

Strand 8.4	Standard 8.4.4 Episode 3	Anchor Phenomena There are factors that affect regional climates and global temperatures.
------------	-----------------------------	--

Title Episode 4 Weather vs Climate	Time 20-30 minutes	CCCs <u>Systems</u> <u>Stability and change</u>	Practices Constructing explanations
--	-----------------------	---	---

Episode Snapshot:

Students will start by **constructing an explanation** of what they think the difference is between weather and climate then they will watch a video that explains the difference. They will change their definitions of the two and then categorize some situations as either climate or weather.

Gathering:

Give the students the following 2 statements (write them somewhere where they can read them while discussing this)

- “since we had an extremely cold winter that proves that climate change is a hoax”
- “Since we had a hot winter that proves climate change is true”

As the students to discuss if these statements are properly based on the evidence given. Have them identify for each one if they think the statement is true based on its supporting evidence.

Explain that the key in knowing if these are sound statements comes from understanding the difference between weather and climate.

Explain that weather and climate are both parts of an overall global system but there are often misunderstandings about what is the difference between the two. Start by having students write based on their own understanding what the definition of weather and climate would be. Then have students watch the following video https://www.youtube.com/watch?v=cBdxDFpDp_k

Reasoning:

After the students are done watching the video have them go back and make any changes to the definitions they created. Using their own definitions give each student (or pairs) a stack of weather and climate cards have them sort the cards into climate and weather. Have them compare their sorting with the students sitting next to them and have them discuss any of the ones that are different between their sortings and decide on a final place for them to belong.

Have students discuss in groups based on what they have learned about weather and climate why the claims that “since we had an extremely cold winter that proves that climate change is a hoax” or “Since we had a hot winter that proves climate change is true” doesn’t work as complete supporting evidence.

Communicate:

Have students either in groups or individually (as the teacher prefers) prepare an explanation as to why these statements about the weather are not absolute proof against or for the climate changing. Have students share their arguments with either the entire class or another group of students.

Assessment: Students should be able to explain in their argument the facts of what the difference is between weather and climate and why this disproves this argument.

Materials, resources, handouts, etc: Set of [cards](#) for each student or for every 2 students. Somewhere where they will write their definition of climate and weather.