

## Details

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- 🕒 About One Period
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- ✍️ High School and Up

# Climate Change in the Media: Comparing Global and Local Perspectives

## Overview

This lesson allows learners to analyze and evaluate how the science of climate change and global warming are portrayed in various online media outlets.

## Objectives

- Students will be able to analyze and evaluate the written structure that an author uses when writing about the science of climate change and global warming.
- Students will be able to establish trends for the use of scientific evidence and political opinion in how climate change and global warming are portrayed in global, national, and locally printed news articles.

## Lesson Preparation

This lesson is used as an introduction to a unit on Global Warming or Climate Change in high school. Students are challenged to evaluate how this topic is portrayed in the media on various scales: global, national, local. With a generation of learners that increasingly relies on the media to learn about important issues facing humanity, this lesson provides students the valuable opportunity to find out for themselves how well newspapers around the world are portraying the science of climate change and global warming.

According to a 2010 research report from the Yale Project on Climate Change Communication and National Science Foundation titled “American Teens’ Knowledge on Climate Change”, teenagers in the U.S. have a rather limited understanding of climate change and global warming. In the study, 517 teens (ages 13-17) were surveyed across the country on their knowledge of

## Materials

- A large class whiteboard
- Dry erase markers and colored pencils: red, green, blue and black
- Student Hand-Out

Earth's climate system, and the causes, impacts, and solutions to global warming. Using a standard grading scale for the survey questions, only 25% of teens in the study received a passing grade (A, B, C) while 54% received a failing grade (F).

The study also indicates that fewer than 20% of teens feel that they are “very well informed” about climate change, while 70% of teens say that they would like to learn more about it. Most importantly, the study finds that 73% of teens claim that the Internet would be their top choice to learn about climate change instead of TV shows, books, magazines, or other printed texts. These results open the door to an important question to be addressed during this activity:

*If teenagers are choosing to learn about climate change and global warming from online sources like newspapers, how reliable are these resources at portraying the science in an unbiased and scientifically accurate way?*

The goal of this activity is for students to understand that the best place to learn about this topic is in scientific journals, articles, or texts that are written and published by credible scientific authors and researchers. Where the media can include political opinions and improper use/reference to data, scientific journals and articles are a much more reliable and accurate account of the science behind these very important topics.

### **Procedure**

#### DAY 1:

1. Assign students in the class the following as a homework assignment the class period before this lesson is scheduled to be completed,
2. Number off students in the class 1-4. This number corresponds to which type of news article they will find and analyze for homework.
  - #1's = local news article
  - #2's = national news article
  - #3's = international news article
  - #4's = scientific journal or publication
3. Distribute a student handout to each student in class once numbers have been assigned.
4. Read through the introduction and Part 1 for the assignment on the hand out and answer any questions that follow. Part 1 is homework.

#### DAY 2:

1. At the start of the next class period have students place their article and student handout on their desk.
2. On the whiteboard in the classroom, have a large version of the Opinion and Evidence Matrix drawn out with a few red, green, blue, and colored pencils and dry erase markers available for student use.
3. As a group, make sure all students have appropriately scored their article using the provided student handout. Clear up any misconceptions or errors students may have accidentally

made when completing the handout and scoring their article on the Evidence and Opinion Matrix.

4. Read the directions for Part 2 on the student handout as a class. At this time, they will read another student's article and score that article on their handout as well.
5. After 10 or 15 minutes of reading/scoring the partner's article, instruct students to discuss the scores they assigned to each of the two articles and complete Part 3 of the student handout. Students should then work together to decide on a 'final score' for each of the two articles.
6. Read the directions for Part 4 of the student hand out as a class. Assign a dry erase marker color to each student/article type:
  - Local articles = red
  - National articles = green
  - Global articles = blue
  - Scientific journals = black
7. Dismiss students four at a time (one color in each group of four) to come up to the whiteboard and place a dot on the Evidence and Opinion Matrix for where their article has been scored.
8. Once all of the students have placed their dots on the matrix, hold a five minute "Think, Pair, Share" for analyzing and evaluating trends/patterns in the scoring of the class' articles. They should use their student handout as a guide for this.
9. Bring the group back together for a group discussion about the following questions. Guide students towards these questions using a Socratic discussion methodology.
  - Are there any patterns for the local articles? National articles? Global articles? Scientific journals?
  - If there are patterns, why? If there are not, why?
  - What do these patterns mean? What articles tend to be the most opinionated and least scientific? What about the least opinionated and most scientific?
  - Based on the results of this activity, what are the best forms of printed media/newspapers for individuals to learn about the science of climate change and global warming?
  - Based on the results of this activity, what can you do as a learner/student to best inform yourself about the science of climate change and global warming?
10. Have students staple their student handout and article together.
11. Read through the directions for Part 5. Assign this section as homework to the students. You may want to discuss possible options for this part of the activity.

## Extension

Part 5 of this activity serves as the extension. This same activity could be used for Youtube videos, TV shows, mass media news shows, or blogs and how the science of climate change and global warming are portrayed.



## Assessment

Completion of the student handout (Parts 1-5) can be used for assessment purposes.

## Author/Credits

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## Standards

### National Science Education Content Standards, Grades 9-12

Content Standard F: Science In Personal and Social Perspectives

a. Science and technology in local, national, and global challenges

Content Standard G: History and Nature of Science

a. Science as a human endeavor

b. Nature of scientific knowledge

### Idaho Science Education Content Standards, Grades 8-10

Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations

9-10.B.1.2.3 Develop scientific explanations based on knowledge, logic and analysis.

### ELA Common Core State Standards for Science and Technical Subjects, Grades 9-12

CCSS.ELA-LITERACY.RST.11-12.1

Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

CCSS.ELA-LITERACY.RST.11-12.5

Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.

CCSS.ELA-LITERACY.RST.11-12.6

Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

CCSS.ELA-LITERACY.SL.11-12.1

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-LITERACY.SL.11-12.1.C

Propel conversations by posing and responding to questions that probe reasoning and



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evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

## Climate Change in the Media: Comparing Global and Local Perspectives

### Introduction

According to a 2010 research report from the Yale Project on Climate Change Communication and National Science Foundation titled “American Teens’ Knowledge on Climate Change”, teenagers in the U.S. have a rather limited understanding of climate change and global warming. In the study, 517 teens (ages 13-17) were surveyed across the country on their knowledge of Earth’s climate system, and the causes, impacts, and solutions to global warming. Using a standard grading scale for the survey questions, only 25% of teens in the study received a passing grade (A, B, C) while 54% received a failing grade (F).

The study also indicates that fewer than 20% of teens feel that are “very well informed” about climate change, while 70% of teens say that they would like to learn more about it. Most importantly, the study finds that 73% of teens claim that the Internet would be their top choice to learn about climate change instead of TV shows, books, magazines, or other printed texts. These results open the door to an important question for our class to consider as we begin our unit on Climate Change and Global Warming:

*If teenagers are choosing to learn about climate change and global warming from online sources like newspapers, how reliable are these resources at portraying the science in an unbiased and scientifically accurate way?*

For a complete description of Yale’s findings, you can access the full report at this website:

[http://oceanservice.noaa.gov/education/pd/climate/teachingclimate/am\\_teens\\_knowledge\\_of\\_climate\\_change.pdf](http://oceanservice.noaa.gov/education/pd/climate/teachingclimate/am_teens_knowledge_of_climate_change.pdf)

### Part 1: Get Online, Find an Article, and Analyze It

a.) Your teacher is going to assign you to obtain a news article from the internet about climate change and global warming. Using the choices below, please circle the type of article you will be obtaining:

*Local Newspaper*                      *National Newspaper*                      *International Newspaper*                      *Science Journal*

b.) As you read the article, you will be analyzing and evaluating two aspects of the author’s structure:

- 1.) Expression of Opinion
- 2.) Reference to Evidence/Data

c.) PREDICTION: Think quietly for a few moments about the four different types of articles that our class will analyze, and make a prediction about how you expect each of these articles to be written in terms of ‘Expression of Opinion’ and ‘Reference to Evidence/Data’. Which will be most or least opinionated? Which will use or not use references to scientific evidence/data?

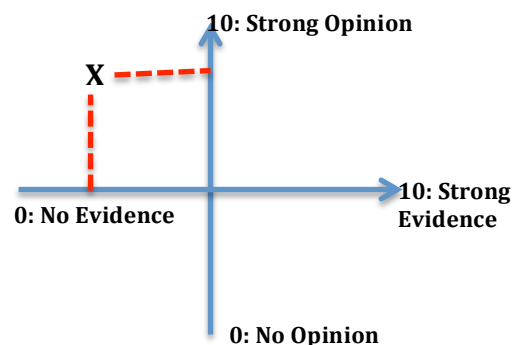
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d.) After you have read the article, you will use the *Opinion and Evidence Matrix* provided below to assign a score to your article. Each aspect of the article that will be analyzed will be given a score between 0 and 10. Using standard graphing techniques, the combination of these scores would place the article within the matrix.

*EXAMPLE: an article given an 8 for ‘Expression of Opinion’ and 2 for ‘Reference to Evidence/Data’ would be an article that contains a strong opinion from the author with very little reference to scientific data. It would be located at the X on the matrix.*



e.) Please use your article to complete the following:

Article Title: \_\_\_\_\_

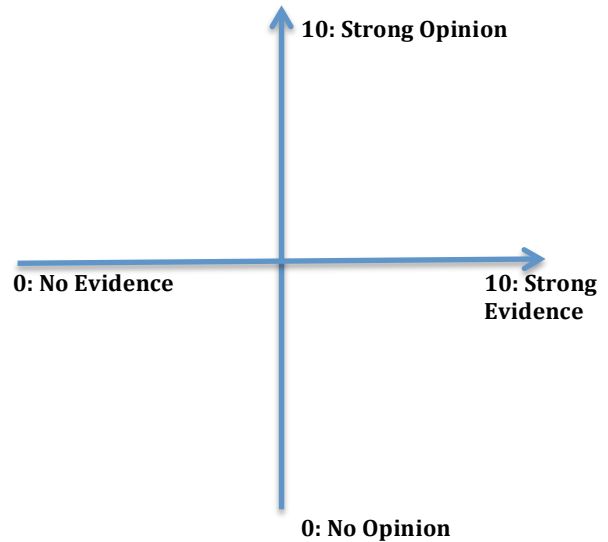
Source/Website: \_\_\_\_\_

Author: \_\_\_\_\_

Expression of Opinion Score: \_\_\_\_\_ /10

Reference to Evidence/Data Score: \_\_\_\_\_ /10

Please explain why you assigned these scores:



**Part 2: Work Together**

a.) Without sharing your scores with anyone else, please switch articles with some near you. Use the same procedures to analyze, evaluate, and score someone's article.

Article Title: \_\_\_\_\_

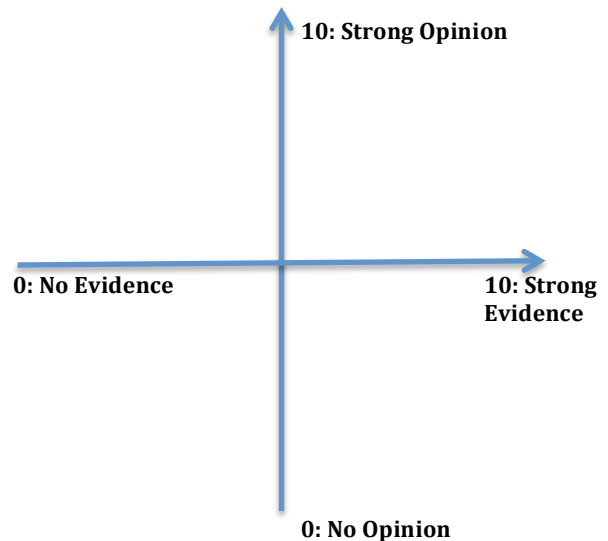
Source/Website: \_\_\_\_\_

Author: \_\_\_\_\_

Expression of Opinion Score: \_\_\_\_\_ /10

Reference to Evidence/Data Score: \_\_\_\_\_ /10

Please explain why you assigned these scores:



**Part 3: Coming to Consensus**

a.) Take a few moments to discuss with your partner the scores you each gave to both articles. Be sure to support your scores with proper reasoning.

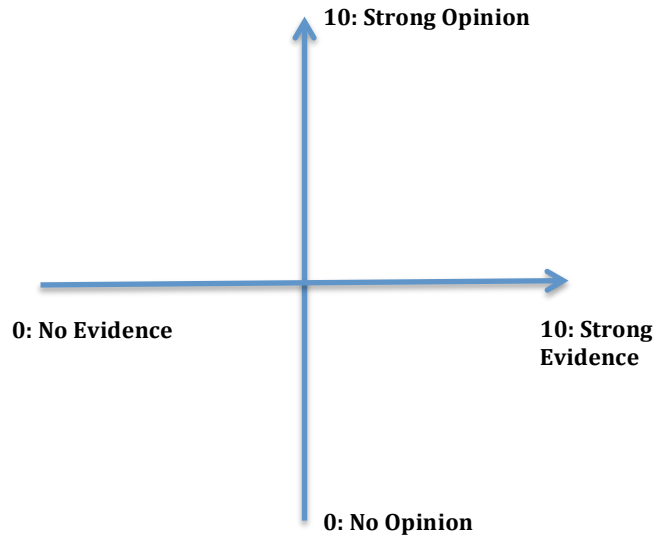
b.) Work with your partner to come to a consensus on your article's final score. Record it below.

Expression of Opinion Score: \_\_\_\_\_ /10

Reference to Evidence/Data Score: \_\_\_\_\_ /10

#### **Part 4: Class Results**

a.) Follow your teacher's directions as each student records his/her article's score up on the class *Opinion and Evidence Matrix* on the whiteboard. Use your red, green, blue, and black colored pencils to record every other student's article score on your copy of the class *Opinion and Evidence Matrix* below. Be sure to make a legend for your matrix, indicating which color corresponds to which type of article.



b.) Are there any observed patterns/trends for the scores of the different types of articles? If so, please explain each trend you can identify.

c.) What do these patterns mean? Please provide an explanation for what you think might cause each of these observed patterns/trends:

d.) Based on the results of this activity, what are the most effective forms of online newspapers for teenagers to learn about the science of climate change and global warming? Why? Support your answer with reference to the class data.

e.) Based on the results of this activity, what can you do as a teenage learner to best inform yourself about the science of climate change and global warming?



**Part 5: Extension and Homework**

a.) From blogs, to TV shows, to YouTube Channels, to websites and forums, the internet is full of other resources that cover climate change and global warming. Please use this page to run a similar investigation on how the science of climate change and global warming are portrayed in another arena of the Internet. Please categorize your chosen form of media into four categories as we did for this activity, and please use the same scoring method and matrix. Lastly, please answer the same questions from Part 4.