What will happen when all the icebergs finally melt?

Age Range: 11 - 12 years

Overview
Using their own research about sea level changes in the world and their local area, pupils will write a newspaper article to share their findings.

Focus: Asking questions, Research enquiry, Newspaper reporting

Learning objectives:
Science - To recognise that environments can change and this can sometimes pose dangers to living things. To recognise how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.

Science Skills - To ask scientific questions and develop lines of enquiry based on observations of the real world, alongside prior knowledge and experience.

English - To predict what might happen from details stated and implied. To identify audience and purpose, selecting appropriate form and use other similar writing as a model. To note and develop initial ideas, drawing on reading and research where necessary.

Resources
Included in this resource pack:
- ‘Thought Developer’ template
- Newspaper article planning sheet
- Newspaper template
- Extension task: excerpt from ‘The Future We Choose’

Step by step guide
1. Display the key question - What will happen to planet earth when all the glaciers finally melt? On a whiteboard or screen and ask pupils to think and talk about their own responses to this question. Use the ‘Thought Developer’ included in this resource and elicit pupil’s own ideas and encourage them to jot them down in the centre circle. Encourage pupils to develop scientific questions they could ask to develop their understanding of the phenomenon.

2. Play the video clip. Pause the video whenever you think it helpful to engage the pupils in picking out key ideas and responses that the experts are sharing. Continue to use the ‘Thought Developer’ resource to make notes about what they're learning from the scientists. Re-watching the video in stages will further support pupils in this activity.

Key points may include:
- Sea levels will rise leading to greater risk of flooding near the coast
- Some small islands are in danger of being completely underwater
- Parts of the east coast of Britain are at or below sea level and will be vulnerable
- Changes in humidity and extreme weather conditions

Again, encourage pupils to develop further scientific questions they would like to ask in response to what they have learnt from the scientists in the video.

Continued...

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Step by step guide continued

3. Use the interactive online maps (see links in resource list) to explain the possible impact of sea level rises, focusing on the country and area in which the pupils live. Identify the continents and encourage the pupils to explain what these maps show would happen to land mass if the ice sheets melted.

Key questions:
- Which areas are currently underwater?
- Which could be at risk?
- Which major cities will disappear if water levels rise further?

Extension: Introduce the children to the book The Future We Choose by Christiana Figueres and Tom Rivett-Carnac, who are working together to promote environmental change and persuade people to change their habits. Read the extract provided in this resource which is a description of what might be happening in 2050 in two different scenarios. Pupils could be provided with a copy of the extract from The Future We Choose to help with the body of the report. They can choose which scenario to write about in their article.

4. Introduce the writing task. Explain that the pupils will use the information to write a newspaper report about the potential risks and impact of the melting ice. Reinforce the features of newspaper reports. Use the ‘Newspaper report writing guide’ included in this resource, or one that best challenges your pupils. Encourage them to share their report by reading or displaying to others.

5. Evaluate the pupil’s learning and ideas taken from the experience. Return to Jack’s question – What will happen to planet earth when all the glaciers finally melt? Ask the pupils to use the phrase – “Before I thought….and now I think...” to explain developments in their thinking about this topic. Reinforce that it is not too late to make a difference and world leaders and organisations across the world are making political and policy decisions to combat the crisis. They too should be encouraged to think about positive actions they can take as individuals to contribute to combating climate change, e.g. eating less meat or other ideas offered by the scientists.

Ask the children what further questions they have to find out more about how organisms might be affected by their changing environment as a result of climate change and encourage them to use the GSSfS question spinner to form their questions.
# Newpaper article planning

Organise your ideas using the 5Ws

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Now decide which information you will use in your article?

Capture your readers attention with a catchy headline!
Collect some ideas from real newspapers here

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If we do nothing...
The white ice which used to reflect the sun's heat is now gone, so the dark sea water absorbs more heat, expanding the mass of water and pushing sea levels even higher.

More moisture in the air and higher sea surface temperatures have caused a surge in extreme hurricanes and tropical storms. Every day, because of rising water levels, some part of the world must evacuate to higher ground.

Every day, the news shows images of mothers with babies strapped to their backs, wading through floodwaters, and homes ripped apart by vicious currently that resemble mountain rivers.

News stories tell of people living in houses with water up to their ankles because they have nowhere else to go, their children coughing and wheezing because of the mould growing in their beds, insurance companies declaring bankruptcy leaving survivors without resources to rebuild their lives.

Contaminated water supplies, sea salt intrusions, and agricultural run-off are the order of the day.

If we do something...
It's 2050. We have been successful at halving emissions every decade since 2020.

In most places in the world, the air is moist and fresh, even in cities. It feels a lot like walking through a forest. The air is cleaner than it has been since before the Industrial Revolution.

We have trees to thank for that. They are everywhere! Corporate donations and public money have funded the biggest tree planting campaign in history. The trees took carbon dioxide out of the air, released oxygen, and put the carbon back where it belongs, in the soil.

Cities have never been better places to live. With many more trees and far fewer cars, it has been possible to reclaim whole streets for urban agriculture and children's play. Every rooftop has been converted to either a vegetable or a floral garden.