

# Sustainable Career Pathways Green Entrepeneurs

**Agricultural Entrepreneur (Agripreneur).** Would you like to invent and draw in new technologies to help improve farming? Perhaps you'll be an agripreneur, like Vincent. Learn more about <u>agricultural entrepreneurship here</u>. And you can draw inspiration from <u>the efforts of 16 agripreneurs described here</u>.

#### Lesson Plan

**Agricultural Scientist** with a specialization in sustainability. If you're interested in making farming more productive, sustainable, and efficient, perhaps you would like to explore the field of agricultural science. Agricultural scientists study plant reproduction, soils, plant genetics, and more to find ways to improve farming techniques and yields while protecting the land. Learn more here.

#### Lesson Plan

**App Designer:** From lead and addiction-level testing to creating an app to make the internet a kinder place, Gitanjali has explored many different paths. With so much of our time spent on the internet, apps that can improve our lives, and the world, can make a difference. Want to get into app design? Here's a good starting point.

# Lesson Plan

Applied Anthropologist. As James learned through experience, understanding how technologies are used in different countries and cultures is essential for successful adoption of them. Anthropologists study culture, and applied anthropologists use their understanding of culture to help solve environmental or social problems: for example, finding ways to overcome stigmas or misconceptions about using solar energy. Anthropology is a robust field: universities, nonprofits, government agencies, and companies all need them to help achieve their missions. Read more about the field here.

# • Lesson Plan

**Aquarist** Do you love marine animals but would rather care for them than study them? Aquarists care for marine life in aquariums and research facilities. This is a niche field and certainly an interesting one to explore.

# <u>Lesson Plan</u>

**Aquaculturist** One of the great ways to heal the ocean is growing kelp and shellfish to filter and clean it. Farming the seas, or aquaculture, is a growth industry, as is working for companies that help seed aquaculture operations. An aquaculturist oversees the breeding and growing of fish, staff management, and the operation of aquacultural systems. Learn more here.

# • Lesson Plan

**Bicycle Mechanic.** Ultimately, in order to reduce our dependence on fossil fuels, it'll take more than electrifying cars or moving to mass transit. We'll need to also live more local lives, where walking and cycling are primary ways of moving ourselves around. This will mean a boon in the bicycle industry: manufacturing, marketing, sales, and keeping bicycles up and running. Are you good with your hands? Consider learning the trade of bicycle mechanics. Here's a great introduction.

# Lesson Plan

**Blue Entrepreneur** SOA also hosts an <u>Ocean Solutions Accelerator</u>, offering mentoring and micro-grant funding to support new initiatives. Finding strategic ways to heal the ocean and creating a needed product or business service are great ways to make a career, and a difference in our world.

#### Lesson Plan

Chemical Engineer. Azza worked to help develop a new catalyst to break down plastic waste and turn it into a new source of fuel. Chemistry is at the heart of modern economies: from fuels and fungicides, to flavorings and fertilizers (and that's just one letter of the alphabet!). Explore this field and learn about ways you could make a career in chemistry to help build a greener economy.

# <u>Lesson Plan</u>

**Circular Economy Entrepreneur.** While people often think about designing *products* in ways that they can be more easily recycled or reused, another key part of the circular economy is innovating ways to better collect and reuse *waste*—such as used cups, plastic waste, and coffee grounds, among many other things. As we shift to new ways to consume and do business, there will be lots of opportunities to participate in the circular economy. This article's inspiring circular economy entrepreneur stories can help get your creative juices percolating and thinking about what unique and sustainable niche you might want to be a part of. <u>Read here</u>.

# <u>Lesson Plan</u>

Coffee Careers! With so many people loving coffee, there are literally millions of jobs in this industry (1.7 million jobs just in the US!) If you want to make a career in the coffee industry, you could work with sustainable farmers, run a sustainable cafe, or like Revive Eco, find ways to make coffee drinking more sustainable—by addressing the waste created by spent grounds and used cups, or the amount of water and type of energy used in cafes. Want to learn more? Here's an introduction that explores some of the issues to consider in order to make coffee consumption more sustainable (whether you're looking for a particular brand to support, or a good company to work for).

**Community Organizer.** Engaging one's community around important environmental and social challenges, as well as in post-disaster situations, is an important career path and opportunity for community service. There are many programs to learn organizing skills, from online courses (<u>such as this one</u>), to one-year environmental organizing field schools like <u>Green Corps</u>.

# • Lesson Plan

Composter. Your parents might already compost waste in your backyard. But many cities are starting to require food waste of all sorts (including coffee!) to be composted, with some even picking up composted materials, along with garbage and recycling. This means that there are a growing number of jobs in industrial-scale composting, as well as in government management of it. It may not be the "sexiest" career path, but helping to turn food waste into soil is a pretty noble career! If you want to learn more, start with this short essay about the potential growth of the composting industry.

# Lesson Plan

Conservationist. Conservationists have various roles to play in preserving and protecting wildlife habitats and their inhabitants: they work as animal advocates, liaisons with governments and affected communities, nonprofit managers, and fundraisers, among many other roles. This witty essay looks at the 12 different types of conservationist you could be. And this article introduces you more thoroughly to the field.

#### Lesson Plan - Elliot Connor

Conservationist. Like Jane Goodall, you too could be a conservationist, helping to preserve and protect wildlife habitats and their many rare and awe-inspiring wildlife inhabitants. Conservationists play many different roles: as advocates, liaisons with governments and affected communities, managers, fundraisers, and so much more. This witty essay looks at the 12 different types of conservationist you could be. And this article gives a more thorough introduction to the field.

# • Lesson Plan - Sainath Manikandan

**Data Analyst.** Understanding data and turning it into effective findings is essential in order to improve not just disaster relief, but development aid, the transition to clean energy, climate change, and all other fields as well. If you love working with data, finding patterns, and writing reports, check out this career path. <u>Learn more here</u>.

#### Lesson Plan

**Designer in the Circular Economy.** Recognizing that waste is a significant cost to companies *and* to the planet, a whole new generation of designers is creating new things that can be fully dismantled—reusing the long-lived parts, recycling the worn parts, and enabling the services that come from goods without the toxic disposability often designed into our products. For example, while most phones can't be easily recycled or repaired (and are instead designed to have a lifespan of only a few years) <u>Fairphone</u> is designed for long life, and can be completely dismantled and various parts replaced if they break. Why not help design goods that have long lives and that at the end of their lives can be fed, with zero waste, into the next generation of products? <u>Learn more about the circular economy</u>, and get inspired here.

**Development and Marketing of Sustainable Technology:** Companies like "The Laundry Alternative" can fill a large niche in an economy where electricity is limited. As communities around the world seek to reduce electricity usage in order to limit greenhouse gas emissions, appliances that are human, or even bicycle-powered may be a significant growth market. Inventing, designing, raising capital for, marketing, and distributing are all essential roles (and jobs!) for creating and distributing sustainable technologies.

#### Lesson Plan

**Disaster Management Specialist.** The climate crisis has increased the prevalence of flooding, fires, droughts, and other natural disasters. Every community needs a disaster management plan that includes the just and effective allocation and management of limited resources. <u>Learn more here</u>.

#### • Lesson Plan

**Diver.** Before he created his shellfish farm, Perry harvested shellfish by scuba diving. Divers are in demand for many other projects as well–from <u>building offshore wind turbines</u>, to reseeding coral reefs, to helping to conduct scientific research and archeology. If you love diving, there's potential to make a career out of it! <u>Read about some diving jobs here</u>.

# Lesson Plan

**Documentary Filmmaker.** As Gary has demonstrated, film is a very powerful tool in that can be used to draw attention to an issue and spark change. Perhaps you want to become a filmmaker. Here are some tips for becoming a filmmaker by Ken Burns. And here are some tips on how to actually make a living doing it.

# • Lesson Plan

**Extension Agent.** Farmers have long been supported by both governmental and nongovernmental agricultural extension offices. (In fact in China, this practice goes back about 2,800 years!). Extension agents support farmers in their area, helping them to improve crop yields and practices. They can also play a role in cultivating the next generation of farmers, for example by supporting youth groups like 4H. If this sounds like the job for you, learn more here.

#### • Lesson Plan

**Fundraiser/Development Officer.** Raising money is a skill as well as a viable career path. Every major nonprofit organization has a development officer—from environmental organizations to universities and community aid organizations. For a basic description on what being a development officer entails, visit <a href="here">here</a>.

### Lesson Plan

**GIS** Specialist. Geographic Information Systems (GIS) is a key technology used in mapping, modelling, and presenting spatial data. Gary employed GIS in tracking his river clean-up progress. Many environmental groups, governments, and businesses use GIS to help with their efforts to make a more sustainable world. <u>Learn more about being a GIS</u> specialist here.

Indigenous Studies Scholar. So much knowledge—of the land, of celestial navigation, of a sustainable way of life, of living through a world-changing societal crisis—exists in the experience and history of Indigenous peoples. Learning from and sharing this knowledge could be a powerful and valuable career path. If this is a path for you, you could start your explorations at the Native American and Indigenous Studies Association or at the Center for World Indigenous Studies.

#### Lesson Plan

**Inventor:** It's not easy to invent something, and it's even harder to get the world to notice. But a good idea can change the world. Explore these <u>5 Steps to Inventing Something</u> and these <u>7 steps to becoming a full-time inventor</u>.

- Lesson Plan Alex Perkins
- Lesson Plan Gitanjali Rao

**Materials Engineer:** Along with properly disposing of and reducing the use of plastic, it will be essential to design alternative sustainable materials to replace plastic. This will take materials engineers. Explore the field of <u>materials engineering</u> for possible ways you could help grow a greener economy.

Lesson Plan

**Mechanical Engineer.** As Alex's story shows, with engineering skills we can redesign our manufacturing processes to make things—from wind turbines to toasters—more efficient and more sustainable! Want to explore the field of engineering? <u>Start here</u>.

Lesson Plan

**Microfinance Industry.** As Gary's innovative work reveals, <u>microfinance</u> is a proven tool in helping to create opportunities, and leveraging the resources of the poorest segment of humanity so they can help themselves,. There are many ways into this sector: for example, through finance, policy, or development, <u>as this article details</u>. And databases like <u>UNJobs</u> and <u>DevEx</u> will help you find internships and jobs in microfinance.

Lesson Plan

Microgrid Design Engineer. Perhaps like Ana Sophia, you want to help build microgrids, increasing community energy independence and resilience. <u>Start by understanding what a microgrid is</u>. Then, if this is for you, <u>learn more about the industry and job opportunities here</u>.

<u>Lesson Plan</u>

Ocean Activist If we are to reduce marine pollution, including plastic pollution, and overfishing, we're going to need more activists fighting for the well-being of the world's oceans. Organizing beach cleanups, advocacy efforts, and drawing attention to the 14<sup>th</sup> Sustainable Development Goal are all ways to get involved right now. As you build your experience in activism, perhaps like Daniela you'll be able to make a career out of this passion as well! One way to get started might be to join the Sustainable Ocean Alliance's Leadership Program.

<u>Lesson Plan</u>

Oceanographer An oceanographer is a scientist who studies the ocean, thereby helping to protect, conserve, and restore marine environments. Oceanographers can study the life, chemicals, fluid dynamics and physics, or even the geology of the oceans' floors. Considering that oceans are the true "lungs" of the planet (producing up to 80 percent of the world's oxygen)—and that climate change deeply threatens the ocean, both through warming and acidification—the world certainly needs more oceanographers. For more on this field and its vast diversity, visit <a href="here">here</a>.

### <u>Lesson Plan</u>

**Recycling Industry.** Americans produce more than 290 million tons of waste each year, about a quarter of which is recycled. Recycling is a big business: drivers, sorters, mechanics, technicians, and plant managers are all needed. It's not a "pretty" job, but it's one you can be pretty proud of. After all, one of the best ways to prevent plastic pollution is making sure it is recycled and made into new products. This article gives a great overview of the recycling industry.

#### Lesson Plan

Renewable Energy Advocate. Renewable energy is a rapidly growing field and will make up an ever-larger percentage of the world's energy mix in decades to come. Becoming part of a renewable energy company—as a manager, salesperson, or support staff—is a way you can help with this transition. Or, by joining one of the many nonprofit organizations researching, promoting, or lobbying for the transition to renewable energy, you can help draw attention and investments to renewable energy.

# • Lesson Plan - Ana Sophia Mifsud

Renewable Energy Advocate. Through his work, James has shown the power of bringing together a diverse set of communities to collaborate with and learn from. Renewable energy is a rapidly growing field and will make up an everlarger percentage of the world's energy mix in the decades to come. Becoming part of a renewable energy company—as a manager, <u>salesperson</u>, or support staff—is one way you can help with this transition. Or, by joining one of the many nonprofit organizations like <u>Solar Head of State</u>, you can help draw attention and resources to renewable energy.

# • Lesson Plan - James Ellsmoor

**Renewable Energy Engineer.** Improving the design of batteries, solar panels, and wind turbines will be essential in the transition to a sustainable future; and that will require renewable energy engineers. Want to learn more? Start here.

# <u>Lesson Plan</u>

Renewable Energy Scientist. Great leaps are being made in renewable energy every year: from higher-efficiency wind turbines to transparent solar energy-generating glass. Do you want to help advance the field? Learn more about being a renewable energy scientist here.

Renewable Energy Site Design Consultant. A lot goes into identifying an appropriate site for a new renewable energy project, from figuring out whether it will generate enough electricity, to determining what impact it will have on the surrounding environment. As we transition to renewables, there is a great demand for people who are skilled in helping to set up new projects. For example, <u>Geo SubSea</u>, a consultancy firm, assesses and maps the design of offshore wind farm sites in the Northeastern United States.

# <u>Lesson Plan</u>

**Renewable Energy Technician.** Are you interested in expanding our use of renewable energy, rather than developing the science and technology behind it? Would you like to be involved in installing solar panels and wind turbines? Explore the career of Renewable Energy Technician.

#### • Lesson Plan

**Roboticist.** If you love the ocean (and robots), perhaps you should be a roboticist. Roboticists are designing autonomous underwater vehicles that will be the future of ocean exploration, aquaculture, and coral restoration. This is an exciting new sector of the Blue Economy that is growing, and that currently lacks a sufficient number of qualified employees. Even if you don't like oceans, there are dozens of fields in which roboticists are needed. Interested? <u>Learn more about entering the field of robotics here</u>.

# Lesson Plan - Perry Raso

**Roboticist.** If you love the ocean (and robots), perhaps you should be a roboticist. Along with Sainath's M-bot, roboticists are designing autonomous underwater vehicles that will be the future of ocean exploration, aquaculture, and coral restoration—a sector of the Blue Economy that is growing, and that is lacking qualified employees. Even if you don't like oceans, there are dozens of fields in which roboticists are needed. Interested? <u>Learn more about entering the field of robotics here.</u>

# • Lesson Plan - Sainath Manikandan

**Satellite Technology.** The modern world runs on satellites, which are used for everything from communications and navigation to sustainability applications like tracking weather and climate patterns in agriculture. Have you ever considered helping to design, launch, and run satellites? <u>Learn more here</u>.

# Lesson Plan

**Serial Entrepreneur:** Gitanjali has created several wildly different, socially beneficial inventions. But to get a product or service into the world takes an integrated network of investors, marketers, and entrepreneurs. An entrepreneur is willing to take on risk in order to create a new business or product and get it into the hands of people. Think you want to be an entrepreneur? <u>Learn more here</u>.

The Shipping Industry. The shipping industry is a key part of the global economy. This field requires <u>captains</u>, <u>navigators</u>, logistics managers, and crew. Can you imagine yourself working on a ship? How about on <u>a cutting-edge</u>, <u>sustainable ship</u> that uses solar and wind energy to keep its environmental impact minimal? Or perhaps you'd like to <u>design sustainable ships</u>?

# • Lesson Plan

**Social Marketer.** In addition to working for a specific company marketing its product(s), marketing brand managers can play a powerful role in drawing attention to sustainable products and services and getting people to use them. From convincing people to put solar panels on their rooftops to getting them to eat sustainable food products, or getting them to use public transportation bicycle, the field of "social marketing" is marketing in service of achieving social goods, rather than just stimulating more consumption of unsustainable products. <u>Learn more about this field here.</u>

### Lesson Plan

**Solar Electrician**. Along with installing photovoltaic cells, trained electricians are needed to wire them properly. This kind of work usually requires a technical degree or apprenticeship. Read more about how to become a solar electrician here.

#### Lesson Plan

**Solar PV Installer.** Not everyone wants to work in an office all day. Some people would rather help build infrastructure working with their hands. Why not help cover the world's rooftops in solar panels? These jobs pay well, and only require a high school diploma. Learn more here.

# <u>Lesson Plan</u>

**STEM Educator:** Gitanjali received significant mentoring and support from the adults in her life. Consider a career in education: either as <u>a teacher</u>, or in informal education, including museums and science centers, FabLabs, and nature centers.

#### Lesson Plan

**Sustainable Aquaculturalist.** One of the great ways to heal the ocean is by growing kelp and shellfish to filter and clean the ocean. Farming the seas, or aquaculture, is a growth industry, as is working for companies that help seed aquaculture operations. An aquaculturist oversees the breeding and growing of fish, manages staff, and/or operates aquacultural systems. Learn more here.

# • Lesson Plan

**Sustainable Beer Industry.** Making beer uses a lot of water (not to mention a lot of grain, and a lot of energy). But it can be, and is starting to be, produced more sustainably. Responsible brands can be leveraged to help invest in sustainable development, (as Stella Artois has done with Water.org). With 2.1 million jobs supported by the U.S. beer industry, this is a sector filled with opportunities both for jobs and for making a real difference in the way it is made. Read more about sustainable beer industry efforts here.

**Sustainable Farmer.** There is an increase in the number of young people who are being drawn to farming, as groups like <u>The Greenhorns</u> reveal. If you're interested in being a farmer, <u>this introduction to the field of sustainable agriculture is a good place to start</u>.

#### Lesson Plan

**Sustainable Finance**. With billions of dollars being invested, where the money goes will shape the future of business. Should we be investing in oil companies, or in renewable energy companies? In downtown real estate or suburban malls? Working with a socially responsible investment firm, or with a university or foundation as an asset manager can be a great way to help develop the sustainable business sector. Here is a brief introduction to the many jobs in the field.

#### • Lesson Plan

Sustainable Restauranteur. It's possible that it's never been harder to be a restauranteur than now, due to the COVID pandemic. But for those who love the idea of managing a restaurant, especially one that draws on sustainable ingredients and helps people understand that healthy and sustainable food is delicious, there are many leaders to draw inspiration from. For example, Alice Waters opened her trailbreaking restaurant Chez Panisse in Berkeley, California, in 1971. And in 2021, Ona, a restaurant in a small village in southwestern France, became the first vegan restaurant to receive a Michelin star. Perry's restaurant, Matunuck Oyster Bar, has shown how obtaining ingredients from local sources and integrating those sources into the business plan can be successful. Perry now has a Farm-(and Sea)-to-Table enterprise, drawing from his vegetable and oyster farms. Want to learn more about being a restauranteur? Read here.

#### Lesson Plan

**Volunteer Coordinator.** Nonprofits depend on volunteers to get the work done. And the success, management, and training of volunteers depends on good volunteer coordinators. Larger nonprofits hire coordinators to help draw out the energy and passion of volunteers, as well as train them: <u>Learn more about what a volunteer coordinator does here.</u>

#### Lesson Plan

**Waste Manager.** Waste, unfortunately, is a major side effect of the industrial economy–a reality Azza saw to her dismay as she drove past the seemingly endless landfill between Alexandria and Cairo. Determining strategies to reduce waste, and manage the waste produced in safe and sustainable ways <u>is an essential green career</u>.

# <u>Lesson Plan</u>

**Watchdog Organization.** Watchdog organizations—whether governmental, corporate, or nonprofit--are essential in order to sustain democratic practices. Watchdog careers can be in government oversight boards like the <u>GAO</u>; nonprofit organizations like DAP or the <u>Bank Information Center</u>; as well as in <u>journalism</u>.

# • <u>Lesson Plan</u>

Water and Sanitation Engineers and Managers. Water and sanitation engineers help plan and build the water systems and piping needed to deliver fresh water to communities and take away sewage, while managers help to operate existing systems. Learn more about a career as a water engineer <a href="here">here</a> and a career in operating water plants <a href="here">here</a>.

• Lesson Plan

**Welder.** Building wind turbines and other advanced technology requires the skill of welding. This is not often considered as a green job, but when using it to build green technologies, it certainly is. <u>Learn more here</u>.

Lesson Plan

Wildlife Veterinarian. Caring for sick and injured wild animals can be rewarding as well. <u>Explore how you can become</u> a veterinarian, or check out these many other interesting jobs working with animals here.