

Student Investigation Sheet

Meltdown: Glaciers and Climate Patterns

In this investigation, you will examine and compare two photographs of Neumayer Glacier, which is located on a South Georgia island off the tip of South America. The first photograph was taken in 2005 and the second one in 2016. Then, you will answer questions about the impact of climate and geography on the size of the glacier. Finally, you will propose a hypothesis explaining the changes that occurred between 2005 and 2016.

Objective(s):

In this investigation, you will explore climate patterns and the effects they have on phenomena such as glacial retreat.

Materials:

Per group:

- Images of Neumayer Glacier
- World atlas, for determining latitude and longitude of Neumayer Glacier



Caption: Neumayer Glacier, 2005

Image Source: NASA Earth Observatory



Caption: Neumayer Glacier, 2016

Image source: NASA Earth Observatory

Analysis and Conclusions

1. Describe the differences between the two photographs.

2. How would you best explain the differences between the 2005 photograph and the 2016 photograph of Neumayer Glacier?

3. What role does geography (including latitude, elevation, and proximity to the ocean) play in the changes observed in Neumayer Glacier?

4. What climate patterns do you believe could have led to the changes observed in Neumayer Glacier?

5. Much of the discussion around global climate change and glacial retreat focuses on the polar ice caps. Why is it important to consider the impacts of climate patterns on other parts of the world?