Description

Students read a short article and examine selections from the media to determine whether the American public and media tend to understand the difference between weather and climate.

Grade Level

6 – 12

Objectives

Students will:

- Examine research findings
- Evaluate the portrayal of climate change in the media using two selections
- Formulate ideas about how to clarify the difference between weather and climate

Background

The public tends to obtain most of its scientific information from the media, and therefore, the accuracy and reliability of the information conveyed is of utmost importance. However, portrayals of climate change in the media often demonstrate confusion between the concepts of weather and climate. This common misconception can lead to inaccurate conclusions about climate change.

Weather is a description of short-term atmospheric conditions. It can include temperature, humidity, precipitation, cloudiness, visibility, wind, and atmospheric pressure. These observations are used to describe the conditions over a short time period, from minutes to months.

Climate is the long-term pattern of weather in an area. It describes the average weather for a region over a longer time period, often defined as approximately 20-30 years or more.

Climate change refers to any significant change in the measures of climate lasting for an extended period of time. This includes global warming, changes in precipitation patterns and length of seasons, and increased frequency of extreme weather events. Note that the media will often use the terms *climate change* and *global warming* interchangeably, and in fact, this is done in the article excerpt used for this activity. Global warming describes the current increasing average global temperature. Climate change is a broader term that encompasses global warming along with many other long-term changes in climate patterns that result from warmer temperatures.

Procedures

1. Read the short article excerpt and look at the graphics on the handout on the next page.
2. Answer the discussion questions on the handout.

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?

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