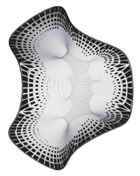
standard enviroment 1,2 l

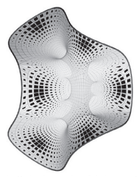
desert 7,5 l

The body has a small reserve of water and can lose some without any effects. After a loss of about 2 quarts (which represents about 2.5 to 3.0 percent of body weight), effectiveness is impaired.

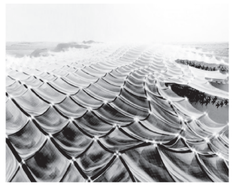
super temporary-emergency

- providing shadow
- collecting water
- providing energy for self sustaining





the flexible membrane is informed by the frei otto's pioneering fabric constructions and manifests a structural skin as a sequence of hyperbolic curves held in tension by the a carbon fiber tube ringhe experimental structure will be composed of recyclable high-density polyethylene and embedded with a pattern of photovoltaic panels that harness sunlight to charge the V60 model.



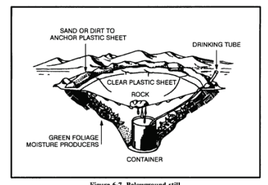
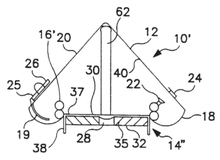
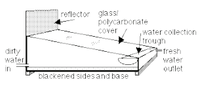
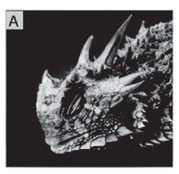
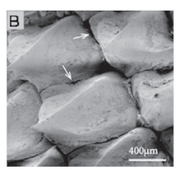


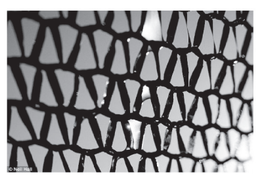
Figure 6-7. Belowground still.

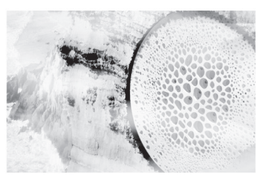












a giant mesh resembling a tree root would capture moisture from coastal fog.

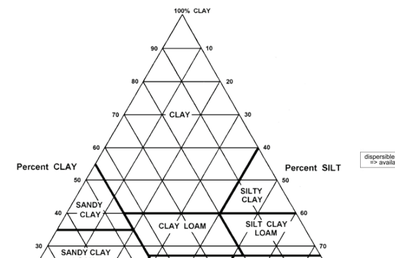
standard enviroment 4,8 l

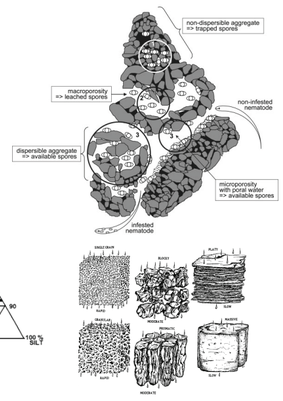
desert 30 l

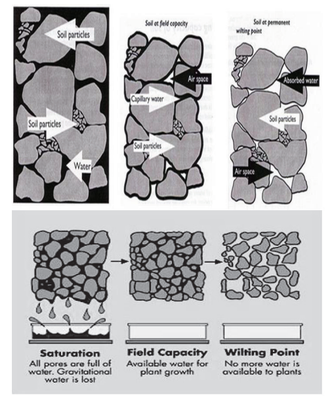
Men cannot be expected to routinely perform more than about 5 hours of heavy work per day in heat. However, using a 20-minute work/40-minute rest cycle, it will take 15 hours to do 5 hours of work.

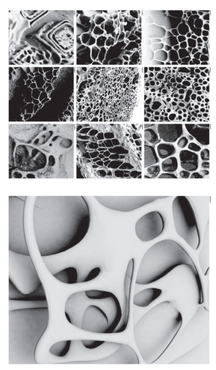
temporary

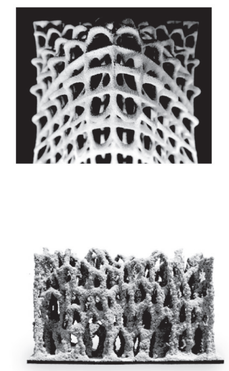
- providing living space
- harvesting moisture
- creating microclima
- pasive cooling

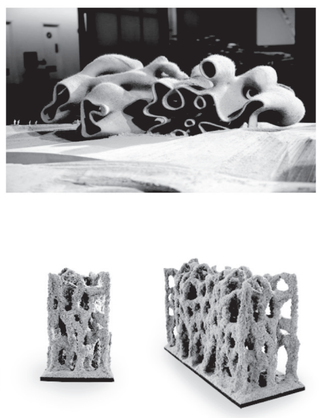




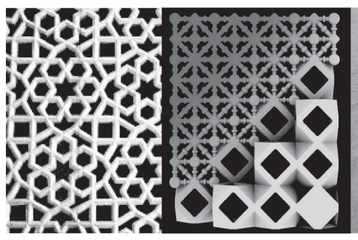


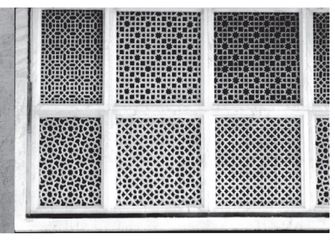




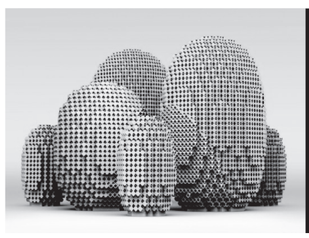


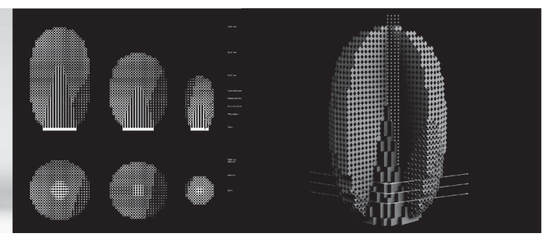
Capillarity
Water molecules behave in two ways:
Cohesion Force: Because of cohesion forces, water molecules are attracted to one another. Cohesion causes water molecules to stick to one another and form water droplets.
Adhesion Force: This force is responsible for the attraction between water and solid surfaces. For example, a drop of water can stick to a glass surface as the result of adhesion.
Water also exhibits a property of surface tension: Water surfaces behave in an unusual way because of cohesion. Since water molecules are more attracted to other water molecules as opposed to air particles, water surfaces behave like expandable films. This phenomenon is what makes it possible for certain insects to walk along water surfaces.



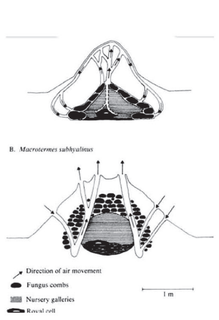


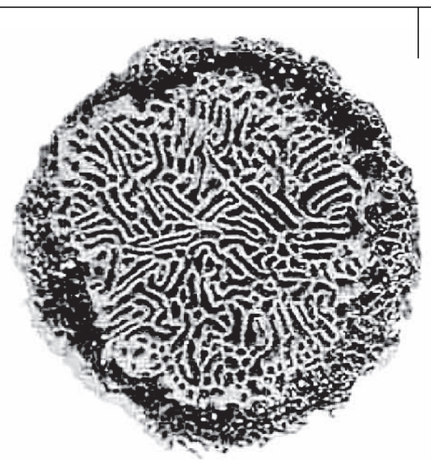
Mashrabiya- The wooden screen with openable windows gives shade and protection from the hot summer sun while allowing the cool air from the street to flow through. The designs of the latticework are usually with smaller opening in the bottom part and larger openings in the higher parts, hence causing the draft to be fast above the head and slow in lower parts. This provides a significant amount of air moving in the room without causing it to be uncomfortable.





The outside layers are built around an inner core and base. Water falls through the inner core. Hot air flowing in from the outside is cooled by evaporative cooling and leaves as a cool breeze.
Each pod is created using a 3D printing technique that builds up layers of locally-sourced sand combined with a magnesium-based binder. The forms of the pods are based upon a 3D interpretation of the masharabiya, resulting in a complex internal structure with a very large surface area.
Water would be drawn up inside the pods and then it would evaporate, cooling air as it passes through the structure.





Termites in Zimbabwe build gigantic mounds inside of which they farm a fungus that is their primary food source. The fungus must be kept at exactly 87 degrees F, while the temperatures outside range from 35 degrees F at night to 104 degrees F during the day. The termites achieve this remarkable feat by constantly opening and closing a series of heating and cooling vents throughout the mound over the course of the day. With a system of carefully adjusted convection currents, air is sucked in at the lower part of the mound, down into enclosures with muddy walls, and up through a channel to the peak of the termite mound. The industrious termites constantly dig new vents and plug up old ones in order to regulate the temperature.

The body has a small reserve of water and can lose some without any effects. After a loss of about 2 quarts (which represents about 2.5 to 3.0 percent of body weight), effectiveness is impaired.

permanent

- infrastructure
- creating microclima
- distribution of resources

Black Rock City LLC is the company that organizes the annual Burning Man event ending on Labor Day, on the dry lake of the Black Rock Desert in northwestern Nevada. Although the organization is largely volunteer-driven, it has a for-profit form. Its mission states that its efforts are, and its primary goal is, to establish community.

dunehouse aims at maximizing the scarce natural resources of Nevada—the fastest growing housing market in the United States—to provide a more responsive and organic relationship to the desert. Inspired by a variety of desert organisms, such as cactus roots and reptilian skins, duneHouse consists of a performance-enhanced skin-structure system that treats surface and structure as responsive co-dependants.

On the wide, flat South Anatolian Plain, near the Turkish city of Konya, there is a broad mound, about 80 metres high. Excavations in the 1960s revealed its importance as one of the first cities the world had known. Nine thousand years ago, Çatal Hüyük was home to up to ten thousand people. The whole mound is made up of the remains of mud brick houses, one on top of another. Many are adorned with painted plaster and the horned skulls of cattle. The settlement occupied a key stage in history, when people were first settling down, domesticating cattle and driving the agricultural revolution. There seem to be no signs of hierarchy; no high-status homes, public buildings or even public open spaces. The small houses were so tightly packed together that entry was through the roof! Above all, Çatal Hüyük was in the middle of a swamp and dry pasture and wheat fields must have been 12 kilometres away or more.

The Louvre Abu Dhabi Museum, designed by Ateliers Jean Nouvel, aims at creating a welcoming world which associates lights and shadows as well as shimmers and calm places in a serene atmosphere. The dome is doubled and flat with a 180-meter diameter, offering a perfect luminous geometry drilled in a more random weaved material which creates a shadow punctuated with sun bursts. It shines in the sun of Abu Dhabi.