

## Topic: Sustainability

<b>Lesson: The impact that individuals can have upon the environment</b>	<b>KS or Year Group: KS3</b>
<b>Resources:</b> <ol style="list-style-type: none"><li>1. Resource 1 - Greenagers</li><li>2. Resource 2 – Example news items</li><li>3. Resource 3 – Five questions</li><li>4. Resource 4 – Presentation guidelines</li><li>5. Resource 5 – Example presentation</li><li>6. Resource 6 – Peer assessment</li><li>7. Computers with internet access</li></ol>	<b>Outcomes:</b> <ul style="list-style-type: none"><li>• Students will recognise ways in which they personally can have an impact upon their local and global environment.</li><li>• Students will recognise ways in which individuals can make immediate changes to their local environment.</li><li>• Students will recognise ways in which individuals can make long lasting changes in terms of the global environment.</li></ul>

### National Curriculum

Key Concepts: 1.2.a & 1.3.b

Key Processes: 2.1.a, 2.1.b, 2.2.b, 2.2.c, 2.3.b, 2.3.c & 2.3.d

Range and Content: 3f, 3g, 3h, 3i, 3k & 3n

### Lesson

At the start of the lesson, students look at a news article which emphasises the point that teenagers ('greenagers') are becoming increasingly interested in the environment. For the main part of the lesson, students use three websites to research an environmental issue of their choice. The lesson finishes with students making short presentations to each other about ways in which individuals can have an impact upon the environment.

### Starter

- Share objectives and outcomes with students.
- Students are given a copy of **Resource 1 - Greenagers** to read. The point of the article is to emphasise that today's young people are generally willing and able to have an effect on both the local and the global environment.

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- The students are told that they are going to spend the main part of the lesson using the internet to search for information about an environmental issue of their choice. They will have the choice of three websites (greenpeace.org.uk, <http://news.sky.com> and [environment-agency.gov.uk](http://environment-agency.gov.uk)).
- A quick 'taster' of the kind of story they can find on these sites is given in **Resource 2 – Example news items**. Students are encouraged to discuss amongst themselves which story interests them the most and explain why.
- Students are told that their task is to produce a brief presentation for their peers (to be performed at the end of the lesson). Full instructions are given in **Resource 3 - Five questions** and **Resource 4 - Presentation guidelines**. The example of a successful presentation given in **Resource 5 - Example presentation** should also be shared with the class.

## Main activity

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Students work at the computers on their presentations. The teacher reminds individual students to keep an eye on **Resource 4 - Presentation guidelines** whilst preparing their speeches. Students are also reminded to stick to the three recommended websites.

## Plenary

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- Five or six students volunteer to give their presentations to the class.
- For each student who presents, several others are chosen to conduct a peer assessment using **Resource 6 – Peer assessment** (the sheets need to be cut up before the lesson).

In the last few minutes of the lesson, students who performed peer assessments are asked to share their scores with the rest of the class. Students then decide in which areas the whole class excelled and recap on the most important facts they have learnt today in terms of limiting their impact on the environment.

## Aim high

During the starter activity, students operating at a high level should be asked to feed back about the three stories. They might be asked questions such as:

- Which of the articles appeals to you the most and why?
- Which of the articles deals with an issue that people in your local area would find the most relevant? Why?
- What were the main differences and similarities between the three articles?

During the main activity, high-achieving students should be encouraged to include issue-specific vocabulary in their presentations (vocabulary that they have not previously used before today's lesson).

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For the plenary, at least one of the students should be asked to not only give their presentation but to undertake a peer assessment of their own presentation afterwards. The score they give for their work should then be shared with the class and justified publically.

### **Assessment**

In order for students to achieve certain levels within the lesson, the following should be considered:

#### **LEVEL FIVE:**

Students can identify the types of environmental issues which have an impact on the global community. Students can identify the salient points from the three stories and engage in small group debates about these points.

#### **LEVEL SIX:**

Students can challenge some of the assumptions that the websites make about environmental issues. Students can explain why it is important for the world's citizens to have the right to the long-term sustainability of their planet.

#### **LEVEL SEVEN:**

Students can play 'devil's advocate' in terms of opposing the opinions of environmental campaigners and/or pressure groups. Students can evaluate the extent to which protestors can have an impact on government policy.

#### **LEVEL EIGHT:**

Students can plan to put to the test their own eco-friendly systems within the local community. Students can make perceptive observations about how the information that they have gleaned from the websites are linked to current affairs issues (on a global scale).

### **Check the web**

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[www.greenpeace.org.uk](http://www.greenpeace.org.uk)

<http://news.sky.com>

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

### **Summary of key learning**

- Students can successfully navigate one or more of the suggested websites
- Students can explain which facts they have learnt from their peers about the environment

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## Resource 1 – Greenagers

### 'GREENAGERS' WANT CLIMATE CHANGE ACTION

Monday February 25, 2008

*British children, well versed in the effects of climate change, are putting pressure on older generations to act now to halt environmental decline.*



New research shows 95% of children aged between 4 and 15 were 'concerned' by global warming, with more than half 'very concerned'.

And three out of four respondents believed they were more fluent on the subject than their parents.

The eco-conscious youngsters, dubbed 'Greenagers', now want to put more pressure on older generations to take a lead in environmental decision-making.

Some 70% of those polled believed climate change is something that will affect them in their lifetime.

Another 85% thought people should be more concerned about the issue and 96% believed it is important to encourage other people to be more environmentally friendly.

The research has been conducted by the UK kids' channel Nickelodeon as part of their environmental campaign called 'Nick's Big Green Thing'.

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The channel has launched a week of programming to encourage children to create a greener environment.

One of the week's hosts, acclaimed adventurer and environmentalist David de Rothschild, was delighted to see the youngest generation were paying attention to the subject of global warming.

He said: "Our climate's changing quicker than anyone ever expected and we can't afford to ignore the signs.

"The good news is we have the solutions and this research proves that kids are taking action helping to create more stable environmental conditions for our future generations."

The survey further showed that more than half (59%) of children were aware of the concept of a 'carbon footprint' and were keen to alter their home life in order to reduce it.

Better recycling, switching off lights in empty rooms, avoiding car travel and reducing the use of household appliances all polled highly.

Despite the awareness of home environmental initiatives, the respondents felt that they learned more about the environment from school teachers rather than their parents.

Courtesy of SKY News

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## Resource 2 – Example news items

### EXAMPLE 1: PLANE STUPID?

In February 2008, 'Plane Stupid' campaigners scaled the Houses of Parliament and draped huge banners from the roof! Their aim was to protest about the government's relationship with the aviation industry and to oppose plans for a new runway at Heathrow.



It was felt by the protestors that no genuine consultation with Londoners had taken place about the new runway. As such, they saw their protest as a clever way to get the word out (on the day that the Heathrow 'consultation' ended) about the proposals. Their banners, hanging from the top of Parliament, read 'British Airports Authority's HQ'. Campaigners also threw paper aeroplanes. These were made from secret government documents which proved that the 'British Airports Authority' (BAA) had already made plans with the government to build a new runway before people living near the airport were consulted. In addition, the campaigners tried to prove that the documents written by the BAA/the government covered up issues such as global warming and noise pollution.

The protestors feel very strongly that the amount of control that industry has over government policy is both frightening and surprising, especially as advances in industry are usually to the detriment of the environment. According to them, this is just 'plane stupid'!

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## **EXAMPLE 2: EGG-STA HELP FOR THE ENVIRONMENT!**

In February 2008 it was announced that Cadbury would be cutting its Easter egg packaging to be more eco-friendly. The confectionery giant decided to launch a new range of chocolate eggs wrapped only in foil (and without a cardboard box). It was also stated that packaging used for other Cadbury boxed Easter eggs would be reduced.

The foil-only eggs, plus the other packaging reductions, were due to cut the total amount of plastic and cardboard used by Cadbury in Easter 2008 by an estimated 247 tonnes and 115 tonnes respectively.

Jo Grice, Easter senior brand manager at the firm, said that the new Easter range "struck the right balance. The company has reduced packaging while still delivering an attractive product that consumers will enjoy giving and receiving at Easter."

Cadbury has now pledged to reduce packaging of its seasonal and gift products by 25% by 2010. It is the latest in a long line of firms to bow to pressure and cut the amount of packaging it uses on its products. Companies which have been especially criticised by green campaigners are those involved in selling confectionery and toiletries, along with a number of supermarket ranges such as vegetables.

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### **EXAMPLE 3: WHAT A ROTTER FOR THE OTTERS!**

The 'Environment Agency Science Department' carried out a series of studies into the deaths of almost 1000 otters between 1992 and 2003. These studies looked at the overall health of otters, factors affecting their survival and the levels of chemicals in otters.



Otter populations have now begun to expand again following a decline in numbers between the 1950s and 1980s. One factor behind this recovery may be decreasing levels of organochlorine chemicals (OCs) in the environment. Examples of such chemicals include 'dieldrin' and 'aldrin'.

Conservation Officer Lyn Jenkins said that "dieldrin was progressively withdrawn from use from 1962, and banned by 1989. Dieldrin was a very potent insecticide, used extensively by farmers because it remained active for a long time after they applied it. It is now known that it can take up to 25 years for dieldrin in soil to disappear, and so a link has been made between levels of OCs in otters and their health."

In some parts of England, almost 30% of otters found between 1996 and 1999 had a distorted retina in the eye. This makes otters almost blind. Interestingly, concentrations of dieldrin were more than three times higher in otters with eye problems than in otters with normal eyes.

Numerous stories of 'blind' otters were also told in the 1950s and 1960s (at the time when there was widespread use of OCs in the countryside).



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### Resource 3 – Five questions

My choice of five questions for my presentation...



- What is the environmental issue that interests me the most on [www.greenpeace.org.uk](http://www.greenpeace.org.uk)? Why?  
**Spend five minutes browsing the site before deciding.**
- What is the environmental issue that interests me the most on <http://news.sky.com>? Why?  
**Spend five minutes browsing the site before deciding.**
- What is the environmental issue that interests me the most on [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)? Why?  
**Spend five minutes browsing the site before deciding.**
- I need to choose an issue from the box below. How can I get involved in this issue in terms of my local community?  
**Spend ten minutes browsing all three sites before deciding.**
- I need to choose an issue from the box below. How can I get involved in this issue in terms of the global community?  
**Spend ten minutes browsing all three sites before deciding.**

agriculture	air quality	carbon footprint
climate change	conservation	consumer power
deforestation	disarmament	energy efficiency
forests	GM crops	government
nuclear power	nuclear weapons	oceans
oil	protests	recycling
reservoirs	renewable energy	transport
waste	whaling	wind power

**Have a better idea? Check it with your teacher and go ahead...**

## Resource 4 – Presentation guidance



### My presentation must:

- **have a clear introduction...**  
...in which I explain which question I am answering. I also need to explain which issue I have chosen and why
- **have a clear main part...**  
...in which I share relevant information about the issue I have chosen
- **have a clear summary...**  
in which I explain ways in which I can get involved in this issue
- **last at least thirty seconds.**

### I also need to:

- speak clearly
- speak loudly
- speak slowly
- give my audience eye contact
- use formal language
- keep fidgeting to a minimum
- keep sounds like 'ummmm' to a minimum
- enjoy the experience!

## Resource 5 – Example presentation

Good morning 8H. I looked through the choice of five questions and I immediately knew that I wanted to do question one about the Greenpeace website. This is for three reasons. The first is that my mum has been a member of Greenpeace for as long as I can remember, and so I suppose her passion for the organisation has rubbed off on me. The second is that I am familiar with the website because I look at it from time to time at home. The third reason is that I noticed a link on their homepage to an issue that I'm really passionate about: efficiency. Greenpeace has a virtual city on their homepage called 'EfficienCity' which is a city that doesn't waste any energy. EfficienCity can teach us a lot about efficiency and so I recommend that you look at it. I believe very strongly that efficiency is a vital issue for our generation to take into consideration. After all, we will soon be thinking about somewhere to live and what transport options we use for our travel.

Now I've told you why I chose the Greenpeace site, and that I've chosen to talk about efficiency, I think it's useful to inform you about some of the main facts surrounding the issue. I would say that as the amount of information available about this issue is huge, it seems sensible to break it down into five main areas for you. My first fact for you is that a wind turbine pays back its carbon debt within 6 months of being built. The second is that sewage can be used to produce energy. Thirdly, I think you might find it interesting to know that it is possible for hospitals to be cooled by building up ice in the day and letting it melt when needed. The fourth snippet of information is that street lights can be powered by solar power. Finally, perhaps the most relevant piece of information I can share with you is that the imaginary city called 'EfficienCity' on the website is actually based on things that are happening in real towns and cities across the UK. For example, some places in our country really do use sewage to produce energy or use solar power for street lights. How impressive!

I hope that you have found all of these facts enlightening. To me, they seem really important, and I can only hope that you agree with me about this. In order to summarise I'd like to talk to you about what I believe I can do to help make a difference in terms of efficiency at a local level.

From now on, I am going to commit myself to emailing our local MP on a weekly basis with suggestions about making this area more efficient. I am also going to send her a link to 'EfficienCity' on the website. Hopefully she will take notice.

I would like to finish by saying thank you very much for listening to me. As I have already mentioned, I hope that you will take something away from this talk and that you too will commit to having an impact on making this area become more efficient in terms of energy. Let's work together!

## Resource 6 – Peer assessment

Name of presenter: .....

Issue: .....

**1 = EXCELLENT. 5 = NEEDS SIGNIFICANT WORK.**

volume: 1 2 3 4 5

confidence: 1 2 3 4 5

length of presentation: 1 2 3 4 5

communication of facts: 1 2 3 4 5

originality: 1 2 3 4 5

Name of presenter: .....

Issue: .....

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