CASE STUDY: IGLOOS OF THE INUITS IN ALASKA

Design for Human Comfort and Resilience

Building materials were pretty much nonexistent; therefore, Inuits had to use snow as a building material to construct their homes when they would go hunting. The size of an igloo can range from a one-person hunting shelter to large, ceremonial structures joined to smaller igloos. Smaller igloos were typically used by the Inuit during their hunting excursions, and larger, more permanent structures were made to form villages for a longer period of time. Snow is a relatively easy material to work with, as it can be packed tightly by the freezing winds in the region. Snow is easy to cut and is durable. A well-constructed igloo with a very small oil lamp and body heat inside can warm an igloo up to 40 degrees above the outside temperature.

A few days after construction of the igloo insulation capabilities increase. Body heat and sun exposure cause the inside of the igloo to melt a little bit. When the igloo is unoccupied during hunting adventures, the melted snow freezes over, turning into ice. As the snow thaws and refreezes, it turns the igloo into solid ice, making it a stable structure and increases the warmth inside.