LAPUTA: A LONG TERM SPACE HABITAT, INTERNAL ENVIRONMENT DESIGN STUDIES

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Location: Running in outer space
Designed area: 504.59747 ac
Internal sunshine source: solar radiation
Internal humidity: need design
Internal wind speed: 3M/S
Internal temperature: 25°C
Human body perceivable wind speed: 0.5M/S
Human body perceivable temperature: 25°C
What can be done from the field of landscape architecture?

What are the effects of aerospace on the human body?
- **Weightless situation**
  - Lack of fresh food intake
  - Hygiene
  - Radiation
  - Medical care
  - Noise
  - Sleep time

What can be done from the field of landscape architecture?
- Physical Health
- Mental Health

Which projects are working hard for this?

**Veggie**
The Vegetable Production System (Veggie) is a plant growth system developed and used by NASA in outer space environments. The purpose of Veggie is to provide a safe, sufficient, and sustainable food source for astronauts as well as a means of recreation and relaxation through therapeutic gardening.

**Space Station Food System**
Most of the food planned for SS will be frozen, dehydrated, or thermocooked and will not require the addition of water before consumption. Many of the beverages will be in the dehydrated form. Food will be heated to working temperature in a microwave-forced air convection oven. One oven will be supplied for each group of 4 astronauts.

The SS food system consists of 3 different supplies of food: Daily Menu, Safe Haven, and Extra Vehicular Activity (EVA) food.

**Health and Medical Systems**
The Aerospace Medicine section is responsible for the organization, planning, and development of headquarters oversight for all activities supporting space medicine, from research requirements to deliveries, including ground-based analogs for space missions, the development of vehicles for human and animal access to space, international space station armaments, planning for future space missions and supporting the execution of Health and Medical Technical Authority.

Population estimate

\[ y = -0.01422x^2 + 80 \]

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Concept Idea

Three-dimensional weaving system

Health
Traffic
Vegetation

1.5km
650m

Starry Night & Polaris

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Master Plan

Ground Garden Layer

1. α community
2. δ community
3. ε community
4. ζ community
5. θ community
6. λ community
7. Polaris Comprehensive District
8. Education Building
9. Starlight Garden
10. Guardian Star Park
11. Streetside Park
12. Galaxy Garden
13. Meteor Plaza
14. Starlight Tower
15. Music Plaza
16. Space Train A Station
17. Space Train B Station
18. Space Train Station C
19. Train Forest
20. Babylon Linear Park

Legend:
1. Labyrinth Garden
2. Circular running track
3. Children’s Hill
4. Green Ocean
5. Indoor activity center
6. Starlight Activity Center
7. Galaxy Gallery
8. Rest Pavilion
9. Leisure promenade

Top Garden Layer
Starlight Ceiling
Through holographic projection, people continue to be brought into the endless galaxy. Even if the space habitat is limited, the landscape created is unlimited.

Quest Camping
Popular science activities. The space of the Space Activity Center provides a good social and scientific popularization event. Both children and parents can spend a beautiful night here.