

Both Sides of the Issue

The Effects of Climate Change?

stosselintheclassroom.org

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Objectives

Students will be able to:

- list specific claims each video makes about Arctic ice, polar bear populations, and rising temperatures.
- explain the “albedo effect” and how it relates to the scientific debate over climate change.
- differentiate between sea ice and land ice trends as discussed in the two videos.
- argue which video provides more credible evidence about the effects of climate change, citing specific examples.

Concepts & Key Terms

The following terms appear across both videos in this pairing. Understanding them will help students follow the arguments and engage in discussion.

Albedo Effect: a measure of how much sunlight a surface reflects. Lighter surfaces, such as ice and snow, reflect more solar energy back into space, while darker surfaces, such as open ocean water and bare land, absorb more heat.

Arctic Circle: the region surrounding the North Pole, including parts of Alaska, Canada, Greenland, Russia, and Norway, where sea ice and glaciers are concentrated.

Carbon Dioxide (CO₂): a colorless gas produced by burning fossil fuels and by the natural respiration of living things. Higher atmospheric concentrations contribute to warming, but CO₂ also acts as a fertilizer for plant growth.

Climate Model: a computer simulation that scientists use to project how the climate may change under different conditions, such as rising greenhouse-gas levels. Different models can produce significantly different projections.

Ecosystem: a community of living organisms interacting with one another and with their physical environment, such as the Arctic ecosystem of polar bears, seals, and sea ice.

Glacier: a slow-moving mass of ice formed from compacted snow over many years, found in cold regions such as Alaska, Greenland, and Antarctica.

Greening: the measurable increase in plant growth and vegetation on Earth’s surface, observed in NASA satellite data over recent decades and partially attributed to higher atmospheric CO₂.

Mass Extinction: a relatively short period in geological time during which a large percentage of species on Earth go extinct.

Sea Ice: frozen ocean water that floats on the surface, distinct from land ice such as glaciers and ice sheets. Sea ice expands in winter and shrinks in summer.

Sea Level Rise: the long-term increase in the average height of the world's oceans, caused mainly by melting land ice and by the thermal expansion of warming water.

Tipping Point: a threshold beyond which a system, such as a glacier or ice sheet, undergoes rapid and often irreversible change.

Discussion Questions

The questions below will help students achieve a better understanding of the arguments made on either side of a contentious topic. Because these questions often touch upon statements made briefly in the videos, we recommend reading the questions before watching each video. Students are encouraged to take notes during the videos, and it may be helpful for students to break into groups, each taking responsibility for only a few questions, before coming together for discussion.

1. What are the opposing ideas in these two videos?
2. John Stossel said that "climate changes." What did he mean by this?
3. In the NBC News video, Chase Cain said that "you could clearly see the signs of climate change" in Alaska's icefields. What signs was he referring to?
4. In the Stossel TV video, Linnea Lueken said, "A lot of the time when you are looking at these very alarming images, it seems like, 'Where did the ice go? There's no ice.'" What was her explanation for those images?
5. In the NBC News video, what did Mauri Pelto say was the tipping point in the Arctic?
6. The Stossel TV video showed a graph of total Arctic ice over the past few decades. What was your reaction to this graph?
7. In the NBC News video, what reason was given for the possible starvation of polar bears?
8. The Stossel TV video showed that the polar bear population has increased. Were you surprised to learn this? Why or why not?
9. Chase Cain described the "albedo effect." What is the albedo effect? How is it relevant to climate change?
10. Linnea Lueken said that CO₂ "helps fertilize plants for faster and better growth," and that the Earth has "significantly greened over the past couple of decades." Were you aware of this before watching this video? Do you think the media has sufficiently covered the Earth's greening? Why or why not?
11. Chase Cain said that in the last 40 years, the Arctic has warmed by 6°F. Did that surprise you? Is it more or less than you would have guessed? Why?

12. John Stossel said: "Alarmist media and environmental groups...keep predicting doom, and when they're wrong, they just move on to the next scare." Do you agree with this statement? Why or why not?
13. Are you concerned about climate change? Why or why not?
14. Have you seen stories about climate change in the media? If so, what was your impression of those stories? Were they "alarmist," as John Stossel said? Were they informative?
15. Did these two videos share any common ground? Were there any points on which they agreed? If so, what were they?
16. Should one of the arguments we heard carry more weight than the other? If so, which one? Why?
17. Did you have an opinion on this topic before watching these videos? If so, what was it? Has your opinion changed? If so, how? What did you learn from these videos that affects your views on this topic?
18. What else would you like to learn about this topic?

Activities

Activity 1: Evidence Mapping

Teacher Instructions: Distribute the worksheet that follows this activity. Students chart the central claims and evidence presented in each video, noting whether the evidence comes from data, expert testimony, or visual imagery. The worksheet helps students see how each side builds its case before they evaluate which is more persuasive.

Student Directions: As you watch each video, fill in the worksheet with at least three claims and the evidence used to support each one. Note the type of evidence: data or statistics, expert testimony, visual imagery, or anecdote. After watching, compare the two charts and identify which side relies more on each type of evidence to make its case.

Name _____

Date _____

Class _____ Period _____

Teacher _____

Evidence Mapping: The Effects of Climate Change?

Directions: For each video, list at least three central claims made by the speakers. For each claim, briefly note the supporting evidence and the type of evidence used (data, expert testimony, visual imagery, or anecdote).

Video 1: *How climate change is speeding up the great Arctic melt*

1. Claim: _____

Evidence: _____

Type of evidence: _____

2. Claim: _____

Evidence: _____

Type of evidence: _____

3. Claim: _____

Evidence: _____

Type of evidence: _____

Video 2: *Climate Change Myths, Part 1*

1. Claim: _____

Evidence: _____

Type of evidence: _____

2. Claim: _____

Evidence: _____

Type of evidence: _____

3. Claim: _____

Evidence: _____

Type of evidence: _____

Synthesis: (Write your answer on the back of the paper.) Which type of evidence does each video rely on most heavily? Which side, in your opinion, builds the stronger case — and why?

Activity 2: Perspective Swap Debate

Teacher Instructions: Begin by polling students: which video did you personally find more persuasive? Divide the class into two groups based on those answers, then assign each group to argue the OPPOSITE position. Allow 15 minutes of preparation, then run a 20-minute structured debate with closing reflections.

Student Directions: You will argue the side you originally disagreed with. Build your case using at least three specific points drawn from that video — claims, expert quotes, data, or visual evidence. Be prepared to respond to counterarguments by anticipating what the other side will say, using points raised in the video they will be representing.

Activity 3: Common Ground Finder

Teacher Instructions: Both sides of the climate debate share more ground than typical media coverage suggests. Pair students up and have them search both videos for points of actual agreement, even when the speakers reach different conclusions. Lead a class discussion afterward to compile a master list on the board.

Student Directions: Working with a partner, list at least four points on which the two videos agree. Examples might include shared facts about the Arctic, statements about how scientific consensus works, or common concerns about misleading reporting. Then write a brief explanation (3-4 sentences) of why these points of agreement might be missing from typical news coverage of climate change.

Activity 4: Strongest Argument Challenge

Teacher Instructions: Each student identifies the single strongest argument from EACH video — not the side he or she agrees with overall, but the most well-supported claim each side makes. This forces students to engage seriously with both perspectives and to distinguish between rhetoric and evidence.

Student Directions: Choose one argument from the NBC News video and one argument from the Stossel TV video that you consider the strongest. For each, write a paragraph explaining: (a) what the claim is, (b) what evidence supports it, and (c) why it is harder to dismiss than the other claims in that video. Be prepared to defend your choices in a class discussion, especially if a classmate selected a different “strongest argument” from the same video.

Activity 5: Exit Ticket Reflection

Teacher Instructions: Use this short writing task as the closing activity. Collect the responses to assess whether students engaged with both perspectives and to

surface lingering questions for the next class. Responses should be brief but specific — students must name which video each example came from.

Student Directions: In one paragraph (4-6 sentences), respond to each prompt below. Cite which video each example came from.

1. One claim from each video that I found persuasive, and why.
2. One claim from each video that I found weak or unsupported, and why.
3. One question I still have after watching both videos.

Activity 6: Check It at the Source

Teacher Instructions: This activity teaches lateral reading — the habit of verifying a claim against its original source rather than trusting how a video presents it. Assign each student or pair one claim from each video to investigate, using the linked sources in the References section of this guide. Students read what the source actually says, then decide whether the claim holds up, holds up but is more complicated than the video suggested, or is overstated. Plan on 20 to 30 minutes plus a short debrief. Expect claims from both videos to land in different categories — that is the point. Several of the claims in the References section are accurate as far as they go but gain important context once students reach the source (the polar bear rebound, the Earth's greening, and the slowing rate of sea ice decline are good examples), which models the idea that a good-faith source can complicate either side's framing.

Student Directions: Choose one claim from the NBC News video and one claim from the Stossel TV video. For each claim, find the matching source in the References section, follow the link, and read what the source actually says. Then decide which verdict best fits, and explain your reasoning in two or three sentences:

- **Holds up:** the source supports the claim as the video stated it.
- **More complicated:** the source supports the basic claim but adds important context the video left out.
- **Overstated:** the source contradicts the claim or qualifies it so heavily that the video's version is misleading.

Be ready to share one example where checking the source changed — or confirmed — what you thought after watching.

Name _____

Date _____

Class _____ Period _____

Teacher _____

Source Check Recording Sheet

Claim 1 — NBC News video

The claim, in your own words: _____

Source used (from References): _____

What the source actually says: _____

Verdict (circle one): Holds up / More complicated / Overstated

Why: _____

Claim 2 — Stossel TV video

The claim, in your own words: _____

Source used (from References): _____

What the source actually says: _____

Verdict (circle one): Holds up / More complicated / Overstated

Why: _____

Reflection: Did checking a source change how you saw either claim? What is one question you would now ask before believing a striking statistic in any video?

References

The sources below allow teachers and students to trace the central claims in both videos to their origins. Several claims on each side are accurate as far as they go but are debated in what they imply; in most cases, the disagreement is about interpretation rather than the underlying data.

From the NBC News video:

Arctic warming: Multiple datasets find the Arctic warming roughly three to four times faster than the global average since 1980, on the order of 3°C. Source: NOAA Arctic Report Card — <https://arctic.noaa.gov/report-card/report-card-2025/>.

The albedo effect: Snow and ice reflect most incoming sunlight, while open ocean and bare land absorb it, so heat absorption rises as ice retreats. NOAA identifies this feedback as a driver of Arctic warming. Source: NOAA Climate.gov — <https://www.climate.gov/news-features/featured-images/2024-arctic-report-card-arctic-has-second-warmest-year-record-2024>.

From the Stossel TV video:

Polar bear populations: Polar bear numbers rose after a 1973 international agreement restricting hunting. The IUCN currently lists the species as Vulnerable and projects a high probability of a population decline greater than 30 percent over the next 35 to 40 years, citing sea ice loss as the primary threat. Source: International Union for Conservation of Nature — <https://iucn.org/content/new-assessment-highlights-climate-change-most-serious-threat-polar-bear-survival-iucn-red-list>.

Earth's greening: NASA satellite data show significant global greening over recent decades, with carbon dioxide fertilization accounting for roughly 70 percent of the effect. NASA notes the fertilization effect may diminish as plants acclimate. Source: NASA — <https://science.nasa.gov/earth/climate-change/co2-is-making-earth-greenerfor-now/>.

Arctic sea ice volume: The Polar Science Center data shown in the video record a decline of roughly 40 percent in annual ice volume since 1979, with 2025 the lowest on record. One study found the rate of decline slowed from 2007 to 2020, under continued warming, and Arctic winter sea ice reached a record-low maximum in 2025. Source: Polar Science Center (PIOMAS) — <https://psc.apl.uw.edu/research/projects/arctic-sea-ice-volume-anomaly/>.