

5 Exploring the Arctic

Read the following:

It is the year 1845 and you are a captain in the Royal Navy. The admiral puts you in charge of an expedition to the North Pole from the starting point listed on your card. You will be responsible for a large crew and the journey could take years. Your ships are able to sail about 80 kilometres per day and can only travel in the summer months when the ice is clear. You are responsible for planning your voyage and showing it on the Giant Floor Map. In addition to the route, you will have to consider three major challenges in the Arctic: climate, geography and your crew's health. Remember, the lives of your crewmembers are in your hands and your reputation is at stake. You will need to make wise choices. Good luck.

Hand out the choose your own adventure cards and dry-erase pens to each group and allow students approximately ten to 15 minutes to map their routes, discuss their choices and justify their decisions. Once students have finished, have each group present their route to the class.

Best answers for the climate card

Selecting proper clothing for your crew is essential for survival in the North. Having learned from previous expeditions and interactions with Inuit communities, you know that cotton is a poor choice because it is a bad insulator and is very difficult to dry. Lambswool, animal pelts and sealskin are all good insulators, although sealskin and pelts are heavy to wear. Fabrics such as Gore-tex did not exist at that time.

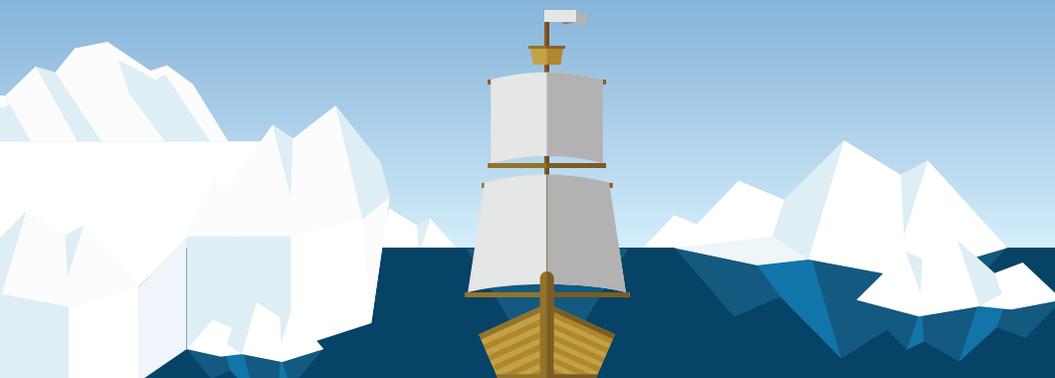
The best option would be a combination of lambswool and animal pelts as an inner layer and sealskin as an outer layer.

Best answers for the geography card

The geography of the Arctic is very difficult to navigate for novice explorers. Travelling on foot is not an efficient option; it takes too much energy and it is too difficult to carry enough food for the journey. Skiing is more efficient than walking, but it is also difficult to carry heavy loads. Dog sleds are a good option, however the dogs need to be fed and the Royal Navy (in 1845) considers dog sleds to be an uncivilized way to travel. Ships are effective as they can carry large loads and travel relatively quickly when weather permits. However when the sea freezes, they become stuck in the ice (ice-breaker ships had not yet been invented).

The best option would be to travel as far north as possible by ship until the water freezes over. Then proceed by ski, dogsled or by foot. Have students used the map to explain how they would complete their journey.





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Best answers for the health card

Live animals, fruits and vegetables will not keep for very long, and are therefore not a sensible choice. Hunting seals, as demonstrated by the Inuit, is a good idea and the meat very nutritious. Dried foods, such as flour, biscuits and nuts, will help crewmembers get enough calories but lack vitamins, especially vitamin C. If your crew doesn't eat enough vitamin C, they can get scurvy. Tinned food seems like a good option, but unfortunately canning techniques in 1845 remove vitamins from the food and can cause lead poisoning.

The best option would be a mix of dried food and foraging for plants and animals when possible. Students may note here that it would have been impossible for early explorers to meet their dietary needs for long expeditions. Have your students look at the map and identify places along their route where they may be able to forage for plants and animals.

Review

Finally, ask students to consider the choices they made and score their own group's answer out of ten. A representative from each group should explain to the class their final choices, score and any changes they would make to their route.

Arctic explorers

Using the early explorer cards, read the facts about an explorer's life to the class. Using as many cards as you wish, have pairs of students locate various points on the map that were relevant to the lives of early explorers and their expeditions. Have students explain the importance of their points on the map to the rest of the class.

Present explorers

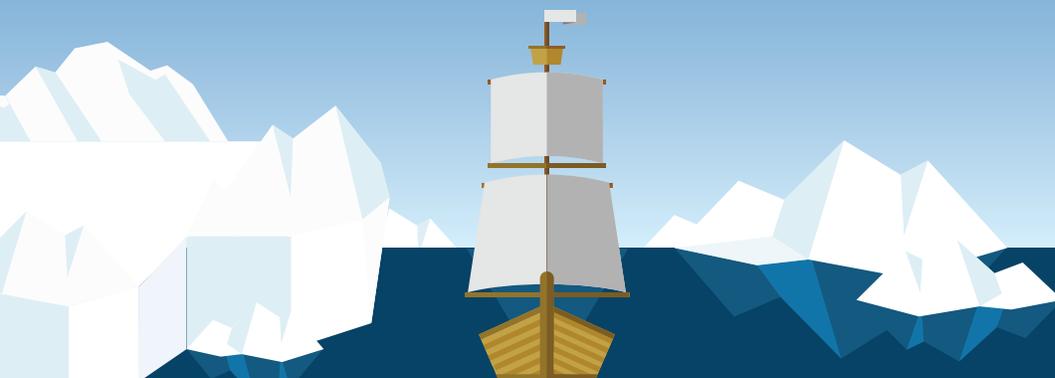
Ask students if they can recall the three motivating factors of Arctic exploration (discovery, economics and science). Explain that the motivations of modern explorers remain much the same as those of the past, except the order of importance has changed:

Science – the Arctic environment continues to provide a unique resource for scientific research.

Discovery – although the Arctic has been comprehensively mapped, territorial disputes continue to occur, particularly as oil has been discovered on the seabed of many Arctic regions.

Economics – routes for transporting goods around the world remain important for global trade.





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Ask students how today's explorers might overcome these challenges with modern technology. Ask them to share their ideas using the Giant Floor Map.

Explain that the challenges for modern explorers also remain much the same. Technology has helped humankind overcome some of the past challenges; heating and insulation technology has improved; dietary knowledge and understanding, as well as food preservation techniques have improved; cartography of the Arctic is much more precise due to aerial and satellite surveillance. However, sustaining life within the Arctic Circle remains fraught with danger.

Future exploration

Arctic exploration will continue, although the changing environment reveals new avenues of exploration. Global warming is causing the ice in the Arctic to recede, which may lead to an increase in sea traffic through the Arctic. For example, throughout the summer of 2016, a luxury tourist cruise liner traversed the Northwest Passage. Although it has historically been too expensive to send cargo ships through the Northwest Passage, if the ice continues to recede, tankers and other ships could ply the Arctic waters with increasing frequency.

Plenary

Play a classroom version of the BBC Radio 4 show "Just a Minute" on the topic of Arctic explorers. Choose a student to start as the speaker. Have them speak on the topic for a length of time (start with 30 seconds). Once the speaker is finished, other students may challenge him/her (by putting up their hand) for any of the following reasons:

- Hesitation - the easiest challenge, awarded if the speaker "ums" and "ahs." You can decide as a group how lenient to be at first.
- Repetition - the speaker is not allowed to repeat any words or phrases which are not contained in the topic title itself, although pronouns, prepositions, etc., can be repeated.