

Naturally
Enhanced
Environments



THE BENEFITS OF DAYLIGHTING IN ARCHITECTURAL DESIGN

The Transformative Power of Daylighting in Architecture

Daylighting — the deliberate incorporation of natural light into building design — is one of the most important means through which architects can find harmony between the functionality and the beauty of buildings. The human instinct towards sunlight has defined how and where we have built our internal environments for millennia, from the positioning of the Great Pyramids to the soaring windows that define Gothic architecture. Today, daylighting has taken on increased significance, as scientific research has revealed its fundamental role in human health and wellbeing, as well as the role it plays in creating a more sustainable future.

Daylighting supports human health and wellbeing

Notable modernist architect, Louis Khan, spoke of human's intrinsic ties to natural light when he stated "We are born of light. The seasons are felt through light. We only know the world as it is evoked by light."

Research has shown that exposure to natural light helps regulate circadian rhythms — the body's internal clock — which is essential for sleep, mood regulation, and overall well-being. Disruption to this natural rhythm has been **linked with cognitive impairment and a variety of health conditions such as diabetes, metabolic disorders, sleep issues and depression**, as our body scrambles to adapt to irregular light temperatures and timings. Therefore, ensuring spaces have access to high levels of natural light during the day will help to reinforce occupiers' natural energy rhythms, making them feel more productive and positive during the day, and consequently sleep better at night.



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Exposure to sunlight during the day has also been directly linked to improved health. For example, **it is important for Vitamin D synthesis within the body**, as it supports skeletal and muscular health. Research has also shown that it can help us to heal faster, with **hospital patients in rooms with increased daylighting recovering faster than those in rooms with obstructions**.

Daylight also contains all the colour wavelengths visible to the human eye, making it the ideal lighting source for colour rendition. This can improve overall visual acuity, reducing the risk of eye strain and headaches.

Daylighting enhances aesthetics

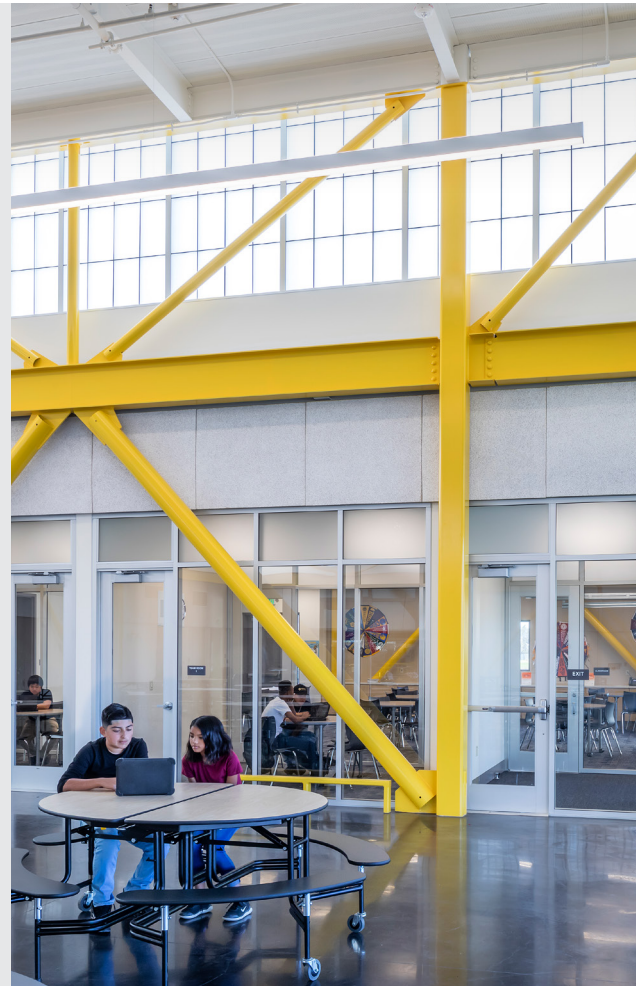
Daylight's impact on people also makes it an invaluable aesthetic tool. Like carefully placed brush strokes on a canvas, light can be used to enhance the visual appeal of spaces and elicit certain responses. It can be used to accentuate materials, highlight architectural details, and even control how people move through and use certain spaces — from creating an open and airy atria designed to help users move seamlessly from the outside world into the spaces beyond, to providing a consistent level of illumination across a workspace to aid productivity and efficiency.

Daylighting reduces energy consumption

By reducing reliance on electrical lighting, thoughtfully-applied daylighting is key to a more energy efficient and therefore lower carbon built environment — contributing to global efforts to address the climate crisis and reducing operational costs for building users. For this reason, natural light is a key part of a number of popular global building standards, including LEED, WELL and BREEAM, all of which prioritize sustainable building practices and occupant health. In this way, daylighting aligns with a broader vision of architecture as a means to not only shelter people in spaces that can inspire them, but also to protect the future of our planet.

Daylighting is crucial to modern architecture

Beyond a mere technical consideration, carefully considered daylighting is a fundamental part of defining how spaces are created and how building occupants are to live within them. With an abundance of daylighting products available, it is possible for architects working in any type of building or within any architectural constraints, to harness this powerful — and freely available — resource within their projects, ensuring buildings that are functional, sustainable and, of course, beautiful.



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