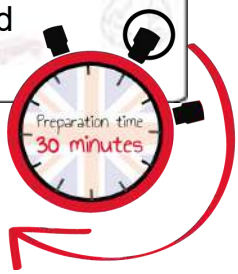
Lesson Plan Easy Access English

The Maths of Climate Change

EAE Learning objectives for this lesson

Learning complex future tenses, discussion, debate and listening comprehension



Activity one: **Questions and Answers**
Aswer the questions with your partner

1. Do you think that climate change is being caused by or own doing?
2. Based on what you have heard or read, do you think the studies made by scientits are accurate?
3. What are your feelings for the future about climate change?



Activity two: **Identify**
Underline the future tenses that you see in the article

Climate Change: Does it all add up?

https://plus.maths.org/content/climate-change-does-it-all-add

Climate change, and its effects on our weather, is important, controversial and is possibly going to affect all of our lives over the next fifty years. The understanding and analysis of climate change is an area where mathematicians, scientists, policy makers (such as members of parliament) and anyone involved in health, insurance or agriculture, meet to try to interpret the current evidence and to make predictions for the future. It is truly an area where mathematics is making a very big difference to the way that people think about the future.

But why should we bother? Predictions made by the IPCC (Intergovernmental Panel For Climate Change) that we might have a three degree rise in mean temperature over the next 50 years or so don't on the face of it seem very scary. However, we are seeing a lot of extreme weather events at the moment, such as the extensive flooding just before Christmas. These cost billions of pounds and can lead to great hardship and even loss of life for those affected. If these extreme events are just what you would expect from random weather variations, then we can just about live with them. If instead they are part of a series of events due to climate change, then we need to be worried indeed. It is the job of the mathematician to help to sort this out.
Evidence for climate change

There are at least five indicators that make us think that climate change is occurring. The first of these is the rise in the Earth's temperature. The chart below shows the measured temperature (relative to a reference temperature) over the last 150 years. You can see that the average temperature is showing a steady rise over this time, with 2015 looking like being the warmest year on record. On top of this rise is what appears to be a random variation. This variation causes a lot of discussion in the climate science debate.

Activity three: **The future tenses**

Future simple - Used for predictions, spontaneous reactions and promises

Future with 'going to' - For plans events and things you see are about to occur

Future perfect - Used for what will have been completed by a future moment in time

Future continuous -For what will be happening at a specific moment in time in the future

Present continuous for the future - Used for scheduled events in the future

Activity four: **Match the sentence to the tense.**

• I'm going to my lesson at 6pm after my job is done.	Future continuous
• He is going to go to the summit at the UN about global warming.	Present continuous
• By 3025 we will have found new ways to save the planet.	Future perfect
• The president will be giving his speech on global warming at the next UN conference.	Future simple
• She will have to be more careful with her use of oil and electricity.	Future with 'going to'

Activity nine: **Team challenge**

Create half a sentence in the future tense, the other team has to complete that sentence in the correct form. Your teacher will give you an example to get you started.

Activity five: **Underline**

Underline more future tenses in the following article.

Facing the climate challenge

https://plus.maths.org/content/facing-climate-challenge

Under the 2008 Climate Change Act the UK has set legally binding targets to reduce CO2 emissions by 80%, compared with 1990 levels, by 2050. Some have suggested that the changes that are needed to meet these targets are similar in scale to the Industrial Revolution of the 19th century. And since the built environment is responsible for over half of our energy consumption, most of the changes will need to be made here.

For this podcast we went to the Centre for Sustainable Development at the Engineering Department of the University of Cambridge to find out what engineers are doing to meet this challenge. We talked to engineer Alison Cooke, who manages a project called Energy Efficiency in the Built Environment, and two PhD students at the Centre and find out how engineers work with Government, business and other groups to help ensure a sustainable future

Activity six:
Looking at Activity two (especially the table) and Activity five, make a simple list with your partner of the changes you think will come as a result of a rise in temperatures.

Activity seven: **Role-Plays**
With your partner debate whether you think climate change is real or not.



- Use the future tenses that you have learned
- Explain why you believe what you believe
- Use creative facts and examples
- Talk about the global temperature
- Think about agriculture, population, economics, medical issues etc...
- What do you think needs to be done ?
- Be ready to give your debate in front of the class and or teacher

Activity eight: **Video 2:19**
Tick the words you hear as you listen and watch the video

http://time.com/5064577/climate-change-arctic/
'Climate Change Is Already Wreaking Havoc on Our Weather, Scientists Find'

- 2017
- battered
- golf coasts
- crumbling
- struggle with drought
- heat
- frequency
- weather
- blame
- clearest link
- average
- 129°F
- Hurricaine Harvy
- wild fires
- Crippled



Are we close to addressing climate change?

Extra: Other sources

Where do you go to get information?

For more information about global warming visit :
https://climate.nasa.gov/
Click on 'Global Temperature'

