



FOOD & FARMING
DISCOVERY TRUST

CONSCIOUS CONSUMERS



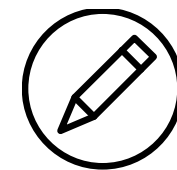
Climate Change



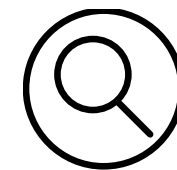
Introduction

Use this presentation to work your way through the topic workbook and activities.

Different activities will have different needs, you'll find icons according to the action you need to take:



Where there is an activity for you to do



Some activities that you need to complete will require another resource



When you need to check the workbook

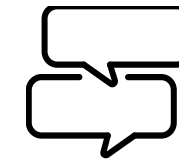
In this session you will:



Think about your own perception of climate change



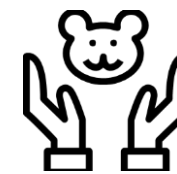
Explore how climate change appears in the media



Understand how different opinions can and have been formed



Develop a deeper knowledge of planetary boundaries



Learn how biodiversity can help to reduce greenhouse gases



Consider how food production can become more climate friendly



See how you can play a part as a consumer



Warm up activity

Before we start exploring the topic, we want you to get your brain in gear

There is an activity on the next slide to consider. You can think about it on your own, in pairs or as a group. You might want to share your thinking before moving on.



Personal Perception of Climate Change

In groups, pairs or individually, think about the following questions and give them a score between 0 and 10 (10 strongly agree and 0 strongly disagree)

1. Climate change will negatively impact my life
2. Climate change will put my life in danger
3. Climate change will stop me being able to have the lifestyle I wanted
4. I can help to stop the climate getting warmer
5. Climate change won't cause problems in the UK
6. Older people don't care as much as young people about climate change

How do we form our views?

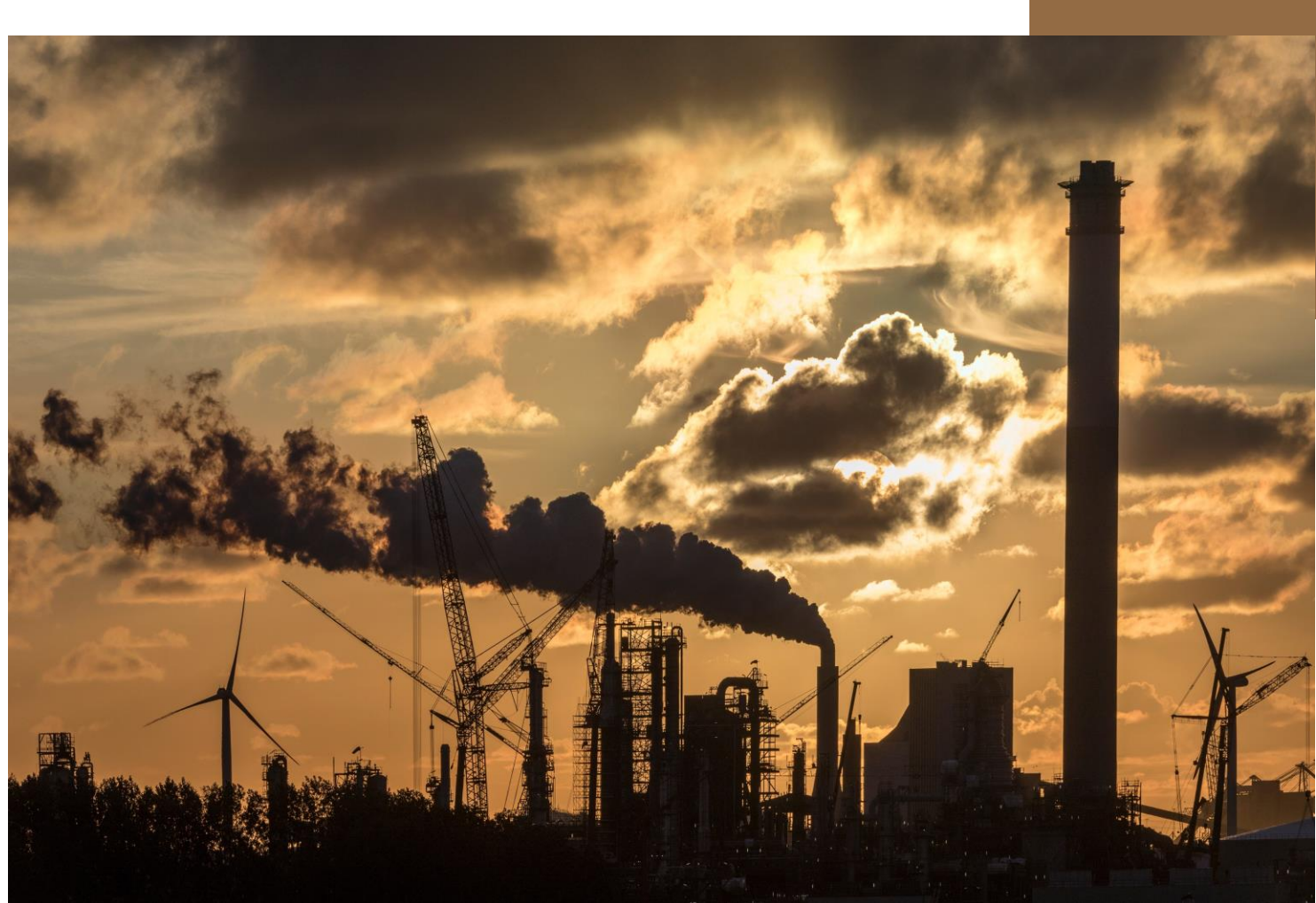
Discuss your findings in groups or jot down your thoughts.

If you did the task as a group, were your views the same or different? - if they were different, why do you think that was?

Do your personal experiences affect how you arrived at your scores?

Do you think people in different countries would give the same answers as you?

Might there be differences of opinions even between different parts of the UK?



Greenhouse Gases

In your workbook you will find some information on the 5 main greenhouse gases.

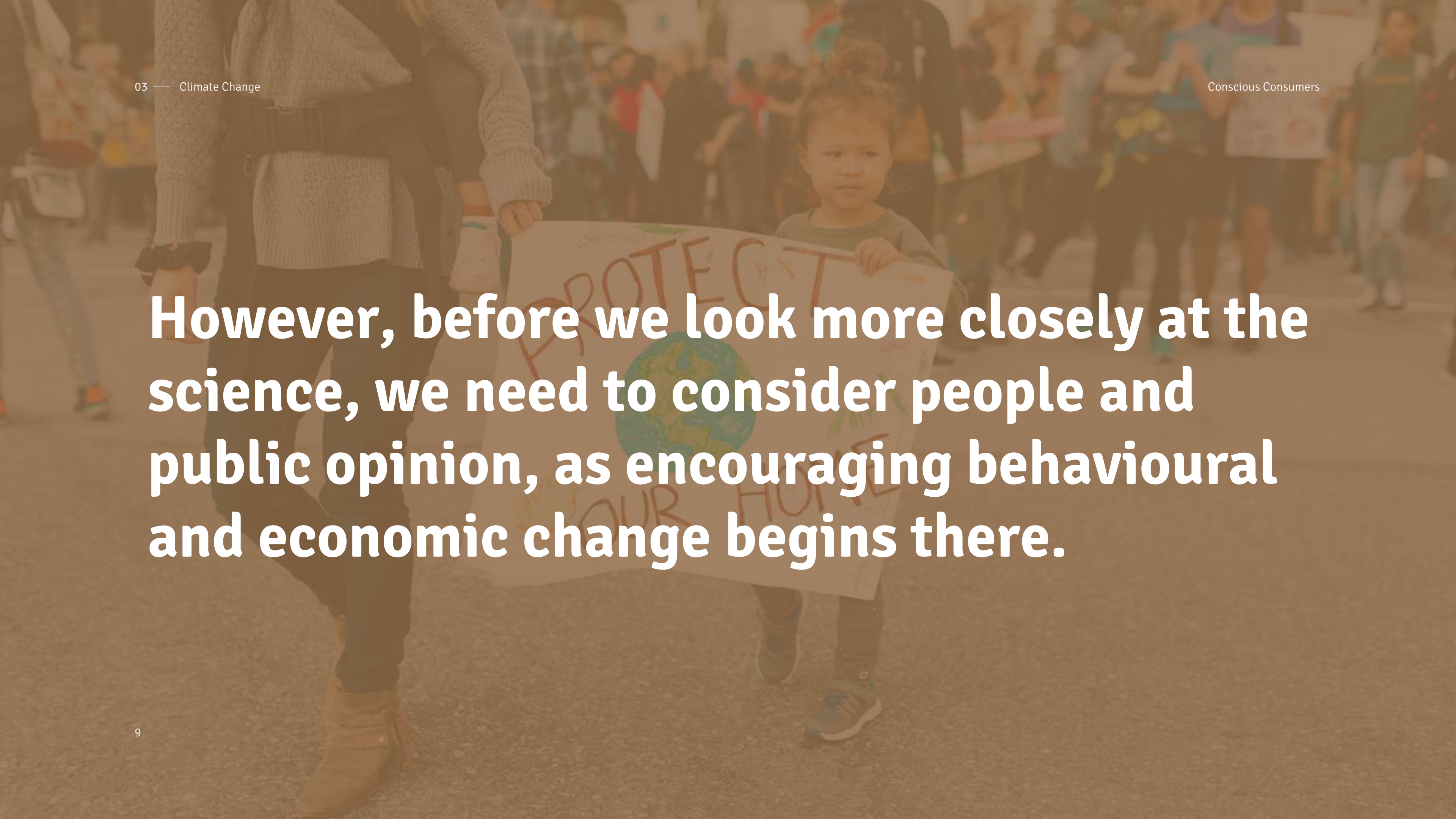
Although some gases have a bigger warming effect than Carbon dioxide, the massive increase in CO₂ seen between 1958 and today (315ppm – 416ppm), together with the length of time it remains in the atmosphere, makes it a serious threat to our survival.

By looking at where these gases come from, we are able to try and find ways to reduce them.

Major contributions come from the way we live and burn fossil fuels to get our energy; buildings, heating, air conditioning and refrigeration, transport, land use and food production.

We obviously still need all these things so we have to find more environmentally friendly ways to maintain our lifestyles, such as greener sources of energy (although in our 'throw-away society' maybe some things we could make do without and some things we could make waste less of!)





However, before we look more closely at the science, we need to consider people and public opinion, as encouraging behavioural and economic change begins there.

Climate Change in the News

It was as far back as 1938, that the connection between carbon dioxide and global warming was made by Guy Callendar.

Scientists studied the impacts of rising CO₂ levels through the 1940's, 50's, 60's and 70's gaining more and more evidence that burning fossil fuels was a key cause of rising CO₂ emissions.

However, the headline that was shared with the world in 1983 by the Wall Street Journal was:

“A panel of top scientists has some advice for people worried about the much-publicised warming of the Earth’s climate: you can cope.”

And so began the skepticism of climate change! Was it really something to worry about? Was it real at all!

In the next activity...

- You will be shown some statements about climate change.
- You'll be asked to investigate them to decide if they are true.
- Once you've made your decision, you can put your detective skills further to the test if you like to try and unpick where/how the statements came to be.
- Check out the 'top tips' slide for advice on selecting sources of information.

'Top tips' to assess quality of information

Who is putting the information out there?

Just because a website is popular doesn't mean its content is accurate. What evidence is being presented? Is it referenced to a source?

Who is the author?

Have they published anything else? Do they have qualifications to support their claims? Is it a balanced argument?

Is the story current or recycled?

Make sure an older story isn't being taken out of context.

How did you find the article?

If the content showed up in your social media feed or was promoted on a website proceed with caution.

Are there any links to advertising?

Might someone be profiting from this point of view? Are they trying to guilt the reader into action?



Activity 1: Climate Change Statements

Use Activity sheet one in your workbook to complete the activity

If you are working in a group, divide the statements between you but if you are working alone just pick your favourite three to try and myth bust!



Statements become part of the narrative

You've had a chance to explore some common climate change-related statements.

Can you see how easily statements can be taken as facts?
Do you think it's hard to change people's views when they remember statements as facts?

Discuss or make notes on these questions:

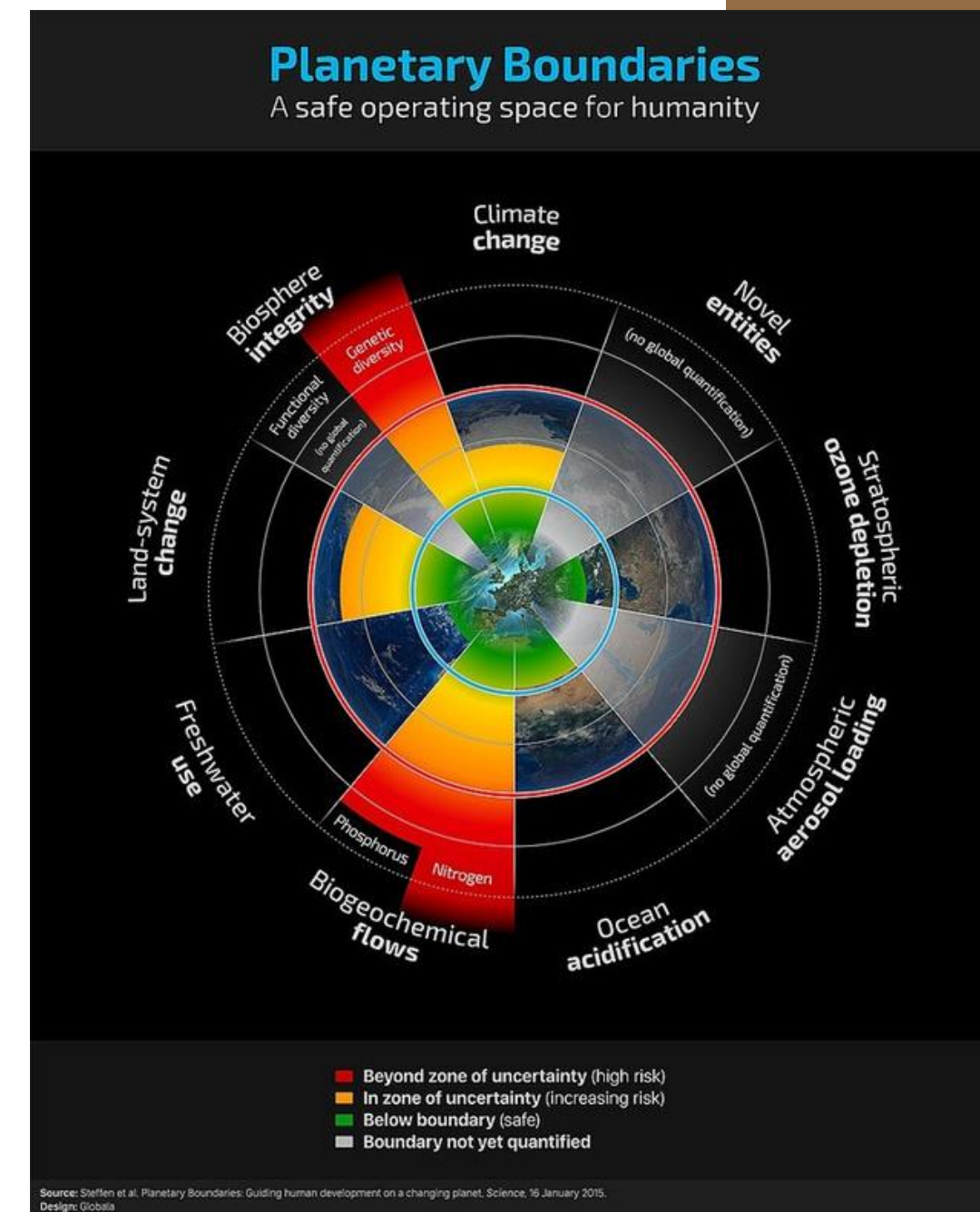
- Why do you think people invest time and energy in creating fake news?
- What could be the best way to fight back against it?

Planet Boundaries

In 2009, the Planetary Boundaries (PB) concept was introduced to define the environmental limits within which humanity can safely operate.

These Earth systems are tightly linked and overlap; i.e., species loss (shown in the image as ‘genetic diversity’) is linked to land-system change, acidification of oceans and climate change.

Looking at the red, high-risk areas you will see as well as loss of genetic diversity, the levels of Phosphorous and Nitrogen are in the high risk zone.



Food Production

Food production contributes nearly a quarter of GHG's caused by humans, this includes clear-felling forests for farming. But if you add to that, the emissions caused by industrial processes that create synthetic fertilisers for growing crops, the contribution is even higher!

Carbon, Nitrogen and Phosphorus Cycles

Nitrogen fertiliser is a good example. It's no lie that since 'the Haber-Bosch process' was developed in the 1900's to create a synthetic fertiliser, the production of plant biomass boomed and has enabled us to feed a growing population.

BUT this industrial process requires a temperature of 450°C, accounting for a whopping 1.4% of the worlds total CO₂ emissions!

We can look **for renewable energy alternatives** to power this process but actually, the very action of putting synthetic fertiliser on the soil upsets the delicate balance in our ecosystem. **How is that related to climate change?**



Henry Driver: Secrets of Soil

Watch the following video to learn about the life beneath our feet:

<https://www.youtube.com/watch?v=6eSVAsOJD9E>





Case Study:

Climate Change and Farming

Watch the following video made by a farmer who is trying to improve soils:

<https://www.youtube.com/watch?v=6eSVAsOJD9E>

Consider the following questions after watching the video:

- How can soils be used as a carbon sink to remove CO₂ from the atmosphere?
- Do you think reversing climate change is just something governments and big business can and should do?
- Can our preferences as consumers (and voters) lead the way to a more environmentally friendly future?

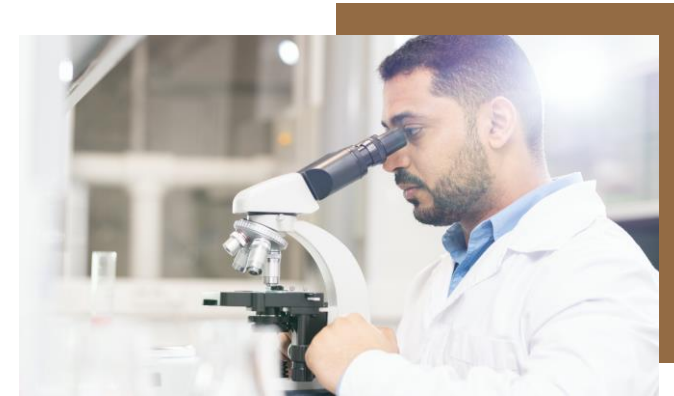
If working in groups or pairs, discuss your answers, if not note them down.

Greener food production – we have options!



Vertical Farming

No soil, less water and can bring food production into urban areas.



Gene Editing

To make crops resilient to drought & resistant to pests and diseases so no need to spray.



Alternative Protein

Insects are nutritious but equally algae and even lab-grown meat offer new dietary sources.



Precision Farming

Technology can be used to run farms more efficiently and use resources more effectively.

Finally...

We hope you've enjoyed finding out about climate change and learning how food production as a whole, not just livestock farming, is part of the problem.

It's important you feel confident to separate facts from fake news and look deeper into things to consider how some statements we hear time and time again aren't true and how 'quick fix' solutions aren't all they appear to be.

If you'd like to explore this area a little more there are **two final challenges** you might like to take on!



Challenge 1: Grow your own

If you have space to grow your own food then try the ‘no dig’ method to help rebuild soils (or you can even grow food in a pot or windowbox to reduce your foodmiles!).

→ [Watch the video: No-dig gardening](https://www.youtube.com/watch?v=VJhGlrqKs1k)

<https://www.youtube.com/watch?v=VJhGlrqKs1k>

Buying food – while there is not currently a quality stamp to show a farm is taking a ‘no-till’ approach to growing crops, you can try local farm shops and look online to see what’s happening in your local area.



Challenge 2: Waste Less

It stands to reason that if we are throwing away food that has been grown then we are not getting the most value out of the land where it grew!

Do your bit by stopping food waste! There's lots of excellent tips online that can help you tackle food waste in your own home to starting community projects that help businesses reduce their waste while helping improve food poverty and the environment.

→ Try this useful resource: Love Food Hate Waste

<https://www.lovefoodhatewaste.com/>

Science Communication Challenge

We hope you are feeling inspired to continue your journey through Conscious Consumerism.

If so have a go at one of the following two challenges:

Design communication materials

to dispel common myths and help people gain a better understanding of the topic. This could be in the form of a blog, a poster, leaflets or a podcast for example.

Develop a campaign

to collect real data and report your findings or to encourage people or companies to change behaviours. For example, you could set up a fashion show or blog to promote switching from new to second-hand clothes.

Let us know what you produce - tag us on social media via @ffdt_uk use the hashtag: #ConsciousConsumerWorkshops

Thank you

You can find this and other materials [here](https://ffdt.co.uk/learn):

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