



Lesson Plan: Sustainable Development Goal 13 – Climate Action

Objectives:

- To explore the topic of climate change and climate action
- To introduce the United Nations Sustainable Development Goal (SDG) 13 of Climate Action
- To understand the impacts of climate change on Zanzibar
- To understand the positive impact that individuals can have on climate change

Starter Activity (15 minutes): Climate change and climate action today

Climate change is the variation in average weather conditions, and is caused by several factors including human activity. This activity heats the Earth's atmosphere, which causes an overall warming of the average global temperature and an increase in extreme weather patterns.

Climate change has featured prominently in mainstream media recently, in part due to the stark warnings issued by scientists about our planet's future. In response, thousands of young people have taken to the streets in mass protests to call for radical climate action by their governments.

The United Nations has committed to advancing 17 Sustainable Development Goals, with the objective of creating a more sustainable future. Sustainable Development Goal 13 is Climate Action, which aims to "take urgent action to combat climate change and its impacts" by 2030.

More information on Sustainable Development Goal 13 can be found below:

- <https://sustainabledevelopment.un.org/sdg13>
- https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/13_Why_it_Matters_Climate_Action_letter_size_1p.pdf



Task: Introduce the topic of climate change and Sustainable Development Goal 13 using the information above. Use the newspaper articles provided (Appendix I-IV) and the questions below to start a class discussion about climate change:

- Is climate change something that your students regularly think or worry about? Do they share the opinions of the young people featured in the articles?
- Ask your students to pick out the most emotive or provocative words and phrases from the newspaper articles. How do these words make them feel about climate change?
- Are they concerned about the 12 year predictions of some experts, or do they think that scientists and the media are simply overreacting?
- Did any of your students participate in the recent climate action protests? If so, what were their reasons for taking part? If not, what do they think about those who did participate?
- Do they think that Sustainable Development Goal 13 is achievable by the year 2030?

2. Main Activity (30 minutes): Climate change in Zanzibar

African Adventures is partnered with 29 partner schools in Ghana, Kenya and Zanzibar. We provide these projects with the financial and humanitarian support they need to grow.

Zanzibar, where some of our partner projects are based, is an archipelago of islands located off the east coast of Tanzania. Seaweed farming is a major part of the economy in Zanzibar; in 2015, the global seaweed trade was worth \$1 billion, and Zanzibar was one of the world's top producers. Seaweed is exported from Zanzibar to be used in products such as toothpaste and shampoo. As it is farmed in shallow water, and men traditionally use deep water for fishing, over 80% of seaweed farmers in Zanzibar are women. This has given women economic independence and higher social status in a traditionally male-dominated society.

Today, however, that status is being threatened by climate change, which is causing sea temperatures in Zanzibar to rise. These warmer temperatures have killed the majority of the seaweed crops, leaving vast numbers of rural women with no income. In addition, Zanzibar's agriculture, tourism industry, and infrastructure faces threats from flooding, coastal erosion, and extreme weather conditions, as a result of climate change.



Task: Share this information with your students, then show them CBS News' short report on seaweed farming in Zanzibar: <https://www.youtube.com/watch?v=i4qFvruFFkc>

You could also show your students the following news articles on the topic:

- <https://www.bbc.co.uk/news/stories-44688104>
- <https://pulitzercenter.org/reporting/climate-change-eroding-womens-status-zanzibar>

a) In addition to the decline of seaweed crops, ask your students to list any other impacts that climate change could have on Zanzibar. When they have discussed their ideas, show them the handout (appendix V) which details some of the impacts of climate change on Zanzibar. Are there any that surprise them? (10 minutes)

b) Ask your students to imagine that they live in Zanzibar and that their homes and livelihoods are being directly threatened by climate change. Ask them to produce a short piece of creative writing describing the impacts of climate change on their everyday lives. This could be in the form of a diary entry, a letter to a friend, or a poem. What will happen if climate change continues at the same pace? Encourage them to consider the impacts on the economy, their homes, food supplies, and their health. (20 minutes)

Plenary Activity (15 minutes): How can you help?

Ask your students to think of all the ways that they can help to advance Sustainable Development Goal 13. Ask them to write their ideas on post-it notes and stick them around the classroom. Appendix VI has some initial ideas to get them started.

Appendix I – The Guardian, 15 February 2019

School pupils call for radical climate action in UK-wide strike

Thousands of young people walk out of lessons in protest at political inaction over crisis

● Did you take part? Share your stories



▲ Thousands of UK students strike over climate change – video

Thousands of schoolchildren and young people have walked out of classes to join a UK-wide climate strike amid growing anger at the failure of politicians to tackle the escalating ecological crisis.

Organisers said more than 10,000 young people joined the strike, defying threats of detention to voice their frustration at the older generation's inaction on the environmental impact of climate change.

Anna Taylor, 17, one of the most prominent voices to emerge from the new movement, said the turnout had been overwhelming. "It goes some way to proving that young people aren't apathetic, we're passionate, articulate and we're ready to continue demonstrating the need for urgent and radical climate action."

The protests won the backing of a former UN climate chief, who said it was "time to heed the deeply moving voice of youth". Christiana Figueres said the fact that children were so worried about their future they were prepared to strike should make adults sit up and take notice. "It is a sign that we are failing in our responsibility to protect them from the worsening impacts of climate change," she said.

The young people taking part in Friday's strike called on the government to declare a climate emergency and change the curriculum to make the state of the environment an educational priority. They also want recognition that since young people have the biggest stake in the future they should be involved in policymaking, and are demanding that the voting age be lowered to 16.

Earlier this week, more than 200 academics backed the strike, saying the "tragic and desperate facts" of the unfolding climate emergency and the lack of meaningful action by the government left young people with little option but to take matters into their own hands.

Appendix II – BBC News, 15 March 2019

Schools' climate strike: Young people protest across England

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Schools' climate change protests



Young people who have skipped school to join climate change protests across England have told the BBC there is no point in learning when their future is at risk.

Thousands of schoolchildren have flooded into city and town centres across the country as classrooms around the world were abandoned for a day of demonstration.

In Bradford, schoolchildren led about 100 people with loud chanting outside City Hall. Danny, 14, said: "What's the point in learning if your future is going to be ruined by climate change?"

His sentiments were shared by Hannah, 18, who joined a crowd in Shrewsbury, Shropshire. She said: "I believe there's no point of us getting an education and planning for the future if there is going to be no future."

Thousands of young people marched through Brighton chanting loudly and holding a variety of banners. One of the city's Labour MPs, Lloyd Russell-Moyle, joined the march saying "students will learn more today than they will in the classroom."

Lana, 13, said: "They're messing up our future and we're the ones who are going to have to clean it up, so I think it's important that we come and tell them about it. The school haven't let us go, they say there's consequences but it's more important than school attendance to come here and protest." Her friend Bea said: "I really don't care what consequences they give us, it's more important that we fight for our future. This is the world we're going to have to live in."

Appendix III – BBC News, 8 October 2018

Final call to save the world from 'climate catastrophe'

By Matt McGrath
Environment correspondent, Incheon, South Korea

8 October 2018

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It's the final call, say scientists, in the most extensive warning yet on the risks of rising global temperatures.

Their dramatic report on keeping that rise under 1.5 degrees C says the world is now completely off track, heading instead towards 3C. Keeping to the preferred target of 1.5C above pre-industrial levels will mean "rapid, far-reaching and unprecedented changes in all aspects of society".

"Scientists might want to write in capital letters, 'ACT NOW, IDIOTS,' but they need to say that with facts and numbers," said Kaisa Kosonen, of Greenpeace. "And they have."

The researchers have used these facts and numbers to paint a picture of the world with a dangerous fever, caused by humans. We used to think if we could keep warming below two degrees this century, then the changes we would experience would be manageable. Not any more. This new study says that going past 1.5C is dicing with the planet's liveability. And the 1.5C temperature "guard rail" could be exceeded in just 12 years, in 2030.

We can stay below it - but it will require urgent, large-scale changes from governments and individuals and we will have to invest a massive pile of cash every year, about 2.5% of global gross domestic product (GDP), the value of all goods and services produced, for two decades. Even then, we will still need machines, trees and plants to capture carbon from the air that we can then store deep underground - forever.

Campaigners and environmentalists, who have welcomed the report, say there is simply no time left for debate. "This is the moment where we need to decide" said Kaisa Kosonen. "We want to move to clean energy, sustainable lifestyles. We want to protect our forests and species. This is the moment that we will remember; this is the year when the turning point happened."

Appendix IV – The Guardian, 8 October 2018

We have 12 years to limit climate change catastrophe, warns UN

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

● Overwhelmed by climate change? Here's what you can do



▲ A firefighter battles a fire in California. The world is currently 1C warmer than preindustrial levels. Photograph: Ringo HW Chiu/AP

The world's leading climate scientists have warned there are only a dozen years for global warming to be kept to a maximum of 1.5C, beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people.

The authors of the landmark report by the Intergovernmental Panel on Climate Change (IPCC) say urgent changes are needed to reach the target, which they say is affordable and feasible.

The half-degree difference could also prevent corals from being completely eradicated and ease pressure on the Arctic.

"It's a line in the sand, and what it says to our species is that this is the moment and we must act now," said Debra Roberts, a co-chair of the working group on impacts. "This is the largest clarion bell from the science community and I hope it mobilises people and dents the mood of complacency."

The world is currently 1C warmer than preindustrial levels. Following devastating hurricanes in the US, record droughts in Cape Town and forest fires in the Arctic, the IPCC makes clear that climate change is already happening, upgraded its risk warning from previous reports, and warned that every fraction of additional warming would worsen the impact.

James Hansen, the former NASA scientist who helped raised the alarm about climate change, said a rise of both 1.5C and 2C would take humanity into uncharted and dangerous territory because they were both well above the range in which human civilisation developed. But he said there was a huge difference between the two: "A rise of 1.5C gives young people and the next generation a fighting chance."

Appendix V – The impacts of climate change on Zanzibar

Rising sea levels leads to an increased risk of flooding. In 2005, a flood seriously damaged 1,000 homes and displaced 10,000 people.	Climate change causes erratic rainfall patterns. In 2011, heavy rainfall caused major damage to the roads in Zanzibar.	Loss of marine ecosystems caused by rising sea temperatures has negatively impacted on diving-related tourism.	Strong winds caused significant damage to buildings in 2009. In 2011, multiple people were injured, and one person died, due to strong winds.
Rising sea temperatures have caused widespread coral bleaching, which has impacted on the tourism and fishing industries.	Rising sea levels have caused salt water to enter the island's water supply, affecting homes, businesses, and hotels.	Rising sea levels has led to an increased risk of flooding, which can cause loss of low lying areas used for agriculture and housing.	Rising sea temperatures have caused seagrass meadows to decline. This has led to the loss of habitats for marine wildlife.
Sea level and temperature increases have led to the loss of mangroves, which are important breeding grounds for fish. Mangroves are also a source of wood, and help to prevent salt water intrusion.	Rice and banana crops are affected by changes in temperature and rainfall, which has a knock-on effect on food prices, food security, and livelihoods.	Zanzibar is known as the 'Spice Island' due to the spices that are grown and sold there. High-value exports such as cloves are very vulnerable to strengthening winds which can damage crops.	Climate change causes erratic rainfall patterns. Low levels of rainfall in 2006 led to crop failures, which in turn led to a hunger crisis affecting over 20% of the population.
Coastal erosion and rising sea levels threaten tourist hotels and tourist areas such as Stone Town	Flooding has caused periodic outbreaks of water-borne diseases among the population.	Zanzibar relies on a mainland connection with Tanzania for its energy supply, which itself relies heavily on hydropower. This supply has been affected by droughts in the region.	Between 2001 and 2015, 94% of seaweed crops died as a result of rising sea temperatures.

Information taken from:

http://www.economics-of-cc-inzanzibar.org/images/Final_Summary_vs_3.pdf

Appendix VI – How can you help?

Eating less meat e.g. 'Meat free Mondays'	Running a 'No Idling' campaign, to encourage cars to switch off when waiting outside the school gates	Reducing their use of single- use plastics by investing in reusable water bottles and food containers
Writing to their local MP to lobby for change	Holding an art exhibition at school, with art pieces made from recycled materials	Offsetting their carbon emissions (see https://climatecare.org/offset)
Recycling their household waste as much as possible	Buying second-hand clothes rather than 'fast fashion'	Walking, cycling or taking public transport to school
Taking reusable bags to the supermarket	Avoiding the use of plastic straws	Using sustainable products such as recycled toilet paper or bamboo toothbrushes