Down To Earth: Mission Cosmic Crops

You Are The Future Of Food

Food is one of the most valuable resources on our planet. You could argue that it's even more important than fossil fuels, which humans use for energy to power their homes, cars, and businesses. According to the United Nations, in 2023, 1 in 11 people globally faced hunger. Without food, humans will not survive. And yet, with the changes in environments due to climate change and increasing population growth, maintaining access to safe, stable, and sustainable food becomes more critical than ever.

How can you help to ensure a stable food resource in your area? Use this journal to plan, prototype, and test your sustainable food resource ideas. Select one of the following scenarios to investigate.

- ☐ Suppose you're a food scientist working for NASA, how could you use hydroponics or aeroponics in places that have the same sort of restrictions as they do in space, i.e., a lack of water, soil, or space? Design a system to grow a simple plant as efficiently as possible.
- ☐ Imagine you work for the World Health Organization (WHO) and need to assist communities in developing systems that help to save precious topsoil from flooding events, wind erosion, and climate change. What would you suggest to create more sustainable and resilient communities? Reforestation? New farming methods? Propose a solution to help an area near you.
- ☐ In 2012, the United Nations set the goal of achieving Zero Hunger for the entire world. That would mean that no one would have to worry about where their next meal would come from. What ideas could you come up with to meet that challenge? Would you combat food waste, develop community gardens, help farmers get more food to market, or come up with another solution? How could you help those in your community who are hungry?

Future Of Food Design Journal

DEFINE: Identify the problem you want to solve. Determine what you would need to solve the problem and identify any limitations. If necessary, conduct further research to gain a deeper understanding of the problem.

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IMAGINE: Brainstorm as many possible solutions as you can. Fill the box with ideas!

DESIGN: Pick your best solution. Make sure it meets all your needs and that you have all the necessary requirements. What makes this potential solution the best?

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CREATE: Make a prototype or model of your solution. Get feedback about your solution from others. Improve your design through iteration. Record your observations through the process.

EVALUATE: Develop a method to test your solution and verify its effectiveness.

IMPROVE: Reflect on the work you have done. How can you make your solution better?