



CLIMATE CONTROL

Brainwashing in schools

Andrew Montford and John Shade

Foreword by Professor Terence Kealey

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Foreword

By Professor Terence Kealey

Politicians and political activists have always wanted to control the schools, for obvious reasons. St Francis Xavier of the Jesuits may or may not have said 'give me the child until he is seven and I'll give you the man' but too many politicians have wanted the child until he or she is seventeen, just to make sure.

In this impressive paper Andrew Montford and John Shade have shown how effectively eco-activism appears to have captured our schools' curriculums. It is of course true that the greenhouse effect is based on good physics, but even better physics recognises that the globe is a complex system and that many different effects – not just the greenhouse effect – will influence the climate. And since we cannot yet model the world's climate with confidence, we must be suspicious of the certainty with which eco-activists seek to influence the schools' curriculums.

Eco-activism is, as Montford and Shade have shown, only the most recent example of attempted curriculum-capture by political activists, so we need to construct institutions to protect the schools from such capture. Montford and Shade have invoked the horrible examples of education under the communist regimes of Eastern Europe or China, and in so doing they point the way to the only solid future – democracy.

Educational researchers such as EG West¹ and James Tooley² have shown how the nationalisation of the schools in England and Wales during the 19th century was a mistake, which neither increased the expenditure per pupil nor fostered social justice – it only handed the schools over to John Stuart Mill's 'dominant power in government.'

But the nationalisation of the schools is now effectively irreversible, so how can we protect the curriculum within it? One harbinger is provided by the UK Statistics Authority, which is funded by government but which reports not to a minister but directly to Parliament. Thus its independence is optimised. Perhaps we now need a Curriculum Authority, reporting to Parliament via a select committee, because by its nature a legislature can foster a wider range of views than can the executive branch of government.

In the meantime, let us echo the call from Montford and Shade for an independent review of our current climate curriculum, because if – as the title of their

paper suggests – schools are indoctrinating rather than educating, we have a problem.

Terence Kealey
Buckingham
February 2014

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About the authors

Andrew Montford

Andrew Montford is a writer and blogger and is best known as the author of *The Hockey Stick Illusion*. He has written several reports for GWPF, including one on the Climategate inquiries and another on the Royal Society. He is the father of three school-age children.

John Shade

John Shade is a professional statistician. After studying physics at university, a concern for the plight of the world's poorest and a belief that climate modelling might help alleviate their plight took him to an MSc in atmospheric physics at Imperial College. However, disillusioned with the lack of meaningful advances in this specialism, he left academia, working first as a meteorologist and then as an industrial statistician, gaining an MSc in statistics along the way. Now retired, he writes the Climate Lessons blog, which focuses on environmentalist indoctrination of children in schools around the world.

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A general State education is a mere contrivance for moulding people to be exactly like one another; and as the mould in which it casts them is that which pleases the dominant power in the government, whether this be a monarch, an aristocracy, or a majority of the existing generation; in proportion as it is efficient and successful, it establishes a despotism over the mind, leading by a natural tendency to one over the body.

John Stuart Mill, *On Liberty*³

The problem isn't that Johnny can't read. The problem isn't even that Johnny can't think. The problem is that Johnny doesn't know what thinking is; he confuses it with feeling.

Thomas Sowell, *Inside American Education*⁴

Executive summary

We have found examples of serious errors, misleading claims, and bias through inadequate treatment of climate issues in school teaching materials. These include many widely-used textbooks, teaching-support resources, and pupil projects.

We find instances of eco-activism being given a free rein within schools and at the events schools encourage their pupils to attend. In every case of concern, the slant is on scares, on raising fears, followed by the promotion of detailed guidance on how pupils should live, as well as on what they should think. In some instances, we find encouragement to create 'little political activists' in schools by creating a burden of responsibility for action on their part to 'save the planet', not least by putting pressure on their parents.

The National Curriculum has recently been reviewed by the government, but the proposed changes seem unlikely to prevent such practices.

Surveys show that many children are upset and frightened by what they are told is happening to the climate.

Teachers and administrators have a fairly free hand to choose textbooks, other materials, visiting speakers and school trips for pupils provided they fit in with curricular goals. This raises the risk that some may select alarming and politically loaded sources in order to win children over to the 'environmental cause'. This 'cause' is often presented through the notion of 'sustainability', a poorly-defined catchword covering political and personal actions for which fundamental criticism is rarely entertained.⁵ Many campaigning NGOs and other organisations with vested interests such as energy companies proffer teaching materials and other resources for use in schools. Some of it is presumably being used.

There are clear grounds for very serious concern. We therefore call upon the Secretary of State for Education and his counterparts in Scotland, Wales and Northern Ireland to undertake urgent inquiries into climate change education in our schools. Only a systematic evaluation of what is going on can determine the extent of the indoctrination as well as the emotional and educational harm to pupils that is undoubtedly resulting.

Introduction

The corruption of the curriculum in schools in support of a radical worldview that is almost certainly at odds with the majority view in our society, has been described in a book of essays edited by Robert Whelan. One contributor, the sociologist Frank Furedi, argues that 'Increasingly the curriculum is regarded as a vehicle for promoting political objectives and for changing the values, attitudes and sensibilities of children'. Another contributor, the geographer Alex Standish, notes how such interventions can degrade 'both young people as embryonic political subjects, and adults as independent political subjects. [They presume] that neither is capable of acting as an independent moral agent...'. In other words, there is a presumption of moral and political incompetence. The incompetence charge is made clear when one considers an alternative approach in which the school seeks to produce individuals equipped to decide for themselves about such matters as using low-energy lightbulbs, cycling to work, or burning fossil fuels, and in which parents retain the primary responsibility for transmitting values to their children and not the other way round.⁶

Concerns about environmental education in modern times are not new. For example, in 1984 Herbert London wrote *Why are they Lying to our Children?*⁷ in response to the following incident described in the book's Introduction:

One evening more than a year ago I came home from university to find my elder daughter – then 13 – with tears streaming down her cheeks... When I gently inquired why she was crying, Staci said, 'Because I don't have a future'. [She] produced a mimeographed sheet suggesting that a dismal future – or none at all – is what awaits her...widespread famine... overpopulation...air pollution so bad everyone will wear gas masks... befouled rivers and streams...melting of the polar ice caps and world-wide devastation of coastal cities...an epidemic of cancer brought on by damage to the ozone layer...

London finishes his introduction by noting that with fear about environmental threats being so widely promoted:

...it is little wonder that teachers and textbook writers often cannot distinguish between wheat and chaff. As a result, they become part of a system that disseminates the currently popular, prevailing opinions. Unfortunately, those opinions tend to be wrong, misleading, and misguided.

Our focus in this report is on the treatment of climate and energy topics in schools in the UK, and the harm that it can cause when 'wrong, misleading, and misguided'. This topic is inextricably linked with that of 'sustainability', which underpins so many relevant curricular objectives.

Some children – perhaps most according to some surveys – have been frightened by what they have been led to believe about climate change. All are at risk of being deprived of a more thorough treatment of subject-matter basics in exchange for time spent on conditioning them for political or personal actions. This conditioning and the associated reduction in basic education are liable to reduce the autonomy of the children as well as of the parents they are encouraged to influence: both are essentially being told what to think and what to do. Children are being treated as political targets by activists who wish to change society in fundamental ways. This is unacceptable whether or not they are successful.

At several places in the text we refer to the Appendices to this report. These are to be found online at <http://www.thegwpf.org/climate-control-appendix/>.

Part I The sustainability agenda

How did we get to here?

The impetus to put the environment and sustainable development at the centre of the education agenda can be traced back to the early 1970s. In these early days of the modern environmental movement, the UN's Stockholm Conference of 1972 concluded that environmental education was 'essential in order to broaden the basis for...enlightened opinion and responsible conduct'.⁸ By 1976, such ideas had taken hold, and an international conference on environmental education was held in Belgrade to plan the way forward. At its conclusion, the Belgrade Charter was issued, stating that the aim of environmental education was the development of a world population that was educated about the environment, had 'strong feelings of concern for the environment and the motivation for actively participating in its protection and improvement'.⁹

The implication of the Charter appeared to be that environmental education should incorporate both provision of information about the environment and a large element of proselytising, and this impression was reinforced by a joint

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UNEP/UNESCO conference the following year in Tbilisi, which saw the objective of environmental education as the creation of 'new patterns of behaviour of individuals, groups, and society as a whole towards the environment'. It called for governments to 'sensitise public opinion to environmental problems...encourage action within the family and in...pre-primary education...organise systematic action in primary and secondary education...[and] seek, by means of environmental education, gradually to transform attitudes and behaviour'.¹⁰

At the Rio Earth Summit in 1992, it was noted that education was central to the success of the sustainability agenda. One of the important outputs of the conference was 'Agenda 21' a non-binding treaty that set out an action plan for getting 'sustainable development' onto the agendas of governments at both national and local levels.¹¹ Among the requirements of the document was a reorientation of education, with the environment and development cutting across curricula around the world.

In 2014, the fact that the promotion of 'Education for Sustainable Development' (ESD) is the focus of a UNESCO conference to be held in Japan suggests that the topic remains fashionable, and that we may expect further promotion of climate hyperbole linked to particular political opinions and 'solutions' for use in our schools.¹²

Children as political tools

This revolution in the purpose of education appears to be not only concerned with changing the way children think but also about changing the behaviour of adults, using their children as a lever. The chairman of the IPCC, Rajendra Pachauri has suggested that a focus on children is the top priority for bringing about societal change, and that by 'sensitising' children to climate change, it will be possible to get them to 'shame adults into taking the right steps'.¹³ Pachauri's ideas are echoed in UNICEF's manual on climate change education, which, it is claimed, is about helping children to become 'agents of change'.¹⁴

The EU, meanwhile, has funded schemes aimed at promoting the standard, narrow ideas about climate change and its causes in schools. Their explicit wish is to 'link students in both primary and secondary schools across Europe to discuss, engage and commit to undertake actions to limit the change in climate'.

One result was a programme at the Institute of Education at the University of Reading, which it described as follows:¹⁵

The Institute of Education at the University of Reading is welcoming more than 300 school children for an exciting and innovative programme of climate change activities, which combine science, maths, history and modern languages.

Councils across the UK have decided to try to use 'pester power' as a way of changing the behaviour of the ratepayers.¹⁶ For example, in Southwark, the council's Environment Subcommittee recommended:

That the Executive Member for Environment in collaboration with the Executive Member for Education make use of the potential of schoolchildren's 'pester power' to promote energy efficiency (particularly) in existing homes.¹⁷

In a leaflet sent to Glasgow schools by the city council, children were encouraged to write to politicians and to pester parents about their use of cars (see Appendix A¹⁸).

Teachers TV, an officially sanctioned but now defunct TV station for educators in the UK, broadcast a film in which Ed Gillespie, a public relations expert and David Lambert, then head of the Geographical Association, explained to a teacher how to handle the subject of climate change. Towards the end of the film Gillespie explained that '...we can turn kids into a whole bundle of little climate activists'.¹⁹

Other educational initiatives such as the Climate Change Schools Project,²⁰ have been quite explicit in their intentions to train children to police their parents, as noted in an evaluation report from 2009:

A really successful activity in this area was the 'Climate Cops' event run by nPower. After an interactive event at a school, students were given police officer style notebooks, and they could 'book' themselves, friends or family members if they saw them wasting energy or performing other 'climate unfriendly' actions.²¹

More recently, a research project at the University of Leeds has sought to identify more effective ways through which children can be used as tools to change the behaviour of their parents.²² Other examples of attempts to co-opt children to the environmental cause and to use them as tools to change their parents' behaviour are described below.

Part II The curriculum

The drive for sustainability education

The environmental torch was taken up by all the main UK political parties during the 1990s. Under the Conservative government of John Major, the UK signed the Rio treaty, and there was strong endorsement of the sustainability agenda by Environment Secretary John Selwyn Gummer. In the years that followed Agenda 21 made a considerable impact in local authorities.²³ The pace of change then accelerated under the Labour government, which in 1998 set up a quango to advise on sustainable education. This move proved significant with the revision of the National Curriculum in 2000, when sustainable development was made a compulsory part of teaching in geography, science, design and technology, and citizenship.

The new curriculum seems to have been warmly embraced by educators. The Geographical Association, a body that promotes the study of that subject, published a pamphlet to help teachers bring about what they called the 'New Agenda'.²⁴ This document examined issues such as how Agenda 21 could be put into action in geography lessons, how to encourage children to think about issues such as the alleged imminent exhaustion of fossil fuels, and what concrete actions – taking showers rather than baths, cycling rather than using cars, recycling newspapers and so on – could be encouraged by teachers. While parents might have wondered whether issues such as these were any business of teaching staff, the authors of the pamphlet were more concerned about how teachers would be able to 'measure children's values' and assess the actions they might take.

With the United Nations declaring a decade of sustainable development beginning in 2005, the Labour government's response was to formulate an all-encompassing strategy for sustainable education that would 'win hearts and minds' and 'motivate people to take personal action'.²⁵ The strategy saw campaigning taking place not only in schools but also in 'the media, youth and trade associations, non-governmental organisations of all kinds, museums, libraries, galleries, the arts, sports and many more'. The National Curriculum Handbook for Teachers, published in 2004, noted that one of the aims of the curriculum was to 'secure [children's] commitment to sustainable development at a personal, local, national and global level'.²⁶ As an Ofsted report of the same period put it, sustainable development was seen as being 'non-negotiable for children's wellbeing'.²⁷

However, despite the apparent pervasiveness of sustainable development in the curriculum of the time, a 2008 Ofsted survey of schools found that sustainability education was being insufficiently promoted.²⁸

Climate change in UK curricula

In this section we review the stipulations on climate change education of the English and Scottish curricula. The concerns outlined here appear to apply equally to the Welsh and Northern Irish curricula, but these are beyond the scope of this report.²⁹

In the National Curriculum for England

At the time the 2007 National Curriculum for England was introduced, and in a move apparently timed to coincide with the release of the Fourth Assessment report of the Intergovernmental Panel on Climate Change (IPCC), the government announced that all children would be required to learn about climate change in geography lessons.³⁰ But in addition, climate change and related areas such as energy use were to be taught across the curriculum, appearing in chemistry, physics, biology, and citizenship lessons.³¹ And by accident or design, the result has been the teaching of one particular dogma rather than a balanced approach.

In 2013, the government put out a draft revision of the National Curriculum for consultation, which appeared to try to restrict the teaching of climate change dogma. An article in the Guardian described the changes:

The latest draft guidelines for children in key stages 1 to 3 have no mention of climate change under geography teaching and a single reference to how carbon dioxide produced by humans impacts on the climate in the chemistry section. There is also no reference to sustainable development, only to the 'efficacy of recycling', again as a chemistry subject.³²

The same article quoted the director of the Royal Geographical Society as approving of the changes, apparently on the grounds that the basic geographical knowledge that would enable proper understanding of climate change questions had previously been jettisoned:

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What we have got [in the new draft] is a much better grounding in geography, and it has the building blocks for a much better understanding of climate change and sustainability.

However, a vigorous campaign by environmentalists, including a petition³³ and a public letter from academics³⁴ eventually brought about a partial retreat by the Education Secretary,³⁵ and climate change was reinstated at the expense of basic geographical knowledge, although with less emphasis than previously.

From the point of view of emphasising the needs and education of children rather than promoting the ambitions of political campaigners, the new curriculum is a major improvement over the previous one.³⁶ There is no mention of 'sustainability' anywhere in the document, and of the five mentions of climate, only two provide clear opportunities for the inclusion of illustrative materials and examples promoting alarm over anthropogenic climate change. These can be found in Chemistry Stage 3, and in Geography Stage 3 – in each case the impact of human activity on the climate is included. It will be up to teaching staff and exam boards to decide how they will cover this, and so further vigilance will be required on the part of parents and others concerned over the risks of exploitation by campaigners.

Vigilance will also be required for areas not covered by this new curriculum, notably the core subjects of English, Mathematics and Science at Stage 4 (14–16 year-olds). A new statutory requirement that schools publish details of their curricula will simplify this task.³⁷

In Curriculum for Excellence in Scotland

The sustainability agenda and climate change are even more explicit in the Scottish Curriculum for Excellence. For example, in science, children are required to be able to:

...explain some of the processes which contribute to climate change and discuss the possible impact of atmospheric change on the survival of living things.³⁸

In social studies, they should be able to:

...identify [the] threats facing the main climate zones, including climate change,...analyse how these threats impact on the way of life [and] assess the impact and possible outcomes of climate change on a...region and can propose strategies to slow or reverse the impact.

While in the technologies section it is stated that they should be able to:

...make suggestions about how to live in a more sustainable way... investigate the use and development of renewable and sustainable energy to gain an awareness of their growing importance in Scotland or beyond [and]...discuss [renewable energy's] benefits and potential problems.

These curricula provide lists of 'desired outcomes', usually expressed in terms of what an ideal pupil might be able to say or do about a given topic. This leaves teachers with considerable freedom to design detailed curricula, and select specific materials for use within their own schools according to their own judgements as to what would best produce the desired 'outcomes'. Given the flood of materials produced by campaigning, fund-raising, and other organisations with vested interests in climate alarm, and aimed at teachers or pupils, it would be remarkable if none of it found its way into classrooms.

Part III Official teaching materials

Textbooks

The emphasis on sustainability in the curriculum has had inevitable consequences for what is taught in the classroom. There has been a profound shift in teaching of many subjects, with sustainable development and, in particular, climate change taking centre stage. But alongside the shift in emphasis, there are important questions on whether these new subject areas are taught in a balanced fashion. Does instruction in this area fall into the realms of science or propaganda? Are children being taught how to think or what to think?

Overwhelmingly it seems to be propaganda. There is no doubt that some textbooks are profoundly misleading. Take, for example, a geography textbook published in 2001, which described the effects of global warming as follows:

Scientists believe that a 1°C increase in world temperature is all that the world can tolerate before climatic chaos sets in.³⁹

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This is an extreme view, in no way representative of the scientific literature, and yet it is presented as if it were a matter of common belief amongst 'scientists'.

Given that the world has experienced a warming of approximately 0.7°C already without any sign of such 'chaos', this statement appears indefensible. Indeed, the consensus among experts is that a 1°C warming will probably be beneficial.⁴⁰

The same book also said that some scientists predicted sea level rises of five metres or more. While this is true of some scientists it was not representative of majority scientific opinion at the time – the IPCC Third Assessment Report, published at around the same time, predicted a rise of less than a metre by the end of the 21st century, and even this figure has been scaled back since.⁴¹

Another example from geography comes in the shape of a revision book targeted at Scottish children.⁴² This features a graph of global surface temperatures. At the right-hand side of the graph, temperatures are shown as accelerating upwards in the period after 2005, suggesting an alarming deterioration in the Earth's climate. However, none of the main surface temperature records – HadCRUT,⁴³ GISS,⁴⁴ or NOAA⁴⁵ – show accelerated warming in recent years, or indeed any temperature rise at all. In reality, the halt in the temperature rise has become an important area of scientific discussion.

Similarly misleading graphs can be found elsewhere, with, for example, *GCSE Geography for WJEC: a Revision Guide* seeming to show temperatures rising to the year 2000 and beyond, although the graph is extraordinarily unscientific, giving no clear indication of whether it is supposed to represent global temperatures, how the anomaly is calculated, or the precise timescales involved.⁴⁶ Another example is in the *GCSE Geography AQA A (Student Book)*, in which it is claimed that 'the average global temperature has increased steeply in the last ten years', with a graph of unknown provenance making the same point.⁴⁷ Review of the GCSE Geography texts suggests that this sort of misinformation is ubiquitous, although not completely universal.⁴⁸

The same book begins its description of the climate change question with a paragraph that would not have looked out of place in a Greenpeace pamphlet:

Climate change isn't something that is going to happen in the future – it's happening now! Disasters, like the severe droughts in Niger, in sub-Saharan Africa, in 2005–6 and 2009, are wrecking people's lives more and more frequently. And it's going to get worse.

The claims about climate-related disasters are at best highly tenuous. The IPCC's Fifth Assessment Report suggests that there is low confidence in identifying a global increase in drought, let alone to ascribing it to man, and tells a similar story about other weather extremes.⁴⁹

The book also includes a section about how individual children can help reduce greenhouse gases, suggesting that they join 10:10, an organisation best known for a controversial video campaign that vividly portrayed the violent death of two children at the hands of their teacher, when their parents refused to accept the teacher's demands for action in response to her concerns about energy usage and global warming.⁵⁰

A revision guide for the same course, as well as featuring a temperature graph distorted in the same fashion as the others mentioned above, includes an adaptation of the notorious, and long-since discredited Hockey Stick graph, referenced to the IPCC's Third Assessment Report.⁵¹ Its inclusion is doubly surprising, since one would expect the authors to have sought the most up-to-date views on longer-term temperature trends available at the time: the IPCC's Fourth Assessment Report.

The text in *GCSE Geography for WJEC: a Revision Guide* makes several highly dubious statements, for example claiming that there has been an increase in the number and intensity of tropical storms, directly contradicting the IPCC, which says that there is low confidence that any such increase has taken place.⁵² The book's section on the impacts of climate change features a mind map that suggests that global warming will be worse than famine, plague or nuclear war (see Figure 1). This has been taken directly from a pamphlet published by a 'passionate' green activist.⁵³

Some geography textbooks make passing mention of the existence of dissenting points of view, but these are often then dismissed. An example comes in *GCSE Geography AQA*:⁵⁴

The climate is changing – global warming is happening. It's just that a handful of people think some of the evidence isn't great. There are other things that cause climate change, but let's face it, we humans better take the rap this time.

Even worse was this characterisation, from *A2 Level Geography AQA Complete Revision & Practice*:⁵⁵

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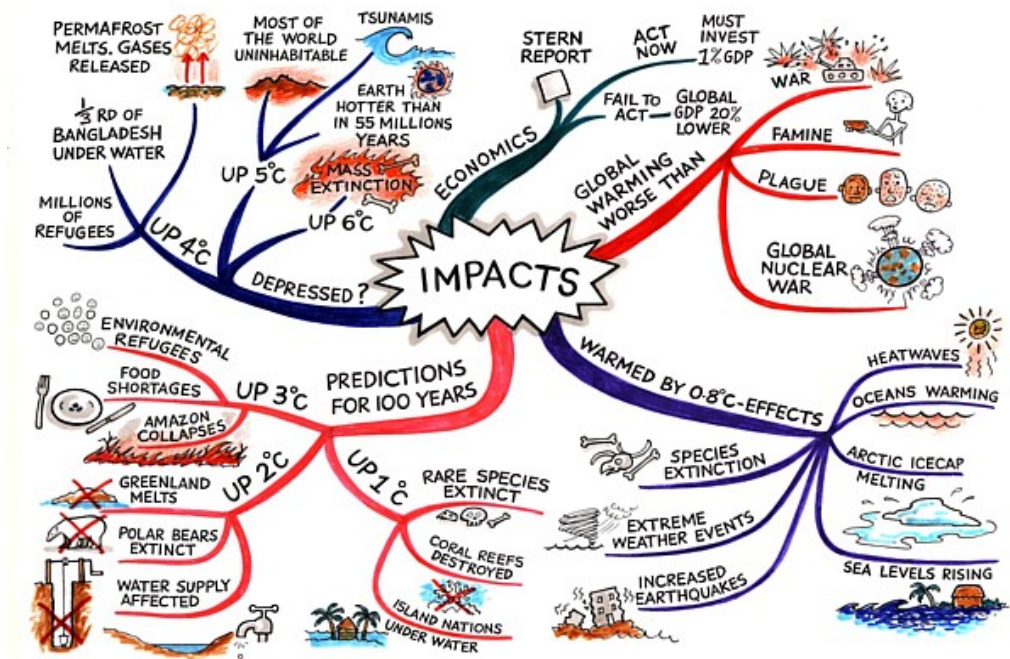


Figure 1: Climate change impacts, from *GCSE Geography for WJEC: a Revision Guide*

All scientists care about is evidence...All these graphs can be mighty confusing, especially when people manipulate the data to try to show that climate change isn't happening.

Also in the CGP stable is a revision guide on biology, which includes sections on global warming and sustainability that adopt the shrill tone of the other titles in the series. This includes discussion of biofuels in the following terms:

There's too much carbon dioxide in the atmosphere, and burning fossil fuels...is making the problem worse. Luckily there are some biofuels out there that we can use, which are carbon neutral.⁵⁶

This is followed by the examples of ethanol produced from sugar cane or maize and biogas from farm waste. Unfortunately, the evidence that corn ethanol is carbon neutral is at best shaky,⁵⁷ and the requirement to divert land away from food production means that the process has had the unfortunate side-effect of increasing the price of basic foods thereby exacerbating hunger and malnutrition in many parts of the world. This issue is not addressed in the CGP text despite having been reported on even by eco-campaigners concerned

about global warming as far back as 2004.⁵⁸ A recent commentary by Lomborg claims that 'at least 30 million people go hungry every year' thanks to bio-fuels.⁵⁹

The impression gained from the curricula that climate change and sustainability are ubiquitous is reinforced by the textbooks. The *CGP English Revision guide for GCSE English*⁶⁰ mentions global warming three times, for example the extract shown in Table 1, explaining effective use of adjectives:

Table 1: Excerpt from a revision guide for English

Adjectives describe Things and People	
'Global warming is bad'	'Global warming is a serious and very worrying issue'
Too boring – zero marks alert	Much better – the adjectives will impress the examiner

There is no escape from the drum beat of global warming and sustainable development. In a Heinemann textbook for A Level French, students are asked to study an open letter by a French environmentalist to schoolchildren (see Table 2).⁶¹

Table 2: Extract from an A' Level French text, with translation

Plus personne ne peut le nier, les scientifiques sont unanimes, et nous le constatons chaque jour: jamais dans l'histoire de l'humanité, les menaces n'ont été aussi grandes...Ce sont l'air, l'eau, le sol, le climat...les animaux que nous sommes en train de massacrer méticuleusement.	Nobody can deny it, scientists are unanimous and we see it every day: never in the history of humanity have the dangers been so great...We are in the course of meticulously destroying the air, the water, the climate...and the animals.
Toi et tes ami(e)s, vous avez rendez-vous avec l'histoire. Devenez des consommateurs' avertis...et soyez avocats de la vie et citoyens de la Terre...	You and your friends have a rendezvous with history. Become responsible consumers...and be advocates for life and citizens of the Earth...

Some Religious Studies texts feature full page spreads on the subject,⁶² although the treatment is not always biased.⁶³

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However, the picture of propaganda in the classroom is not uniform. In particular, the coverage of global warming in the International GCSE course appears much more balanced than in mainstream GCSEs or their Scottish equivalents. For example, EdExcel IGCSE Chemistry summarises the global warming debate in admirable terms, explaining the range of views on the subject and suggesting that the balance of opinion may change in the future.⁶⁴ The equivalent Geography text also takes a calm and measured approach, with a complete absence of misleading or scary graphics or text. For example it introduces a section on managing the causes of global warming and climate change by noting 'if we believe that today's global warming is simply part of natural climate change, then there is nothing we can do to stop it. All we can do is to adapt to the consequences... However, if we believe that the increase in greenhouse gases is the main cause of global warming, then we can certainly do something'. Thus in a few words, two ends of a range of views are presented, along with some simple inferences to help frame the following section on international cooperation to reduce greenhouse gas emissions.⁶⁵ While in no way could these books be classed as 'climate-sceptic' texts, the examples above do give an impression of a curriculum that aims at education rather than indoctrination, and therefore enhance the already high reputation of the IGCSE qualification.

Examinations and mark schemes

Examination papers and published mark schemes show that marks are often only available for candidates who choose to parrot the sustainability agenda. A number of examination boards have repositories of past and example papers, together with examiners' reports and these are revealing as to the emphasis given to global warming in exams. The following section is a review of materials in the repository of the AQA exam board.⁶⁶

AQA repository

A search of the AQA past paper repository returned 526 documents containing the expression 'global warming' and 391 containing the expression 'climate change', spanning a wide range of subjects. For example, the expression 'global warming' could be found in papers on economics, chemistry, geography, religious studies, physics, French, humanities, biology, citizenship, English and science.

One example, from an Economics paper, was particularly egregious, assuming in essence that a particular political response was beyond question:⁶⁷

Explain why developed rich countries should provide money to poorer, developing countries so that they can reduce their CO₂ emissions.

Questions on global warming also appeared in a paper on religious studies:⁶⁸

(b) Explain two reasons why many religious believers are concerned about climate change. (4 marks)

...

(d) Explain actions religious people might take to look after the planet. (3 marks)

The mark scheme for part (b) of this question suggests awarding marks for:

The effects of climate change on life, e.g. loss of life, food shortages, devastation of livelihoods because of severe weather, droughts, floods, famine, destruction of crops, effects on plants and animals/long term effects/religious reasons – stewardship, dominion, responsibility, etc.

While for part (d), marks were to be awarded for such things as:

Avoid polluting the world/recycle/reduce carbon footprint – reduce use of car, use renewable energy, turn off lights, use energy saving bulbs/ encourage sustainable development/ plant trees/protest when necessary/ join action groups such as Greenpeace and religious organisations which raise awareness/encourage others to protect the planet, etc.

Global warming also featured prominently in Humanities, for example:⁶⁹

2. (e) Explain two ways in which global warming can be reduced. Use your own studies to answer. (4 marks)

The marking scheme for this question suggested:

Max 2 marks for each of the two ways:

1 mark for identification and 1 mark for explanation or development.

Ways of reducing global warming include: reducing the amount of greenhouse gases we produce; taking action through international agreements such as the Kyoto Protocols; producing energy in cleaner ways; reducing individuals' energy consumption, e.g. by better insulation of homes, recycling, using public transport rather than our own cars

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Examples in this vein are legion. An Environmental Science paper asked why fossil fuels would be used less in the future, with marks awarded for making the *incorrect* statement that they are running out,⁷⁰ while in a paper assessing functional English skills students were asked to read an article promoting recycling and then 'write...four reasons why recycling is a good thing to do', with marks awarded accordingly.⁷¹

Since even official sources agree that recycling is not always a sensible thing to do, this is grossly misleading.⁷² Recycling also featured in a specimen religious education paper, which asked students to 'Explain two reasons why people should recycle'. No marks were available for explaining the circumstances in which recycling is foolish.⁷³

A functional English paper asks children to imagine they are members of a recycling pressure group, and to write a leaflet explaining:

- why recycling is a good thing
- what things should be recycled
- where to put items for recycling.⁷⁴

The previous year, the paper had a comprehension question based around global warming and another around recycling.⁷⁵

An AQA GCSE specimen answer in Chemistry, deemed worthy of full marks, includes the following words: 'Overall I think we should be using more biodiesel as it is important for us all to reduce our carbon footprint in an effort to halt global warming'. One for a physics question includes: 'I think wind turbines are a good idea as global warming from burning coal is an increasing problem and needs to be stopped.'⁷⁶

The AQA repository is particularly bad. Reviews of the equally disturbing Scottish Qualifications Authority repository and the considerably better OCR one are to be found in Appendix B.⁷⁷

Part IV Unofficial teaching materials

As well as officially sanctioned teaching materials, teachers have access to a vast array of unofficial materials. They may also have the pupils take part in workshops and school visits as a means of injecting variety into the schooling. Much of this is as bad or even worse than the official materials.

Ecoschools

The majority of schools in England have signed up for the Ecoschools programme.⁷⁸ A parallel programme operates in Scotland with similar penetration rates.

The Ecoschools programme describes itself as ‘...an international award programme that guides schools on their sustainable journey’⁷⁹ and is operated by an NGO which is ultimately controlled by three UN agencies.⁸⁰ It aims to introduce environmentalism into almost every aspect of school life – from the way schools get their electrical power, to what is being taught in the classroom.

Worcestershire County Council has been a pioneer in the area and has a full-time team of sustainable development education staff. It has worked alongside WWF activists and used WWF course materials to train its teachers.⁸¹ One school in the county – Bredon Hill Middle School – posts its children’s work online and this gives a flavour of the educational impact this approach has made. For example, a language lesson apparently consists of drawing eco-posters with slogans in French (see Fig. 3). Two examples are shown below, but from a more extensive selection of the posters produced (see Appendix C^{??}) it can be seen that the children have been provided with the French text. The lesson is thus largely environmentalism, with a little art and almost no language tuition.

A similar eco-theme can be seen in the schools work in Geography, Science, Maths and English (see Appendix C^{??}).

One result of the programme is that many schools now have teams of ‘eco-warriors’ (their term) who are involved in proselytising efforts,⁸² but it is the interference in the curriculum that is most alarming. This can be seen from the outcome maps given to schools on the Scottish Ecoschools programme, which take each of the main strands of the curriculum and show teachers how to introduce the sustainable development agenda into them. No part of the curriculum is left untouched.⁸³

Activist materials

Alongside such allegedly science-based material is a bewildering array of educational texts written by activists for use in schools. The National STEM Centre – a body which promotes technical education in schools and colleges –

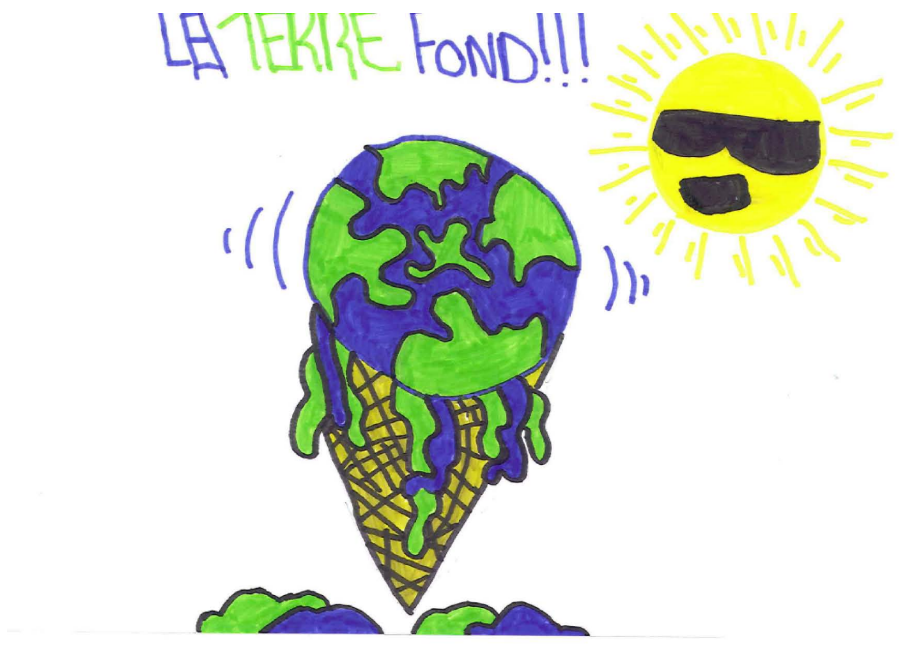


Figure 2: French language tuition in an EcoSchool.

does not distinguish between science-based materials and activist materials. For example, its database of course materials features lessons prepared by the New Economics Foundation, a political think-tank in London. This features 20 cards to 'inform' debate, none of which offer any antidote to the green narrative and most of which are scientifically dubious; issue cards for a later part of the lesson are similar in tone (see Figure 3; the full sets of cards are shown in Appendix D^{??}).

In the lesson plan, the session is to close with encouraging the children to become environmental activists – one suggestion being to write to their MPs.

Outside the classroom

Teachers can choose from hundreds of schools visits and trips centred on sustainability and climate change: everything from recycling facilities⁸⁴ and renewable energy generators⁸⁵ to climate change days.⁸⁶ They can also invite outside agencies to visit the school and here again there is a vibrant market: recycling robots,⁸⁷ eco-poetry⁸⁸ and climate change workshops⁸⁹ sitting alongside more prosaic events such as talks from local council recycling officers.⁹⁰

A report of a joint visit to a Norfolk school by a group consisting of staff from the University of East Anglia and renewable energy companies⁹¹ describes one such lesson in sustainability, a vision of a resource-starved future:

As the day begins, the students are informed that the Earth's remaining reserves of fossil fuels have finally been exhausted and, as a result, the fabric of what we consider normal life has immediately started to crumble. No more light, no more heat, no more iPods. No more anything, in fact, meaning something needs to be done – and soon – before the world falls into total chaos.⁹²

Another popular means of getting the environmental message over is showing green-themed films. The best known example is Al Gore's *An Inconvenient Truth*. At one time there was a plan to show this in every school in England and Wales, but when the legality of the move was challenged in the courts, it was held that the film contained many scientific errors and that schools' requirement to deliver a politically impartial education therefore demanded that it be accompanied by suitable caveats as to its accuracy. Whether these caveats have been presented in practice is unclear – the guidance notes we have seen

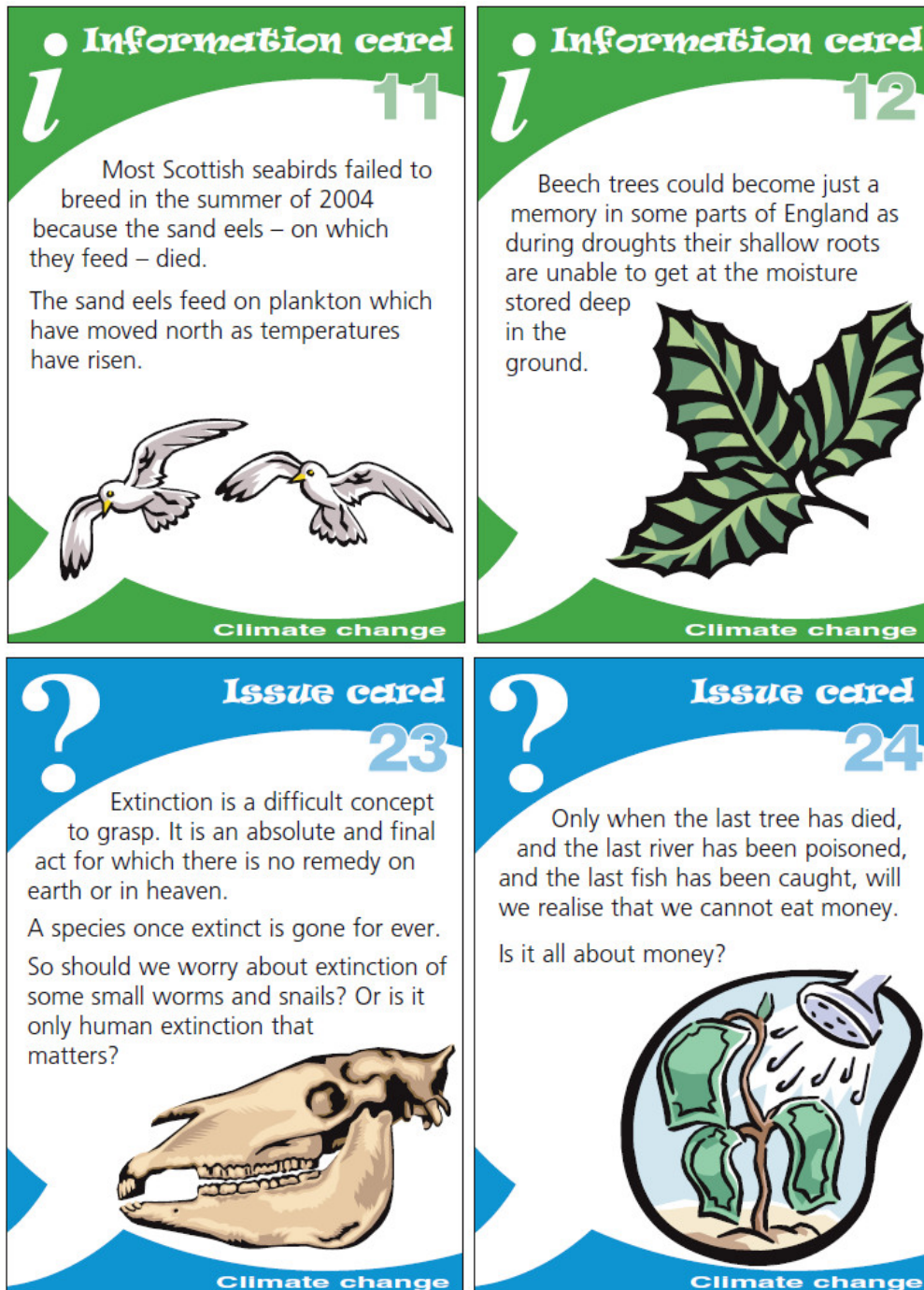


Figure 3: Activist teaching materials

are aimed only at the teachers, and the cautions about the political and scientific excesses in the film are modest compared with the main message, which is one of trying to squeeze impact out of every minute of the imagery and commentary.⁹³ Showings of the film certainly continue,⁹⁴ although the government no longer actively promotes it.⁹⁵

A variety of other environmentalist films are shown. Education Scotland has a website suggesting suitable material for climate change education and, in addition to pointers to the BBC and Discovery Channel websites, this recommends:⁹⁶

- An Inconvenient Truth
- Age of Stupid
- Eleventh Hour
- Flood
- The Day After Tomorrow

No materials critical of mainstream views on climate change – for example *The Great Global Warming Swindle* or the earlier documentary *The Greenhouse Conspiracy* – are suggested.

The forums of the *Times Higher Education* website give a flavour of some of climate and sustainability themed activities in schools: a teacher seeking environmental materials in Spanish,⁹⁷ another struggling to find ways to teach reception classes about renewable energy,⁹⁸ still another seeking advice on how to run a green-themed assembly.⁹⁹ The sense of all-pervasiveness is overwhelming:

We change the focus of [the Geography topic, Improving the Environment] to be more about caring for the environment and being eco-friendly. We interview the caretaker. We litter pick the school grounds and weigh the bags and talk about it in assembly. Make eco posters. We use online energy/green surveys. In ICT we build an eco town.

There are also intriguing hints that the eco-message is important when applying for jobs, as this question on the forums reveals:

I've got [a job] interview coming up in which I have to teach English to a mixed year 7 group on the theme of Environment and Sustainability. Any ideas folks?¹⁰⁰

Part V What do teachers say?

We have been unable to locate any systematic reviews of the opinions of teachers about the ubiquity of climate change in the school system. We are aware of one project currently underway, but this is incomplete and the author is not yet ready to share her results. However, as part of the data collection procedures, the author published a notice in the discussion forums of *Times Higher Education*,¹⁰¹ asking for teachers to complete a survey. This attracted a number of comments that at least give a flavour of what the survey might show. The responses were overwhelmingly critical:

[I]t's done to death in UK schools across a range of subjects and in nearly all year groups. We risk turning them off it.

They are turned off it already!

The questionnaire seemed to be written from perspective of thinking that schools don't do much about climate change. This is not true in England.

Blimey, it is virtually impossible to do any science topic without some reference to greenhouse effect/global warming/climate change having to be included.

In fact IMHO there is too much emphasis on it and it has become a big turn off for the kids.

I made pretty much the same comment within the survey.

It has become a bit of a joke in my higher groups that on the long exam questions the words carbon dioxide and global warming will always get a mark regardless of the question!

However, until systematic evidence is available, it will be difficult to reach reliable conclusions on the views of teachers about the sustainability agenda in schools.

Part VI Confusion, ignorance and fear

Confusion and ignorance

As we have shown above, the curriculum has been undergoing a long process of subversion, one that is now largely complete. As early as 2004, one geography teacher was lamenting the effect on children's education:

Teaching pupils about political values... rather than the geographical knowledge they need to acquire has become the core of the subject...

Nearly all pupils today are given the impression that the natural environment is a fragile entity that is being harmed by human actions leaving them with a pervasive sense of limits. Such an approach fails to deal with the complexities of environmental management and gives the impression that the environment needs to be protected even at the expense of meeting basic human needs.¹⁰²

Back in 2008 Ofsted had criticised schools for not pushing the sustainable agenda hard enough, but in 2011, perhaps under the influence of a new government, they started to complain that many children had 'poorly developed core knowledge' of geography and that their 'mental images of places and the world...were often confused and lacked spatial coherence.'¹⁰³ Any link between the requirements of the curriculum and this geographical ignorance among its victims appears, however, to have eluded Ofsted's inspectors.

It might be possible to make the case for the curriculum's emphasis on climate change if children were emerging with an enhanced understanding of science or economics. However, our research for this report suggests, perhaps unsurprisingly, that having unqualified primary school teachers explain complex physical phenomena to primary school children has not been a successful strategy, as the examples of childrens' work shown in Figure 4 make clear.

Fear

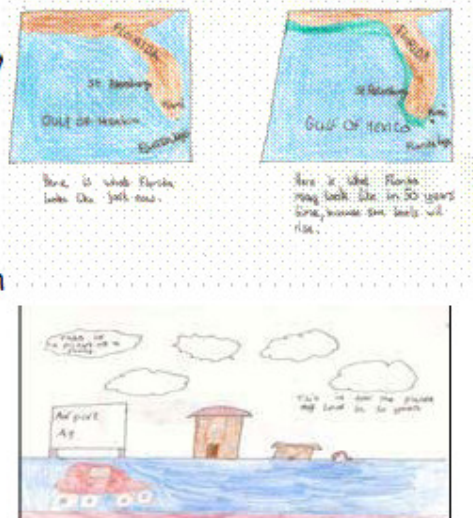
It is not only ignorance that is engendered by the subversion of the curriculum. There is widespread evidence that children are becoming scared and disturbed by the constant refrain of doom from their teachers. Some evidence for this is anecdotal, for example this quotations from a child 'yet to lose all her baby teeth' in an article in the Washington Post:

I worry about [global warming] because I don't want to die.¹⁰⁴

But there is also systematic evidence. In a survey of 500 American pre-teens, it was found that one in three children aged between 6 and 11 feared that the Earth would not exist when they reached adulthood because of global warming and other environmental threats.¹⁰⁵ In the UK, a 2006 survey found that climate change was children's top worry...

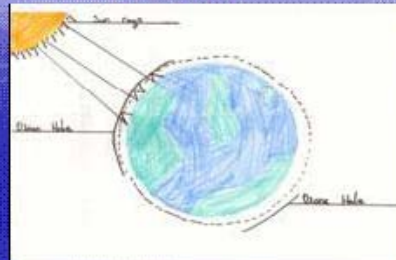
How global warming will effect humans on Planet Earth

In the poles the water is going to rise remarkably high. It will rise high all around the world. Scientists believe that in around 50 years the world is going to be flooded over. So even in big cities you should expect large floods.



The Ozone Layer.

§ The ozone layer is like a big wall above our atmosphere. The rays from the sun, come in through the atmosphere but, when they bounce off the Earth, the ozone layer doesn't let them out, so it heats up the Earth and melts everything. This is called, Global Warming.



The ozone layer is made up of gases. The gases come from anything that is powered by petrol, coal or oil. One of the worst gases is called carbon dioxide or CO₂.

Figure 4: Examples of primary schoolchildren's understanding of anthropogenic global warming. Source: Collace Primary School (Perth & Kinross) website

The results showed three quarters of 11 to 14-year-olds worry about climate change, compared to 41% who are worried about going out with someone.¹⁰⁶

...while a 2007 survey

...showed that half of young children aged between seven and 11 are anxious about the effects of global warming, often losing sleep because of their concern.¹⁰⁷

More recently a survey by UNICEF found that three-quarters of 11 to 16-year-olds in the UK were worried about how global warming was going to change the world.¹⁰⁸

But the use of fear as a campaigning tool, despite a long and ignoble history, is recognised by some as being counterproductive, with researchers finding that although it can attract attention to an issue, it does not actually encourage serious engagement.¹⁰⁹ Note that the concern is not over the wellbeing of those who are being frightened, but rather over the effectiveness of fear in persuading them to support the cause, although one professional psychotherapist has called for child welfare to be considered alongside the demands of environmentalists.¹¹⁰

It is easy to engage the sympathies of children with stories of damage to the natural world and images of suffering animals they will identify with. But children have very little power. Of all the sections of society who might make an impact on climate change, they have the least influence. There is a real risk of raising levels of anxiety amongst children that will not only cause distress in the immediate term but will in the long term lead to those children turning against the environmental causes we hoped they might espouse.

Part VII Conclusions

There can be little doubt that the provision of a rigorous education has now given way to a highly politicised brainwashing of growing minds with 'climate change' and energy scares as motivators and 'sustainable development' as the 'solution'. Gone are the days when the education system hoped to generate young people equipped to form their own opinions on complex scientific, sociological and political issues. Instead the education system, subverted by

Climate Control

a green political movement, now seeks conformity with environmentalist orthodoxy, with any challenge to its vivid certainties viewed as transgressions to be ignored or treated with contempt.

The seriousness of what we have seen is hard to overstate. The fact that children's ability to pass their exams – and hence their future life prospects – appears to depend on being able to demonstrate their climate change orthodoxy is painfully reminiscent of life in communist-era Eastern Europe or Mao's China. Politicians seem to have given the nod to this process, effectively handing much of the curriculum to green activists. The question of whether what is taught in the classroom is scientific or political, balanced or biased, true or false seems to have gone unexamined.

The legal guidance in the Education Act of 1996 is clearly intended to protect children from partisan political indoctrination. It has been successfully used to win a court action critical of the propaganda in *An Inconvenient Truth*.¹¹¹ But the almost uniform position taken by the major political parties may have provided cover for the promotion of the views we have noted in this report. However, the political scene may now be changing in ways which will call for a re-examination of the extent to which the relevant sections of the Act are being respected.

Parents of schoolchildren and other concerned individuals need not be helpless in the face of these concerns. The book *Facts, Not Fear* by American authors Michael Sanera and Jane S Shaw contains many examples of poor materials for teaching children about the environment, but it also contains many suggestions for doing something about it.¹¹² Their key message is that such materials 'tell only one side of an often complicated story', and that parents ought to review a school's curriculum by asking some general questions such as 'Is there a pervasive bias against economic growth and modern technology?', 'Is the overall presentation of environmental problems gloomy and pessimistic?', and 'Are children being frightened into becoming environmental activists?'. The authors suggest reviewing the textbooks and supplementary materials being used, including contributions by any outside speakers. They urge parents to talk with their children's teachers and raise concerns about topics in a friendly, non-confrontational way. Parents may also be able to recommend speakers for school visits, or indeed provide such contributions themselves if they are knowledgeable about relevant topics. They might also seek out new books for the school library to provide more balance, and consider, if problems seem insurmountable by such methods, working with other parents to bring concerns to school management and other responsible bodies. They

conclude their recommendations by urging parents to explore environmental issues with their children, and help 'offset the tone of certainty and the gloom and doom typical of their texts'.

On a wider perspective, there is a risk of weakening a key element of a healthy society in our scientific and technological age: the skill of citizens to form their own opinions on technical issues such as those of climate change. Part of the sales pitch for climate alarm is a frequent appeal to authority, with the implication that 'ordinary people' will just have to trust the experts. Aaron Wildavsky has shown how students from non-science subjects such as sociology, politics, and philosophy can successfully dig into the literature in contentious areas of science, and form substantial opinions on the state of various controversies such as DDT, hazardous waste and global warming.¹¹³ It is interesting to note that the students found profound weaknesses in all the cases for alarm which they investigated, suggesting a resounding answer of 'No!' in response to the question raised in the title of Wildavsky's book *But Is It True?*. There is surely scope for the spirit of his work to be pursued in schools and in the wider community, aided by subject-matter specialists willing to engage with genuine investigations. Kow-towing to organisations such as the WWF is not the way forward. Such organisations deserve to be challenged. The sorry, error-strewn history of environmental alarmism makes that quite clear. But is that made clear in our schools? We suspect not.

We believe that there is an urgent need for further evaluation of what is going on in our schools under the banners of 'sustainability' and, in particular, 'climate change'. Teaching staff and school administrators have some responsibility here for ensuring the aims of the Education Act are being respected by avoiding political indoctrination in their schools, and parents have an obvious interest in finding out what is happening to their children in contentious and potentially highly disturbing topics. The piecemeal information and examples we have reported on here seem to us sufficient grounds for concern that children remain at risk of being targeted by zealous campaigners, and of being frightened into premature personal and political actions. They are also at risk of being deprived of a more meaningful education appropriate for the 21st century – an education that would equip them to question and evaluate all claims, not least those of fear-mongering campaigners.

But only a systematic evaluation can truly determine the extent of the indoctrination as well as the emotional and educational harm to pupils that is undoubtedly resulting. We therefore call upon the Secretary of State for Education and his counterparts in Scotland, Wales and Northern Ireland to undertake urgent inquiries into climate change education in our schools.

Notes

¹West EG. *Education and the State*, Institute of Economic Affairs, 1965

²Tooley J. *The Beautiful Tree*, Cato Institute, 2009.

³ Mill, JS. *On Liberty*. London: Longman, Roberts & Green, 1869.

⁴Sowell T. *Inside American Education*. Free Books, 1992. This is how Sowell's words are usually rendered. The actual quotation per the source text is: '...it is not merely that Johnny can't read, or even that Johnny can't think. Johnny doesn't even know what thinking is, because thinking is so often confused with feeling in many public schools.'

⁵Despite many criticisms existing. See for example Beckermann W, 'Sustainable development': Is it a useful concept? *Environmental Values* 1994, 3, 191–209.

⁶Whelan R (ed). *The Corruption of the Curriculum*. Civitas, 2007.

⁷London HI. *Why Are They Lying to Our Children?* Inprint, 1984.

⁸<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503>.

⁹<http://unesdoc.unesco.org/images/0015/001533/153391eb.pdf>.

¹⁰<http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf>.

¹¹<http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>.

¹²<http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/>.

¹³http://www.youtube.com/watch?feature=player_embedded&v=HesdOJdLN-k.

¹⁴http://www.unicef.org/publications/files/CFS_Climate_E_web.pdf.

¹⁵<http://climatelessons.blogspot.co.uk/2013/06/good-news-co2-based-climate-alarm-is.html>.

¹⁶For example, Southwark, Kingston, Northumberland, Herefordshire. Some of these councils claim that pester power is an official policy of the Ecoschools organisation although the term does not appear on that organisation's website.

¹⁷http://www.southwark.gov.uk/download/586/renewable_energy_and_energy_conservation_within_existing_properties.

¹⁸<http://www.thegwpf.org/climate-control-appendix/>.

¹⁹<http://climatelessons.blogspot.co.uk/2011/02/classroom-climate-conditioning-at-work.html>.

²⁰The Climate Change Schools Project describes itself as 'a partnership between Science Learning Centre North East (part of Durham University), the Environment Agency ..., ClimateNE, One World Network North East, the North East Strategic Partnership for Sustainable Schools and the Association of North East Councils'.

²¹http://www.lauragrantsassociates.co.uk/Resources/Resources/45/CCSP_evaluation_final_report_July09.pdf.

²²http://www.ukerc.ac.uk/support/tiki-download_file.php?fileId=2211.

²³Tuxworth B. From environment to sustainability: Surveys and analysis of local agenda 21 process development in UK local authorities. *Local Environment: The International Journal of Justice and Sustainability* 1996; 1, 277–297.

²⁴Grimwade K, et al. 'Geography and the New Agenda'. Geographical Association, 2000.

²⁵http://www.desd.org.uk/UserFiles/File/new_articles/england/defra/sdep/SDEP%202003-Learning_to_Last-Govt_SD_Ed_Strategy.pdf.

²⁶<http://webarchive.nationalarchives.gov.uk/20130401151715/https://www.education.gov.uk/publications/eOrderingDownload/QCA-04-1374.pdf>.

²⁷DCSF. The Children's Plan: Building brighter futures. DCSF, 2007.

²⁸<http://staffcentral.brighton.ac.uk/clt/ESD/documents/ofstedschoolsandsustain.pdf>.

²⁹See for example 'Dodging Doomsday' at http://www.nicurriculum.org.uk/connected_learning/thematic_units/sustainable_development/geography.asp and 'Adapting to Climate Change in Wales' at <http://climatelessons.blogspot.co.uk/2011/09/welsh-schools-to-be-sent-scare-them.html>.

³⁰<http://www.independent.co.uk/environment/climate-change/all-pupils-to-be-given-lessons-in-climate-change-434717.html>.

³¹http://www3.imperial.ac.uk/climatechange/resources/national_curriculum.

³²<http://www.theguardian.com/environment/2013/mar/17/climate-change-cut-national-curriculum>.

³³<http://www.bbc.co.uk/news/education-22158941>.

³⁴<http://www.theguardian.com/politics/2013/mar/20/gove-curriculum-dumb-down-education>.

³⁵<http://www.theguardian.com/environment/blog/2013/jul/08/climate-change-geography-national-curriculum>.

³⁶https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260388/MASTER_final_national_curriculum_11_9_13_2.pdf.

³⁷ From September 2012, all schools are required to publish information in relation to each academic year, relating to the content of the school's curriculum for each subject and details about how additional information relating to the curriculum may be obtained. See <http://www.legislation.gov.uk/ukxi/2012/1124/made>.

³⁸http://www.educationscotland.gov.uk/Images/all_experiences_outcomes_tcm4-539562.pdf.

³⁹Widdowson J et al. *GCSE Geography in Focus*. John Murray 2001.

⁴⁰Tol, R. The economic effects of climate change. *Journal of Economic Perspectives* 2009; 23: 29–51.

⁴¹http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1-figure-1.html.

⁴²Rutter J. *Bright Red Revision: Higher Geography*. Bright Red 2010.

⁴³<http://www.metoffice.gov.uk/research/monitoring/climate/surface-temperature>.

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⁴⁴<http://data.giss.nasa.gov/gistemp/>.

⁴⁵<http://www.ncdc.noaa.gov/cag/time-series/global>.

⁴⁶Sykes D and McCabe S. *GCSE Geography for WJEC: a Revision Guide*. Hodder, 2010.

⁴⁷Hurst C, et al. *GCSE Geography AQA A (Student Book)*. OUP, 2011.

⁴⁸Pallister J and Bowen A. *Understanding GCSE Geography for AQA A: Student Book*. Heinemann, 2009.

⁴⁹Working Group I Contribution to the IPCC Fifth Assessment Report Climate Change 2013: The Physical Science Basis. Summary for Policymakers. See also Khandekar M. The Global Warming–Extreme Weather Link. GWPF 2013.

⁵⁰<http://www.youtube.com/watch?v=5FkB4uiizVo>.

⁵¹*GCSE Geography AQA A Complete Revision & Practice*. CGP books, 2013.

⁵²http://ipcc-wg2.gov/SREX/images/uploads/SREX-SPMbrochure_FINAL.pdf.

⁵³<http://media.learningfundamentals.com.au/global-warming-ebook.pdf>.

⁵⁴Op cit.

⁵⁵*A2 Level Geography AQA Complete Revision & Practice*. CGP Books, 2012.

⁵⁶*GCSE Biology Revision Guide*. CGP Books, 2007.

⁵⁷See for example Bernell D, Ethanol. In: *Issues and Controversies in Science and Politics*, CQ Press (forthcoming). Available at: <http://bit.ly/1d1FeWl>.

⁵⁸<http://www.theguardian.com/politics/2004/nov/23/greenpolitics.uk>.

⁵⁹<http://www.telegraph.co.uk/earth/energy/biofuels/10520736/The-great-biofuels-scandal.html>.

⁶⁰*GCSE English: Revision Guide (for GCSE English and GCSE English Literature)*. CGP books, 2002.

⁶¹Bell C and McLachlan A. *Edexcel A Level French (AS) Student Book*. Heinemann, 2008. Translation by Montford.

⁶²*GCSE Religious Studies Complete Revision & Practice*. CGP Books, 2010.

⁶³Hill A. *Revise Edexcel: Edexcel GCSE Religious Studies Unit 1 Religion and Life and Unit 8 Religion and Society Christianity and Islam*. Exexcel, 2012.

⁶⁴Clark J. *EdExcel IGCSE Chemistry. Student book*. Edexcel, 2009.

⁶⁵Milner S and Witherick M. *Edexcel IGCSE Geography*. Edexcel, 2010.

⁶⁶Originally the Assessment and Qualifications Alliance, the board is now known simply as AQA.

⁶⁷<http://filestore.aqa.org.uk/subjects/AQA-4130-W-SQP-U12-ECO.pdf>.

⁶⁸<http://filestore.aqa.org.uk/subjects/AQA-4055-W-TRB-ASPQU02PE.PDF>.

- ⁶⁹<http://filestore.aqa.org.uk/subjects/AQA-40701-SMS.PDF>.
- ⁷⁰<http://filestore.aqa.org.uk/subjects/AQA-44401F-W-MS-JUN12.PDF>. In fact, while natural resources are certainly finite, there is no evidence of fossil fuels running out.
- ⁷¹<http://filestore.aqa.org.uk/subjects/AQA-47201-W-MS-MAR11.PDF>.
- ⁷²See discussion in Worstall, T. Recycling. In: *Chasing Rainbows*, Stacey International 2010.
- ⁷³<http://filestore.aqa.org.uk/subjects/AQA-4050-W-TRB-ASPQU09E.PDF>.
- ⁷⁴<http://filestore.aqa.org.uk/subjects/AQA-47202-QP-JUN12.PDF>.
- ⁷⁵<http://filestore.aqa.org.uk/subjects/AQA-47201-W-QP-MAR11.PDF>.
- ⁷⁶<http://filestore.aqa.org.uk/subjects/AQA-GCSE-SCIENCE-COMMAND-WORDS.PDF>.
- ⁷⁷OCR is Oxford Cambridge and RSA Examinations, now known simply as OCR.
- ⁷⁸<http://www2.keepbritaintidy.org/ecoschools/aboutecoschools/ecoschoolshistory>.
- ⁷⁹<http://www2.keepbritaintidy.org/ecoschools/>.
- ⁸⁰UNESCO, UNEP and the UNWTO.
- ⁸¹<http://www.worcestershire.gov.uk/cms/pdf/Brakspear%20CC%20Ed%20Oct%206%2010%20version%202.pdf>.
- ⁸²http://www.hexthorpe.doncaster.sch.uk/p_Eco-Warriors.ikml.
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the 1990s, the number of people in the world who are under 15 years of age has increased by 1.2 billion, from 1.1 billion in 1980 to 2.3 billion in 1999. The number of people aged 15 years and over has increased by 1.1 billion, from 1.1 billion in 1980 to 2.2 billion in 1999.

There are a number of reasons why the world population is growing so rapidly. One of the main reasons is that the number of children born to each woman has increased. This is due to a number of factors, including improved medical care, increased access to contraception, and a shift in cultural values.

Another reason why the world population is growing so rapidly is that the number of people who are surviving into old age has increased. This is due to a number of factors, including improved medical care, increased access to health care, and a shift in cultural values.

The world population is growing so rapidly that it is becoming a major concern for many people. There are a number of potential problems that could arise if the world population continues to grow at its current rate. These problems include increased competition for resources, increased environmental degradation, and increased social and economic inequality.

There are a number of ways in which the world population could be controlled. One way is to increase the number of people who are using contraception. Another way is to increase the number of people who are surviving into old age. A third way is to shift cultural values so that having large families is no longer considered desirable.

It is important to understand the reasons why the world population is growing so rapidly, so that we can develop effective ways to control it. This will help us to avoid the potential problems that could arise if the world population continues to grow at its current rate.

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