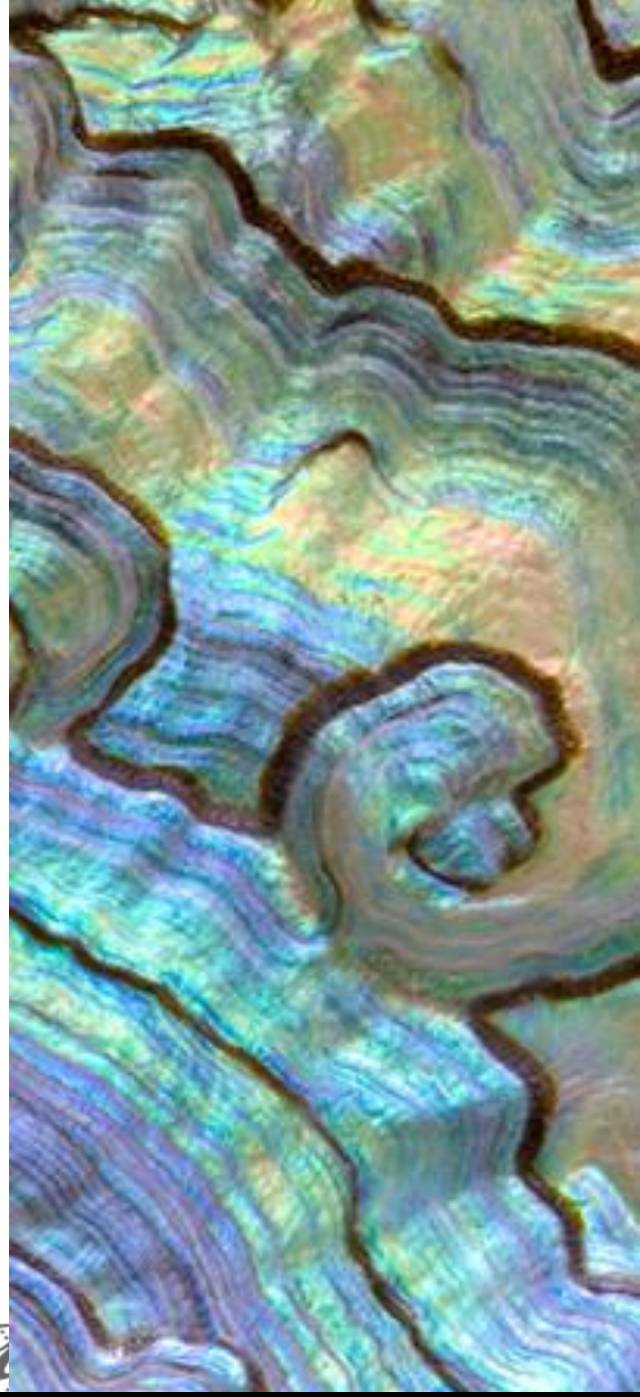

Which OUTCOMES? *Where should they be FOCUSED?* *Which TACTICS and WHY?*