Could the American tradition of eating meat be hurting the earth? Raising animals and transporting meat creates almost one-fifth of the earth’s greenhouse gases. This is more than the greenhouse gases produced by cars, trucks, trains, and airplanes combined. In addition, almost half of the water used in the U.S. goes to raising livestock.

Most of the beef produced domestically is eaten by Americans. However, exports are also increasing as more countries integrate meat into their daily diets. As a result, the meat industry is thriving. Reducing meat consumption could damage an important domestic industry, hurting the economy and taking away precious jobs.

Some people choose another option. “Flexitarians” are vegetarians who eat meat occasionally. Flexitarians believe that a diet should be mostly plant-based, but that meat and fish can be healthy and responsible choices if consumed in moderation.

With all of the benefits of vegetarianism, should people continue to eat meat? Are tradition and industry more important than the environment and health benefits?

Questions for Classroom Discussion:
- What is a vegetarian?
- Why do people choose to eat a vegetarian diet?
- Why do people choose to eat meat?
- What are some concerns about the meat industry?
- Do you think eliminating meat would mean giving up an essential part of American culture?
USE THE FOCUS WORDS *and alternate parts of speech

**export** (noun) a good or service sent to another country for sale

*Sample Sentence:* Exports are increasing as people around the world add more meat into their daily diets.

*Turn and Talk:* Why might having a lot of exports be good for a country’s economy?

**export** (verb) to send something to another country, especially for sale

*Sample Sentence:* China exports many goods that are sold around the world.

*Turn and Talk:* What kind of transportation is needed to export large machines to far-away countries? (Machines are the U.S.’s number one export.)

**symbolic** (adjective) representative of something else, such as an idea

*Sample Sentence:* A huge roasted turkey is symbolic of Thanksgiving.

*Turn and Talk:* What is one thing that is symbolic of your city?

**domestic** (adjective) made in, done in, or otherwise related to one’s own country

*Sample Sentence:* Reducing meat consumption could damage an important domestic industry.

*Turn and Talk:* Why do some people try to buy domestic rather than foreign products?

**integrate** (verb) to combine or unite into a whole

*Sample Sentence:* Residents of more and more countries are integrating meat into their daily diets.

*Turn and Talk:* Describe some challenges that immigrants might face when integrating into U.S. society.

**efficient** (adjective) productive without wasting time, energy, or resources; effective

*Sample Sentence:* Nonetheless, a vegetarian diet is not a very efficient way for people to get enough protein, iron, and vitamin B12.

*Turn and Talk:* Do you think that you are becoming more or less efficient at studying for tests?
DO THE MATH

**Option 1:** Many Americans believe that a healthy diet *integrates* meat. After all, meat is an *efficient* source of calories and protein. Meat can also be a powerful symbol. For many Americans, a thick steak represents success, and hot dogs represent summertime baseball.

For many farmers and ranchers, meat production is also a way to earn a living. The U.S. *exports* billions of pounds of meat a year in addition to the billions of pounds sold in the *domestic* market for consumption. This table from beefusa.org shows the number of pounds of meat eaten by the average American during five different years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average meat consumption per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>200.4 lbs</td>
</tr>
<tr>
<td>1990</td>
<td>200.7 lbs</td>
</tr>
<tr>
<td>1995</td>
<td>207.7 lbs</td>
</tr>
<tr>
<td>2000</td>
<td>213.9 lbs</td>
</tr>
<tr>
<td>2005</td>
<td>220.2 lbs</td>
</tr>
</tbody>
</table>

How much more meat per year did the average American eat in 2005 than in 1985?

A. 0.2 pounds  
B. 0.8 pounds  
C. 19.2 pounds  
D. 19.8 pounds

**Option 2:** For vegetarians, meat can be *symbolic* of cruelty to animals. While eating meat is an *efficient* way to take in calories, most people get enough calories anyway. A vegetarian diet that *integrates* beans, nuts, and vitamin supplements can be just as healthy as a diet with meat. Domestically, about 3% of young people ages 8–18 are vegetarian.

If two young Americans ages 8–18 are selected at random, what are the chances that both of them are vegetarian?

\[
.03 \times .03 = .0009, \text{ or } .09\%
\]

**Discussion Question:** The U.S. produces billions of pounds of meat each year: some for *export*, and some to be eaten domestically. According to beefusa.org, most Americans have a diet that *integrates* over half a pound of meat a day. What will happen if more Americans become vegetarian? Which people might lose money and which people might earn more money? In order to feed people efficiently, how should the food industry change?
**THINK SCIENTIFICALLY**

Sasha, a student in Ms. Kahn’s class, is vegetarian. “I can integrate all the nutrients I need into my diet without eating meat,” she says, “so why should any animals be harmed?”

Jamal is not vegetarian, but has decided to eat less meat. Jamal claims, “Raising livestock for food is not an efficient use of our resources. Over 50% of the corn and soybeans grown in the world are fed to animals instead of hungry people! The United States does not just export products to other countries; we export our ideas too. We should set a good example by trying to eat less meat.”

Anthony disagrees with the other students. “The way we eat is symbolic of being American!” he says. “Eating meat has always been an important tradition in this country.”

Sasha says, “I don’t think that’s right. I heard that Americans used to eat much less meat than they do today. That means there are so many more animals killed for food than there used to be.”

“No way!” said Anthony. “I’ll look it up.”

Anthony checked data from the U.S. Census and the Humane Society to investigate eating patterns in the U.S. over time.

**Question:** Has the number of animals killed for food per person in the United States gone up over time?

**Hypothesis:** The number of animals killed for food per person in the United States has stayed about the same from 1950 to 2000.

**Procedure:**

2. Record the total population of the United States for each year listed.
3. For each year listed, calculate how many farm animals were killed for food per person.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Farm Animals Killed for Food in One Year in the U.S.</th>
<th>Total United States Population</th>
<th>Number of Farm Animals Killed for Food in One Year, Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>0.1 billion</td>
<td>152 million</td>
<td>less than 1 (about 0.7)</td>
</tr>
<tr>
<td>1960</td>
<td>1.8 billion</td>
<td>181 million</td>
<td>about 10</td>
</tr>
<tr>
<td>1970</td>
<td>3.2 billion</td>
<td>205 million</td>
<td>about 16</td>
</tr>
<tr>
<td>1980</td>
<td>4.5 billion</td>
<td>227 million</td>
<td>about 20</td>
</tr>
<tr>
<td>1990</td>
<td>6.4 billion</td>
<td>249 million</td>
<td>about 26</td>
</tr>
<tr>
<td>2000</td>
<td>8.9 billion</td>
<td>281 million</td>
<td>about 32</td>
</tr>
<tr>
<td>2010</td>
<td>9.2 billion</td>
<td>309 million</td>
<td>about 30</td>
</tr>
</tbody>
</table>

Complete Anthony’s table above. Do you notice a trend? If so, what is the trend?

*What would you predict the data to be this year? Do you have ideas about how you could find that data?*

The number of farm animals killed annually for food per person in the U.S. dramatically increased from 1950–2000 and slightly declined from 2000–2010.
DEBATE THE ISSUE

Pick one of these positions (or create your own).

☐ People should not eat meat.

OR

☐ People should include a limited amount of meat in their diets.

OR

☐ People should eat as much meat as they want.

OR

CREATE YOUR OWN

☐ __________________________

☐ __________________________

☐ __________________________

☐ __________________________

Box down a few notes on how to support your position during a discussion or debate.

☐ __________________________

☐ __________________________

☐ __________________________

☐ __________________________

Be a strong participant by using phrases like these:

“Can you show me evidence in the text that...”

“I believe that...”

“You make a good point, but have you considered...”

“I agree with you, but...”
TAKE A STAND

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

export | symbolic | domestic | integrate | efficient

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________


U.S. Census Bureau: http://www.census.gov/popest/data/historical/index.html


