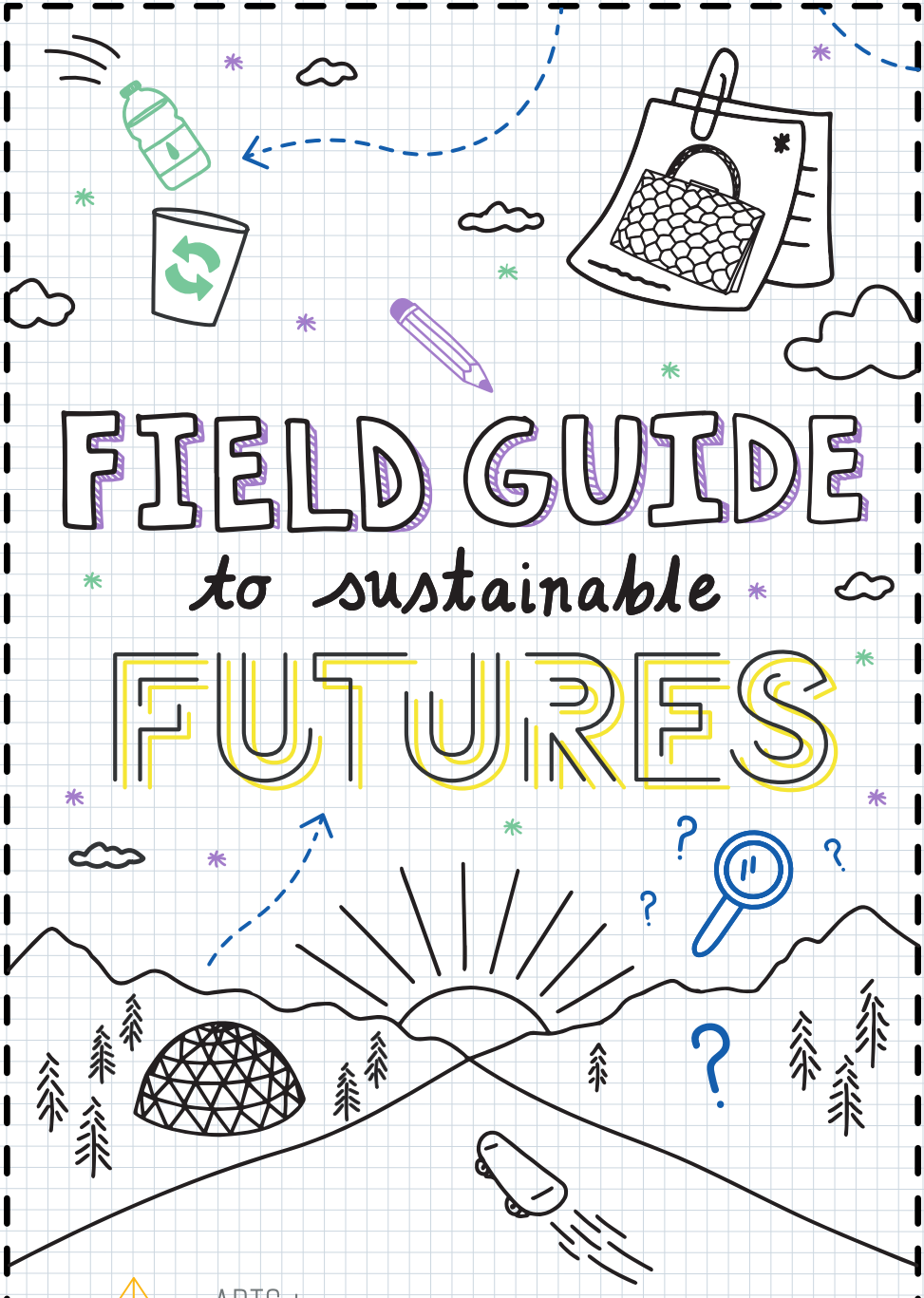

FIELD GUIDE

to sustainable

FUTURES

ARTS + INDUSTRIES BUILDING
Smithsonian

Smithsonian
Science Education Center

Hello Futures Agent!

Welcome to FUTURES at the Arts + Industries Building, where we explore new ideas and imagine what we want our world to be. In FUTURES you'll find exciting new tech, art, history, science, and prototypes that offer different visions for many possible futures.

This guide helps you navigate the four halls of FUTURES, with a focus on how we might solve one of our greatest challenges – living more sustainably. You'll find things from the past, things that work better for our world, things that inspire new ideas, and things that unite us as we move toward a more hopeful, sustainable future.

The future is not a fact, it's a decision. We each play a part in making it the future we want.

Onward, friend!
The Smithsonian Team

Where are we going and how do we want to get there?

How do you feel about being able to create a sustainable future?

Sustainable FUTURES

Sustainability means interacting with the environment in a way that makes sure there will be enough resources left for the future.

What is my vision for a sustainable future?

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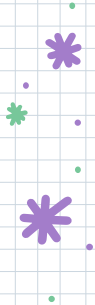

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What Makes Me a Future-Maker?

We welcome all dreamers, makers, and changers of tomorrow to the Arts + Industries Building. It is a space to think about a future that is more equitable and sustainable. Everyone can contribute to creating the future we want. Think about your interests and traits and ask yourself: What makes me a future-maker?

Look at words here. Circle any that make you a future-maker.

Writer
Animal Lover
Adventurous
Dreamer
Fashion-forward
Curious
Innovative
Math geek
Optimistic
Other: _____
Imaginative
Experimental
Artsy
Maker
Designer
Other: _____
Storyteller
Nature Lover
Collaborative
Visionary
Care Provider
Analytical
Other: _____
Independent
Nature Lover
Techie
Inventor

FUTURES PAST

North Hall

We cannot truly understand the future without understanding our past. We are, after all, only the latest in a line of future-makers.

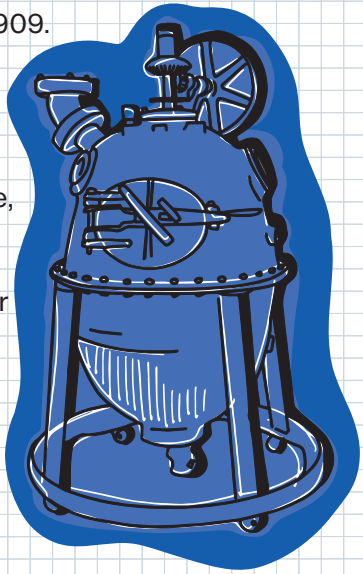
How can we build on ideas of past generations? What ideas should we bring forward? What ideas should we leave behind or change?

Let's look for...

- A machine that created possibilities with new materials, but also caused environmental problems.
- An unusual but efficient type of home.

Bakelizer Steam Pressure Vessel

The Bakelizer made the first plastic in 1909. It marked a huge shift in materials used in manufacturing. Now plastics are everywhere. They have transformed our lives and enabled great innovation, but have also led to a throwaway culture, causing widespread environmental problems. Plastics take hundreds of years to break down. How can we better use this innovation in the future?



Look at this object.
What do you notice? What does it remind you of? How has plastic been helpful in your life? How has it been harmful?

Consider reusable designs and biodegradable materials. What does a sustainable future with less waste look like?

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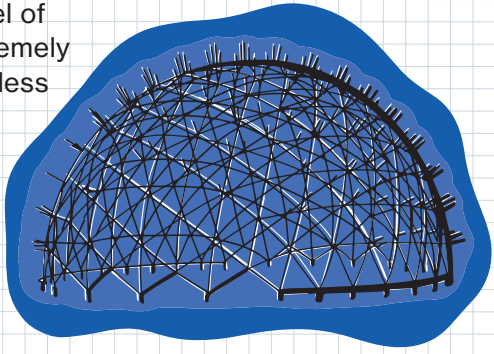
'Weatherbreak' Buckminster Fuller Geodesic Dome

The geodesic dome is a marvel of engineering. It is light but extremely strong. It requires 30 percent less energy to heat or cool than a typical building. Domes can be built from a kit of premade parts. They save on costs and materials because they enclose the largest volume of interior space using the least surface area.



What would be cool about living in a house like this? What would be challenging? How could a dome be helpful in your community? What could we use this structure for in the future?

How can we build more inclusive, efficient, and sustainable cities and structures?

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FUTURES THAT INSPIRE

East Hall

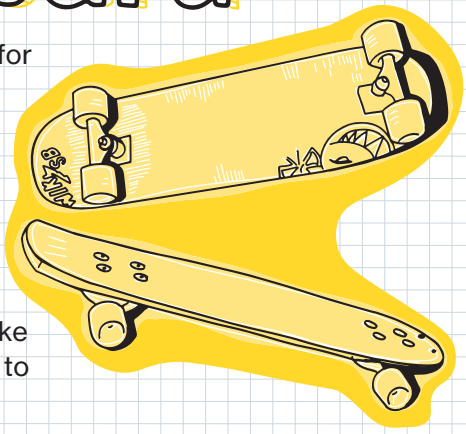
Big dreams shape reality. The most important innovations can come from play and imagination.

How can your imagination help build a more sustainable future?

Let's look for...

- A fun and sustainable mode of transportation.
- A community of the future in an unlikely place.

Leo Baker's Skateboard



Skateboarding began as a way for surfers to have fun on days the ocean was quiet. Skateboard athletes learn complex tricks. They do ollies, kickflips, and power slides. Many people saw skateboarding as a "male" sport. Athletes like Leo Baker, who is nonbinary, worked to make skateboarding more welcoming to everyone.

Skateboards are not just for fun. They are also transportation. Skateboards, scooters, and bicycles are micromobility tools. Micromobility tools are small, lightweight devices that do not have engines. They help people get around their communities without using fossil fuels. Electric or human-powered transportation is much better for the environment.

How can transportation change to become more sustainable?

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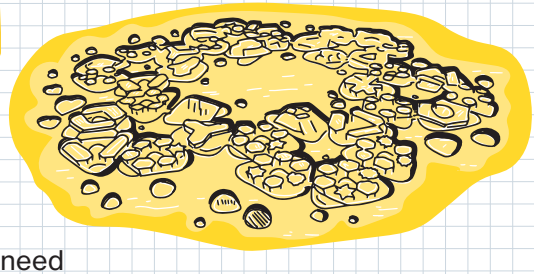
Oceanix City Model



Our climate is changing. Climate change is causing sea levels to rise. This is threatening many cities around the world. We may need to design new types of cities. The ocean surface could provide answers. Oceanix City is a plan for a sustainable city of 10,000 people. It uses solar energy, plant-based food production, zero-waste systems, shared mobility, affordable housing, and more.

Look at this model. What do you notice about how this community works?

Can you see yourself living in a floating city in the future? What would be the benefits and challenges to living on the ocean's surface?

Dream big about solutions for sustainable communities of the future! What would you add to Oceanix City?

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FUTURES THAT UNITE

South Hall

How can we create a future that is more equitable, peaceful, and inclusive?

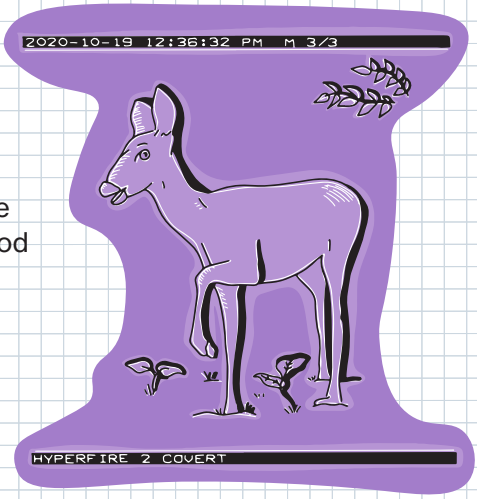
How can we make a more sustainable future by working together?

Let's look for...

- A program that uses everyday people to help with environmental research projects.
- A program that saves animal species from extinction.

Citizen Science

Did you know you can help scientists do research from home? Sometimes they need help from the community to better understand nature. You can help identify wildlife, share information about neighborhood birds, or collect ginkgo leaves to learn about atmospheric change. This work makes you a citizen scientist!



How would you like to contribute as a citizen scientist?

What ways can your community benefit from citizen science?

What types of projects are needed in your community to better understand the local environment and wildlife?

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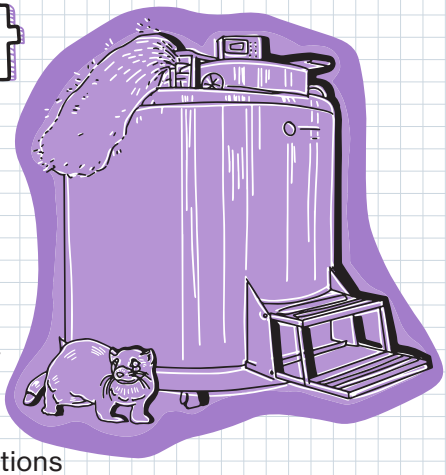
Smithsonian Cryo-Initiative Equipment



How do you save an endangered species? Smithsonian scientists are leading the way in cryo-collections. These collections save frozen genetic material for the future. In early 2021 scientists cloned a black-footed ferret. They used DNA that had been frozen for 30 years! This work can help boost endangered species populations and increase biodiversity. It may even bring back animals from extinction.

What species would you want in the cryo-collection? Is there an animal species that you would like to bring back from extinction? What is it?

What do you see for the future of endangered species and biodiversity?

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FUTURES THAT WORK

West Hall

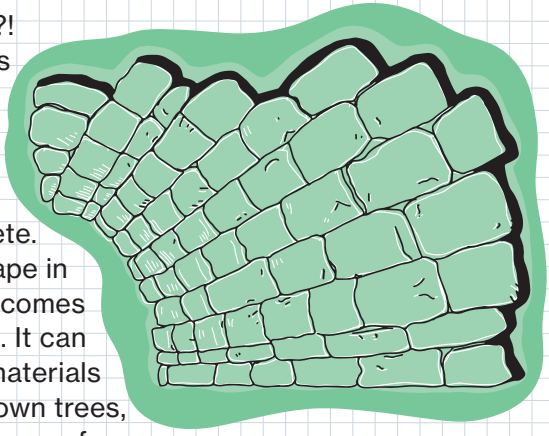
Technology moves fast. We don't always consider where the materials in our life come from. Meanwhile, climate change presents an enormous challenge for our global community.

What if we worked smarter, slower, and more thoughtfully toward sustainable solutions?

Let's look for...

- A building material that uses a surprising ingredient.
- A waste product that's finding a new purpose.

Mushroom (mycelium) Bricks



Bricks made out of what?! Mushrooms!? Mushrooms or fungi might not seem like a great building material. But mushroom bricks are fire-resistant and stronger than concrete. They can grow in any shape in just one week. Mycelium comes from a part of the fungus. It can replace typical building materials like lumber, which cuts down trees, and cement, a main producer of carbon dioxide, with something more sustainable.

What structures in your city could be built with mushroom bricks? What would a unique mushroom brick building look like?

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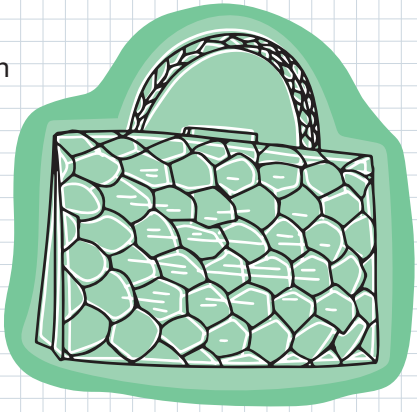
Fish SKin Fashion



Elisa Palomino's fish skin fashion shows how a "waste" product can be repurposed into a sustainable and stylish material. The fashion industry is the second largest polluter in the world. It produces 10 percent of global carbon emissions. It produces 20 percent of global wastewater. Polyester, acrylic, and nylon are made from nonrenewable fossil fuels. Indigenous practices using sustainable materials like fish skin are showing us how future fashion could be more environmentally friendly.

Take a close look. What do you think of when you think of fish skin?
What other natural materials could we use for fashion with a sustainable twist?

What clothing would you design and make out of fish skin? Where would you wear it?

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The future is not a fact. It is a decision. We can make the future what we want. What do you see for the future?

As you have seen through FUTURES and this guide, there is no single vision of the future, but many ideas for many futures. As we take on the great challenge of living sustainably, its important think about the causes you care about. Imagine how you can play an active role in shaping the future we want, not the future we fear.

Use this space to write your dream of a sustainable future. How can we build on past generations' ideas? How can we use imagination and play? How can we work together for a more connected future? How can we unite and be inspired to use our resources more wisely? The future you envision is uniquely yours!

Write:

Draw:

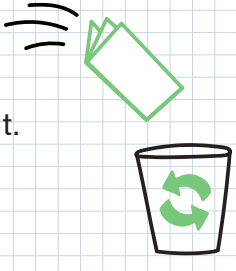
How do you feel about being able to create a sustainable future?

Share your ideas with your family, class, community, or on social media with #TheFUTURES.

@smithsonianaib
@smithsonianscie

Field Guide to Sustainable FUTURES was created in partnership with the Arts + Industries Building and the Smithsonian Science Education Center.

Please visit ScienceEducation.si.edu/futures-toolkit to find the corresponding digital toolkit for teachers, with science standard-based lessons for the classroom and digital resources that enhance the activities. Please visit aib.si.edu for more information about FUTURES.



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