

Lesson Three: Perplexing Poles

Key Questions:

- What does 'Antarctica' mean?
- What seasons are there on this continent?
- What is life like at the Poles?
- What time of year would you plan your expedition?

Subject Content Areas:

- Physical geography: hot and cold climate zones and the influence of the earth's orbit on climate zones
- Geographical skills: Using different secondary data sources for geographical investigation
- Place knowledge: Antarctica and its specific physical geography

Downloads:

- Antarctica Expedition Proposal PDF | MSWORD
- Antarctica Expedition Proposal Answer Sheet PDF | MSWORD
- Factsheet PDF | MSWORD

During this lesson pupils become immersed in 'physical geography'. 'Perplexing Poles' enables pupils to use a variety of sources, locating the north and south poles, and explaining the term 'ant-arctic.' Pupils then consider the view of the world from each of the poles. Use of simple climate maps establishes hot and cold areas across the globe. Pupils consider time zones at the Pole in addition to mountain ranges, volcanoes and the ever changing ice mass throughout the seasons. A challenge and assessment activity asks pupils to decide what time of year they would plan their expedition and how they would prepare for the weather conditions.

Starter

This lesson is designed to develop an understanding of what life is like at the poles; with a focus on 'physical geography' in Antarctica and the South Pole.

1. What does Antarctica mean?

Warm up activity where students are organised into small groups and discuss the question: What does 'Antarctica' mean? (See Fact Sheet).

2. What are the seasons in Antarctica?

Interactive activity involving computers and the changing nature of Antarctica's seasons: Go to Dive and Discover website:

<http://www.divediscover.whoi.edu/ecosystem/infomod.html>

Students should engage in role play and act out the position and significance of the earth and sun (using two children and/or a globe and torch). This should then be used to help them understand the basic differences of temperature in the earth's poles.

Main

Pupils will apply their previous learning of what Antarctica is like, relating to challenges of exploration and what Frank Hurley documented in his images from the Endurance

expedition. Whilst completing a 'fact file' project, pupils will research and gather information on what the physical geography of Antarctica is like; and also what life is like on this frozen continent using different web resources below.

Pupils should create a fact file, this could be using ICT (e.g. PowerPoint) to present findings or create a folder of information (see research case study photos 'research' for examples). Teachers should share with pupils various websites for 'fact file' information and first-hand accounts of 'The Frozen Continent':

Suggested areas of focus and research:

- Time zones at the South Pole (including length of the 'day' with sun)
- Mountain ranges and volcanoes
- Changing ice mass and glaciers throughout the seasons

Videos:

KS2 simple facts: Go to Antarctica: Simple Facts and Figures Youtube website:

<http://www.youtube.com/watch?v=mOOVu22iPVE>

Go to Tourism in Antarctica Youtube website:

<http://www.youtube.com/watch?v=P6M5hw2eTWY>

Recent Expeditions and blogs provide first-hand accounts of trips to Antarctica which pupils should also explore. These are detailed below:

Modern Day Antarctic Explorers:

Current and future expeditions are also relevant. Go to The Coldest Journey (2013) website: <http://www.thecoldestjourney.org/>

Future Expedition Links:

Go to Fire to Ice website: <http://fromfiretoice.org/>

Plenary

Pupils should be asked to sharing information from fact files and give feedback on the content. Using what they have learnt and to finish this lesson, pupils should be asked to fill out a brief 'Expedition Application' explaining what time of year they would plan their expedition to Antarctica and why (see lesson three resources Antarctica Expedition Proposal (with Answer Sheet) and Fact Sheet for information).