

Article-Based Observation

Directions: Read the recent article "[2016 shattered Earth's heat record](#)" and then answer these questions:

- 1. What was significant about Earth's surface temperature in 2016?**

- 2. The graphic titled "Temperature difference in 2016 compared with 1891–2010 average" on Page 9 (also on [Blackline Master 2](#)) compares the temperature in 2016 with the 1891–2010 average. What does the graphic show and how does it lead to the conclusion that 2016 broke the heat record?**

- 3. What other record was set in 2016 and early 2017?**

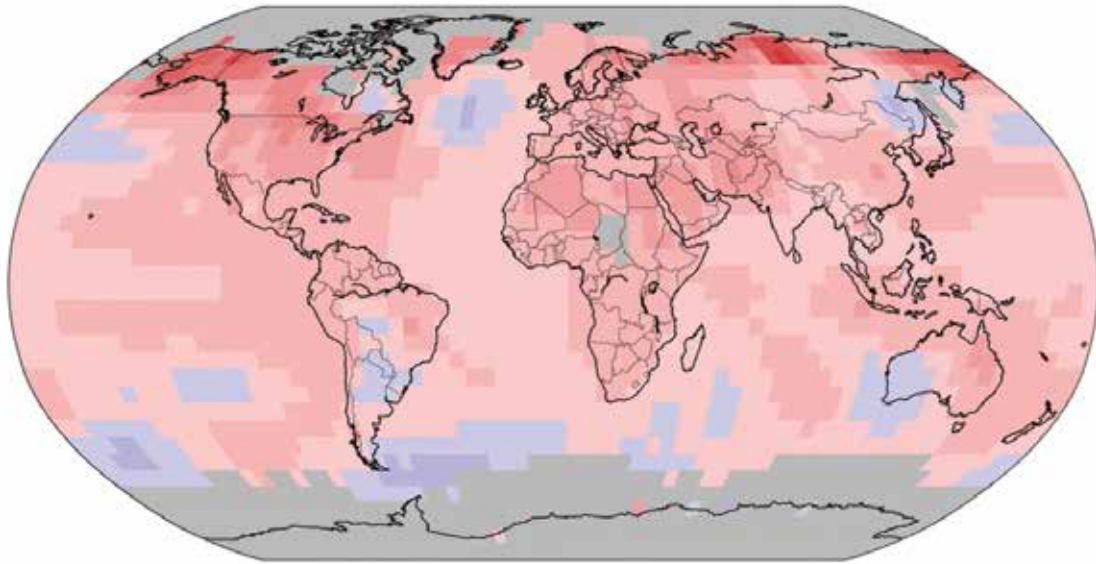
- 4. The graph titled "Vanishing ice: 1978–2017" on [Blackline Master 2](#) shows daily fluctuations in global sea ice extent from 1978 to 2017. What general trend occurs over the course of a year? What does the gray-shaded region indicate? How does the global sea ice extent at the beginning of November 2016 compare with the gray-shaded region for that time?**

5. According to climate scientist Kevin Trenberth, what factors have caused warmer temperatures in 2016?
6. What metaphor is used by Kevin Trenberth to describe global temperature changes? Use the metaphor to explain his predictions about future global temperatures.
7. Give two examples of supporting data from the article's text that indicate global warming in recent years.
8. Come up with another catchy title for the article that summarizes the content.

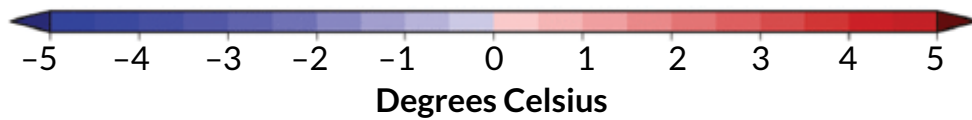
2016 shattered Earth's heat record

Article-Based Observation

Directions: Use the graphics from "2016 shattered Earth's heat record" to answer the related questions.

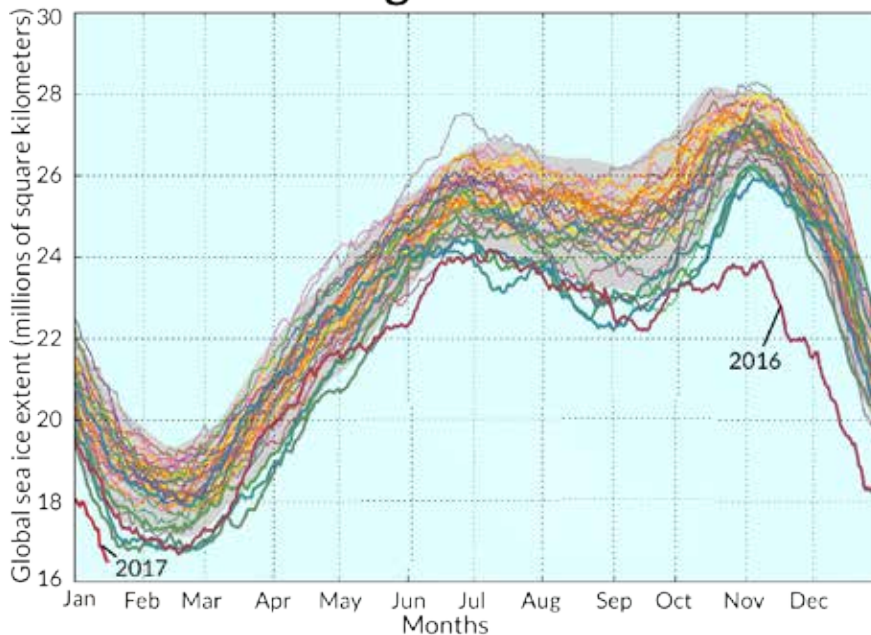


Temperature difference in 2016 compared with 1891–2010 average



SOURCE: NOAA

Vanishing ice: 1978–2017



SOURCE: NSIDC