

STUDENT GUIDE

EVALUATE LESSON 14



Part 1: Our Motivation

Record what we are now trying to explain about the anchor phenomenon.

We are going to revisit Media Claims 2, 5, 6, 7, 9, and 10, the ones about how the dairy system impacts the climate, and evaluate their validity and accuracy with the new information we have figured out.



Part 2: Evaluate Claims

Sort the four media claims provided to determine if they are accurate, inaccurate, or if they are misleading. Write the title of the claim or the claim number in the appropriate column in the table below.

Accurate	Misleading Claim That Omits Context or Details	Inaccurate
7: Oatly Adds Banned by UK Watchdog Over Misleading Claims 10: Farmers Are Part of the Climate Change Solution	2: Unlocking the Dairy Cow's Potential to Combat Climate Change 5: To Shrink Your Carbon Footprint, Ease Up on the Dairy 6: Cows are the New Coal	9: The Meat and Dairy Industries Have Devastating Effects on Climate Change

Once all the media claims have been sorted, select ONE media claim and assess its validity based on the evidence we have gathered in this unit. Be sure to use the Look Fors provided to guide your response.



I think media claim 10 is accurate. It says the agricultural sector is one of the smallest contributors to greenhouse gas emissions. Even though its contribution is small, it does still produce some methane and carbon dioxide that participate in the greenhouse effect. I can see from my Greenhouse Effect model that this occurs when greenhouse gases produced by human activities like agriculture and transit enter the atmosphere. Solar energy comes into the Earth system and warms the Earth. The warmth of the Earth moves outwards, and greenhouse gases trap this heat energy in the Earth system. So, with more greenhouse gases, the Earth system will have more heat energy in it than with less greenhouse gases. Indeed, the agricultural industry is the global leader in methane emissions at over 3 billion tons per year, as stated by Our World in Data. Even though this is the case, I still think claim 10 is accurate because other industries are emitting much more greenhouse gases. According to Our World in Data, globally the Energy sector contributes 74% of greenhouse gas emissions, while Livestock only contributes 5.8%.



Part 3: Construct a Written Argument

Construct a written argument that answers our Driving Question: *“What is the impact of dairy production on the environment?”* Be sure to use the Look Fors provided to guide your response.

I think the impact of the dairy industry on the environment is overall somewhat negative. The dairy system is made up of dairy cows raised to produce milk that is processed into dairy products for consumers who depend on agricultural products such as dairy for food. The dairy system was designed to make a lot of products for little cost, but doing so has resulted in downsides that extend beyond the boundary of the design of the system, such as an environmental cost like pollution, social impacts such as health problems for workers, and environmental impacts like chemical pollution and contribution of greenhouse gases to the atmosphere. The article, “A Review of Potential Public Health Impacts Associated With the Global Dairy Sector,” states that “Livestock production may also be the single largest sectoral source of water pollution. Major sources of water pollution from dairy farms include animal wastes, pharmaceutical residues (e.g., antibiotics and hormones), fertilizers and pesticides used for growing feed crops, and sediment from eroded pastures.” The agricultural industry is also the global leader in methane emissions at over 3 billion tons per year, as stated by Our World in Data. But at the same time, according to Our World in Data, globally the Energy sector contributes 74% of greenhouse gas emissions, while Livestock only contributes 5.8%. So even though dairy is not the biggest emitter of greenhouse gases, the greenhouse gas contributions plus the pollution I think make the impacts of the dairy industry overall somewhat negative.