Lesson plan: Ages 8-12

Timing: If done at speed this plan could be done in just over an hour. If you take your time it could easily last a morning.

The additional activities after the plan could be used for an extended session, day out, multiple sessions.

To start ensure you have downloaded all the resource you need from the website and printed the number of copies you need for each child.

Our website: https://timetorethink0.wixsite.com/timetorethink

You will need: The PowerPoint presentation, Drawing sheet 1 and 2, Card game, My earth pledge sheets.

If you don not have access to a screen to show the PowerPoint. Print the Learning pack and share them around the group.

Learning objectives:

What is climate change?

What is CO_2?

What causes Climate Change?

What can we do to change it?

Warm up activities: allow about 10 min

All resources available for free download on our website :
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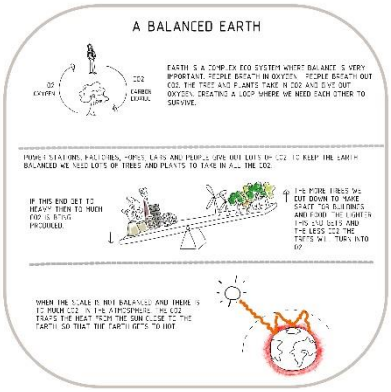
Drawing Sheets1 – 1 each

Colours and pencils per table or group.

Hand out the **"Draw yourself saving the earth sheet"**. This is a very open-ended statement so expect to see everything from Superheroes to climate-related pictures and more. This is a good way to gauge what the children already know or why and how they think they need to save the earth.

Earth in Balance – looking at booklet or screen – allow about 5 min



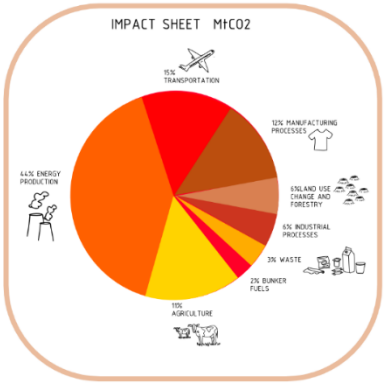
Earth is a complex eco system where balance is very important. People breath in oxygen, people breath out CO_2. The trees and plants take in CO_2 and give out oxygen, creating a loop where we need each other to survive.

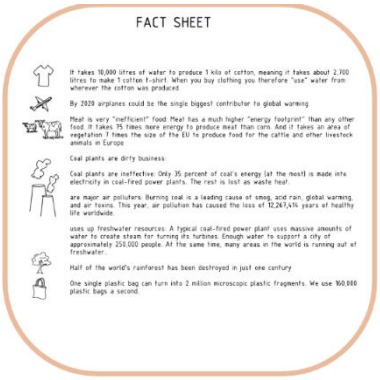
The more electricity we need to power our lights, phones, TV's and more, the more power stations we need. Power stations give out lots of CO_2, so we need lots of trees to take in the CO_2. However, the more people on earth, the more trees we cut down to build houses, make paper, grow food, *et cetera*.

So, our world is currently out of balance, we produce far too much CO_2 and don't have enough trees left.

But why is too much CO_2 bad?

Well, CO_2 traps the sun's heat in our atmosphere meaning that the planet gets too hot. When the planet gets too hot, the ice melts and sea levels rise, the seas get too hot and the fish die, the land gets too hot and catches fire and much, much more.





What's causing all the CO_2 – allow about 10 min

Global statistics of the biggest impactors to climate change. And a few facts to help explain the problems with these areas.

Burning of Fossil Fuels to create energy has the biggest impact: Fact about coal burning to create energy, from the fact slide would be good to reference here. Ask the class - Does anyone know a better was to make energy which doesn't produce CO2? Answer: renewable energy sources such as solar, wind, turbo, waves.

Meat farming, global travel and manufacturing things. All have a very similar impacts and are a close second, third and fourth.

Meat farming: Use the fact from fact slide about meat farming and agriculture. Cattle farming is not very efficient, it takes up a lot of space and produce very little food, cattle farming also produces lots of methane which is like CO2, but even worse for the planet. Ask how many of the class are vegetarian?

What is a manufacturing process: Manufacturing processes are making things like toys, clothes, toothbrushes, cars, chairs and more. All the energy and resources needed to create these product gives out CO2. (Fact from the fact slide about cotton might be good to use here.) Ask the class what is polyester? Answer a fibre made from crude oil we mined from under the earth, which creates CO2 when we turn it into clothes, and can't be recycled. What is cotton? Answer cotton is a fluffy fibre that grows on plants and is collected to make clothes

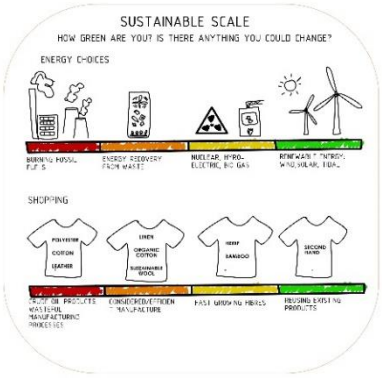
Travel: This is everything from you being driven to school, to flights on holiday to shipping, containers all over the world. Any product made in china has to be shipped 4,800 miles for us to buy it. All that time producing co2 as the ship burns fuel to power its propeller. (fact from the fact slide about planes)

Cutting down trees, waste and industrial processes are the next contributors.

Waste: Ask the class where they think the rubbish, they put into the bin goes? Answer: landfill or burnt to create electricity. Is burning to create electricity good or bad? Answer: Good because waste is not in landfill, but bad because burning creates CO2 and this case even more harmful gases such as Sulphur Dioxide.

Cutting down trees: use fact from fact sheet about deforestation. Why do we cut down trees, paper, building houses, burning to make heat, making furniture, making more space to grow crops, making more space to build city's and towns and housing estates?

Industrial processes: Quarrying and mining are good examples of this. All the equipment, power and machinery needed to mine metals or granite and stone and more needs fuel and power, these processes are damaging to the environment in many ways.

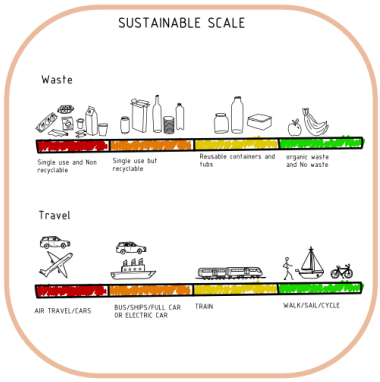


Sustainable Scale sheets – allow about 10 min

Look at the scales. We have talked about the bad stuff, lets look at the many greener alternatives available which will bring balance back to the earth.

Renewable energy is a must, solar energy from the sun, wind power, wave and hydroelectric power (from water) are all CO2 free! these are the answer to saving our planet.

If cotton and polyester are bad what's good? Fast growing more efficient plants like hemp and bamboo, these can both be used to create clothing which is much better for the planet. As well as buying cloths second had rather than new.



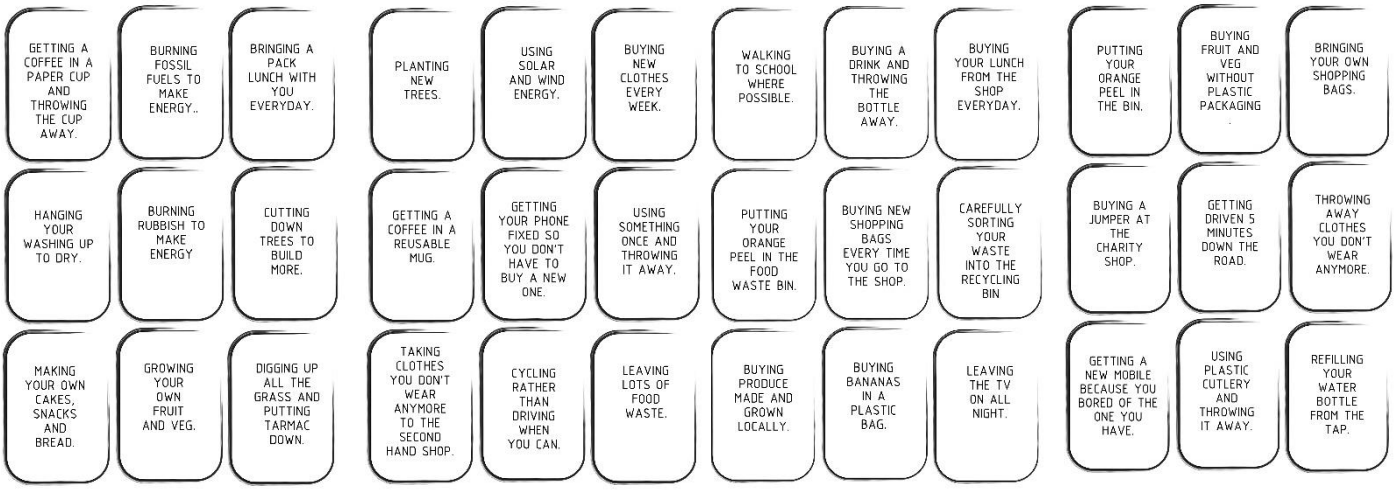
Non-recyclable plastics and waste is bad. So can we shop and avoid plastic packaging? We can try lots of shops are now doing packaging free fruit and veg. And maybe if we bake our own snacks at home, we wont need to by chocolate bars which have non-recyclable packaging.

Travel. Shipping and flighting things all over the world is bad for the planet so what's good? Walking when we can, buying things made and grown locally, using public transport when we can.

Interactive:

- Get groups to check their clothing labels see what it's made of.
- Get the group to keep their snack rubbish from lunch or breaktime and see what can or can't be recycled. (FACT: Sweet, crisps and chocolate wrappers can't be recycled and take 75 -80 years to breakdown. All for 1 snack.)
- Hands up who walks to school?
- How do they travel on their holidays?
- Where do they think their energy comes from?
- Did they know most of our rubbish gets burned and turned into electricity (this is better than it going to land fill, but it releases just as much CO_2 into the air as coal and fossil fuels.)

Ask the class to think of ideas of how **they** could do more of the green things on the Sustainable Scale. Only Take a few minutes on this as the **next activity** will give them a lot more ideas.



Activity: allow about 15 min Card Game. All resources available for free download on our website : https://timetorethink0.wixsite.com/timetorethink

Hand out the pack of cards and ask the groups to sort them into things that are good for the planet and bad for the planet.

OR

In a large space, read out the cards from the front and ask children to run to the left for 'good for the earth' and run right for 'bad for the earth'. Last one to left or right, or the wrong way, is out. (its always nice to get outside you could do this in the playground)

Have discussion about any the group struggled with.

Drawing sheet 2 – 1 each **"Draw something you could do to save the world" – allow about 15 min**

Through the other learning and games, hopefully they will have a good idea of what they can do to make a difference. However, if struggling, prompt the group using the card game or the 6 pledge cards which you can review next.

Writing your Earth pledges: allow about 15 min

There are 6 key areas we can focus on to make a difference, read out and show these areas.

These pledge areas are ones that, if we focus on, will make the biggest difference to Climate Change.

All children should write their own earth pledge as a challenge to save the earth over the next 30 days. You could even write a whole class pledge, or a whole school pledge. Could the school change its energy supplier to completely renewable energy? Could the class learn to cook a veggie meal?

hang up the pledges, and use the stickers to reward achievements.

Print the posters to remind the class/school about the challenge.

Lesson conclusion:

Does the planet need our help? Ask for hands up. Answer: Yes

Who can give me a reason the planet needs our help? Ask for hands up. Possible answers about CO_2, not enough trees, travel, cows and so on… all as we have previously stated.

Do we all know what we can do to help? Hopefully nodding.

Need More? These activities all linked to the 6 earth pledge areas.

All resources available for free download on our website :
https://timetorethink0.wixsite.com/timetorethink

PowerPoint presentation

Lesson plan

Learning Pack

Card Game

6 pledge cards

Earth Pledge Cards

4 poster designs in A3 and A4

Drawing Sheets