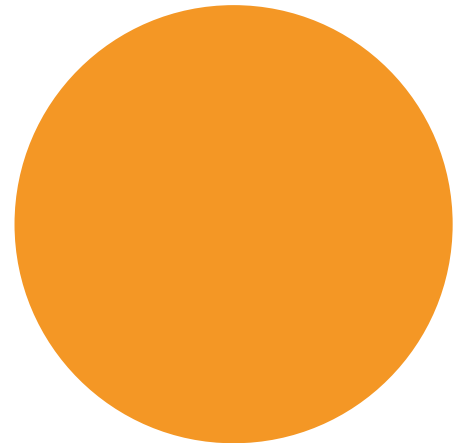
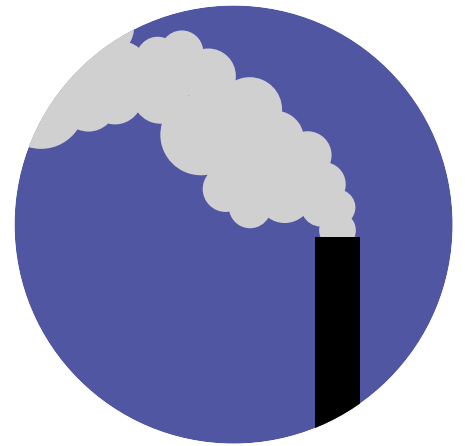


THE FUTURE WE WANT



KS3 LESSON 3- TEACHER GUIDE

CONTENTS

PAGE 3

INTRODUCTION

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

PAGES 4-8

TEACHER NOTES TO SUPPORT LESSON SLIDES

PAGE 9

BACKGROUND INFORMATION

Useful links and further reading.

PAGE 12

LESSON WORKSHEETS

Useful worksheets to support classroom activity for your class to take away.



KS3 LESSON 3 – TEACHER GUIDE

THE FUTURE WE WANT

Learning objective:

To reflect on climate change learning and understanding from previous lessons, and present a positive vision of the future in a creative format.

Curriculum links:

English, IT (Computing), and Art

Lesson plan:

Students reflect on climate change issues and their impact on the things students value most. Students use these reflections to inform a creative response, entitled ‘The future we want’, using poetry, creative writing, designing a poster, artwork, film or presentation.



SLIDES 1-2



Show the clip on the slide:

Video: Climate Change 101 with Bill Nye | National Geographic

Bill Nye is an American science educator who has produced lots of YouTube clips on different topics. Here he gives a summary of climate change and its causes and effects, as well as the things we can do to reduce our individual impact.

Note – all measures used are American in format so may need explanation or conversion.

For the Love of... is a campaign from **The Climate Coalition** to encourage people to recognise the impact of climate change on their own lives and the things they love (from bees and coastlines, to tea and summer). The campaign film was shown at the end of Lesson 1.

If you have time, visit <http://fortheloveof.org.uk/stories/> to view the things that people have shared that they love and how these could be affected if climate change continues unchecked.

Use the bullet points on the slide to recap the main threats posed by climate change:

- Species are becoming extinct
- Weather systems are changing and becoming more extreme
- Our planet is getting warmer

Use the final statement to remind the group that we can all make a difference by taking action to limit the future impact of climate change.

SLIDES 3-5



Use the interactive map to show a future where climate change continues to cause extreme weather, sea level rise and extinction across the world. Ask the group for their reactions and reflections on the consequences to the physical and human geography and to the people and animals that live there. Encourage discussion around any differing opinions. Make sure to emphasise that these consequences are not inevitable – depending on the actions we take now, things in the future could be much more positive.



AFRICA – Drier subtropical regions are likely to warm more than the moister tropics, potentially causing desertification across most of Africa and widespread loss of habitats, wildlife and livelihoods.



© GLOBAL WARMING IMAGES / WWF

EUROPE – Across Europe, global warming is likely to see temperatures rise in the winter in the North and in the summer in the Mediterranean South. Annual precipitation is predicted to increase in the North and decrease in the Mediterranean South. This will result in summer droughts for the Mediterranean and winter storms and flooding in the North. This extreme weather, together with severe glacier melting, is likely to cause water and food shortages.



© ALBRECHT G. SCHAEFER / WWF

ASIA – Soaring temperatures are predicted to cause frequent extreme weather events resulting in loss of life and devastating farming and agriculture. Exceptional rainfall and hurricane winds associated with tropical cyclones will cause significant problems for parts of Asia.



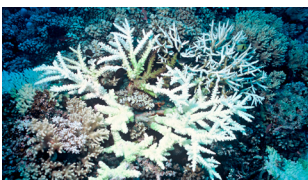
© DAYS' EDGE / WWF-US

NORTH AMERICA – Extremes of weather are predicted to cause droughts in the plains and increased rainfall in mountainous regions. Canada is likely to see its winters shorten but snowfall increase. The increased warming in the region will also affect water and food supplies.



© NATUREPL.COM / TONY HEALD / WWF

SOUTH AMERICA – Precipitation is predicted to decrease across all central and southern areas including the Amazon rainforest, where even a slight change could lead to the extinction of hundreds of species unique to the area. Extreme weather events will cause widespread damage and loss of lives.



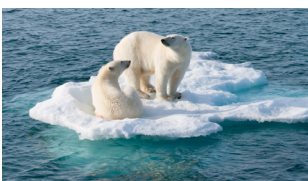
© CAT HOLLOWAY / WWF

AUSTRALIA – Soaring temperatures, high winds and reduced rainfall are likely to cause desertification in many areas. Coastal regions are predicted to be battered by high seas and winds causing extreme flooding to low lying regions. The Great Barrier Reef will continue to be bleached by warming seas and will likely die - devastating the marine species that rely on it as their home and source of food.



© WIM VAN PASSEL / WWF

ANTARCTICA – Change here will be unpredictable, but summers are likely to become much warmer and winters much milder. Unique species living in this area are unlikely to be able to adapt quickly enough to the warmer climate in order to survive.



© FLORIAN SCHULZ/VISIONSOFTHEWILD.COM

ARCTIC – This region is warming faster than any other area on the planet. The loss of sea ice will harmfully affect the species in the region that rely on it e.g. polar bears. As Greenland's ice sheet melts, it could lead to global sea level rises of up to 1 metre this century.

SLIDE 6

CHOOSE TO CHANGE



In small groups students should use the 4 bullet points on the slide and come up with suggestions for ways in which they and their families could have a more positive effect on the environment by making simple changes to their lifestyle. After a few minutes, ask for feedback and record on the board. The next slide, 'Make the Change' shows a short summary for each point, but other suggestions might include:

1. REDUCE YOUR CARBON FOOTPRINT

- Reduce the amount of electricity you use by turning off lights, TVs and other electrical gadgets at the wall when not in use.
- Save water by turning off the tap when cleaning your teeth, and remember a shower uses much less water than a bath.
- Wash clothes at 30°C or less with a full load, and hang your washing up to dry using an indoor ailer if you can't hang it outside.
- Think about how your family sets your thermostat at home; each degree you turn it up in summer and down in winter can save you 10% in energy.
- Reduce the amount of waste sent to landfill by reducing, reusing and recycling as much as you can.
- Try eating fresh, local, organic, seasonal produce and include more veg and fish in your diet.



2. GREEN UP YOUR LIFESTYLE

- Walk or cycle when travelling short distances and consider using public transport when travelling further away.
- Reduce your need for home and school heating and cooling by installing insulation such as draft-excluders or if possible, double glazing.
- Check the energy efficiency ratings on new appliances before you buy and install energy-efficient light bulbs, as this will save money by reducing bills in the longer term.
- Switch to greener energy sources where possible; look for electricity and gas suppliers who use renewable sources.



3. TAKE POSITIVE ACTION

- Plant a tree in your school, garden or local community.
- Grow your own fruit and vegetables at school or at home.
- Buy recycled, FSC or Fair Trade products wherever possible.





4. GO BEYOND YOUR OWN CARBON FOOTPRINT

- Talk to your friends and family about climate change and share your concerns.
- Raise the issue with your local MP/elected representative and ask them to take action against climate change.
- Consider a career that would help you contribute positively to climate action.
- Take part in **Earth Hour** to help raise awareness of climate change.

These are included on the worksheet for students if you would like them to take the actions away.

Your students may like to answer the **lifestyle quiz** on the WWF website to calculate their family's carbon footprint and work out where they need to make a change.

If time allows, you could also ask students to think about whether they think individual actions are better than government action, and record their responses.

SLIDES 7-10

MAKE THE CHANGE

Once the groups have fed back some ideas, display the summary on slide 6 and discuss any they hadn't already mentioned.

SLIDES 11-12

SHARE YOUR VISION



Before using this slide to introduce the main activity, show the embedded 5-minute clip.

Video: I wish for you...

The film is a message from a grandfather to his granddaughter about his hopes for the future of the world that she will grow up to live in. Ask the group how they feel after watching it; what are the grandfather's wishes? Does the group think they are achievable?

Emphasise that as consumers and citizens in a democracy they have the power to act and help to reverse the damage done by human activity.

SHARE YOUR VISION *continued...*



The group should now review what they have learnt from the previous lessons about the effects of climate change and the measures agreed to reduce global emissions forecast by 2050.

Working in pairs or small groups, challenge students to get creative and share their vision for ‘The future we want’ by producing a poem, a letter, a poster, artwork, a short presentation or a film. This should reflect what they think our world will look like if we meet our emission targets, and should include consideration of how we can reduce our impact on the planet:

- **Energy sources** – potential for renewables to provide all our energy, and generating local energy e.g. solar panels/solar schools
- **Housing** – using less energy at home, new technology in improving energy storage e.g. generating electricity in the day to use in the evening
- **Transport** – electric vehicles becoming more prevalent; batteries from cars help to store electricity generated from intermittent renewable sources for use at other times; climate and health benefits of walking/cycling; public transport
- **Food** – how to encourage more sustainable diets by buying local/seasonal produce and eating less meat and dairy and more vegetables
- **Consumption** – reusing, repairing, recycling, buying less, upcycling; buying only what we need and not just what we want
- **Economy** – opportunities for low carbon/clean tech jobs
- **Adaptation/resilience** – improving our resilience to, for example, flooding and other extreme weather

Students can be as creative as they like in the format that their positive predictions take. For example, they could write a presentation in the style of a weather forecast to show geographical impact of climate change, perform a news report of the future, produce an on location film log or vox pops, design a PowerPoint presentation, produce a piece of creative writing or artwork.

You may want to complete this task over multiple lessons.

To end the lesson, showcase student’s creative responses, encouraging them to reflect upon their choice of focus and explain why it is important for the future they want.

You can extend this activity by:

- contacting your local MP/elected representative;
- get your school involved in Earth Hour.

Further details can be found in the **Resource Overview**.

BACKGROUND INFORMATION AND RESOURCES

- Extreme weather predictions in the news:
<http://www.bbc.co.uk/news/science-environment-30215782>
- Global warming effects map:
<http://www.climatehotmap.org/>
- Find out how you can change the way we live to reduce our impact on the environment:
http://www.wwf.org.uk/what_we_do/changing_the_way_we_live/
- Before and after photographs:
<http://news.nationalgeographic.com/2015/12/151229-before-after-earth-features/>





DO IT
FOR YOUR
PLANET

LESSON WORKSHEETS

CHOOSE TO CHANGE



What changes could you make to reduce the impact you are having on the environment?

1. REDUCE YOUR CARBON FOOTPRINT

- ✓ Reduce the amount of electricity and water you use at home, and think about how your family sets your thermostat at home; each degree you turn it up in summer and down in winter can save you 10% in energy.
- ✓ Reduce, reuse, recycle.
- ✓ Eat fresh, local, organic, seasonal produce where you can.

2. GREEN UP YOUR LIFESTYLE AS A FAMILY

- ✓ Walk, cycle or use public transport.
- ✓ Install insulation, draft-excluders and double glazing in your house.
- ✓ Buy energy-efficient appliances and light bulbs.
- ✓ Switch to greener energy sources where possible; look for electricity and gas suppliers who use renewable sources.

3. TAKE POSITIVE ACTION

- ✓ Plant a tree in your school, garden or local community.
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www.wwf.org.uk/earthhour