



# Teaching Climate Change

## Nez Perce Tribe Climate Change Program

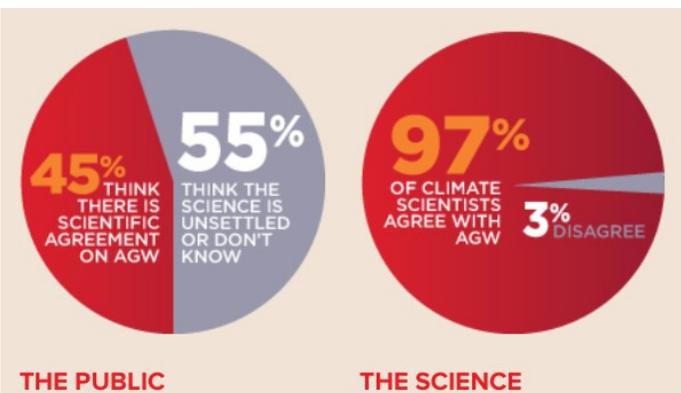
### Why Teach About Climate Change?

The global average temperature of has risen rapidly over the last century. Scientific evidence points to human activity—especially the burning of fossil fuels—as the main driver of this increase. This shift in global climate patterns impacts human life and well-being all over the world, including Idaho.

Idaho's students live in a changing world. It is important to provide them with scientifically accurate information and the skills to respond to these changes throughout their lives and careers. Climate change is an important topic for the classroom.

“Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.”<sup>1</sup> Global warming, or anthropogenic climate change, refers to the abrupt warming in global temperature over the 20th and 21st centuries driven by increased atmospheric carbon dioxide and other greenhouse gases emitted by human activities.

<sup>1</sup> EPA. 2016. *Glossary of Climate Change Terms*.



Source: Union of Concerned Scientists

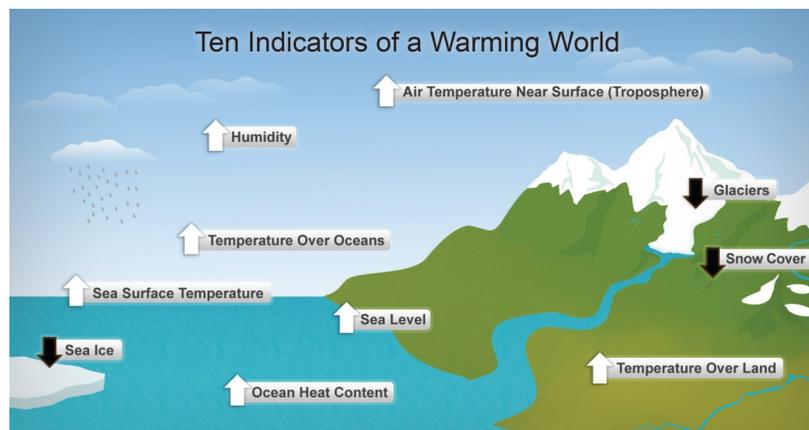
### Challenges to Teaching Climate Change Science

- Climate change myths: it's not really happening... warmer temperatures are going to be a good thing... it's just a natural cycle... scientists don't agree on the cause...
- Student, parent, or community pushback
- Teachers' lack of education or training in foundational climate change science
- Avoiding mixed messages by giving equal time to “both sides”
- Lack of support from regional or state political entities

### Basics of Climate Change Evidence

- Greenhouse effect—greenhouse gas emissions from human activity trap energy from the sun in atmosphere
- Measurements of past climate conditions from ice cores, lake sediments, tree rings, etc. indicate that atmospheric carbon dioxide tracks really closely with global temperature averages.
- 97% of scientists agree with the premise that human activity is the main driver of contemporary climate change (i.e., humans have caused global warming).<sup>2</sup>

<sup>2</sup>National Center for Science Education. 2017. *Heartland's Claims Against the 97% Climate Consensus*.



Source: National Oceanic and Atmospheric Administration

[www.nptwaterresources.org/climate-change-adaptation](http://www.nptwaterresources.org/climate-change-adaptation)

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# Tips for Bringing Climate Change into the Classroom

## Educate yourself and dive right in!

It can be intimidating to dive into teaching controversial subjects that you might not have specialized knowledge about. But there are a lot of resources out there for educators who want to develop their understanding of climate science—see the list to the right for some examples.

## Base it in the data.

Try not to get stuck in the politics of climate change. Instead, aim to teach your students to understand the basic fundamentals of climate change science so they can explore the issue through the data.

## Take a local perspective.

Climate change is a global issue, but has local impacts. Bring it home by inviting your students to consider what effects climate will have on your region. Check out local and regional resources and organizations for useful information.

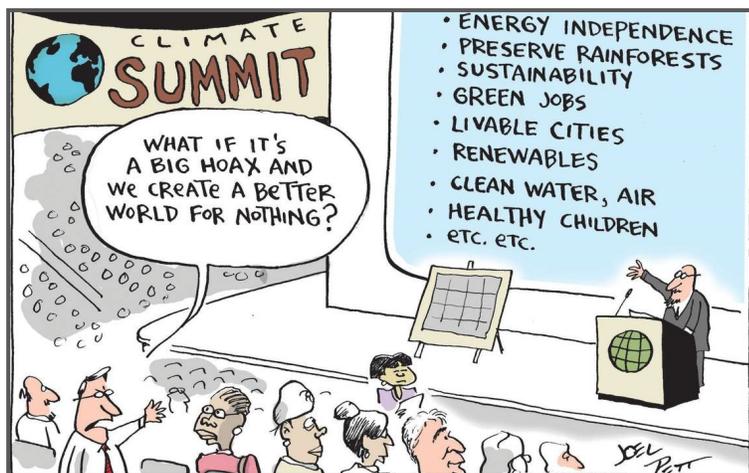
## Make cross-curricular connections.

Climate change is a broad-reaching, complex topic that touches the world and human society in many ways. This provides plenty of opportunity to build integrated approaches across multiple types of curriculum. For example, you might bring in ecology, economics, and the history of fire suppression when considering the increase in large forest fires in Idaho in recent years.

## Be hopeful!

It's easy to become discouraged when talking about climate change. It's scary to think about the amount of change and destruction it can cause! Reminding students that there is hope and they can take action will empower them to fight the temptation toward apathy. Check out Kids Against Climate Change for some exciting examples of student-led action.

Adapted from NEA Today—5 Ways to Teach About Climate Change in Your Classroom and National Center for Science Education—Teaching Climate Change: Best Practices

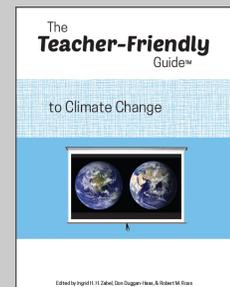


## Resources for Educators

- Alliance for Climate Education
- Climate Literacy & Energy Awareness Network (CLEAN)
- Columbia Basin Environmental Education Network (CBEEN)
- Kids Against Climate Change



- NASA Climate Kids
- National Center for Science Education: Classroom Resources
- National Oceanic and Atmospheric Administration—Climate Change Resources for Teachers
- Paleontological Research Institution—The Teacher-Friendly Guide to Climate Change



- PBS Learning Media
- UCAR Center for Science Education Classroom Activities
- Union of Concerned Scientists
- US Global Change Research Program: Resources for Educators
- WWF Adapt Interactive Courses

This is just a smattering of what is out there—visit our website for even more resources!