

Teacher Workshop Guide

This is an introduction to the campaign designed to inform your students and give them background info on why participating in this campaign is important in restoring our planet with a healthy climate.

Climate change and why its urgent - In Pre industrial times of the mid 1700's and earlier there were no coal powered trains and there certainly were no homes and businesses connected to energy plants that sourced power from coal and natural gas. At this time 80% of the population were farmers and almost all of people's needs for material goods such as food clothing and building materials were sourced from the local community. Because of this, communities were close and as a natural result they were better able to rely on each other for all their needs including traditional welfare and economic support. Since the mid 1700's until now a lot has changed. Technology has advanced and replaced many activities of our lives and as a result we consume a lot more energy and are less connected to those around us. The sources we are using for our energy have been derived from unsustainable, environmentally harmful places. In fact they are so harmful that much of our wild life has already been killed to the point where today over 90% of all mammals on the planet are either human or livestock! So what can be done in order to restore a healthy planet? In order to do this there are a variety of important short term and long term goals we can aim for.

One of the main long term goals is reducing our overall energy consumption needs outside of our homes. In the long run this could be accomplished by living more in community the way people did in Pre Industrial Times where there are more famers and community based economies. People love the term innovation and although it may seem that going back to community living, similar to how we lived in the 1700's, is the opposite of innovation, it is possible that this is the best type of innovation we can have for our time, because it is a model that has proven to cause little to no harm to our environment and it is a way of living that is much different to what we see happening in most of our town's today. If old fashioned means spending our energy in ways that are renewable and healing such as communi-

cating to people face to face rather than through using technology that pollutes our planet and leaves us drained, why not be old fashioned?

So how is technology and energy use polluting our planet? Mostly this is attributed to gas and coal burning power plants since they power most of our energy needs, and are also two of the primary sources of climate change since they emit large amounts of carbon into the atmosphere. These carbon emissions are known as **greenhouse gases** and the energy sources that cause them are known as **fossil fuels**. The result of fossil fuels causing large amounts of greenhouse gases is what has created global warming. Since the industrial revolution, the planet has warmed by almost 1.5 degrees celsius. This may not seem like much, but the last time the planet was this hot, the sea levels were 20 feet higher and so even if we stopped climate change now we would still see much devastation happening to our planet within the next century.

The good news is that most people now agree that human activity related to the rise and development of the Industrial Revolution has caused global warming and secondly, we still have time to avert a global crises from global warming if we begin acting now or in the very near future by making climate change remediation a priority in our beliefs and in our actions. The main goals to achieve this are by completely eliminating fossil fuels and green house gases by switching to clean energy by the year 2030. As we move closer to this goal there are many things that must be done, and one of these important things is accomplished by using less energy in our homes which will result in less green house gas emissions.

Does anyone here know or want to guess how much money the average house in america spends through inefficient energy designs in their home?

Answer - According to a New York Times article, we waste up to \$500 a year by having inefficient energy operation in our homes. What this means is that if your house was highly energy efficient, then on average you would be saving \$480 every year on your energy bill and you would be cutting your green house gases by about 35%. Most of this wasted energy comes from idle load electricity which is appliances left plugged in while out of use.

So then, one powerful way we can take action now is by reducing energy consumption inside our homes.

Here are some specifics of what we can do.

Reduce Heating/Cooling/Energy Costs

- Consider telling your parents to hire energize CT to do an energy audit of your home. Through incentives with your state you are offered this service at a reduced rate that includes 20 free LED light bulbs and many other services that will save you so much energy that the cost of the audit will pay for itself within the first year. Their website is www.energizect.com
- Replace light bulbs with LED bulbs
- Make your house less drafty by insulating your windows with plastic
- Turn down your thermostat at night and when out of the house during winter or even better.
- Change electric to clean supplier (wind or solar). You can do this way more easily than you think through www.arcadiapower.com
- Weatherize extensively. The goal is to use as little energy as possible long term and save funds for other work.
- Think Big. Could you install solar panels on your roof?
- Encourage your friends and neighbors to be more energy efficient.
- Unplug and use power strips. Your workspace should not be using energy when you're not around. According to the EPA, idle electronics consume enough energy to equal the annual output of twelve power plants. Many chargers and appliances (printers, computers, TVs, etc) use energy when they're plugged in, even if they're not turned on

Now we have an idea of what the main short term strategies are and the long term strategies. The short term solution for helping our climate is by making energy use changes in our homes and the long term solution is by making energy consumption changes outside of our homes by way of restoring community based economies, creating more farms, and switching to 100% clean energy for all of our town's energy needs.

Other climate change lessons to consider for your students:

Lesson 1 at this link teaches children how a t shirt is made. Its ideal for students grades 9 - 12 - <https://thischangeseverything.org/studyguide/>

Climate change presentation - https://docs.wixstatic.com/ugd/e8b68a_a7e60c82982341a6bd5cd139f0f99d53.pdf