

Innovation and the Climate Crisis

The climate crisis is one of the biggest challenges facing the world today. To help solve the problems caused by global warming we will need to be innovative, meaning we will need to come up with new ideas and solutions! There are thousands of scientists, engineers and inventors around the world who are coming up with new ways to help us drastically reduce our carbon emissions and halt global warming.

To find out more about the climate crisis and how humans are contributing to global warming watch this video on the [greenhouse effect](#) and do our [source or sink activity](#)!

In short, the climate crisis is being caused by an increase in gasses like carbon dioxide. These are being made by humans through things like burning fossil fuels.



Science or fiction!

To solve big problems, like the climate crisis, we have to be really inventive. This means coming up with different ways to make less carbon dioxide, or to capture the carbon dioxide that we do make before it gets into our atmosphere. Look at the ideas on the next page and try to guess which ones are real scientific ideas people have come up with to help fight climate change and which ones are completely made up!

The answers are on the page after that, but don't peek!

Hamster Power

All schools will be given hamsters with special wheels. These wheels are connected to the school's electricity supply, and when the hamsters run on the wheel the energy created is turned into electricity used to power the school.

Kite Power

A huge merry-go-round which uses kites to harness the energy from the wind to make renewable energy will be built.

Sleep Capture CO₂

We all breathe out CO₂ making humans a source of greenhouse gasses.

By wearing specially designed masks when we sleep some of this CO₂ could be captured and stopped from getting into our atmosphere.

Sun Shield

By putting a huge sun shield or umbrella in space we could block out some of the sun's rays and cool the Earth.

Cloud Seeding

Using special boats, droplets of water would be pumped up into the sky where they would start the formation of clouds.

Clouds reflect more light than the sea, so more clouds mean less warming.

Artificial Trees

These plastic trees would soak up carbon dioxide even more efficiently than real ones. This CO₂ would then be buried or turned into fuel.

Hamster Power - FICTION

Although this would be a very cute idea, unfortunately, we would need a lot of hamsters to make enough electricity for one school. We would then need to feed them all, and making all that food and transporting it to the schools would use up more energy than the hamsters would generate!

Kite Power - SCIENCE

Yes! The merry-go-round and more simple one or two kite systems have both been suggested. The advantage of these over traditional wind turbines is that they are much cheaper and easier to make. This means they can be built all over the world. This technology is very new and is still being tested.

Sleep Capture CO2 - FICTION

Humans do breath out CO2 all the time. However, this is in such small amounts that the energy used to make machines to capture it would be more than it saves. Also you'd have to convince people to where these in bed!

Sun Shield - SCIENCE

This has been suggested by more than one scientist and it would work to cool down the planet. However, it is not very likely to happen because putting things into space is very expensive and very difficult. It also doesn't slow down or stop climate change so after a while we would still have the same problems!

Cloud Seeding - SCIENCE

Adding more clouds to the atmosphere would make the planet reflect more heat. This is because of something called the **Albedo effect**. Lots of scientists think it would be a bad idea because changing the weather patterns on Earth could have lots of unexpected effects and actually make things worse!

Artificial Trees - SCIENCE

These "trees" might not even look like trees when they are built, but would have lots of leaves made out of a special material which absorbs CO2. This could be really useful in reducing the greenhouse gasses in the atmosphere, but we do need to decide what to do with it once we capture it!