

Revision Checklist – Going to Extremes

| | Revised for homework? (1) | Revised for homework? (2) | Revised in lesson? |
|--|---------------------------|---------------------------|--------------------|
| Define extreme. | | | |
| Define distribution. | | | |
| Describe distribution using TEA. | | | |
| Describe the distribution of hot and cold places. | | | |
| Explain why Antarctica is so cold. | | | |
| Give reasons why scientists spend time in Antarctica. | | | |
| Explain strategies that scientists use to survive in Antarctica. | | | |
| Geographical skills. | | | |



| | | | | | | | |
|--|--|--|---|--|---|---|--|
| Coordinates  | OS maps  | Grid references  | Distance  | Percentages  | Averages  | Writing tips  | Revision tips  |
|--|--|--|---|--|---|---|--|

Knowledge Organiser – Going to Extremes

Why is Antarctica so cold?

Core Knowledge

- If something is extreme, it is much higher or lower than the average.
- On Earth, average temperature is 14°C. In Antarctica, average temperature is -41°C. Therefore, Antarctica is extremely cold.
- Distribution is how something is spread out.
- Hot places are distributed around the Equator. Cold places are distributed around the Poles, including Antarctica.
- Solar heat energy is concentrated at the Equator. This means that places here tend to be hot.
- Solar heat energy is spread out at the Poles by the curve of the Earth. This means that places here tend to be cold.

Revision Questions

- What does extreme mean?
- What is the average temperature of Earth / Antarctica?
- Is Antarctica extremely cold? Why?
- What does distribution mean?
- Describe the global distribution of hot and cold places.
- Explain why places near the Equator are hot.
- Explain why Antarctica is extremely cold.

Knowledge Organiser – Going to Extremes

How do scientists survive in Antarctica?

Core Knowledge

- Nobody permanently lives in Antarctica because the temperature is extreme.
- Scientists spend some of the year in Antarctica to do research on wildlife, volcanoes and the moving ice. These scientists live at research stations.
- Scientists have used a range of strategies to survive in Antarctica. Research stations are built on stilts to stop them being buried by snow. Research stations have angled sides to deflect strong winds. Some research stations have ski feet so they can be moved if the ice becomes unstable.
- Scientists wear multiple layers to trap air around the body to insulate it. Scientists also wear spiked boots for grip on icy surfaces and mukluks made of reindeer skin to insulate your feet.
- Most research stations are near the Southern Ocean so fresh food can be delivered. Food is delivered to some research stations by planes. Scientists need to eat 3,500 calories per day so they have enough energy to keep warm.

Revision Questions

- Why do scientists visit Antarctica?
- Where do scientists stay when they are in Antarctica?

- How are research stations designed to cope with extreme cold?

- How do scientists dress to survive the extreme cold?

- How is food delivered to research stations?
- How much food do scientists need each day to eat? Why?