



2017 6th Annual Global

Invent It Challenge



Smithsonian



Think about a real-world **environmental issue** and come up with a planet-friendly solution.

ENVIRONMENTAL TOPICS & RELATED RESOURCES

Use these ideas and resources to spark your environmental inventions!

Too Much Trash! We see trash overflowing our dumpsters, scattered along roads, spoiling parks, and floating in waterways. The garbage humans produce causes pollution and damages wildlife habitat, while also using up valuable natural resources. What can be done? Lots! What invention can you create to help solve this problem all around us?

Resources:

- Earth 911 <http://earth911.com/>
- CAL Recycle <http://www.calrecycle.ca.gov/default.asp>
- Sustainable Sources-Composting <http://compost.sustainablesources.com/>
- Home Recycling <http://homerecycling.sustainablesources.com/>
- Green Education Foundation <http://bit.ly/2e5saVd>
- Rethink Recycling <http://www.rethinkrecycling.com/learn-educate>
- Compost Education Center <http://projectgrowgardens.org/cec>

Water Scarcity: All life on Earth depends on water. Unfortunately this precious resource is often taken for granted and used carelessly. With an increase in severe weather and drought, we are realizing the importance of saving water. What can you invent to help conserve water?

Resources:

- Water: Use It Wisely <http://wateruseitwisely.com/kids/>
- Water Sense <https://www3.epa.gov/watersense/>
- Ecology Global Network: Water <http://www.ecology.com/water/>
- Sustainable Sources: Water <http://sustainablesources.com/water/>
- GEF: Water <http://bit.ly/2f0Wlfq>
- Project Wet <http://www.projectwet.org/cleanandconserve>

Climate Change: The climate is changing, which is creating an urgent need to make some changes in the way we use energy and burn fossil fuels like coal and gasoline. The more energy we use, the larger our carbon footprint is. Individuals, families, schools, and businesses can all have a positive impact on the environment by using less energy. What can you invent to help people lower their carbon footprint and slow climate change?

Resources:

- EPA: Climate Change <https://www.epa.gov/climatechange>
- EPA Measure Your Impact <https://www.epa.gov/energy/measure-your-impact>
- Passive House Institute <http://www.phius.org/home-page>
- Home Energy <http://www.phius.org/home-page>
- EPA Energy and the Environment <https://www.epa.gov/energy>
- Energy Kids <http://www.eia.gov/kids/>
- Ecology Global Network: Climate Change <http://www.ecology.com/air/climate-climate-change/>
- NOAA: Climate Change <http://bit.ly/1DWtb7Q>

Air Pollution: Air pollution is known to cause health problems in people, plants, and animals. We see it as smoke, smog, and haze. Some air pollution is invisible and comes from chemicals in the things we use. What can you invent to reduce the pollution in the air so we can all breathe easier?

Resources:

- EPA: Indoor Air Quality <https://www.epa.gov/indoor-air-quality-iaq>
- EPA: Healthy Air in Schools <https://www.epa.gov/iaq-schools>
- Air Now <https://www.airnow.gov/>
- WWF: Air Pollution <http://bit.ly/2ef36i2>
- National Institute for Environmental Health <http://bit.ly/2f1aHSs>

Water Pollution: Have you ever seen or even smelled polluted water? Yuck! Water pollution spoils our drinking water and ruins the habitat for aquatic plants and animals. Find out how water becomes polluted, and then think of ways to help solve this toxic problem. What can you invent?

Resources:

- EPA: Water <https://www.epa.gov/learn-issues/learn-about-water>
- GEF <http://bit.ly/2f0Wlfq>
- Project Wet <http://www.projectwet.org/cleanandconserve>
- National Geographic: Water Pollution <http://on.natgeo.com/1t5rW7b>
- Natural Resource Defense Council <https://www.nrdc.org/issues/water-pollution>
- World Wildlife Fund Water Pollution <http://bit.ly/1DQMr9r>

To the Rescue—Endangered Species: Elephants, rhinos, and bees, oh no! Our planet is home to diverse forms of plants and animals. Unfortunately, this number is rapidly shrinking through the destruction of habitat and other human causes. What can be done? Select an endangered plant or animal in your location. What can you invent to help save it from extinction?

Resources:

- Ecology Global Network: Species <http://www.ecology.com/species/>
- US Fish & Wildlife <https://www.fws.gov/endangered/>
- NEEF <https://www.neefusa.org/nature/plants-animals>
- NWF: Endangered Species Act <http://bit.ly/2f5sK7S>
- ARKive <http://www.arkive.org/endangered-species/>
- WWF <http://wwf.to/1pMS3JQ>
- Natural Resource Conservation Service <https://plants.usda.gov/threat.html>

Invasive Species: People often bring a plant or animal to a location that is not its natural habitat. When this happens, the species can take over and disrupt the delicate balance of nature in that location. What invasive species are in your location? What can you invent to help stop the spread of these plants or animals?

Resources:

- NWF: Invasive Species <http://bit.ly/13qVOL4>
- USDA <https://www.invasivespeciesinfo.gov/index.shtml>
- Invasive Org <http://www.invasive.org/>
- National Invasive Species Council <https://www.doi.gov/invasivespecies>
- US Forest Service <http://www.fs.fed.us/research/invasive-species/>

Natural Resource Loss: We cut trees to build houses, furniture, and make paper. Water is used in the manufacturing process. The land is mined for metals and fuel. All of us depend on these natural resources to meet our needs and enjoy activities. Find out the problems facing the Earth's natural resources. What can be done to reduce the amount of resources we use? What can you invent for a more sustainable future?

Resources:

- EPA: Green Building <https://archive.epa.gov/greenbuilding/web/html/>
- The Center for Green Schools <http://centerforgreenschools.org/>
- USDA Natural Resource Conservation Service <http://bit.ly/1c1menK>
- FS Conservation Education <http://www.fs.usda.gov/conservationeducation>
- UNESCO Biodiversity <http://bit.ly/2f5Mvfb>
- Smithsonian Ocean Portal <http://ocean.si.edu/blog/helping-kids-help-ocean>