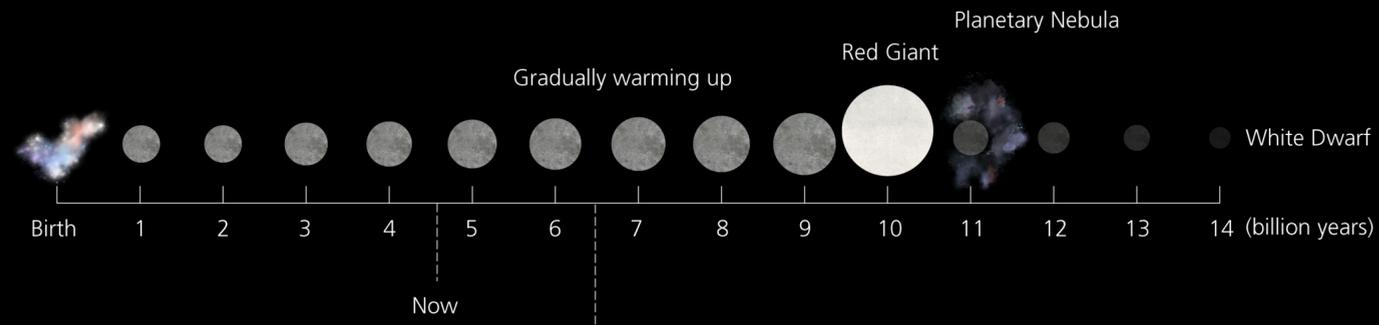


## Earth Life Archive

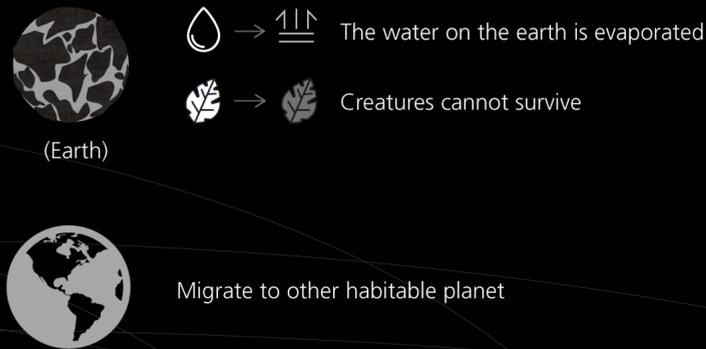
We live in the age of stars, but this age will eventually come to an end. At that time, giant stars will burn out, followed by medium ones like our sun. If the sun perished, so would the earth, and what would happen to lives on earth? But The archive of life, which is to collect and preserve DNA information of species on earth. In this way, we assumed that in the future, humans would mature cloning biotechnology, then the creatures stored in the archive could be cloned. Creatures that have died out in the past, or are in danger of dying out, will emerge on a new planet.

# Background

## The Growth Cycle Of The Sun



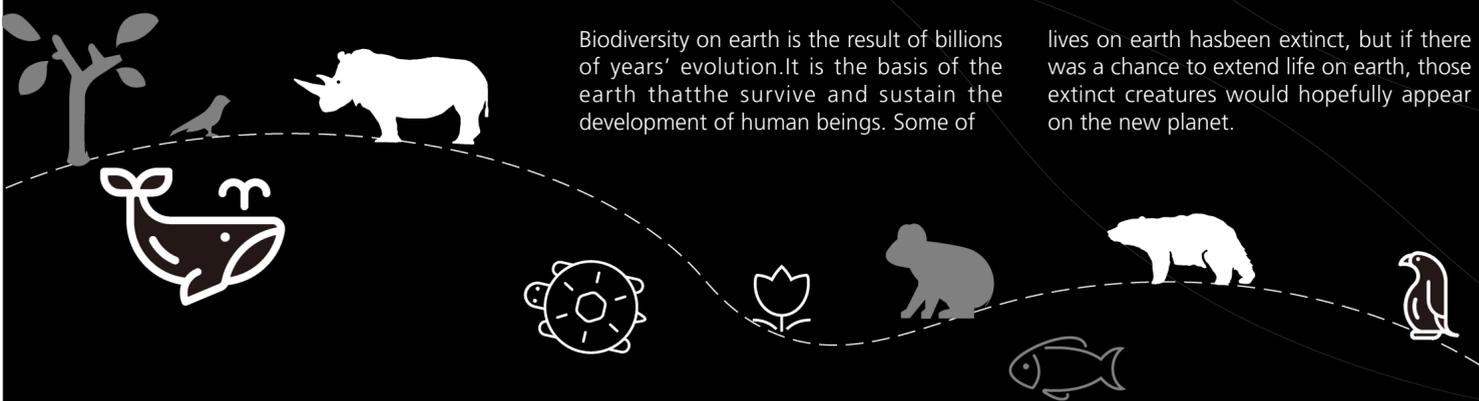
According to current theories and observations, the sun has approximately five billion years of life as a major sequence star. The next few tens of millions will form red giants. Then, it becomes a White Dwarf and goes on for a long time until it goes out. As the sun formed a red giant, the earth would become hotter and hotter, evaporating water and wiping out lives on earth.



## Biodiversity

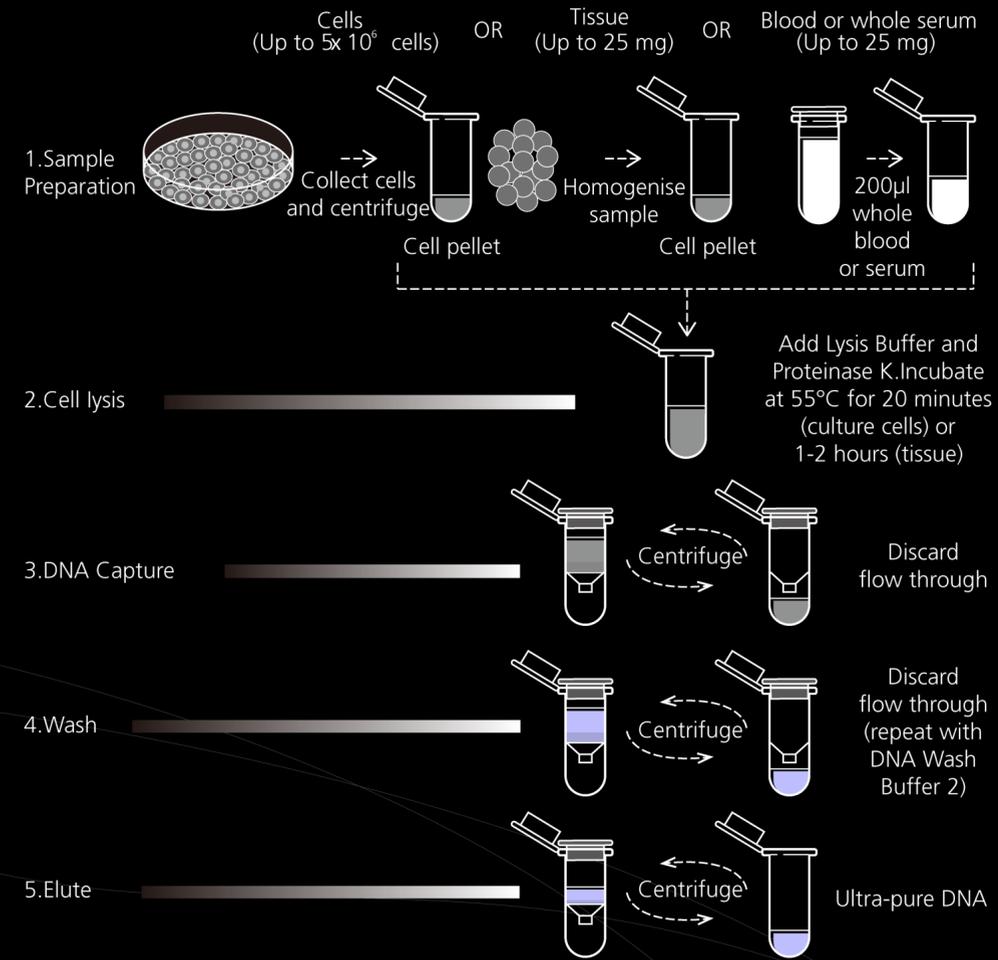
Biodiversity on earth is the result of billions of years' evolution. It is the basis of the earth that the survive and sustain the development of human beings. Some of

lives on earth has been extinct, but if there was a chance to extend life on earth, those extinct creatures would hopefully appear on the new planet.



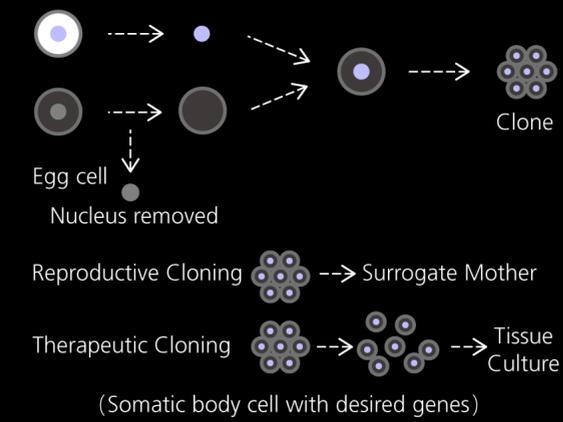
# How

## How To Extract DNA



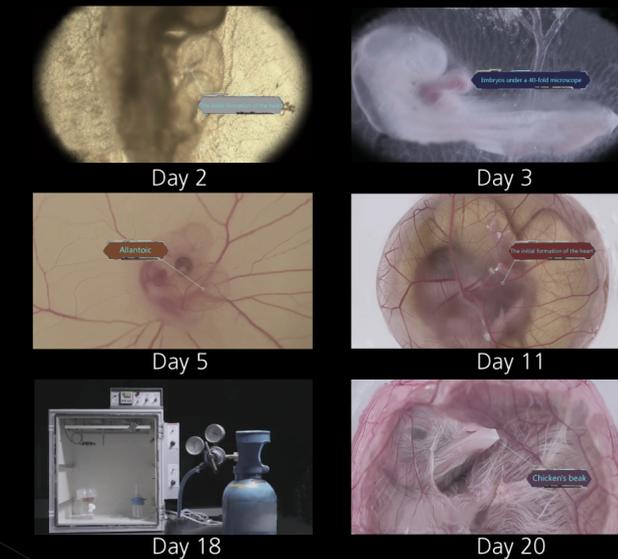
The genetic record of lives on earth can be recorded and preserved in the archives of lives by extracting DNA from fossils or from living organisms.

## How To Clone Organisms

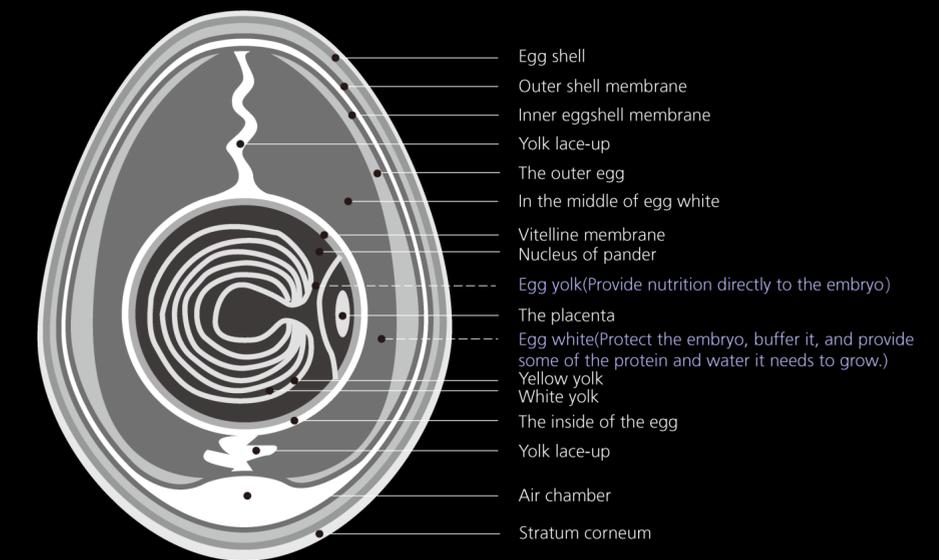


There have been studies shown that extinct animals can be cloned with biological techniques.

## The Birth Of A Chicken



## How Can They Be Born



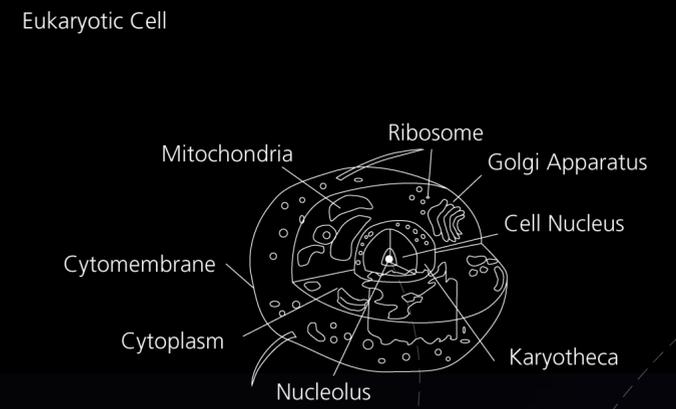
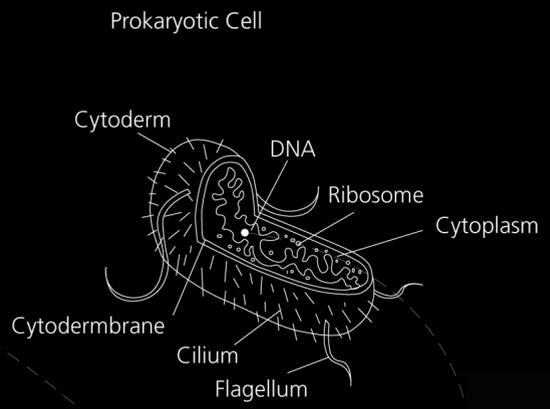
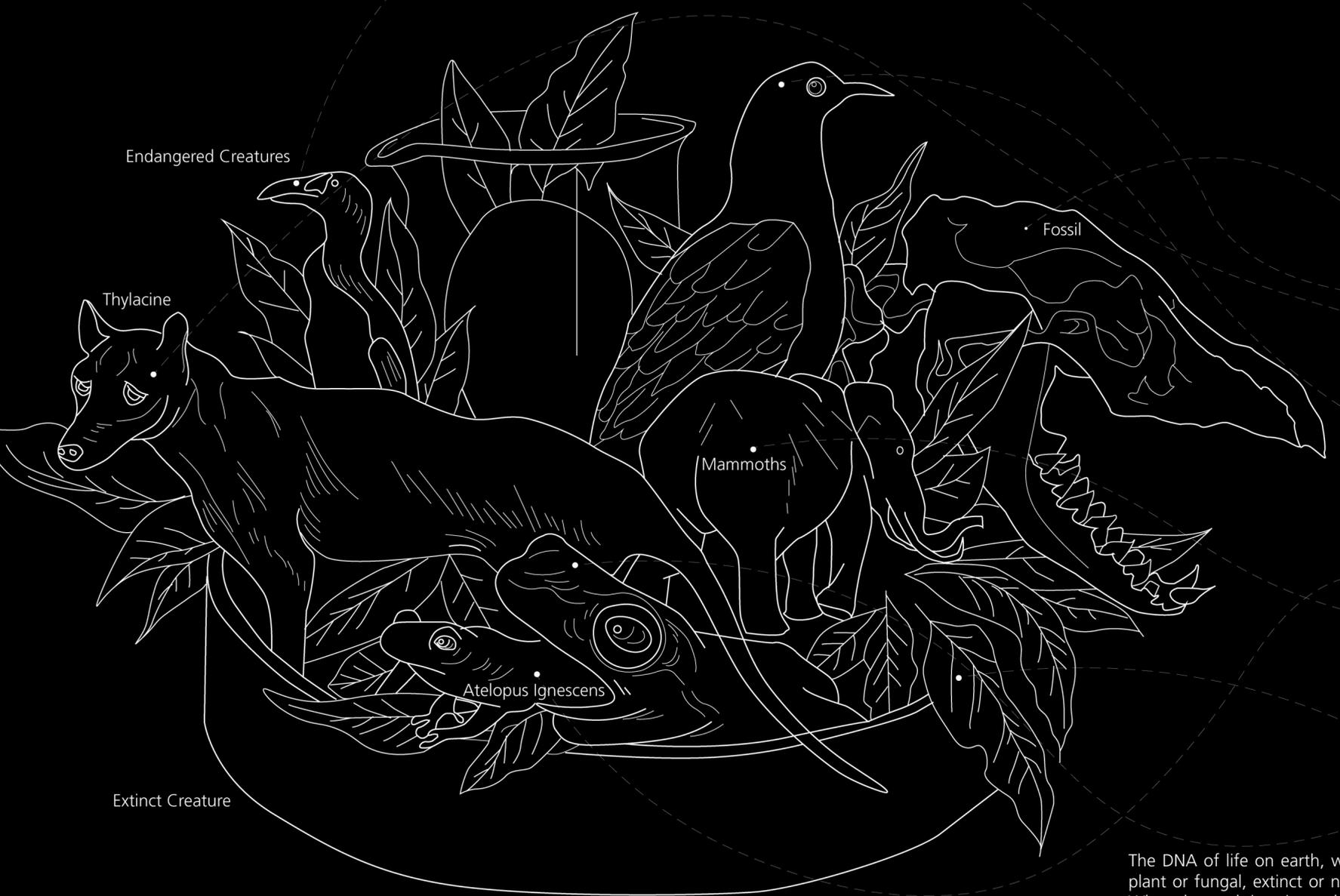
Fertilized eggs, the placenta on the yolk will develop into an embryo, first absorb the nutrients of the yolk to develop each organ, then absorb the nutrients of the

protein to accelerate feather formation and weight gain, and finally become a hatchling chicken. Chickens cannot develop without nutritional support.

Scientists have now succeeded in achieving chick shellless hatching. Incubation process: First, a transparent cup needs to be prepared, and a small amount of bacteriostatic water is added to the cup to prevent the generation of bacteria. After that, a transparent container made of cling film similar to the shape of an eggshell is shaped in the tea pot, and the intact egg liquid is placed inside. Then add some calcium carbonate to this container to replace the egg shell's calcium supplement during the chick's development.

Finally, some small holes need to be punched in the edges of the plastic wrap to simulate the ventilating holes in the original eggshell. Finally, put this cup into the incubator, wait for 21 days, and the chicken will successfully hatch. Future scientific and technological development may support the development of organisms. Only the environment and nutritional support are needed, and there is no need for such a "breaking shell" process.

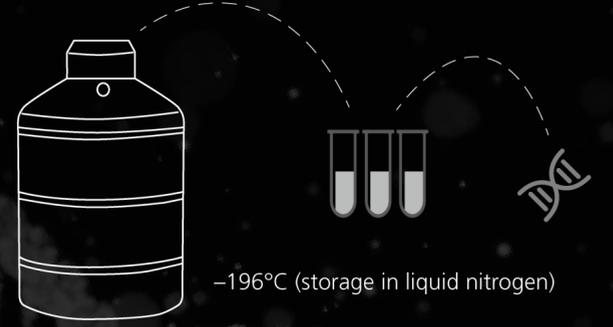
# ■ Concept



The DNA of life on earth, whether animal, plant or fungal, extinct or not, is collected. When the earth is going to be destroyed, the DNA database that holds earth will be launched to other habitable planets to extend the life on earth.

# Research

## How To Store DNA

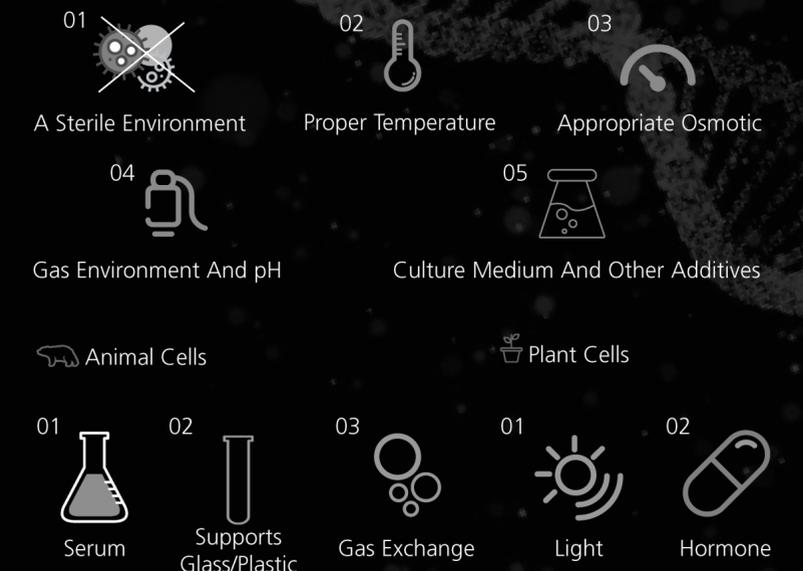


-196°C (storage in liquid nitrogen)

Storage of complete DNA is the first step in cloning.

## How To Grow Cell

### Environment And Conditions

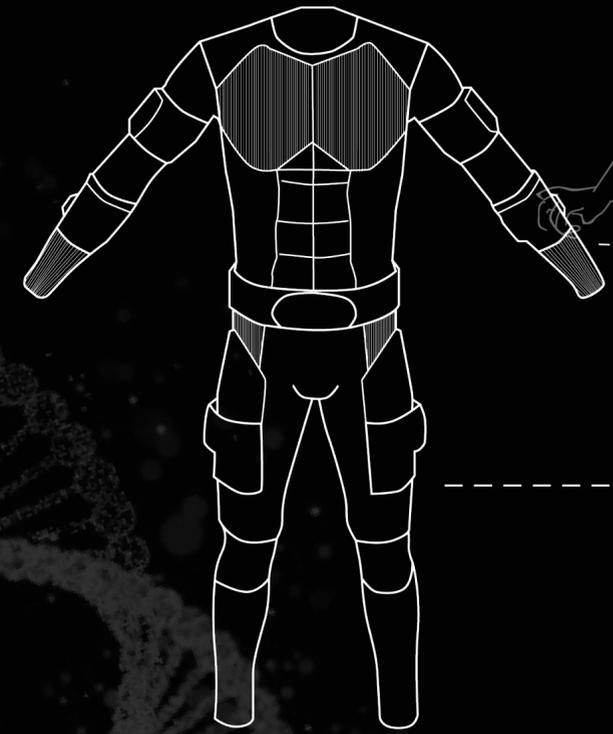


The second is to study how to cultivate the growth of cells, as long as they are provided with the nutrients and necessary conditions required for the growth process.

# Technology

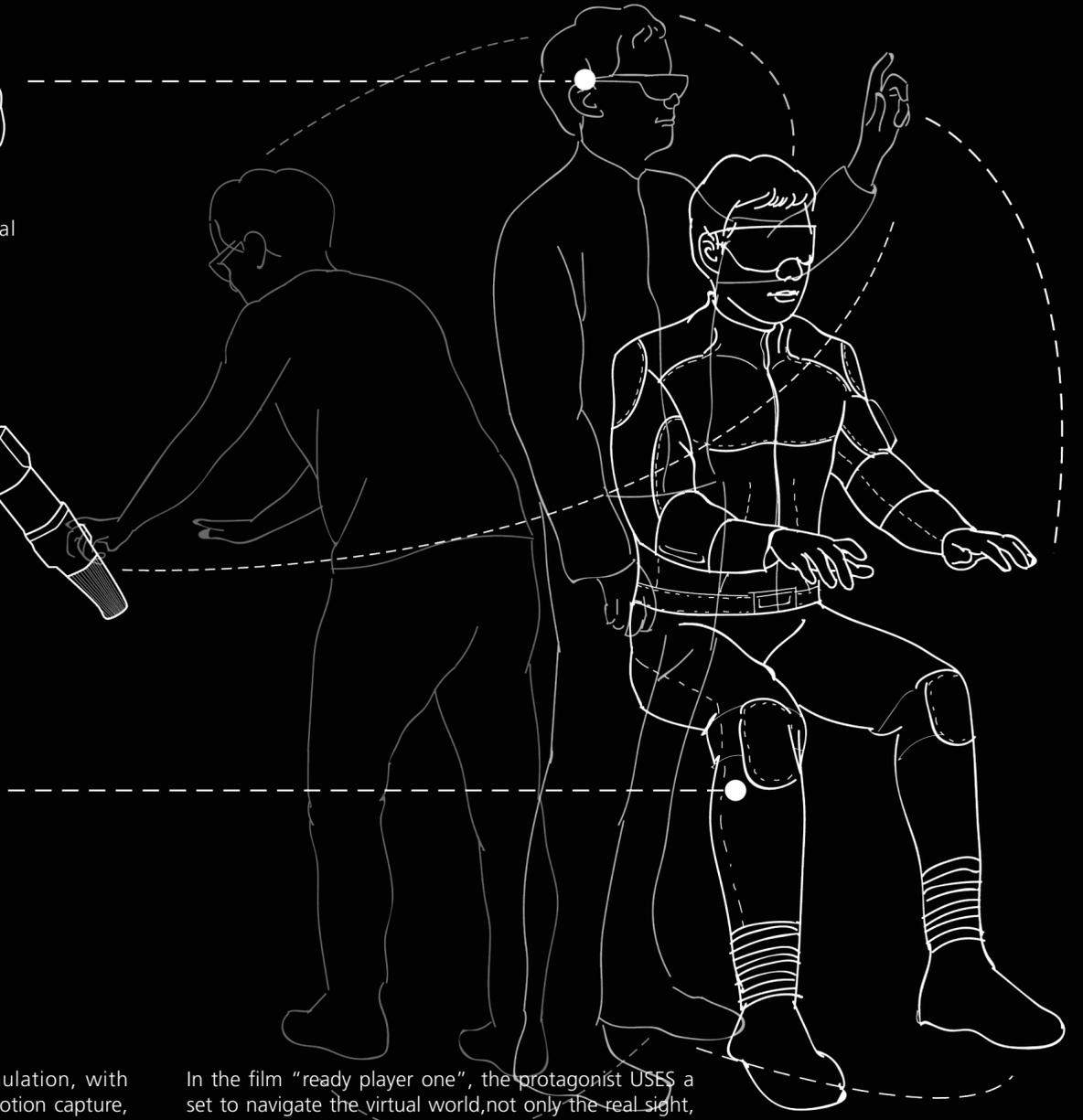


01 VR Glasses  
You can see a virtual world, or a real reflection of a scene elsewhere.



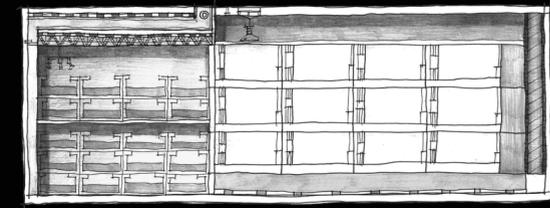
02 Body force feeds back into the clothes  
It adopt the way of the electrical stimulation, with tactile feedback biological recognition, motion capture, temperature control, feedback, etc. Both gentle touches and strong shocks can be simulated.

In the film "ready player one", the protagonist USES a set to navigate the virtual world, not only the real sight, but also the real touch. Put this technology into practice.



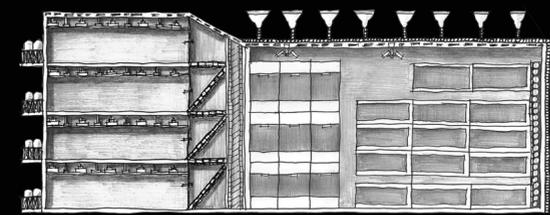
# Sketch

## Floor 1



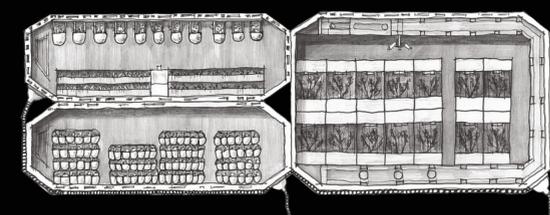
I hope there will be a special layer to check the growth of organisms and see if they can meet the requirements of release.

## Floor 2



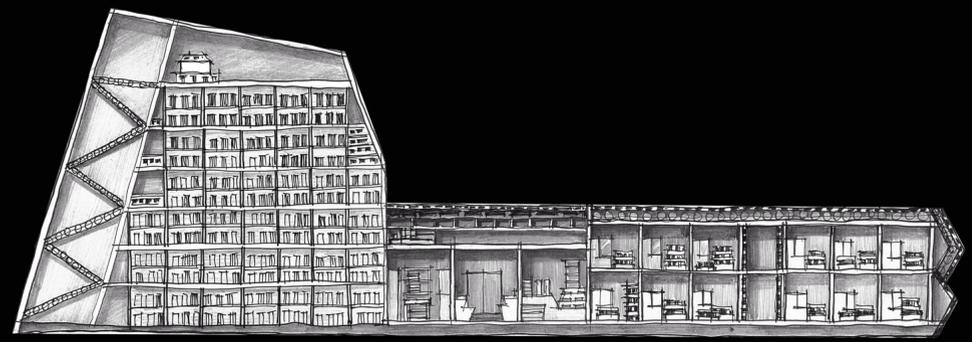
The growth needs of plants and animals are different. I want to separate them. This floor is a special place for animals.

## Floor 3



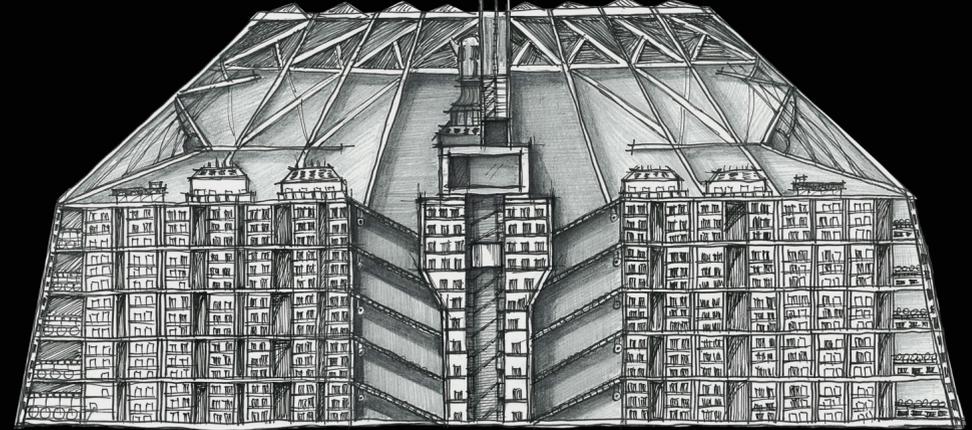
This layer is a special place for plants, which can provide them with light, oxygen, and water they need.

## Floor 4



This layer is used to configure the embryos of plants and animals.

## Floor 5



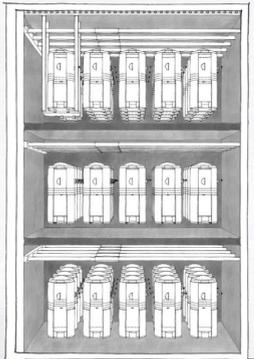
At the top, I wanted to leave a large space to store the DNA of the organism, and the whole things would run from top to bottom.

This building carries the DNA of the earth and is fully mechanized. Animals and plants can grow on the back of a nutrient solution and then be released. Human can monitor the inside lives remotely.

■ Section

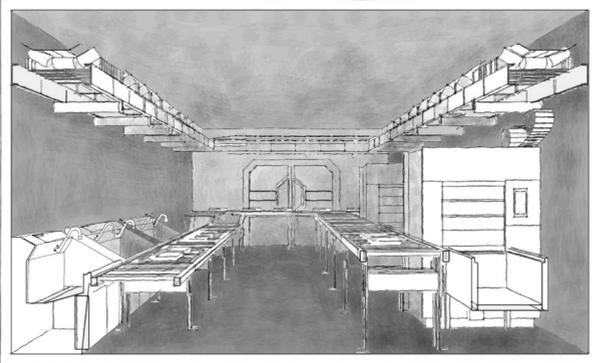
01 DNA Storeroom

A huge store of DNA from lives on earth.



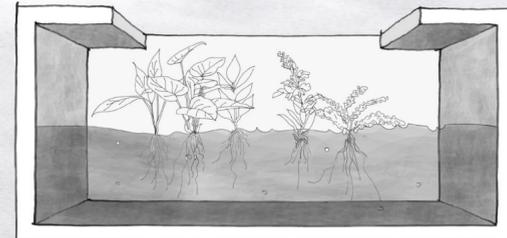
02 Sterilizing Room

Sterilize and sterilize the appliances that need to be used to ensure that the appliances are sterile.



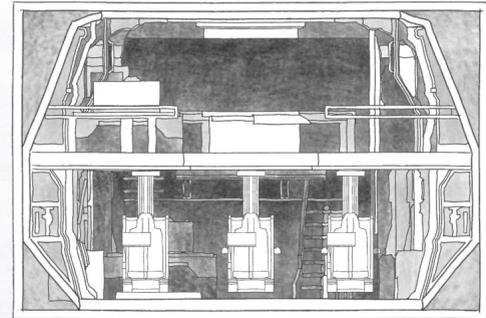
03 Observation Room

The growth of the plant can be observed and monitored, and if it meets the standard of surviving outdoors, it will be transported to the outdoor environment.



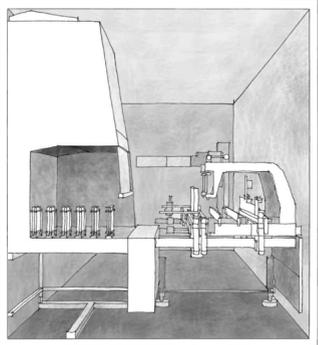
04 Operation Room

With equipment, people can experience the environment here on earth. From this control room, one can observe the operation of the whole building.



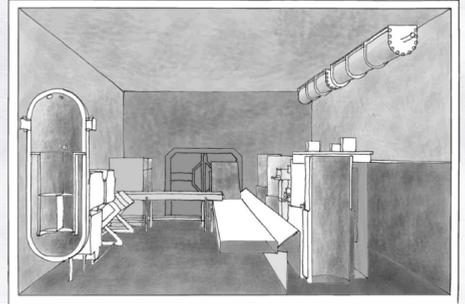
05 Inoculation Room

It's a small chamber for the isolation and transfer of bacteria, it's actually an enlarged inoculum.



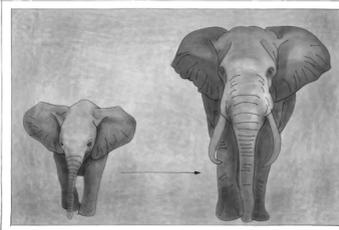
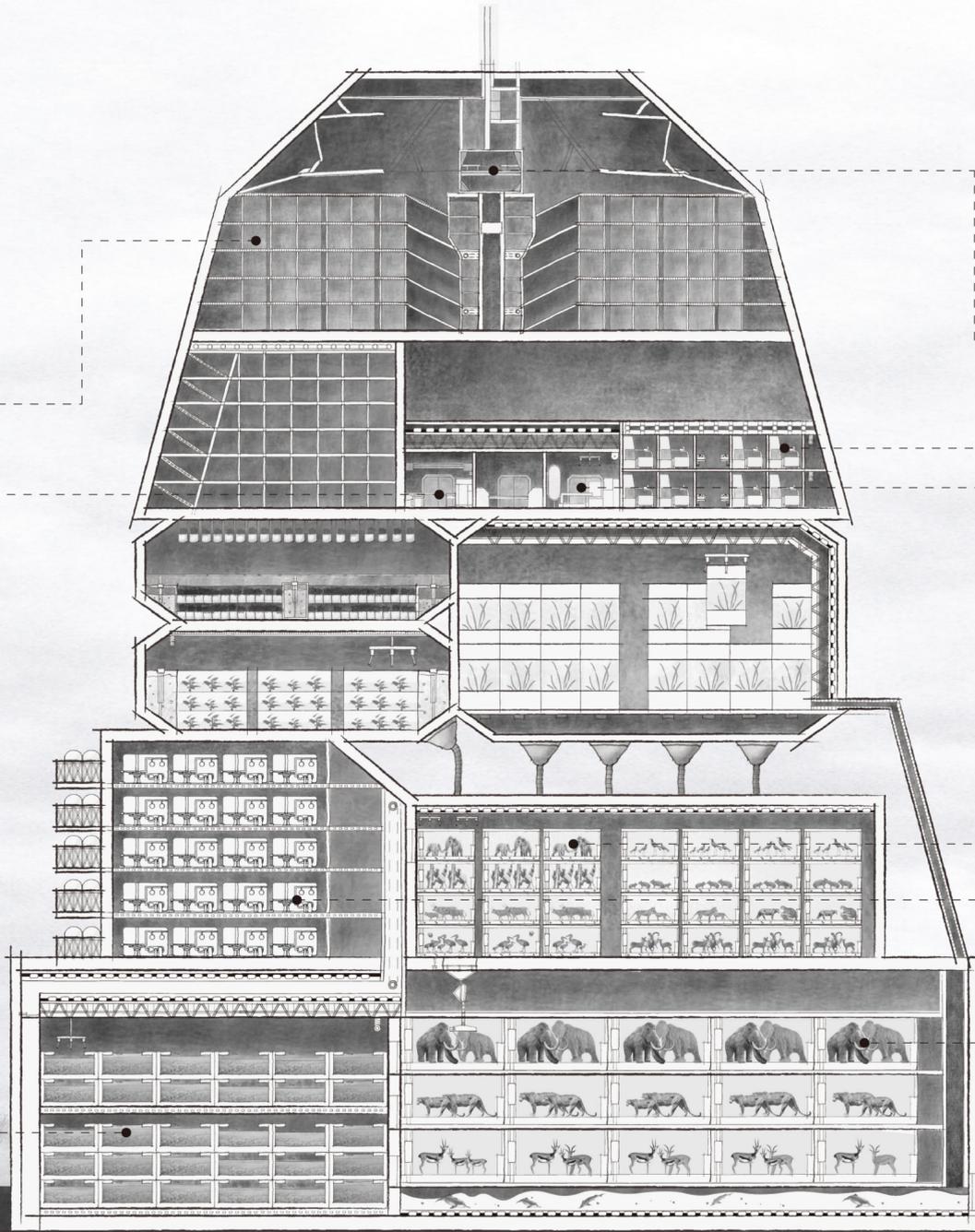
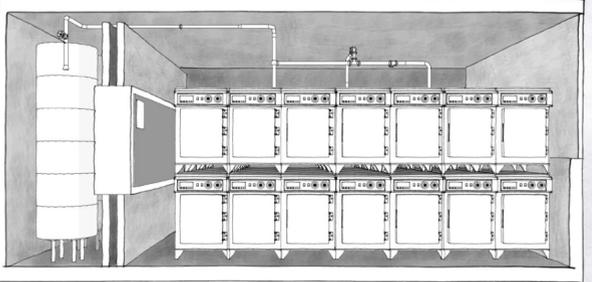
07 Configuration Room

Allocate the nutrient solution needed in the development process to ensure sufficient nutrition to the organism.



08 Growth Chamber

Smaller animals grow here, and incubators provide the environment they need to grow.



The growth chamber is the process of biological growth, and the observation chamber is the stage of biological growth that has been completed. We only need to observe whether the organism has reached the standard of release.



# ■ Rendering

Even after hundreds of millions of years, when the sun becomes a red giant, the earth is no longer suitable for life and life is dying out. On this habitable planet, life on earth can be survived. Not only the extinct creatures in the past, but also the endangered creatures at present will appear in our sight, and this is a scene of biodiversity we want to see.