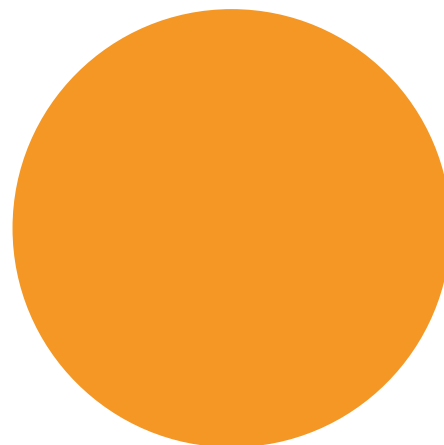
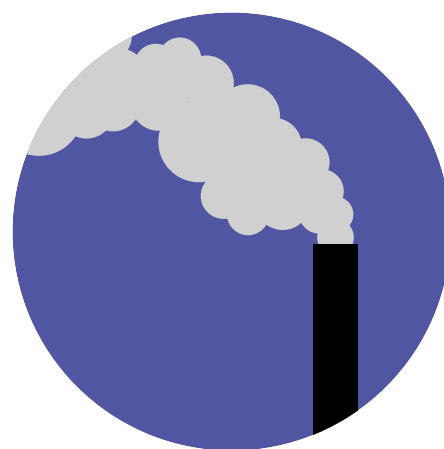


CHANCE TO CHANGE THE FUTURE



KS3 LESSON 2- TEACHER GUIDE

CONTENTS

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INTRODUCTION

An overview of the lesson including the learning objective and curriculum links.

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TEACHER NOTES TO SUPPORT LESSON SLIDES

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LESSON WORKSHEETS

Useful worksheets to support classroom activities linked to this lesson.

- **‘What happens around the world has an impact on you’** (activity to outlined in slides 9-11).
 - **‘Who’s in charge?’** (activity to support slides 14-23).
-

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APPENDIX

Detailed description with links to support delivery of slides 14-23, **‘Who’s in charge?’** and more background information.



KS3 LESSON 2 – TEACHER GUIDE

CHANCE TO CHANGE THE FUTURE

Learning objective:

To understand how human and physical processes interact to influence, and change the climate; and how human activity relies on effective functioning of natural systems.

Curriculum links:

Geography

Students investigate the impacts of climate change and international and national commitments to reduce emissions, such as the UK Climate Change Act and Paris Agreement. They have the opportunity to find out about the institutions and individuals who represent the UK when decisions around tackling climate change are made.

They then use what they have learnt to forecast possible future climate change outcomes and, if possible, revisit their timeline from Lesson 1.



SLIDES 1-3



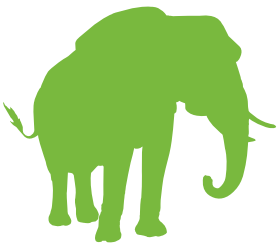
THE TIME IS NOW

Use the slide to introduce the lesson before showing the clip (2.30) embedded in the slide:

<https://www.youtube.com/watch?v=K-TwTY4z46g>

The clip introduces the concept of 2°C being a key target for reducing the effects of climate change. In 2015 world leaders, scientists and policymakers met in Paris for an important climate change conference. They sought to come to an agreement that keeps the planet to well below 2 degrees of warming, and preferably to within 1.5°C from pre-Industrial temperatures. Climate Central chief meteorologist Bernadette Woods Placky discusses why this target is so important and what happens if the temperature continues to rise.

SLIDES 4-5



THE STORY SO FAR

Share the statistic on the slide:

‘In less than two generations of humans, the populations of vertebrate animals have dropped by 58% between 1970 and 2012’

Living Planet Report 2016

Ask students what they think has caused such rapid reduction in animal populations.

Causes include:

- Habitat loss
- Over fishing, poaching and hunting
- Water pollution
- Climate change

Use the image carousel on the slide to highlight the work that has already been done to protect some of the most endangered species, and emphasise how this work needs to continue.

SLIDES 6-8



UNEQUAL DEMANDS, UNEQUAL CONSEQUENCES

Climate change is indiscriminate and the people who depend most on the natural environment are the ones being hit hardest by the effects of climate change, despite in many instances not being to blame for the emissions. Read out the quote on the slide and discuss briefly.

Simon Reeve is a journalist and broadcaster, who has travelled all around the world and witnessed the impact that climate change is having first hand. Show the clip (4.44) to students:

Video: Simon Reeve - climate change is real and happening fast

Ask for their comments after they have watched the video, and then ask them to discuss the question on the slide: 'In what ways do Simon Reeve's discoveries support the quote from Marco Lambertini?'

SLIDES 9-11

WHAT HAPPENS AROUND THE WORLD HAS AN IMPACT ON YOU



Using the bullet points (and student worksheet if you wish), discuss the effects of climate change and ensure the students understand all of the terminology:

- drought and water shortages
- floods and other extreme weather
- crop failures and food insecurity
- reduced agricultural productivity
- loss of low-lying lands and islands
- desertification (the gradual transformation of habitable land into desert)
- loss of biodiversity and ecosystem services
- spread of diseases, such as malaria



Use the image carousel on the slide to share and discuss how these effects have an indirect impact on people living in the UK. Ensure they understand the links with specific examples, e.g.

- Chocolate comes from cocoa trees, which grow best in specific conditions, found in areas of Africa where temperatures are rising. As the trees struggle to survive, crops may be less successful, and farmers choose to grow other crops to secure their income.



SLIDES 12-13

WHAT DO WE NEED TO ACHIEVE?



© GLOBAL WARMING IMAGES / WWF

Use the image carousel to support a discussion of what needs to be done to protect the world and its natural capital in order to sustain life on Earth:

- increased availability and use of renewable energy resources
- reduced waste and pollution
- responsible and sustainable consumption
- integrated water resource management
- sustainable fisheries
- restoration of degraded land
- sustainable forest management
- sustainable agricultural development



Ask students if they can name any situations they have heard about in the news which have been affected by climate change. For example, one of the causes of the crisis in Syria was an extended period of drought which led to large movements of populations due to food shortages caused by crop failure. The movement of people, an increase in poverty and strain on resources was a key driver for the subsequent conflict. Flooding across different parts of the UK is also a good example of a story your pupils might have seen recently in the news or even experienced themselves. You could also reference Bangladesh which was mentioned by Simon Reeve in the clip shown earlier in the lesson.

The student worksheet provides an overview.

SLIDES 14-23

WHO'S IN CHARGE?



The main task in this session is to find out about the institutions and individuals who represent the UK in climate change talks and policy decisions, and to explore the targets that have been agreed, such as those referenced in the 2°C clip from Slide 2.

It has taken many years to get countries to agree on what needs to happen to stop climate change, but in December 2015, 195 countries, including the United Kingdom, signed up to the Paris Agreement to act on climate change. One of the main debates was around how we can reduce the amount of greenhouse gas emissions each country is producing and move to renewable energy sources.

For additional background on the December 2015 Paris Agreement and emission/2°C targets, show this 2-minute clip.

Video: The Paris Agreement for Climate Change

Use this slide series (and student worksheet) to present the various responsibilities, including your students and their local communities in making sure change happens.

SLIDES 24-25



CHANCE TO CHANGE

Summarise what the students have learned about the institutions and individuals who represent the UK in climate change talks and policy decisions. Ensure students understand that they can be part of the solution.

The statements on the slide should encourage them to take action, which they can do by making small changes to their lives. Ask them what actions they think they can take personally: this could be walking instead of driving to school, recycling and reducing waste. Keep this discussion brief as it will be returned to in more detail in Lesson 3.

As a plenary, show the clip on the slide narrated by Morgan Freeman which presents a hopeful look at why we need to tackle climate change.

Video: Our Future | Narrated by Morgan Freeman



LESSON WORKSHEETS

WHAT HAPPENS AROUND THE WORLD HAS AN IMPACT ON YOU

Currently 4,000,000,000,000 (four billion) people are vulnerable to the effects of climate change, such as:

- drought and water shortages
- floods and other extreme weather
- crop failures and food insecurity
- reduced agricultural productivity
- loss of low-lying lands and islands
- desertification (the gradual transformation of habitable land into desert)
- loss of biodiversity and ecosystem services
- spread of diseases, such as malaria

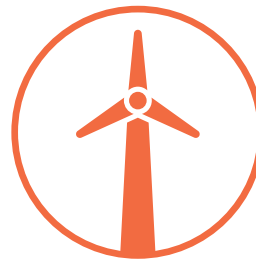


These effects on people and environments around the world mean that everyday products you enjoy could be in short supply, or increase dramatically in cost.

WHAT DO WE NEED TO ACHIEVE?

In order to protect people, our world and its natural resources to sustain life on Earth, we need:

- increased availability and use of renewable energy resources
- reduced waste and pollution
- responsible and sustainable consumption
- integrated water resource management
- sustainable fisheries
- restoration of degraded land
- sustainable forest management
- sustainable agricultural development





WHO'S IN CHARGE?

INDIVIDUALS

Every single person on this planet has a carbon footprint. This means that every individual has a responsibility to reduce their own impact on our climate. In democratic countries, people also choose their governments.

BUSINESSES

Business activity is a major cause of greenhouse gas emissions. Every business needs to reduce their emissions.

COUNCILS

Local councils are responsible for providing local services and facilities that could affect the environment. Your elected representatives or councillors represent you at a local level.

MEMBER OF PARLIAMENT (MP) / ELECTED REPRESENTATIVE

Individual elected to represent your interests and concerns at a national and UK level eg at the House of Commons in Westminster, in the Scottish Parliament or the National Assembly for Wales. MPs/elected representatives consider and can propose new laws as well as raising issues that matter to you in Parliament.

In Wales, there are also Members of the National Assembly for Wales, which sits in Cardiff.

In Scotland, there are also Members of the Scottish Parliament, which sits in Edinburgh.

DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY

The UK Government department responsible for tackling climate change.

In Scotland, the Scottish Government Department for Environment, Climate Change and Land Reform is responsible.

In Wales, the Welsh Government Department for Environment and Rural Affairs is also responsible.

SECRETARY OF STATE FOR THE DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY

This person is responsible for making a plan for the UK to meet its emissions reduction targets.

In Scotland, the person responsible is the Cabinet Secretary for Environment, Climate Change and Land Reform.

In Wales, the person responsible is the Cabinet Secretary for Environment and Rural Affairs.

UK GOVERNMENT

Responsible for cutting emissions in line with UN agreements and according to the Climate Change Act which is part of UK law.

In Scotland, the Scottish Government is responsible and there is a separate Climate Change (Scotland) Act.

In Wales, the Welsh Government is also responsible and there is separate climate change legislation.

UK PRIME MINISTER

Head of the government, ultimately responsible for making sure the UK meets emissions reduction targets.

In Scotland, the First Minister is the head of the Scottish Government, responsible for meeting Scottish targets.

In Wales, the First Minister is the head of the Welsh Government, responsible for meeting Welsh targets.

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

Responsible for convening all the countries of the world to coordinate the global effort to reduce greenhouse gas emissions.

EXECUTIVE SECRETARY OF THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

Responsible for delivering successful negotiations on climate change action between all countries at the UN.

APPENDIX

Executive Secretary of the UN Framework Convention on Climate Change
United Nations Framework Convention on Climate Change (UNFCCC)
UK Prime Minister
UK Government
Secretary of State for the Department for Business, Energy and Industrial Strategy
Department for Business, Energy and Industrial Strategy
Member of Parliament (MP) / elected representative
Councils
Businesses
Individuals

INDIVIDUALS – Every single person on this planet has a carbon footprint. This means that every individual has a responsibility to reduce their own impact on our climate. In democratic countries, people also choose their governments.

http://www.wwf.org.uk/what_we_do/changing_the_way_we_live/

BUSINESSES – Business activity is a major cause of greenhouse gas emissions. Every business needs to reduce their emissions.

<https://www.theclimategroup.org/about>

COUNCILS – Local councils are responsible for providing local services and facilities that could affect the environment. Your elected representatives or councillors represent you at a local level.

<https://www.gov.uk/understand-how-your-council-works/types-of-council>

MEMBER OF PARLIAMENT (MP) / ELECTED REPRESENTATIVE – Individual elected to represent your interests and concerns at a national level in the House of Commons, Westminster. MPs consider and can propose new laws as well as raising issues that matter to you in Parliament.

<http://www.parliament.uk/education/about-your-parliament/mps-lords-monarch/>

In Wales, there are also Members of the National Assembly for Wales, which sits in Cardiff. Assembly Members (AM) carry out the work of the National Assembly for Wales; they represent the interests of Wales and its people, make laws for Wales and hold the Welsh Government to account.

You can find out who your local AM is **here**.

In Scotland, there are also Members of the Scottish Parliament, which sits in Edinburgh. Members of the Scottish Parliament (MSP) carry out the work of the Scottish Parliament; they represent the interests of Scotland and its people, make laws for Scotland and hold the Scottish Government to account.

You can find out who your local MSP is **here**.

DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY –

The UK Government department responsible for tackling climate change.

<https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about>

In Scotland, there is the Scottish Government Department for Environment, Climate Change and Land Reform.

<http://www.gov.scot/Topics/Environment/climatechange>

In Wales, there is the Welsh Government Department for Environment and Rural Affairs. <http://gov.wales/topics/environmentcountryside/?lang=en>

Executive Secretary of the UN Framework Convention on Climate Change
United Nations Framework Convention on Climate Change (UNFCCC)
UK Prime Minister
UK Government
Secretary of State for the Department for Business, Energy and Industrial Strategy
Department for Business, Energy and Industrial Strategy
Member of Parliament (MP) / elected representative
Councils
Businesses
Individuals

SECRETARY OF STATE FOR THE DEPARTMENT FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY –

This person is responsible for making a plan for the UK to meet its emissions reduction targets. You can search here for the new Secretary of State for Business, Energy and Industrial Strategy.

<https://www.gov.uk/government/people>

In Scotland, the person responsible is the Cabinet Secretary for Environment, Climate Change and Land Reform.

<http://www.gov.scot/About/People/Ministers/Cab-Sec-Environment-ClimateChange-LandReform>

In Wales, the person responsible is the Cabinet Secretary for Environment and Rural Affairs. **<http://gov.wales/about/cabinet/cabinetm/lesley-griffiths?lang=en>**

UK GOVERNMENT – Responsible for cutting emissions in line with UN agreements and according to the Climate Change Act which is part of UK law.

ClientEarth have a good explanation on their website:

<http://www.clientearth.org/what-is-the-climate-change-act/>

<http://www.parliament.uk/education/about-your-parliament/parliament-and-government/>

In Scotland, the Scottish Government is responsible and there is a separate Climate Change (Scotland) Act.

<http://www.gov.scot/Topics/Environment/climatechange/legislation>

In Wales, the Welsh Government is also responsible and there is separate legislation related to climate change.

<https://gov.wales/atism13169>

UK PRIME MINISTER – Head of the government, ultimately responsible for making sure the UK meets emissions reduction targets.

In Scotland, the First Minister is the head of the Scottish Government, responsible for meeting Scottish targets.

<http://www.gov.scot/About/People/Ministers/First-Minister>

In Wales, the First Minister is the head of the Welsh Government, responsible for meeting Welsh targets.

<http://gov.wales/about/firstminister/?lang=en>

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

– Responsible for convening all the countries of the world to coordinate the global effort to reduce greenhouse gas emissions.

<http://newsroom.unfccc.int/about/>

EXECUTIVE SECRETARY OF THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE

– Responsible for delivering successful negotiations on climate change action between all countries at the UN.

<http://www.climatechangenews.com/2016/05/19/patricia-espinosa-approved-as-un-climate-chief/>

With the help of the links to support each level of the hierarchy, and the background information and resources section, challenge students to find out more about what has been agreed and what we need to do to achieve these targets. This could be done as a whole class taking an institution/individual one at a time, or dividing the levels between smaller groups and then feeding back.

To summarise the group's research, you could show this clip (2.40) from 2012 that highlights positive achievements so far:

https://www.youtube.com/watch?v=kA2tA1h_BOs

BACKGROUND INFORMATION AND RESOURCES

- The Carbon Brief:
<http://www.carbonbrief.org/carbon-briefs-guide-to-the-intergovernmental-panel-on-climate-changes-fifth-assessment-report>
- Sustainable Development Goals. Goal 13- Take urgent action to combat climate change and its impacts.
<http://www.un.org/sustainabledevelopment/climate-change-2/>