

## 1. Design and Build a Climate Change Machine

So would you like to become a millionaire and help fight climate change at the same time? Why not design your own Climate Change Machine? People around the world would eagerly line up to buy a machine that would be both affordable and portable and help to remove carbon dioxide from the atmosphere to help fight climate change.

You can work alone or in a group. The main idea is to be creative and have some fun. If you have extra time, try building a model of your Climate Change Machine.

Design directions: You are to design a machine with the following in mind, your machine must:

- run on 100% solar energy;
- be made of 100% biodegradable materials;
- absorb carbon dioxide out of the atmosphere;
- transform the carbon dioxide into carbon;
- return oxygen to the atmosphere; and
- be completely recyclable.

Building directions:

- Keep your machine small – it must be portable.
- You can only use biodegradable ‘planet friendly’ materials – use paper, cardboard, wooden popsicle sticks, etc.
- Think of how your machine can be used after it stops working.
- Have fun!
- Like all machines, you will need directions on how to operate your machine, so write a short paragraph or two to describe how it works.

### **Note to teachers:**

In real life, this machine already exists – it’s called a tree!  
See if some of your students discover this on their own.

## 2. B.C.'s Mountain Pine Beetle

Climate change has been identified as one of the causes of the recent Mountain Pine Beetle epidemic that has killed millions of pine trees throughout our province and which has now moved into Alberta threatening the vast boreal forest region of Canada.

As an extension to '*Climate Change and Our Forests*', refer to the teaching kit *British Columbia's Mountain Pine Beetle*, an intermediate teacher's resource. This resource kit includes lesson plans, activity sheets, a DVD, posters along with wood, bark and beetle samples. Every elementary school in B.C. has received one or more of these resources for your use.

If for some reason you cannot locate a copy of this resource in your school, you can order a free copy by going to <http://forest-education.info/teaching/elementary-resources.html>

## 3. Develop an Action Plan to Lessen the Effects of Climate Change

Have your students work in groups or individually to design a plan of action to lessen the effects of Climate Change at our school or neighborhood. Here are just a few suggestions to get them started:

- Reduce the use of bottled water. Not only will this cut down on the amount of plastic waste, but it would also help reduce the use of non-renewable petroleum used to make the plastic bottles and the amount of energy used to make them.
- Start a 'no-plastic bag' campaign where students can work with their families to avoid using plastic bags. They can request paper bags from stores or even use reusable cloth bags.
- Plant a tree or two – every tree you plant will absorb carbon dioxide and return valuable oxygen.

- Put a new twist on recycling paper. Now you are doing this to continue storing carbon! Why not have a paper recycling contest to see which class can recycle the most paper?

For more extension activities, check out the web links on page 21 of the Climate Change and Our Forests Teacher's Resource Kit.