

# TEACHER GUIDE

## PERFORMANCE TASK LESSON 26



**Driving Question:** *What is the impact of dairy production on the environment?*

### What We Figure Out:

The claims made by the media related to the dairy system and its impact on the environment are often misleading and missing context and/or information that tells the entire story of dairy's impact on the environment. There are many unique sustainability solutions that the dairy system already has in place to mitigate negative impacts to the environment and biodiversity in an ecosystem.

### 3D Learning Objective:

Students **evaluate the validity of media claims** about the **design of the dairy system and its unintended effects** on **climate and biodiversity**.

### Time estimate:

50 min.

### Materials:

Lesson 26 Student Guide  
Lesson 26 Handout Media Claims  
Lesson 26 Task Rubric

### Targeted Elements

#### SEP:

#### INFO-H4:

**Evaluate the validity and reliability of** and/or synthesize **multiple claims**, methods, and/or designs **that appear in** scientific and technical texts or **media reports**, **verifying the data when possible**.

#### DCI:

#### LS4.D-H2:

**Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is also having adverse impacts on biodiversity through overpopulation, overexploitation, habitat destruction, pollution, introduction of invasive species, and climate change. Thus, sustaining biodiversity so that**

#### CCC:

#### CE-H3:

**Systems can be designed to cause a desired effect.**



**ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth.** Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.

**ESS3.A-H2:**

**All forms of energy production and other resource extraction have associated economic, social, environmental, and geopolitical costs and risks as well as benefits. New technologies and social regulations can change the balance of these factors.**

## Directions



### Part 1: Evaluating Media Claims

Introduce the Performance Task by sharing with students that they will now use what they have learned in the unit to undergo a performance task where they apply their knowledge to new situations. First, share with students that they will evaluate the validity of two new media claims that they have not yet seen in the unit and that this will be an individual task meant for students to demonstrate their proficiency with practices from the unit and to demonstrate their knowledge from the unit.

Distribute the Lesson 26 Student Handout Media Claims and share with students that they will complete a performance assessment in this lesson. Share that students can use any of the resources from the module to support them in the performance assessment tasks in this lesson.

**TEACHER SUPPORT**

The media claims provided in this Performance Task are new to students. Because students have had multiple opportunities to practice using evidence from the unit to evaluate the validity of media claims, you may choose to let students complete this task independently with little teacher support to have an authentic assessment of their proficiency.

Provide students with the Lesson 26 Handout Media Claims, either in a physical or digital copy. Allow individual students time to reorganize the media claims into the following categories – valid claim, misleading claim that omits important context or details, and invalid claims. Students should write the title of the claim or the claim number in the appropriate place on the table on their Lesson 26 Student Guide Part 1 Question 1.

As students arrange the media claims in the table, remind students that where they place each claim should be based on evidence gathered throughout the unit. Encourage students to use their models and artifacts from the unit.

**STUDENT SUPPORT**

If you find that some students still need additional support for this task even though they have done it multiple times in the module, consider asking questions such as:

- Why did you choose to put this claim in this column? What evidence do you have to support or refute this claim?
- Based on the evidence from the unit, what about this claim do you think is accurate? What is inaccurate or incomplete?
- What makes this claim valid/invalid/misleading? Why?

After students organize the media claims, students will explain why they think each of the claims was valid, misleading, or invalid. This response belongs in their Lesson 26 Student Guide Part 1 Question 2 and Question 3. For Question 2, students may want to compare data on the environmental impact of dairy to that of other industries, so you may allow students to include data sources from outside research.

**STUDENT SUPPORT**

If students are struggling with which media claim to select or how to assess the claim, encourage them to look back through the media claims they evaluated in the previous lessons. These previous claims were somewhat similar, which may help them evaluate a new claim in a new light.

After students have completed the task, you can use the Lesson 26 Part 1 Question 1 and Question 2 Task Rubrics to assess students' performance on this task. At the bottom, this rubric also contains guidance for how to support students in using a peer feedback protocol

and an activity to discuss and norm on what features of high-quality student responses look like. Use either or both of these to have students reflect on and improve their work should you decide that additional steps are needed for your class to achieve proficiency.

After returning their work to students, you can hold a reflective conversation about the validity of the media claims. Be sure to highlight to students that:

- Claim 14: While it is true that the meat and dairy industries do produce some greenhouse gases, their emissions relative to other major industries such as transit, electricity production, and manufacturing are relatively low in comparison.
- Claim 15: While it is true that dairy production, particularly clearing land to grow feed crops in monoculture, reduces the biodiversity of a sample of land, the claim does not mention the benefits of grazing over monocultured crops for biodiversity nor does it mention solutions the dairy system is trying to implement to improve its impacts on biodiversity.
- Overall: It is important to never take claims in the media at face value. Many claims are written in misleading manners and require readers to look deeper to find evidence to evaluate the claims made.

#### **CCSS SUPPORT**

**RST 9-10.9:** Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

During this work, students evaluate the media claims against what they have learned throughout this unit and note whether they find the claims to be accurate or inaccurate.