

WHY BIOPHILIC DESIGN?

Unsure of why you should invest in biophilic design? Biophilic design has a number of measured benefits. Below are some statistics taken from *The Economics of Biophilic Design* published by Terrapin, a sustainability consulting firm specializing in biophilic design.

IN HEALTHCARE

Over 50 studies show the benefits of biophilic design in health-care, with the following being a few highlights:

- **perception of pain is less** when daylighting is present
- **opioid / pain medication use is 22% less** in rooms with daylighting
 - \$300B spent on prescription medicine per year, 22% reduction **saves \$66B**
- biophilic design and access to nature increase nursing staff mood, alertness, productivity
- patients with views of nature have, on average, an **8.5% shorter hospital stay**
 - average 5-day stay costs \$25k / patient, 8.5% reduction in stay **saves \$2,125 / patient**

IN SCHOOLS

Schools with daylighting have **3-4% fewer absences**

- cost of an absent student averages **\$25 per day**
- for a school district with 633 students, over \$126k tax-payer money is saved

5-26% improved test scores due to biophilic design, access to nature, and nature education programs

Students in schools with biophilic design or views to nature have **better behavior and higher achievement levels** compared to those without biophilic elements

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IN THE OFFICE

Adding proper daylighting in an office can result in an increase of employee productivity, **saving up to \$2000 per employee per year**. An office with 15 more-productive employees will result in \$30,000 saved

Productivity costs are **112x energy costs**

- salary - 90.3% (productivity)
- energy - .8%
- rent / mortgage - 8.9%

Private sector employers **lost over \$2k per employee** per year due to absences, while public sector employers **lost over \$2.5k in absences**.

10% of employee absenteeism can be eliminated with daylight and views of nature

IN RETAIL

Retail market is \$3.9T, with average consumer spending \$13K on retail a year

Locations with biophilic design are perceived as higher-end

- people **will spend 20% more** on food
- **willing to spend 25% more** on goods (clothes, accessories, etc)

WHAT IS BIOPHILIC DESIGN?

BIOPHILIA

"The love of all that is vital," as defined by psychoanalyst Erich Fromm, biophilia describes our innate love of nature as humans. We can channel this in our interior environments for calmer, happier, healthier, and lower-stress occupants and employees.

HOW TO IMPLEMENT

Biophilic design can be implemented in a variety of ways, ranging from simple, post-occupancy additions to major design considerations.

- Include lighting to fit with circadian rhythms for enhanced performance
- Use materials that evoke nature. ex: wood grain, plants
- Provide daylighting, natural water features, and views of nature
- Provide open areas as well as private space
- Encourage exploration through pathways and artwork
- Provide nature smells or sounds to recreate the outdoor environment
- Add a plant or herb garden!

WHO WE ARE

At CaraGreen, we provide materials that help meet biophilic principles. Check out our selection of sustainable architectural materials on our website or contact your local representative for more information! Some of the materials we offer include Durat Solid Surface, PaperStone, Lapitec Sintered Stone, and Kirei Echopanel acoustic solutions, all of which contribute to healthy spaces.

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EXAMPLES

