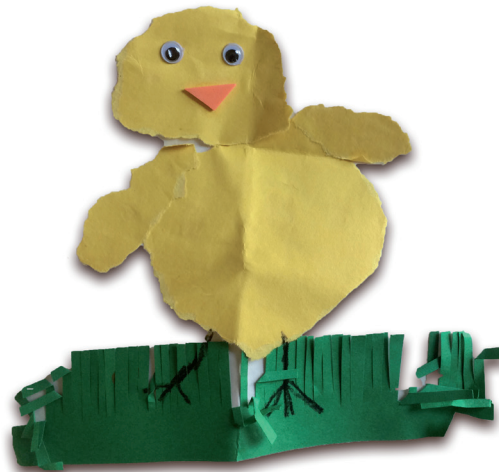


STUDIO JOURNAL

*NOTE: PLEASE ADD PAGES AS
YOU SEE NECESSARY*



DESIGNING
SUSTAINABLE
NOMADIC
STRUCTURES

Mikolaj Stasulewicz

PARSONS THE NEW SCHOOL FOR DESIGN , SPRING 19
INSTRUCTOR: CAROLIN MEES

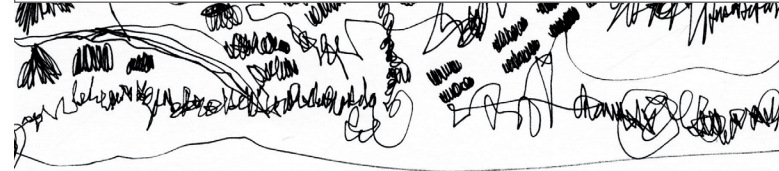
SUSTAINABLE SYSTEMS

GLUE STRIP



GLUE STRIP

SOCIAL & SYSTEMS



Fibonacci spiral

The Fibonacci Spiral or the golden ratio is a spiral with a growth factor of 0.618. Many plants such as pineapples, sunflowers and pinecones grow according to the Golden Ratio. Apparently there are two types of Fibonacci Spirals that



Occur in nature, one that is clockwise and the other. The underlying biological mechanisms are not well understood. The formations of the Fibonacci Spiral is still under research. Although it is rather mysterious the spiral can be found everywhere. counterclockwise

GLUE STRIP



Wheatgrass in recycled cup.

A-WHAT ARE THE CONDITIONS NECESSARY TO GROW THE EDIBLE PLANT WHEATGRASS?

The room temperature and sunlight from my window were perfect to grow quite a lot of grass.

B-HOW LONG DID IT TAKE YOU TO GROW THIS EDIBLE PLANT?

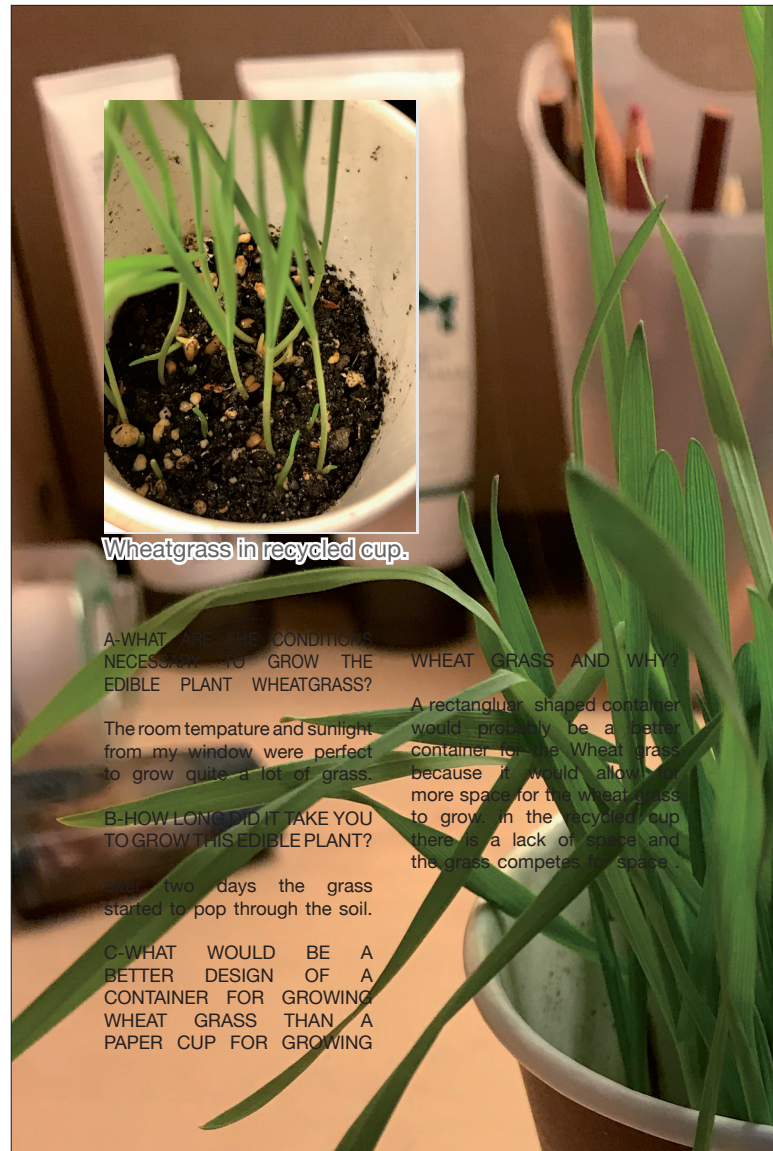
After two days the grass started to pop through the soil.

C-WHAT WOULD BE A BETTER DESIGN OF A CONTAINER FOR GROWING WHEAT GRASS THAN A PAPER CUP FOR GROWING

WHEAT GRASS AND WHY?

A rectangular shaped container would probably be a better container for the Wheat grass because it would allow for more space for the wheat grass to grow. In the recycled cup there is a lack of space and the grass competes for space.

GLUE STRIP



A SCOBY is a syntrophic mixed culture, generally associated with kombucha

Scoby has a high risk of being contaminated and destroyed by other bacteria such as mold. Protecting the scoby is necessary, wearing gloves to keep from contaminating the waters. The scoby is put into a container of tea water consisting sugar for nutriance and vinigar for a necessary acidic quality . all of the ingredients are necessary for the kombucha leather to grow properly supplying nutrients to the mixed culture.

heat is helpful for the bacteria growth but

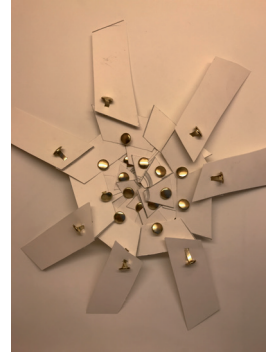
In my case there was no access to heat, the kombucha leather was grown on top of a fridge in room temperature and grew to a satisfactory thickness. the drying process took only a few days and produced a fine layer of leather.



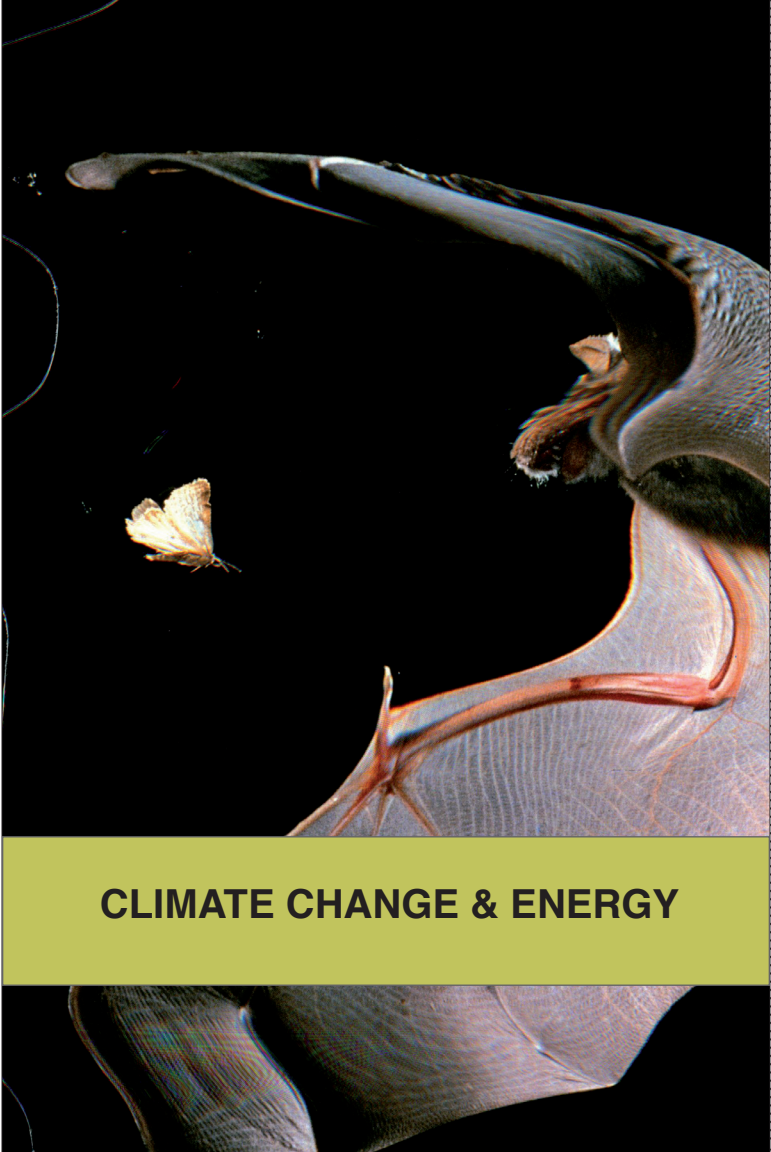
GLUE STRIP

Scobyweekone

GOLDEN
RATIO
H A T
DESIGN



GLUE STRIP



CLIMATE CHANGE & ENERGY

GLUE STRIP

This self-contained, portable rainwater collecting and purifying system designed by Eddi D. Duke is for collecting, filtering and disinfecting rainwater primarily for drinking purposes. The Invention is best summarized in the description on the Google Patents website. In a preferred embodiment the portable rainwater collecting and purifying system is characterized by a housing which contains the system components. The bottom of the housing is typically fitted with skids or wheels, and a pair of sloped water collection panels is typically hinged to the housing for receiving the falling rainwater. A collection gutter receives the rainwater from the panels and drains the rainwater into a vertical standpipe fitted

with a typically screen filter or filters. As the rising water in the standpipe eventually overflows, the overflowing, partially filtered water leaves the standpipe and enters a water collection tank through a hopper typically fitted with a gravity-flow filter or filters. A typically battery-operated pump automatically pumps the water through a pair of particle filters which remove dirt and other particulate impurities from the water, and finally through an ultraviolet light sterilizer which kills bacteria and other microorganisms to render the water suitable for drinking. In another embodiment solar panels provided on the respective water collection panels collect solar energy for energizing the pump, ultraviolet sterilizer or both.

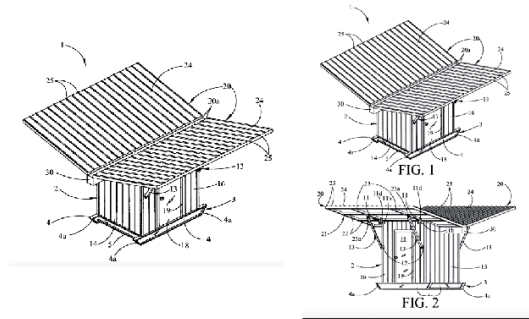


Image caption: <https://patents.google.com/patent/US6436283B1/en>

GLUE STRIP



Changes in precipitation since 1980 due to climate change has resulted in a burning 10 million acres in western forests. According to the National Geographic, heat rises three degrees each year in California. This rise in heat results in moisture being sucked from from the plants and wildlife resulting in higher rates of forest fires. The connection to Climate Change is clear in the research conducted by the National Geographic that records the change from the 1980's. There are many areas of california that are being effected by forest fires and people who need to take refuge can do so in many areas, parks and public rest stops located all around California. The first map represents spots that roughly layout area that can be used for refuge. The second map shows the the heat average and its rising from 1895-2018.

GLUE STRIP



GLUE STRIP

WATER & MATERIALS

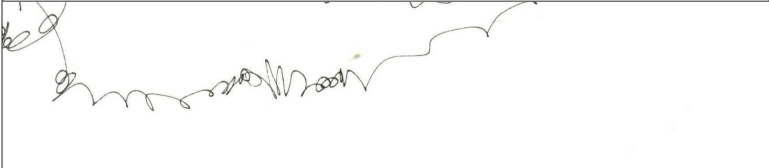




PHOTO BY ALPHA SMOOT

A) How is the color pigment extracted from the plant and fixed to the cellulose fibers? What is a "mordant" and what can be used as a mordant? Does natural dyeing work without a mordant?

The Pigment from plants is extracted by a process of chopping up your chosen plants and boiling them in water until their color has entered the water. A Mordant is the chemical link between the dye and the fabric, potassium aluminum sulfate is a common mordant. A mordant is required for natural dyes, without it the dye would not adhere to the fabric. (B) What do you find out about

dyeing and water pollution? It is estimated that 17-20% of industrial water pollution is caused by chemical dyes. (C) Why is natural dyeing healthier for the environment and humans than chemical dyeing? Natural dyeing is much more beneficial towards the environments because reintroducing it back into nature has no negative impact whereas chemical dyes do. (D) How could you waterproof nature dyed wool and bioleather? One of the simplest ways of waterproofing the natural dyed wool and leather is with wax.

GLUE STRIP

RESEARCH THE BACKGROUND OF SUSTAINABLE THERMIC INSULATION. WHAT IS NECESSARY TO COLLECT PROVIDE SUSTAINABLE THERMIC INSULATION? Technically speaking, home insulation is already green because it is saving energy by preserving the temperature inside the home. To make this part of your home or clothing even greener there are several options available. One thing that is necessary for good insulation is for the material to have a good R-Value which measures the resistance of heat flow. On average a home insulations R-value should be inbetween R-30 and R-60. the top five sustainable thermic insulators are Soybean Foam, Sheeps wool, Cotton, aerogel, Rigid Polystyrene and Icylene
WHAT ARE THE MATERIAL QUALITIES THAT YOU ARE LOOKING FOR?
I am looking for a cotten mate-

rial to make this thermic wearable object comfortable and safe for the respiratory system. IN TERMS OF MATERIALITY, SUSTAINABILITY AND DESIGN, HOW CAN THERMIC INSULATION AND WATER COLLECTION BE ADDRESSED AT THE SAME TIME? In the case of Eddie D. Dukes invention of his portable water collecting device, he addressed water collection but the outside design and then addressed the insulation of the device to allow for the water collecting device to be usable in any season. For instance the insulation was also part of a heating system that allowed for the object to be used in the winter. Taking this into consideration, the design for my wearable object will incorporate a similiary element of intertwining thermic insulation and water collection in the design of a hat.

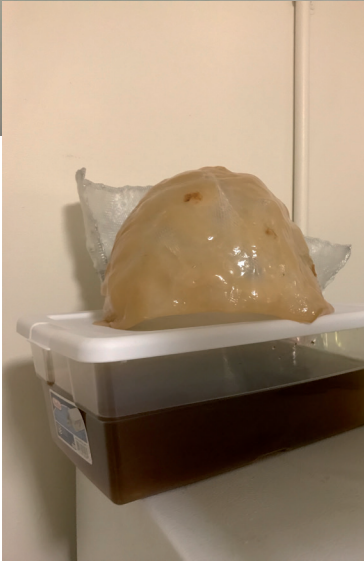
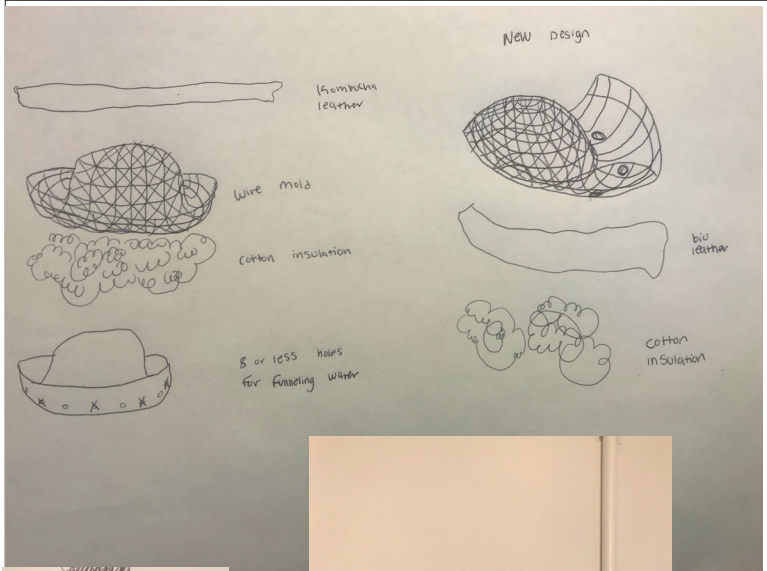


PINTEREST



HUSQVARNA RUBBER LOGGERS BOOTS.COM

GLUE STRIP



GLUE STRIP

I chose blueberries for my natural dye experiment because I see the color from this fruit producing an interesting outcome after the boiling process. Blue berries on the inside have a redish color on the outside a blue purple, I am interested to see what will come from this . Blueberries are native to North America and where introduced to Europe in the 1930's

