Name _____ Date _____

UNDERSTANDING THE DIFFERENCE

Do the American Public and Media Understand Weather and Climate?

DIRECTIONS

Please read the short article excerpt and look at the graphics below. Then answer the discussion questions.

BELIEF IN GLOBAL WARMING DROPS AFTER COLD WINTER

After an especially cold winter across much of the United States, the American public was slightly less convinced that the planet is heating up, a new survey shows.

A majority of Americans, or 63 percent, still believe there is solid evidence that global warming is real, according to the latest poll from the National Surveys on Energy and Environment (NSEE). That number is down, however, from 67 percent who said the same in the fall.

"The fairly cold winter and slow arriving spring weather this year appears to have contributed to a slight decline in the number of Americans that think global warming is happening," said Chris Borick, director of the Muhlenberg Institute, which conducts the NSEE in partnership with the University of Michigan.

Previous research has shown that public opinion on climate change often shifts in response to weather events that seem to support or refute a warming trend.

Excerpted from: NBC News, 6/19/2013
www.nbcnews.com/id/52254197/ns/technology_and_science-science/t/belief-global-warming-drops-after-cold-winter/#.VA38SUve71q

'Where's global warming when you really need it?'

DISCUSSION QUESTIONS

1. Evaluate this sentence from the article:
   "After an especially cold winter across much of the United States, the American public was slightly less convinced that the planet is heating up, a new survey shows."

Which word or phrase best describes this sentence?

a. Fact
b. Reasoned judgment based on research findings
c. Speculation

2. Does a big winter storm better represent the concept of **weather** or **climate**?

a. Weather
b. Climate

3. Does cold weather in one area of the world mean that the global climate is **not** changing and, specifically, that the earth is **not** warming? Why or why not?

4. Based on the survey data from the article, do you think that, in general, people understand the difference between weather and climate? If not, what can be done to help people understand the difference?

5. Do you think that the media, such as the example news clip and cartoon, can influence the way people think? In general, are newscasters and cartoonists qualified to educate the public about science topics?

Image Credits:
Chattanooga Times Free Press, Dec. 2010
Fox News Television, Jan. 2014

ANSWER KEY

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Which word or phrase best describes this sentence?

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c. Speculation

The answer is B because the sentence is summarizing the findings from a research sample. We cannot call this a fact because the researchers did not survey everyone in the US. It is not speculation because the author(s) cite a reliable source for their statement.

2. Does a big winter storm better represent the concept of **weather** or **climate**?

a. Weather
b. Climate

The answer is A because a big winter storm is experienced over a short time period.

3. Does cold weather in one area of the world mean that the global climate is **not** changing and, specifically, that the earth is **not** warming? Why or why not?

No. Cold temperatures in one area in a short time period do not have a large effect on the average global temperature over time. Climate change includes a long-term increase in global temperatures, and a cold winter in one area refers to the weather in that place, which is short term.

4. Based on the survey data from the article, do you think that, in general, people understand the difference between weather and climate? If not, what can be done to help people understand the difference?

The change in acceptance of climate change after cold weather suggests that many people do not understand the difference between weather and climate. Often people rely on anecdotal evidence instead of empirical evidence to inform their ideas. Student answers will vary about what can be done to help people understand the difference.

5. Do you think that the media, such as the example news clip and cartoon, can influence the way people think? In general, are newscasters and cartoonists qualified to educate the public about science topics?

Student answers will vary, but the educator may want to bring up the following points. Because the public tends to obtain most of its science information from the media, the media can have a large impact on the way that people think. In general, newscasters and cartoonists do not have science credentials. In fact, journalistic standards, such as "balanced reporting," can skew scientific information such that it appears that there is less consensus among scientists than there is. In other words, journalists are trained to present both sides of an issue equally, giving as much weight to a few dissenting voices as the scientific consensus.

Image Credits:
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