

Lesson Two: Fascinating Imagery

Factsheet for teachers

Key Questions

- Who found Antarctica?
- Which explorer got to the South Pole first?
- Why is Sir Ernest Shackleton an important 'Antarctic' historical figure?
- What would the crew have seen along their route?

Vocabulary

Glacier	a slowly moving mass or river of ice formed by the accumulation and compaction of snow on mountains or near the poles.
Ice Shelf	A thick, permanent, floating sheet of ice that is derived from terrestrial <i>tributary</i> glaciers. The back pressure from an ice shelf stabilises its tributary glaciers, which may be prone to acceleration, recession and retreat if the ice shelf melts away.
Tributary Glacier	A glacier that originates on land but flows out into the sea, where it begins to float. If the floating portion of the glacier combines with that of several other glaciers it forms a floating ice shelf.

First sighting

The first land south of the parallel 60° south latitude was discovered by the Englishman William Smith, who sighted Livingston Island on 19 February 1819. A few months later Smith returned to explore the other islands of the South Shetlands archipelago, landed on King George Island, and claimed the new territories for Britain.

The first confirmed sighting of mainland Antarctica cannot be accurately attributed to one single person. It can, however, be narrowed down to three individuals. According to various sources, three men all sighted the ice shelf or the continent within days or months of each other during 1820: Fabian Gottlieb von Bellingshausen, a captain in the Russian Imperial Navy; Edward Bransfield, a captain in the Royal Navy; and Nathaniel Palmer, an American sealer out of Stonington, Connecticut.

Exploration

Only slightly more than a year later, the first landing on the Antarctic mainland was arguably by the American Captain John Davis, a sealer, who claimed to have set foot there on 7 February 1821, though this is not accepted by all historians. In December 1821, Nathaniel Palmer, an American sealer looking for seal breeding grounds, sighted what is now known as the Antarctic Peninsula, located in the continent's northwestern quadrant. In 1823, James Weddell, a British sealer, sailed into what is now known as the Weddell Sea. Charles Wilkes, as commander of a United States Navy expedition in 1840, discovered what is now known as Wilkes Land, on the southeast quadrant of the continent.

Reaching the South Pole

After the North Magnetic Pole was located in 1831, explorers and scientists began looking for the South Magnetic Pole. One of the explorers, James Clark Ross, a British naval officer, identified its approximate location, but was unable to reach it on his trip in 1841.

Many attempts to reach the South Pole continued however due to its impenetrable location these all failed and interest in this quest began to diminish.

The Heroic Age of Antarctic Exploration began at the end of the 19th century and closed with Ernest Shackleton's Imperial Trans-Antarctic Expedition in 1917. During this period the Antarctic continent became the focus of an international effort that resulted in intensive scientific and geographical exploration and in which 17 major Antarctic expeditions were launched from ten countries. The prize of the Heroic age was to reach the South Pole. Two expeditions set off in 1910 to attain this goal; a party led by Norwegian polar explorer Roald Amundsen from the ship *Fram* and Robert Falcon Scott's British group from the *Terra Nova*.

Amundsen succeeded in reaching the Pole on 14 December 1911 using a route from the Bay of Whales to the polar plateau via the Axel Heiberg Glacier.

Scott and his four companions reached the South Pole via the Beardmore route on 17 January 1912, 33 days after Amundsen. All five died on the return journey from the Pole, through a combination of starvation and cold. The Amundsen-Scott South Pole Station was later named after these two men.

Shackleton's Endurance Expedition

The Imperial Trans-Antarctic Expedition of 1914 was led by Ernest Shackleton and set out to set the record of crossing the continent via the South Pole. However, their ship, the *Endurance*, was trapped and crushed by pack ice before they even landed. The expedition members survived after an epic journey on sledges over pack ice to Elephant Island. Then Shackleton and five others crossed the Southern Ocean, in an open boat called *James Caird*, and then trekked over the uncharted mountains of South Georgia to raise the alarm at the whaling station Grytviken. Shackleton returned to the United Kingdom with all 27 of his men alive after an epic tale of survival.

Antarctica is the only permanent landing area for the **Emperor Penguins**. They spend their whole lives on Antarctica and its waters. Emperors are the only animal to spend the winter on the Antarctic ice. There are many species of **whale** found in Antarctic waters including Minke, Humpback, Blue, Sperm and Orca (killer whale). All Antarctic whales feed in the Southern Ocean in Antarctica's summer months and then migrate long distances north to breed and give birth to their young during the winter.

Deception Island is an **active volcano**. It creates a unique landscape of volcanic slopes, steaming beaches and ash-layered glaciers. Because the island is the flooded caldera of an active volcano of the horse shoe shape of the island, it is possible to sail through Neptune's Bellows right into the centre of the caldera, one of the few places it can be done! This is one of the top visitor attractions with visitors able to land at an abandoned whaling station or at Baily Head on the south east side of the island, an astonishing place with an estimated 100,000 chinstrap penguins.

Massive **sheer cliffs** with jagged peaks drop straight into the sea. The Lemaire channel has the Antarctic Peninsula on one side and Booth Island on the other. The channel is sometimes blocked by large **icebergs** which prevent boats getting through. This is a top tourist destination in Antarctica and because of its beauty it has been nicknamed "Kodak Gap." There are many icebergs that calve (break off) off the **glacier** at the Harbour's head which produce beautiful shades of blue. You can see wildlife floating on the ice floes, such as **penguins, seals and birds**.