



 **recycle**
The possibilities are endless.

conservation crazy!

What is conservation?



Conservation means to look after something so that it doesn't get damaged or destroyed.

The word conservation is used a lot when we talk about the environment and the world around us. You might have heard about wildlife conservation, which means to make sure that animals are protected. The Monkey Sanctuary Trust works to protect monkeys and so is an organisation that practices conservation.

We have already talked a little about rainforest conservation in this pack but there are lots of different types of conservation too, and you can help to make a difference, read on to find out more!

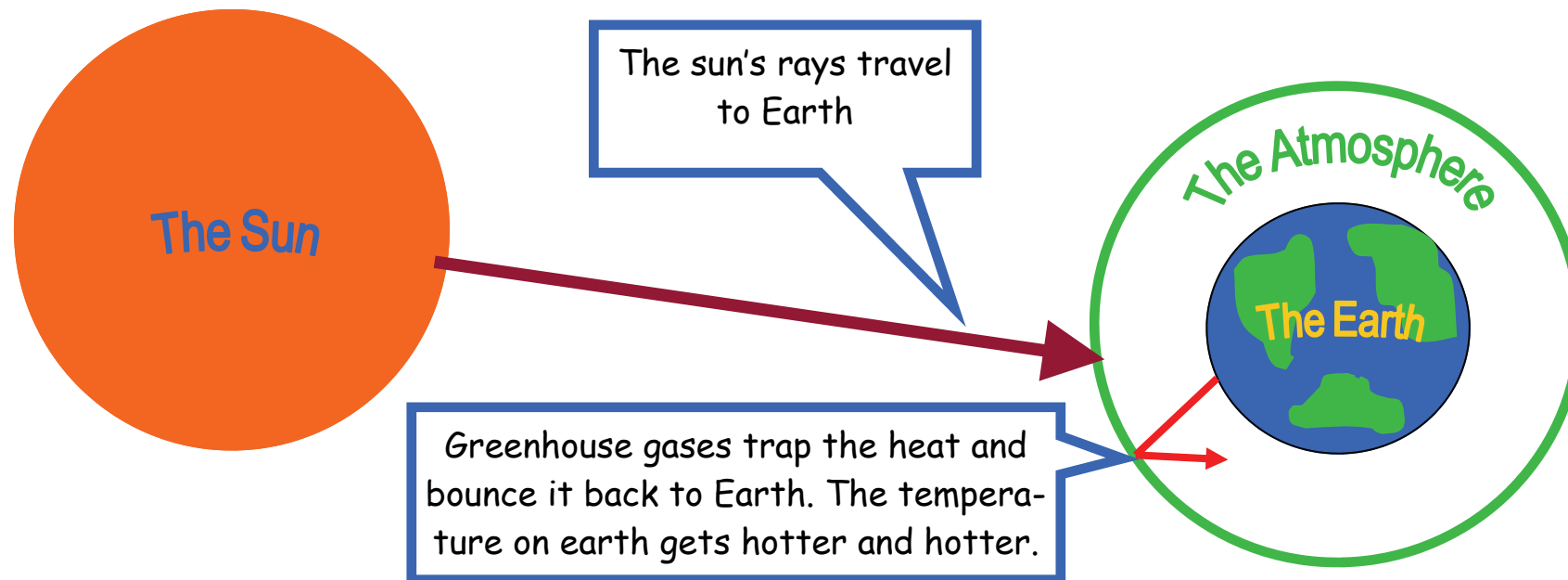
Pollution, global warming and the "greenhouse effect"

You may have heard of global warming and the "greenhouse effect", but do you know what it means?

Each day, the sun gives out heat which enters the atmosphere of the Earth. There are some gases in the atmosphere which trap heat and hold it in. This allows the world to stay quite warm and stops the earth's surface from freezing over. One of these gases is called carbon dioxide and it is the same gas that comes out in our breath when we breathe out.

When we burn things like coal in our fires or petrol in our cars, more carbon dioxide is released and more heat is trapped. This means that the temperature of the world gradually rises. It is this process that is known as the greenhouse effect because, like a greenhouse, our planet is trapping heat and getting hotter and hotter.

There is a diagram on the next page to help you understand what happens.



Global warming might sound great at first with our country enjoying hot summers and warm winters but the effect is much more serious than that. Glaciers will melt and so more water goes into the sea, making the level of the sea rise. Millions of homes will be flooded and people made homeless. Animals and plants will not be able to evolve fast enough to get used to the new climate and will become extinct, among just a few problems. It is important we slow down the effects of global warming for our future.

Ways that we can help are by reducing our use of fuels like coal, gas and oil, using as much wind and solar power as we can, recycling all that we can so that new resources do not have to be found and being as "energy efficient" as possible. This means walking places instead of using a car, putting an extra jumper on instead of turning the heating up if we are cold. Other ways in which we can be more energy efficient is by taking a shower instead of a bath so that we use less water, only doing our laundry when we have a full load instead of one or two items, turning lights off when we leave a room and shutting doors to preserve heat. We will look at other ways that we can help in the activities at the end of this booklet!

Destruction of the ozone layer

Another conservation problem that you might have heard of is the destruction of the ozone layer, often called the "hole in the zone layer". Let's look at what it means...

Ozone is a gas and is actually the same gas that we need to breathe—oxygen. The difference between ozone and normal oxygen is that ozone is very reactive, so if it collides with another type of gas in the atmosphere, it can cause a chemical reaction. A chemical reaction is what happens when two chemicals meet and turn into something else.

Ozone is present in our atmosphere (the air that we breathe) but 90% of the world's oxygen is found between 10km and 50km above the ground in the stratosphere. Even though there is only a very thin layer of this gas, it is very important as it filters harmful *ultraviolet radiation* (UV) from the sun. When you put on sun-cream in the summer, it is the UV rays from the sun that you are blocking out.

However, when ozone and human-made chemicals known as CFCs meet, a chemical reaction occurs that turns the ozone into normal oxygen. Normal oxygen does not protect us from UV and so a "hole" appears in the ozone layer.

Without the ozone filter, there is a bigger risk of skin cancer, marine life can suffer and other life systems across the world are being affected.

Lots of countries have now put laws in place banning the use of CFCs but there are still some countries that use them. We are not certain whether the hole in the ozone layer can ever be fixed so it means making sure we always wear a high factor sun cream if we go out in the sun and being careful not to get sunburned.

The hole in the ozone layer was one of the first conservation problems which became worldwide.

All doom and gloom?

The good news is that conservation isn't all doom and gloom, we can all make small changes in our everyday lives which make a big difference to the world around us.

Research in Holland in the early 1990s showed that by using the technology we already have we could reduce waste by 50-60% but still be productive.

Perhaps even more exciting is the suggestion by Professor Wim Turkenburg that there is it is actually possible for us to get all of our energy either directly or indirectly from the sun if we can learn how to trap the energy properly.

People problems and fair trade

When we think about conservation, we normally think about animals, plants and the environment, but another big issue for conservation is the protection of people. The Fair Trade Foundation was set up to do this.

Fair trade is a very simple idea: it means that a fair price should be paid to the people in poorer countries who are making a product. Sadly, these people are normally paid very little for their work and so cannot afford to look after themselves and their families properly.

"Cash crops" such as coffee, tea, cocoa and bananas are normally grown in developing countries. The people growing these crops work as hard as any farmer in any part of the world and yet, for many years, they have been paid almost nothing for their products so that developed countries like the UK and USA can make more profit when they sell them on. Many workers cannot afford medicine if they are sick and most children do not go to school because they have to work to support their family instead .



Because the people making the products get so little money for their work, they have to work very long hours, even if they are sick as if they don't it could mean that they lose their home and cannot afford to feed their families. We are very lucky in the UK to have rights that are given to us by the law which mean that this will never happen to us.

The Fair Trade Foundation is trying to make sure that things change and that the workers in these countries:

- Get paid fairly for their work
- Don't have to work long hours and don't have to risk their health
- Are offered long-term work so that they don't have to worry about losing their jobs
- Are given more chances for women and don't have to send their children to work anymore

It is not just food that can be Fair Trade but clothes and household products. The Fair Trade Foundation are trying to make sure that everyone gets a fair deal.

In the two years from 2001, sales of Fair Trade goods nearly doubled and in just one year in the UK, Fair Trade goods make 140 million pounds!

The way we can help to support this cause is by making sure that items that we have in our houses bear the Fairtrade logo. Some products are fairly traded but do not yet carry the Fairtrade mark, so the other way to check if the items you buy regularly are fair trade is by checking the website for BAFTS (The British Association for Fair Trade Shops) www.bafts.org.uk which lists all of its members.

Next time you are in a supermarket, see how many Fair Trade products you can find—perhaps you can start to buy them instead of the items that you usually buy. Doing this small thing can help to make the lives of people on the other side of the world a little bit better.

Activities



How environmentally friendly am I?

This activity asks you to think about how environmentally friendly you are and find out what changes you can make to become "greener". You have a month to become as environmentally friendly as you can and then you will see how you have done, both on your own, and as a class.

In your pack, you will find a Personal Conservation Chart which you need to fill in to gain "environment points" when you make a change in your everyday life to make yourself more environmentally friendly. Your teacher has a chart which you can use as a group to see how "green" your class is!

Each Monday for four weeks, you will have to think back to your weekend and fill in your answers to the questions below in the correct box on your chart:

1. How many items did you recycle - including giving clothes/books to charity shops, reusing bags and wrapping, taking items to a recycling plant etc?
2. How many times did you walk or cycle when you could have been given a lift in a car?
3. If you used the car, how many times were there more than two of you in the car?
4. How many times did you eat or use something that was fairly traded (look for the logo!)?
5. How many times did you take a shower instead of a bath?
6. How many times did you turn a light off when you left the room?
7. How many times did you put an extra layer on if you were cold or turned the heating down if you were hot?
8. How many appliances did you switch off at the mains when you finished using them?
9. How many times did you or your family use the dishwasher when it was completely full or:
How many times did you or your family wash a full load of laundry?
10. How many other things did you do that helped the environment and what were they?

You might not know the exact answers to every question so try to make an estimate if you are unsure. Fill in your own answers and then add your totals together to get an answer for the whole class. Your challenge is to try to make your environment points increase over the four weeks.

Over the course of 4 weekends, try to note how many times they do any of the 10 actions during those two days. Use a notebook if it helps you. You could even have your own chart for home, and you could explain to your family why the 10 actions are important.

At the end of the four weeks, sit down as a class and see how you have got on. Are you more environmentally friendly now than you were? Are there any practices that you think you will continue once the activity is over? How do you feel about what you have achieved?

Recycled art

As a class, make a collection of interesting items like bottles, and cans, newspapers and magazines, packaging and boxes and anything else you can find that might be useful. You could even set up a collection point in the school and build up your collection of materials from classroom waste or items brought in from home.

Once there is a good selection of items to choose from, make a piece of artwork using your recycled materials. This could be a group exercise where you create a large piece of work as a class, with everyone having a chance to add their ideas or it could be a smaller piece of work that you create yourself.

You could create a collage from your recycled materials or even make a sculpture from them. Make your ideas as creative and interesting as you can and don't be afraid to experiment!

Important: If you are working with cans or glass be very careful as they can have sharp edges!

Long Term Projects

For conservation to work, it has to be ongoing so why not look into setting up the following ideas at your school. These projects can involve the entire school and can be used by future pupils after you have moved on.

School recycling centre

One of the best things that you can do to help the environment is recycling. Why not make a school recycling centre? You can design and make recycling bins, you could have recycling monitors and make sure the rest of the school recycle too!

Your class could write letters to your council to find out about facilities in your local area and use these to learn more about the importance of recycling.

Conservation area

How about getting your hands dirty and creating a conservation area in your school grounds? It's amazing what can develop when an area of land is set aside and allowed to grow wild. Choose a small area of your school field and leave it to develop naturally. Use the conservation area for mini field studies, looking at plants and insects.

Energy efficient school

Now that you have learned more about energy efficiency, why not apply some of your new practices to your school? Think of ideas that could make your school more energy efficient and see which of your ideas can be put into practice. Some ideas might be too expensive to put into place right away but a "lights off" and "doors shut" policy is a starting point.