

# Lesson 4: How can we Reduce the Effects of Climate Change?

## Aim

- To be able to identify some of the steps that we can all take to reduce the effect of climate change.

## Lesson Objectives

- To name at least three steps that we can take to reduce the effects of climate change.
- To recognise what could be done at school to reduce climate change.
- To spread awareness of climate change to a wider audience (parents and guardians and the wider school).

## Assumed Prior Knowledge

- The impacts of climate change.
- To be aware that different foods are produced in different countries.
- To have knowledge about recycling.

## Resources

- 'Food Miles' worksheet.
- Woodland Trust video about tree planting: <https://youtu.be/vJY3DTaE0sl>
- National Grid 'What is Net Zero?' YouTube video: <https://www.youtube.com/watch?v=XKM7W4KtSjQ>
- 'Climate Change Diary' worksheet.

## Assessment

- 'Food Miles' worksheet.
- Poster to put up around school.
- Diary entry that future self will read in 2100.
- 'Climate Change Diary' homework task.

## Lesson Outcomes

- To be able to name at least 3 ways that we can reduce the effects of climate change.

## Curriculum Links

- Science
- Maths
- English
- Art

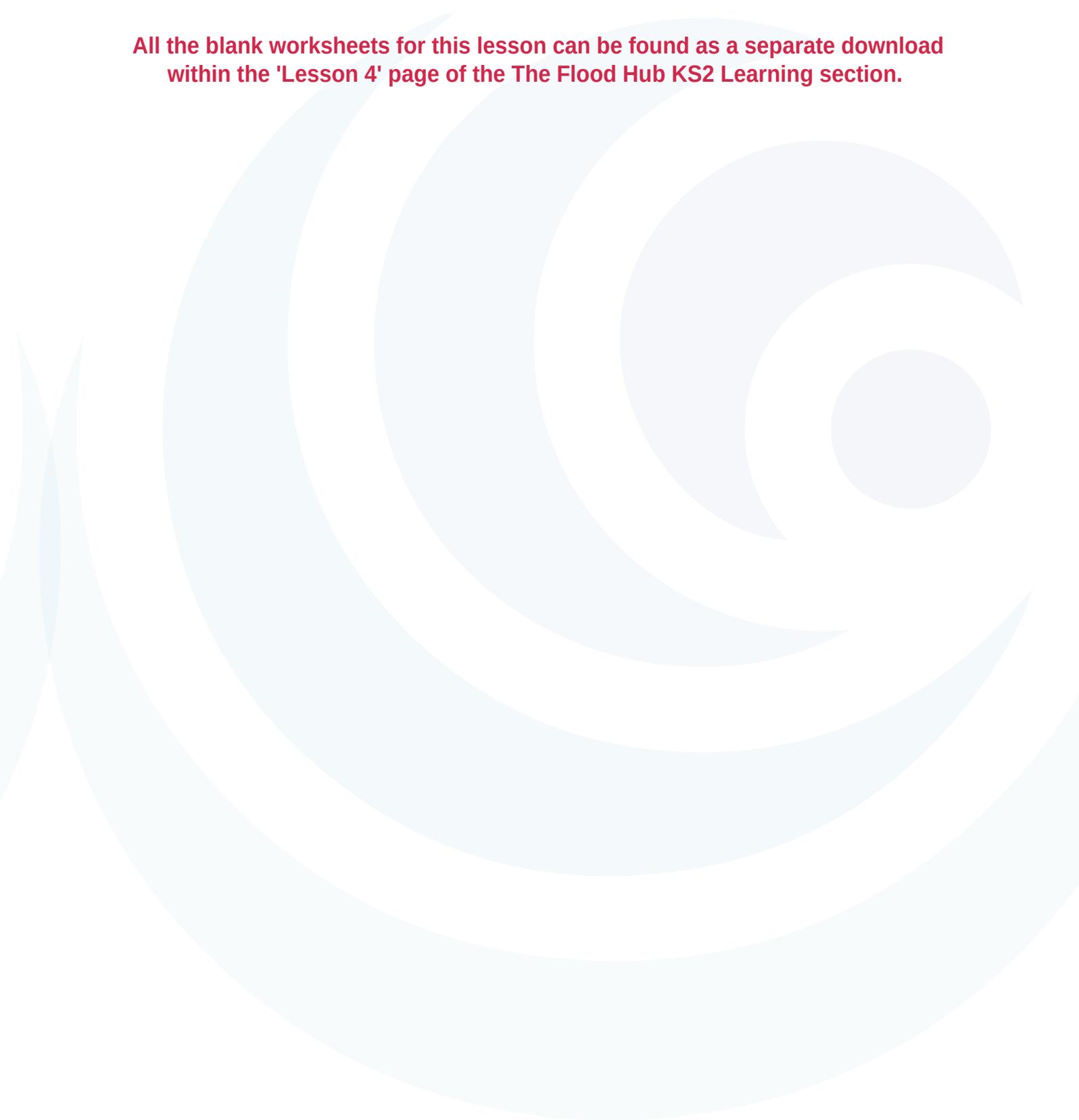
## Differentiation

- Class discussion
- Individual work



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All the blank worksheets for this lesson can be found as a separate download within the 'Lesson 4' page of the The Flood Hub KS2 Learning section.





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Notes for each slide – The teacher is to decide what is copied down in their workbooks.

This is the longest lesson in the series of 'Climate Change Lessons', therefore may need to cover two lessons.

## Slide 1 – What can we do to reduce the effects of climate change?

- Teacher to run through the lesson aims and objectives with the class.

## Slide 2 - Recap

- This slide is a lesson recap of the previous lesson. Teacher to talk through this slide with the class. This slide can be skipped if the class haven't completed the previous lesson.

## Slide 3 - How can we reduce the effects of climate change? – Use public transport

- Teacher to talk through this slide with the class. This is the first way in which we can reduce the effects of climate change - by using public transport.
- The pupils should copy this information into their workbooks.
- The teacher to ask the class to note down the different types of way you can travel, other than a car.

## Slide 4 - 8 - How can we reduce the effects of climate change? – Use public transport

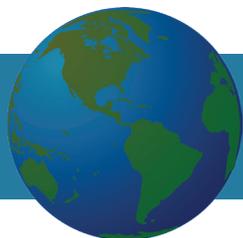
- Following the discussion on the previous slide, the teacher can reveal these examples of how people can travel, instead of travelling by car.

## Slide 9 - How can we reduce the effects of climate change? – Eat locally grown and seasonal food.

- This slide introduces food miles and the importance of eating locally grown, seasonal food to reduce the impact on the environment.
- The pupils should copy the information down into their workbooks.

## Slide 10 – How can we reduce the effects of climate change? – Eat locally grown and seasonal food.

- This slide highlights some of the products which can be grown and produced in the UK sustainably.
- There is a diagram taken from BBC Bitesize which highlights some vegetables that grow in this country at certain times of year, as well as an image of meat and dairy products.
- \*Optional\* The teacher could ask pupils to draw the images in their workbooks or it could be printed and stuck in their workbooks.
- The text should be copied down into their workbooks.



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## Slide 11 – How can we reduce the effects of climate change? Food miles worksheet

- The 11th slide is the first exercise of this lesson and is a maths task.
- The worksheet is all about food miles, which has been covered in the previous slides.
- Manchester airport has been used as an example of where food can be imported. However, in the fourth column, the teacher is to choose a supermarket closest to the school and write the distance between the airport and supermarket on the first row, or in every row within the fourth column, as this will not change. Next, the teacher is also to write the distance between the supermarket and school in the fifth column, this value also won't change – this could be done by pupils if they have access to a computer to google how many miles there are between each location.
- The pupils are then to add up the values in each row and answer the four questions in the section below.
- The correct answers are location dependent and are therefore different for every school. However, for question 3, the pupils should write an answer around the fact that the further food travels, the more greenhouse gases are released into the atmosphere which will contribute to climate change.

## Slide 12 – How can we reduce the effects of climate change? – Eat locally grown and seasonal food

- This slide concludes the section on eating locally grown and seasonal food and provides a short summary of what has been learnt in the previous two slides.

## Slide 13 - 15 – How can we reduce the effects of climate change? – Reduce, reuse and recycle waste

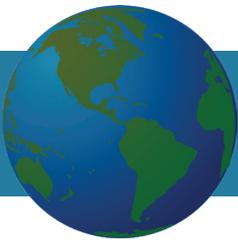
- Teacher to discuss the slides around reducing, reusing and recycling.
- Pupils to copy the information into their workbooks.

## Slide 16 - 17 – How can we reduce the effects of climate change? – Plant more trees

- Pupils to copy the information into their workbooks.
- Teacher to play the video to the class and ask the pupils to write notes in their workbook as it plays.
- Video link: <https://youtu.be/vJY3DTaE0sI> The teacher could play the video until 1 minute 13 seconds for lower ages and the full video for older pupils, as the video starts to introduce some more complex language and terminology, e.g. photosynthesis.

## Slide 18 – How can we reduce the effects of climate change? – Reduce our energy usage

- Teacher to talk through the slide with the class.
- The pupils, either individually or in pairs, should write down as many items as they can, that use electricity in their home.
- After around five minutes, there should be a class discussion and pupils are to raise their hand and name an item. The pupils should list these in their workbooks.



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- It's important to highlight to the pupils that all these items use fossil fuels.
- If the class haven't been through lesson 2, they may not be aware of what fossil fuels are, the definition is "fossil fuels are coal, oil and gas and were formed millions of years ago" and the teacher can write this down and ask the pupils to copy down.
- If they have covered lesson 2 and are aware of what they are, the teacher could ask a pupil who raises their hand to define them.

## Slide 19 – How can we reduce the effects of climate change? - Reduce our energy usage

- Teacher to talk through the slide with the class and ask the pupils to write the information down in their workbooks.

## Slide 20 – How can we reduce the effects of climate change? - Renewable energy

- Teacher to talk through the slide with the class about renewable energy sources.
- Pupils to copy the information into their workbooks.

## Slide 21 and 22 – How can we reduce the effects of climate change? – Have you heard of the term 'carbon neutral'?

- These slides introduce the terms 'carbon neutral' and 'net zero emissions' and how we need to be both in order to help tackle climate change.
- There is also a video for pupils to watch by National Grid on being net zero.  
<https://www.youtube.com/watch?v=XKM7W4KtSjQ>
- The pupils should copy the information in these slides into their workbooks.

## Slide 23 – Activity

- This is the second of the exercises in this lesson.
- As a class, the teacher could walk with them around the school and the pupils can suggest ideas of what steps the school could take to reduce climate change, examples include:
  - Switching lights off in rooms that aren't in use
  - Turning devices off standby
  - Planting trees in school
  - Using locally grown foods in the canteen
  - Set up recycling stations (if they haven't already)
- From this, here are some ideas for the teacher that could be done by the class at school on a different day or as part of this lesson:
  - Plant trees on the land within school.
  - Split the class into smaller groups and plant some fruit and vegetables. Once the crops are ready to harvest, a meal could be made by a cook in the canteen using what the class have grown.
  - The class could create posters to highlight what we can do to reduce the effects of climate change. These could be laminated and placed around school for other teachers and pupils to view.
  - The class could also do a presentation/assembly to the rest of the school about climate change, the causes, the effects and what we can do to reduce these effects.



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- PE activity – Before the lesson, ask the pupils (with the help of an adult) to bring in two recyclable household waste items, e.g cereal box, plastic milk bottle, cellophane food wrapper etc. Then on the day, split the pupils into equally sized groups. Students have to race in their relay teams and sort each item into the correct recycling pile – (paper, plastic, metal, non-recyclable, charity shop). Teams are scored on their time to complete the sort and the number of correct items.

## Slide 24 – Activity

- This is the third exercise of this lesson. The pupils are asked to write a diary entry that their future self will read in 2100. They should write about what is currently causing climate change and the effects that it is having on the planet. They need to write about how it makes them feel and what people can do to reduce the effects of climate change.

## Slide 25 – Homework

- The pupils are to complete a 'Climate Change Diary' with an adult at home, where they are to write down at least one thing they have done in the day to help reduce the effects of climate change.
- The diary has columns for food, energy and recycling to get the pupils to think about what they could do to help the environment under those three themes.

## Sources used for Lesson 4

- BBC Bitesize
- BBC.co.uk
- BBC.com
- EDF Energy
- Energy Saving Trust
- European Parliament Trust
- Friends of the Earth
- Kidinakilt.com
- National Grid
- National Grid UK YouTube video
- Woodland Trust
- Woodland Turst YouTube video