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What is climate change? Climate is an average of weather conditions over a period of time so climate change looks at the changes either in the past or into the future of the average weather.

What are the impacts? There are many varied impacts of climate change. Into the future we're projecting that climate will get warmer, because of the increase in greenhouse gases that we're putting into the atmosphere, and this warming effect around the globe is going to have many different localised impacts. In some areas, particularly over the seas and the tropics and in the higher northern latitudes, we are expecting increases in rainfall, but in some areas particularly around, for example, the Mediterranean and some regions in Africa, we are expecting decreases in rainfall, so the impacts of these are going to be very wide and varied depending on where you live.

In the UK we're expecting warming to continue and we're expecting by the end of the century this warming trend to have increased by about 5 °C in the summer, obviously this is an average over the whole summer. We're also expecting extreme temperatures such as events like heatwaves to get more frequent and so, for example, the 2003 heatwave that affected Western Europe is expected to get more like an average summer by the 2040s and actually a low temperature for the summer by the 2060s.

What is the evidence? There's a wide range of historical observations and evidence that climate change has been happening in the recent decades, particularly. Some of that evidence comes from for example temperature records, also sea level rise records indicate that sea level rise has been increasing, and this is consistent with global warming. Probably the most compelling evidence comes from the retreat of glaciers and sea ice in for example the northern Arctic. This is very clear evidence which is linked to global warming that warming is having an impact on the whole globe.

What can we do? To help mitigate climate change we can reduce greenhouse gases in the atmosphere and reduce our contributions of greenhouse gases in the atmosphere. Such gases include carbon dioxide, methane, nitrous oxides for example, so anything that reduces these emissions will help mitigate climate change.

There's overwhelming scientific evidence that global warming and the associated climate changes are happening and will continue to happen if we continue to emit greenhouse gases into the atmosphere. The impacts of this future climate change could be very dramatic if we don't reduce greenhouse gas emissions, so in order to mitigate climate change we all have a role to play, no matter how small, in reducing greenhouse gas emissions.