The antarctica.

Tonight, I'm going to talk to you about that remarkable continent Antarctica - remote, _____ and at present uninhabited on a permanent basis. For early _____, it was the ultimate survival contest; for _____ like me, it remains a place of great intellectual challenge; while for the modern tourist, it's simply a wilderness of great _____.

First, some facts and figures. Antarctica is a place of extremes - the _____, coldest and _____ continent and over fifty-eight times the size of the UK. The ice-cap contains almost _____ % of the world's fresh water and 90% of its ice, but with very low snowfall, most of the continent technically falls unbelievably into the category of _____! Huge icebergs break off the _____ each year, while in winter half the surrounding _____ freezes over, which means its size almost doubles.

Research and exploration has been going on in Antarctica for more than two hundred years, and has involved _____ from many different countries, who work together on research stations. Here science and technical support have been _____ in a very cost-effective way - our Antarctic research program has several summers-only stations and two all-year-round ones; I was based on one of the all-year-round ones.
The research stations are really self-contained _____ of about twenty people. There's living and _____ space, a kitchen with a huge food store, a small _____ and a well-equipped gym to ensure everyone keeps fit in their spare time. The station generates its own _____ and communicates with the outside world using a _____ link.

Our station - Zero One - had some special features. It wasn't built on land but on an ice-shelf, hundreds of metres thick. Supplies were brought to us on large sledges from a ship fifteen kilometres away at the ice _____.

Living in the Antarctic hasn't always been so _____. Snow build-ups caused enormous problems for four previous stations on the same site, which were buried and finally crushed by the weight. Fortunately no-one was hurt, but these buildings became a huge _____ to architects who finally came up with a remarkable solution - the buildings are placed on _____ which can be raised above the changing snow level on legs which are extendable.

Food is one of the most important aspects of _____ in a polar climate. People living there need to obtain a lot more energy from their food, both to keep warm and to undertake heavy physical work. Maybe you know that an adult in the UK will probably need about 1,700 kilocalories a day on average; someone in Antarctica will need about 3.500 - just over double! This energy is provided by foods which are high in carbohydrate and _____.

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Rations for fieldwork present an additional problem. They need to provide maximum energy, but they must also be compact and _____ for easy transport. Special boxes are prepared, each containing enough food for one person for twenty days. You may be familiar with _____ processed by freeze-drying, which preserves the quality of the food product while making a large saving in weight - well, this type of presentation is ideal in our situation. It wasn't available to earlier _____ explorers, whose diet was commonly insufficient for their health.

I think that being at the cutting edge of science has a special appeal for everyone _____ in Antarctica, in whatever capacity. As a _____ biologist, my own research was fascinating; but it's perhaps _____ change research that is the most crucial field of study.

Within this general field, surveying changes in the volume and stability of the ice-cap is vital, since these may have profound _____ on world sea levels and on ocean currents. A second important area is monitoring the size of the hole in the ozone layer above Antarctica, since this is an indicator of global ultra-violet _____ levels. Thirdly, bubbles in the ice-sheet itself provide an index of _____ because frozen inside them are samples of previous atmospheres over the past 500,000 years, and these provide us with evidence for the effects of such human activities as agriculture and _____.

There are an increasing number of opportunities for _____ people to work for a period in Antarctica - not only as research assistants in projects like mine, but also in a wide range of junior administrative and _____ positions including vacancies for map-makers. I hope that the insights I've provided will encourage you to take up these opportunities in this fascinating _____

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