The language of climate change

Lesson plan 1

Greenwashing and the use of climate change-related language

The purpose of this lesson plan is to teach research skills and encourage students to think critically about the language they are presented with in advertising, in particular in adverts for ‘environmentally-friendly’ products.

The OED team would like to thank the Climate Action Working Party of Cheney School for their valuable help and support in producing this lesson plan.

NOTE: if your school does not currently subscribe to the OED, librarians can contact their local Sales Rep for sales and pricing queries, or to register for a free institutional trial using our online form: within the Americas | outside of the Americas. If you are a student or academic, you can complete our librarian recommendation form to recommend OED to your librarians for an institutional free trial.

What is greenwashing?

The verb to ‘greenwash’ is defined in the Oxford English Dictionary as ‘(a) To mislead (the public, public concern, etc.) by falsely representing a person, company, product, etc. as being environmentally responsible; (b) to misrepresent (a company, its operations, etc.) as environmentally responsible.’
You can see in the etymology section of the OED entry that 'greenwash' as a verb was formed from the noun form. The quotations at the entry for the noun also provide evidence that help to explain why some organizations might be tempted to engage in greenwashing.

Student activity:
In groups, reflect on:

- what do you feel is meant by ‘environmentally responsible’?
- why might companies portray themselves as environmentally responsible without being environmentally responsible in reality?
- Who is responsible for making ethical purchases – the consumer or the producer? Why do you think is this the case?

Discuss your thoughts with your class.

Teacher notes:
You can see in the etymology section of the OED entry that ‘greenwash’ as a verb was formed from the noun form. The quotations at the entry for the noun also provide evidence that help to explain why some organizations might be tempted to engage in greenwashing.
The quotations tell us a great deal here. While there is an indication of surprise at environmentally-unfriendly companies not greenwashing, we can also see some negative terms:

- There is a reference to greenwashing being ‘foolish’.
- There is also ‘At worst..they are interpreted as further methods of greenwashing’.
- The term can convey negative and skeptical attitudes towards those who engage in greenwashing.

Student activity:
In groups, list as many climate-related terms as you can (for example, eco-friendly) and categorize them in two columns—positive and negative terms. Report these back to your class.

What do you think these terms mean?
What do these words really mean? Use the OED to explore meanings of the words on your list.

Teacher notes:

Suggested terms:

- bioenergy
- carbon emission
- carbon footprint
- carbon offsetting
- carbon-neutral
- clean, adj. (in the energy sense)
- climate change
- climate emergency
deforestation
dirty adj. (in the energy sense)
eco-friendly
eco-label
energy efficiency/energy efficient
environmentally friendly
fossil fuel (information on the term fossil fuel can be found here)
global heating, n.
global warming, n.
green, n. and adj.
hydroelectric, adj.
low-carbon
low-emission
microplastic
net zero (at net, adj. and n.4)
non-renewable
organic, adj. and n.
overconsumption, n.
overshoot, n.
plastic, n. and adj.
post-consumer
recycling
rewilding n.
single-use (at single, adj.)
sustainability/sustainable
tipping point (at tipping, n.2)
unsustainable, adj.
zero emission(s) n.
zero-carbon
zero-waste (at zero, n. and adj.)

‘Carbon offsetting’ and ‘net zero’ could be interesting terms for discussion. ‘Net zero’ is a particularly challenging term, conveying different points of view.

The ‘over’ in ‘overconsumption’ implies a common understanding of how much is enough, and for whom, which should also provide an interesting starting point for discussion. Similarly, negative terms such as ‘unsustainable’ tells us what a culture considers positive by implication.

**How are terms related to climate change being used today?**

We have seen an emergence and surge of terms that demonstrate an awareness of our environmental impact in recent years. The [Google Books Ngram viewer](https://books.google.com/ngrams), which gives a graphic representation of the way usage of words varies over time, shows that since the first known usage of the term *carbon footprint* in 1999, the term grew in usage:
The first known use of ‘environmentally friendly’ is recorded in the OED as 1971 in a quotation about environmentally friendly bicycles:

*environmentally friendly* adj. (esp. of a product or process) designed, produced, or operating in a way that minimizes harm to the natural environment; (of a person, organization, industry, etc.) adopting measures that minimize harm to the environment; not harmful to the environment; (cf. FRIENDLY adj. 7c).

1971 Guardian 18 Nov. 5 Encourage the use of ‘the healthy and environmentally friendly bicycle’.
1984 Christian Sci. Mon. 6 Apr. 9/3 The factory means jobs. There is no factory without emissions. It just has to be as environmentally friendly as possible.
1990 Health Guardian May–June 6/2 She’s now an environmentally friendly housewife and mother who makes regular trips to the bottle bank en-route to shopping for organic vegetables.
2009 Guardian 25 Apr. (Money section) 2/5 Not sure how environmentally friendly smoke from a chimney is.

From its first appearance in the English language, we see it rising in use:

Source: Google Ngram Viewer
**Discussion point**
What do you think the rise in terms such as this means?
What do you feel might be the reason that use of the term fossil fuel does not seem to have decreased?

**Teacher notes:**
NOTE: an interesting additional piece of information to share with students about carbon footprint is that although the term was not coined by BP, it was popularized by them. More information on this is available here. Terms related to climate change may come become more common for unexpected reasons.

OED lexicographers use corpora (collections of written or spoken material in machine-readable form, assembled for the purpose of linguistic research) in their language monitoring. Below are some examples of the kind of information that can be gleaned from collecting and large amounts of written and spoken English over a period of years, updating it regularly, and analyzing it systematically for patterns and change in how language is being used.

OED lexicographers can generate charts showing frequencies for selected terms from 2018 to 2021. Below is a chart for climate crisis and climate emergency (showing a peak in 2019, a dip in 2020–presumably because of Covid-19–and then subsequent rise again of climate crisis):

![Chart showing frequency of climate crisis and climate emergency terms from 2018 to 2021](chart.png)

Something we can gather from looking at this data is that more urgent and emotive terms, for example, global heating rather than global warming, or in this instance climate emergency and
climate crisis instead of climate change, are on the rise. You might point out for climate emergency that it has been adopted, for example, by The Guardian and The Observer newspapers in their style guides, in preference to ‘climate change’. Several local governments have also declared a climate emergency.

As well as seeing climate change terms increase in usage, and more urgent terms emerging, it is also helpful to look at regular and frequent patterns of language use: e.g. what words are used in combination or in close proximity to each other.

Usage of the term ‘fossil fuel’ hasn’t decreased, in fact, it’s more common than ever before. However, the contexts in which we discuss fossil fuels have changed. Nowadays it’s used more frequently with words like ‘divestment’, ‘transition’, and ‘phasing out’.

(quotations taken from this article by OED Science Editor, Trish Stewart)

Changing patterns in language usage can help us to see shifting attitudes and behaviours in relation to climate change. In the case of fossil fuels, the patterns indicate that although they are still spoken and written about, they are spoken about in a different way.

Below are the top 25 nouns most frequently modified by green in 2018, 2019, 2020, and 2021 (to date). Where the collocation mainly represents the sense ‘not harmful to the environment’ or ‘relating to environmentalism’, it has been marked in green. Even in the space of a few years the change is notable, with many more environment-related collocates in the top 25 by 2021.

<table>
<thead>
<tr>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021 (to date, September 2021)</th>
</tr>
</thead>
<tbody>
<tr>
<td>light</td>
<td>Light</td>
<td>Light</td>
<td>Light</td>
</tr>
<tr>
<td>space</td>
<td>Space</td>
<td>Space</td>
<td>List</td>
</tr>
<tr>
<td>card</td>
<td>Card</td>
<td>Energy</td>
<td>Space</td>
</tr>
<tr>
<td>energy</td>
<td>Energy</td>
<td>Card</td>
<td>Hydrogen</td>
</tr>
<tr>
<td>tea</td>
<td>Tea</td>
<td>Hydrogen</td>
<td>Energy</td>
</tr>
<tr>
<td>jacket</td>
<td>Belt</td>
<td>Recovery</td>
<td>Card</td>
</tr>
<tr>
<td>bean</td>
<td>Bean</td>
<td>Zone</td>
<td>Bond</td>
</tr>
<tr>
<td>belt</td>
<td>Jacket</td>
<td>Tea</td>
<td>job</td>
</tr>
<tr>
<td>flag</td>
<td>Bond</td>
<td>Bond</td>
<td>economy</td>
</tr>
<tr>
<td>bond</td>
<td>Flag</td>
<td>Bean</td>
<td>technology</td>
</tr>
<tr>
<td>screen</td>
<td>Economy</td>
<td>Shoot</td>
<td>recovery</td>
</tr>
<tr>
<td>dress</td>
<td>Dress</td>
<td>Belt</td>
<td>tea</td>
</tr>
<tr>
<td>vegetable</td>
<td>Technology</td>
<td>Economy</td>
<td>belt</td>
</tr>
<tr>
<td>eye</td>
<td>Screen</td>
<td>Job</td>
<td>zone</td>
</tr>
<tr>
<td>technology</td>
<td>Eye</td>
<td>Screen</td>
<td>revolution</td>
</tr>
<tr>
<td>Bin</td>
<td>Area</td>
<td>Jacket</td>
<td>country</td>
</tr>
<tr>
<td>Building</td>
<td>Job</td>
<td>Technology</td>
<td>project</td>
</tr>
<tr>
<td>onion</td>
<td>Building</td>
<td>Flag</td>
<td>infrastructure</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>shirt</td>
<td>Shoot</td>
<td>List</td>
<td>shoot</td>
</tr>
<tr>
<td>room</td>
<td>Infrastructure</td>
<td>Infrastructure</td>
<td>flag</td>
</tr>
<tr>
<td>jersey</td>
<td>Leaf</td>
<td>Revolution</td>
<td>bean</td>
</tr>
<tr>
<td>grass</td>
<td>Room</td>
<td>Area</td>
<td>screen</td>
</tr>
<tr>
<td>area</td>
<td>Vegetable</td>
<td>Project</td>
<td>area</td>
</tr>
<tr>
<td>field</td>
<td>Shirt</td>
<td>Waste</td>
<td>initiative</td>
</tr>
<tr>
<td>leaf</td>
<td>Bin</td>
<td>Jersey</td>
<td>transition</td>
</tr>
</tbody>
</table>

**Optional additional student activity:**
If students wanted to explore similar data themselves they could use the [Google Ngram Viewer](https://books.google.com/ngrams) themselves or the [NOW (News on the Web) corpus](https://news.google.com/newspaper), which is another monitor corpus of web-based news material with data up to the present day. It is possible to register for a free account with limited access.

**Teacher notes:**
The Google Books Ngram viewer can be used to chart the frequency of a term, or compare frequencies of different terms, from 1800 to the present day. Full guidelines, including more advanced searches, are available [here](https://books.google.com/ngrams), and some tips are available below.

**Single terms**
Enter a term into the search box and set the date range you are interested in, e.g.:

![Google Books Ngram Viewer](image)
Comparing terms

Enter two or more terms separated by commas, in order to compare the frequencies of those terms. For example, the chart below compares the frequencies of climate change and global warming from 1950 to 2019. It shows that while climate change has been on the rise since the 1980s, global warming rose in frequency and then has become slightly less frequent since about 2010. Students might like to consider the reasons for that.

Source: Google Ngram Viewer
Collocates

You can also search for the most frequent collocates of a word (i.e., other words that are used in combination with that word). For example,

- `climate *_NOUN` shows the top ten nouns most frequently following `climate`
- `climate change *_NOUN` shows the top ten nouns most frequently following `climate change`
- `*_ADJ energy` shows the top ten adjectives most frequently preceding `energy`
- `*_VERB the environment` shows the top ten verbs most frequently preceding `the environment`
- `*_ADV sustainable` shows the top ten adverbs most frequently preceding `sustainable`.

Example:

Results for `climate change *_NOUN`, 1970 to 2019:

![Google Books Ngram Viewer](image)

Source: Google Ngram Viewer

Comparing collocates in different periods

You can run the searches above with different date ranges, to compare collocates in different periods.

For example, here are the results for `climate change *_NOUN`, comparing 1950-1980 and 2000-2019:
1950-1980

- climate change impacts
- climate change experiments
- climate change scenarios
- climate change effects
- climate change studies
- climate change impact
- climate change levy
- climate change scenario
- climate change problem
- climate change adaptation

2000-2019

- climate change adaptation
- climate change mitigation
- climate change impacts
- climate change policy
- climate change issues
- climate change effects
- climate change scenarios
- climate change policies
- climate change negotiations
- climate change research
Greenwashing in advertising

Student activity:
Explore how words related to climate change are used for persuasive purposes by looking for some examples of adverts, speeches, articles, and interviews which contain one or more of the terms you have listed, and which portray a particular organization as environmentally-friendly.

If you are looking at a historical ad, interview, article, or speech, double-check that what you think is meant corresponds with the date that the ad was produced (be aware that meanings change over time).

Think about:
- What does the ad definitely tell you (or what is it trying to convey)?
- What can you infer? What guesses can you make?
- What doesn’t the advert tell you? What questions do you need to ask?
- Do you feel that what you have found is an example of greenwashing?

Report back to your class.

Teacher notes:
Suggested focuses for ads, speeches, articles, interviews, etc.:

- **food companies** (for example, an ad may mention a particular food product is ‘palm-oil’ free, but are there any other climate-related words mentioned that indicate the product is really environmentally-friendly)
- **beauty industry products** (e.g. does the ad refer to the lack of microplastics but not show the packaging (or clearly show the packaging is made of plastic) or refer to ‘degradable’ rather than ‘bio-degradable’ packaging?)
- **energy** (for example, for an electric car – they may mention ‘clean energy’ but is information available about production methods, where the energy to produce the electricity might come from post-purchase, etc.)
- **clothing companies** (e.g. are clothes described as ‘sustainable’? What does that mean, and what other terms are missing?)
- **political speeches** (e.g. where further environmental policies might contradict assertions about ‘net zero’ goals)

Some terms to look out for:

- Some products or services may be portrayed as ‘carbon-neutral’. According to the *OED* definition of *carbon-neutral*, do students feel that the advert they are investigating is correct in describing the product/service as such? If they answer yes or no, invite them to explain why. Prompt them to think of the questions they might need to ask to determine if this is
indeed the case (e.g. the production phase of a product may be carbon-neutral, but what about its shipping to the point of sale? Or the user phase? Or the disposal/recycling phase?)

- Products might be marked as ‘recyclable’, where this is just an inherent characteristic of the material used, not a feature of the particular brand being advertised, and it may not mean that the product/packaging is in fact going to be recycled (this depends on local collection schemes and recycling facilities). A discussion point could be what would be a ‘better’ label (e.g.: ‘recycled’, meaning that the product or packaging is made with some recycled raw material, not entirely with virgin raw material – closing the loop on the material.)

Encourage students to think about collocates – if looking at words such as ‘packaging’, which words are occurring alongside them (for example – ‘low’ or perhaps ‘free’, in ‘plastic-free’)?

Ask students if they noticed what accompanied the words – were there nature images accompanying the text? What effect might that have had on their opinion about the company?