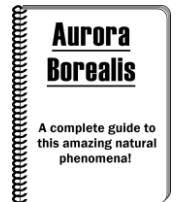


Lights in the Sky

Level 4

Karrie had been looking forward to this trip for months and now it was finally here. Her mother and father were taking her to Kemi, Finland in the hope of seeing the northern lights. Finland, her parents had told her, was one of only a few countries from which this natural phenomenon can be seen. To be honest, Karrie hadn't really been that excited when her parents first told her, but then she watched a video of the lights. In the video, the night sky was lit up with flickering curtains of purple, green, blue and red. She could hardly believe what she was seeing was real!

From that point on, she was captivated. Her parents had bought her a book titled 'Aurora Borealis'. She learned that 'aurora borealis' was the scientific name for the northern lights. Karrie discovered that these lights also occur around the south pole, but that it is called 'aurora australis' when it occurs there.

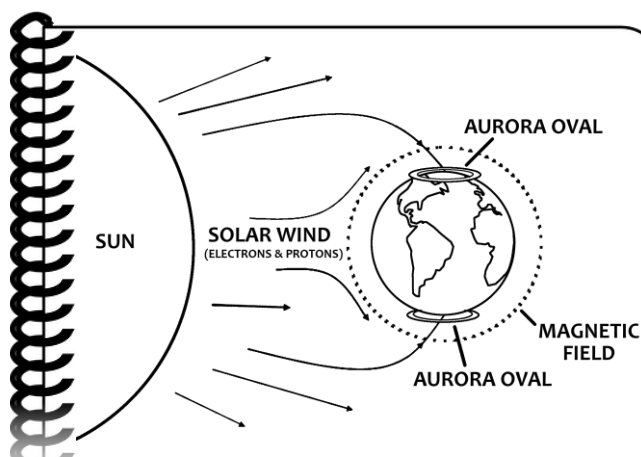


Karrie reached down into the bag below her seat and pulled out a book. She had a five-hour flight ahead of her, and she was determined to understand what causes the amazing light show.

What Causes an aurora?

An aurora begins with a large disturbance on the Sun. The Sun doesn't just send out light and heat, it also emits electrons and protons. This stream of very small particles is known as the solar wind. It is only possible to see an aurora at times when the solar wind is strong enough.

While the Earth's magnetic field stops most of the particles from the solar wind, some particles do get through into our atmosphere. Some of these electrons find a way through the Earth's magnetic field at the north pole and the south pole. Once in our atmosphere, these electrons collide with atoms. The electrons give their energy to the atoms which causes light to be released.



Questions

Lights in the Sky – Level 4

1. Where are Karrie and her family going? _____

2. Why wasn't Karrie excited when her parents first told her?

3. Which word in the text means 'fascinated'? _____

4. What is another name for the aurora borealis? _____

5. What does the word 'emits' mean? _____

6. Why is the aurora borealis only visible from a few countries?

7. When is it possible to see an aurora?

8. What is the solar wind?

9. Why might studying the sun help scientists predict when auroras will occur?

Answers

Lights in the Sky – Level 4

1. Where are Karrie and her family going? **They are going to Kemi, Finland.**

2. Why wasn't Karrie excited when her parents first told her?

Karrie didn't seem to know much about the northern lights.

3. Which word in the text means 'fascinated'? **Captivated.**

4. What is another name for the aurora borealis? **The northern lights.**

5. What does the word 'emits' mean?

'Emits' means produce.

6. Why is the aurora borealis only visible from a few countries?

The aurora borealis only occurs around the north pole, so it is only visible from nearby countries.

7. When is it possible to see an aurora?

It is possible to see an aurora when the solar wind is strong enough.

8. What is the solar wind?

The solar wind is the stream of particles released by the sun.

9. Why might studying the sun help scientists predict when auroras will occur?

Answers may vary. If disturbances on the Sun cause an aurora, scientists might be able to work out when an aurora will occur.

