

Dear George

Using census data to report on agriculture

Objective

Students will read from a letter written to George Washington and compose a modern-day reply based on current census data. Students will design brochures to promote selected agriculture commodities. Students will design surveys and use US Postal Service and email to correspond with students in other parts of the country and compare modes of modern communication.

Background

In 1791 President George Washington, received a letter from an Englishman named Arthur Young requesting information on land values, crops, yields, livestock prices, and taxes in the US. Young was an English agriculturalist who thought Washington was as good a farmer as he was a general. By personally conducting a mail survey and compiling the results, Washington was able to gather enough information to reply fully to his English correspondent. This was, in effect, the nation's first agricultural survey.

Between September 24 and November 18, 1791, Washington sent Young three letters that provided agricultural statistics on an area extending roughly 250 miles from north to south and 100 miles from east to west. The strip ran through an area which is today Pennsylvania, West Virginia, Maryland, Virginia, and the District of Columbia, where most of the young country's population lived at that time.

Washington's reports to Young reflect some of the same concerns farmers have today. He worried that prices weren't keeping up with the cost of raising crops. He worried that some farmers weren't good stewards of the land. He worried about the cost of transporting agricultural goods to markets and improving those routes.

Washington asked Congress to establish a National Board of Agriculture in 1776, but Congress rejected the idea at that time. The issue wasn't raised again until 1839, when Commissioner of Patents Henry Ellsworth persuaded Congress to designate \$1,000 from the Patent Office Fund for "collecting and distributing seeds, carrying out agricultural investigations, and procuring agricultural statistics."

In 1840, the first Census of Agriculture collected detailed agricultural information to provide the first nationwide inventory of agricultural production.

The US Department of Agriculture (USDA) was established by Abraham Lincoln in 1862, and its first crop report appeared in July, 1863. The National Agricultural Statistics Service (NASS) traces its roots all the way back to 1863, when USDA established a Division of Statistics.

Oklahoma Academic Standards

GRADE 6

Social Studies PALS—

1.A.1,3;B.4;C.7,8,9; 2.B.7,8,9
Social Studies Content— 1.2,4,5
English Language Arts— 1.R.1,3;
2.R.1,2,3; 4.R.1,3,5; 6.R.1,2,3;
7.R.1,2; 1.W.1,2; 3.W.2;
6.W.1,2,3,4; 7.W.1,2
Math— N.1.3; 3.1,3,4; 4.4

GRADE 7

Social Studies PALS—

1.A.3;B.4;C.7,8,9; 2.B.7,8,9
Social Studies Content— 1.2,5
English Language Arts—
1.R.1,3; 2.R.1,2,3; 4.R.1,3,5;
7.R.1,2; 1.W.1,2; 3.W.2;
6.W.1,2,3,4; 7.W.1,2
Math— N.2.3,5; A.2.2,3

GRADE 8

Social Studies PALS—

1.A.1;B.4,5;C.7;D.10;
2.A.2;B.4,6,7,8,9;C.10
Social Studies Content— 2.3a;
4.1b
English Language Arts—
1.R.1,3; 2.R.1,2,3; 4.R.1,3,5;
7.R.1,2; 1.W.1,2; 3.W.2;
6.W.1,2,3,4; 7.W.1,2

Materials

US Map

During the Civil War, USDA collected and distributed crop and livestock statistics to help farmers assess the value of the goods they produced. At that time, commodity buyers usually had more current and detailed market information than did farmers, a circumstance that often prevented farmers from getting a fair price for their goods.

Today NASS is responsible for conducting the Census of Agriculture. The Census of Agriculture is a complete accounting of agricultural production in the United States and is the only source of uniform, comprehensive agricultural data for every county in the nation. From 1840 to 1920 the Census of Agriculture was taken every 10 years. Since 1925 the census has been taken every five years, in the years ending in 2 and 7. In addition, NASS field offices in every state produce a wide variety of reports throughout the year, along with an annual report. The reports are used by producers, researchers, the news media, people involved in financial markets and many others. These reports are compiled only for the top agricultural commodities from a sampling of state producers contacted at random. In contrast, the census of agriculture reports on every agricultural commodity produced in the state, based on surveys collected from every producer.

English Language Arts

1. Read and discuss background and vocabulary.
 - Lead a discussion about the difference between the way information was shared in George Washington’s time (by letter) compared with the way we acquire information today.
 - Ask students how they would find the kind of information Arthur Young asked George Washington to provide.
2. Provide students with the excerpts from George Washington’s letters to Arthur Young and others included with this lesson.
 - Students will rewrite the excerpts in modern English.

Social Studies

1. Provide each student with the Census of Agriculture data included with this lesson and a copy of the modern-day version of the letter Arthur Young might have written to George Washington.
 - Students will use the data provided to compose a reply.
 - Students will include information about the following topics in their letters: land value, crops, yields, and livestock prices.
2. Divide students into groups.
 - Each group will select either a commodity or a state or region and use the census data to develop promotional brochures, posters, Power Point or other technology-based presentations.
3. Students will design surveys to gather information about their school.
 - Students will present the information to local audiences in

a variety of forms—charts, graphs, prose, oral presentation, technology-based presentation, etc.

4. Students will design surveys about agriculture in another state or country.
 - Make arrangements to connect with a classroom in another state or country.
 - Divide your class into two groups.
 - One group will use email to correspond with the other class while the other will use the US Postal Service.
 - Track responses on a map of the US or the world.
 - As a culminating activity, connect with the other class via Skype or FaceTime.
 - Students will discuss advantages and disadvantages of each method of communication.
5. Arthur Young thought George Washington “was as good a farmer as he was a general.” Students will research George Washington and write papers supporting or refuting this claim.
 - Students will list at least three facts to support the claim that Washington was a good farmer and at least three facts to support the claim that Washington was a good general.
 - Students will summarize the impact of General Washington’s key military leadership skills.George Washington was ahead of his time in many of his farming practices. Provide students a copy of George Washington’s farewell address to read.
 - Discuss his advice for the nation and the impact and consequences of his advice.
 - Lead students to discover that Washington mentioned agriculture in his farewell address.

Lesson adapted from: “Arthur Young and the President,” lesson plan from the National Agricultural Statistics Service, USDA, http://www.nass.usda.gov/education_&_outreach/Lesson_Plans/index.asp

Math

1. Students will complete the last column on the Farm Real Estate chart by figuring the percentage of change from 2014 to 2015 for each state and region.

Additional Reading

Adler, David A, *George Washington: An Illustrated Biography*, Holiday House, 2005.

Bial, Raymond, *Where Washington Walked*, Walker & Co., 2005.

Vocabulary

agriculture—the science or occupation of cultivating the soil, producing crops, and raising livestock

analyze—to study or find out the nature and relationship of the parts of

assess—to set a value on (as property) for tax purposes

bale—a large bundle of goods tightly tied for storing or shipping

bushel—any of various units of dry capacity

census—a counting of the population (as of a country, city, or town) and a gathering of related statistics done by a government every so often

comprehensive—including much or all

contemptible—the state of being despised

correspondent—one who communicates with another by letter

cwt—abbreviation for hundredweight, a unit of weight equal to 100 pounds

data—facts about something that can be used in calculating, reasoning, or planning

husbandry—wise management of resources

livestock—animals kept or raised; especially farm animals kept for use and profit

statistics—a branch of mathematics dealing with the collection and study of numerical data; also, a collection of such numerical data

survey—to gather information from or about

uniform—of the same form with others

yield—the amount or quantity produced or returned

Dear George

Use the Census of Agriculture data provided to compose a response to this letter.

June 30, 2016

Dear George,

It was nice to get your letter and to hear all about your school, your town and your friends. I loved the photos you sent of your family's camping trip. What a beautiful place!

It's always interesting to hear about life in your country. I hope I get to visit there sometime. I would also love for you to come visit me. As you know, my family has a farm, and when I am not in school, I am usually helping with that.

What is farming like in your country? What kinds of crops grow there? Are there some crops that your country produces more than any other? How much is produced in a year? What kind of livestock do you raise? How much does farm land cost? Is it more expensive in certain parts of the country? Does the price stay the same, or does it go up and down from one year to the next?

I know you have a big country and that agriculture must be different in different states. How is the agriculture in your state different from agriculture in other parts of the country? Is there one kind of crop that is grown in all the states? What about livestock? What crops and livestock are most common in your state?

As you can see, I have many questions. Thank you again for your letter. I look forward to hearing from you again.

Your Friend,

Art

Farm Real Estate: Average Value per Acre, by Region and State, 2011–2015

| REGION AND STATE | 2011 (dollars) | 2012 (dollars) | 2013 (dollars) | 2014 (dollars) | 2015 (dollars) | CHANGE 2014- 2015 (percent) |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------|
| NORTHEAST | 4,690 | 4,790 | 4,850 | 4,930 | 5,020 | |
| Connecticut | 11,600 | 11,200 | 11,100 | 11,200 | 11,300 | |
| Delaware | 8,140 | 8,150 | 8,170 | 8,180 | 8,180 | |
| Maine | 2,080 | 2,070 | 2,100 | 2,080 | 2,090 | |
| Maryland | 6,870 | 6,760 | 6,930 | 6,900 | 7,000 | |
| Massachusetts | 10,900 | 10,400 | 10,400 | 10,400 | 10,400 | |
| New Hampshire | 4,560 | 4,440 | 4,310 | 4,280 | 4,280 | |
| New Jersey | 12,800 | 12,300 | 12,800 | 12,800 | 13,000 | |
| New York | 2,450 | 2,650 | 2,600 | 2,700 | 3,000 | |
| Pennsylvania | 5,070 | 5,300 | 5,430 | 5,600 | 5,500 | |
| LAKE | 3,450 | 3,880 | 4,240 | 4,640 | 4,740 | |
| Michigan | 3,600 | 3,890 | 4,300 | 4,700 | 4,900 | |
| Minnesota | 3,160 | 3,740 | 4,300 | 4,700 | 4,900 | |
| Wisconsin | 3,880 | 4,110 | 4,100 | 4,400 | 4,700 | |
| CORN BELT | 4,460 | 5,190 | 5,880 | 6,370 | 6,350 | |
| Illinois | 5,390 | 6,210 | 7,100 | 7,520 | 7,500 | |
| Indiana | 5,070 | 5,840 | 6,400 | 6,950 | 7,150 | |
| Iowa | 5,410 | 6,530 | 7,700 | 8,500 | 8,000 | |
| Missouri | 2,420 | 2,710 | 2,850 | 3,100 | 3,350 | |
| Ohio | 4,160 | 4,640 | 5,100 | 5,550 | 5,750 | |
| NORTHERN PLAINS | 1,290 | 1,620 | 1,960 | 2,280 | 2,340 | |
| Kansas | 1,290 | 1,620 | 1,960 | 2,280 | 2,340 | |
| Nebraska | 1,840 | 2,420 | 2,800 | 3,120 | 3,050 | |
| North Dakota | 930 | 1,160 | 1,550 | 1,820 | 1,920 | |
| South Dakota | 1,090 | 1,330 | 1,690 | 2,070 | 2,320 | |
| APPALACHIAN | 3,520 | 3,530 | 3,610 | 3,690 | 3,730 | |
| Kentucky | 2,750 | 2,840 | 3,020 | 3,150 | 3,250 | |
| North Carolina | 2,750 | 2,840 | 3,020 | 3,150 | 3,250 | |
| Tennessee | 3,510 | 3,520 | 3,570 | 3,600 | 3,650 | |
| Virginia | 4,350 | 4,260 | 4,310 | 4,320 | 4,320 | |
| West Virginia | 2,580 | 2,540 | 2,550 | 2,560 | 2,600 | |
| SOUTHEAST | 3,610 | 3,530 | 3,590 | 3,630 | 3,670 | |
| Alabama | 2,340 | 2,390 | 2,500 | 2,600 | 2,630 | |
| Florida | 5,130 | 5,160 | 5,200 | 5,250 | 5,400 | |
| Georgia | 3,610 | 3,260 | 3,300 | 3,300 | 3,270 | |
| South Carolina | 2,980 | 3,010 | 2,980 | 3,010 | 3,010 | |
| DELTA | 2,300 | 2,440 | 2,520 | 2,640 | 2,780 | |
| Arkansas | 2,440 | 2,620 | 2,700 | 2,850 | 3,050 | |
| Louisiana | 2,200 | 2,400 | 2,550 | 2,670 | 2,800 | |
| SOUTHERN PLAINS | 1,580 | 1,620 | 1,630 | 1,790 | 1,900 | |
| Oklahoma | 1,280 | 1,370 | 1,450 | 1,580 | 1,730 | |
| Texas | 1,670 | 1,690 | 1,680 | 1,850 | 1,940 | |
| MOUNTAIN | 899 | 953 | 1,010 | 1,070 | 1,100 | |
| Arizona | 3,330 | 3,370 | 3,500 | 3,740 | 3,780 | |
| Colorado | 3,330 | 3,370 | 3,500 | 3,740 | 3,780 | |
| Idaho | 2,060 | 2,140 | 2,220 | 2,360 | 2,470 | |
| Montana | 710 | 760 | 790 | 860 | 890 | |
| Nevada | 830 | 980 | 1,000 | 1,000 | 1,000 | |
| New Mexico | 410 | 460 | 500 | 480 | 480 | |
| Utah | 1,510 | 1,730 | 1,850 | 1,800 | 1,810 | |
| Wyoming | 400 | 490 | 560 | 520 | 510 | |
| PACIFIC | 3,280 | 3,660 | 3,970 | 4,010 | 4,050 | |
| California | 5,360 | 3,960 | 6,440 | 6,600 | 6,700 | |
| Oregon | 1,470 | 1,720 | 1,900 | 1,800 | 1,780 | |
| Washington | 1,720 | 1,850 | 2,020 | 2,000 | 2,030 | |
| UNITED STATES | 2,300 | 2,520 | 2,730 | 2,950 | 3,020 | |

Source: Land Values 2015 Summary (August 2015), USDA, National Agricultural Statistics Service, <http://www.usda.gov/nass/PUBS/TODAYRPT/land0815.pdf>

Crop Summary: Production, United States, 2015

| <u>Crop</u> | <u>Unit</u> | <u>2015</u> |
|--|---------------|-------------|
| GRAINS & HAY | | |
| Corn for Silage | 1,000 tons | 126,894 |
| Sorghum for Silage | 1,000 tons | 4,475 |
| Oats | 1,000 bushels | 89,535 |
| Barley | 1,000 bushels | 214,297 |
| All Wheat | 1,000 bushels | 2,051,752 |
| Rice | 1,000 cwt | 192,343 |
| Rye | 1,000 bushels | 11,496 |
| Proso Millet | 1,000 bushels | 14,159 |
| All Hay | 1,000 tons | 134,388 |
| OILSEEDS | | |
| Peanuts | 1,000 pounds | 6,213,790 |
| Canola | 1,000 pounds | 2,875,010 |
| Sunflower | 1,000 pounds | 2,923,730 |
| Soybeans | 1,000 bushels | 3,929,885 |
| Flaxseed | 1,000 bushels | 10,095 |
| Safflower | 1,000 pounds | 214,251 |
| Rapeseed | 1,000 pounds | 1,520 |
| Cottonseed | 1,000 tons | 4,153 |
| Mustard | 1,000 pounds | 26,927 |
| COTTON, TOBACCO AND SUGAR CROPS | | |
| Cotton | 1,000 bales | 12,943 |
| Tobacco | 1,000 pounds | 711,236 |
| Sugarbeet | 1,000 tons | 35,278 |
| Sugar cane | 1,000 tons | 32,549 |
| POTATOES AND MISC. | | |
| Potatoes | 1,000 cwt | 440,498 |
| Sweet potato | 1,000 cwt | 31,016 |
| Hops | 1,000 pounds | 1,807 |
| Peppermint oil | 1,000 pounds | 5,882 |
| Spearmint oil | 1,000 pounds | 3,070 |
| Maple Syrup | 1,000 gallons | 3,414 |
| Taro | 1,000 pounds | 3,502 |
| DRY PEAS, BEANS AND LENTILS | | |
| Dry edible beans | 1,000 cwt | 30,121 |
| Lentils | 1,000 cwt | 5,276 |
| Wrinkled seed peas | 1,000 cwt | 384 |
| Dry edible peas | 1,000 cwt | 18,283 |
| Austrian Winter Peas | 1,000 cwt | 260 |

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.

Livestock: Total Inventory by State, 2014

1,000 head

| | Sheep and Lambs | Hog and Pigs | Meat Goats | Cattle and calves |
|----------------|-----------------|--------------|------------|-------------------|
| Alabama | | 110 | 50 | 1,270 |
| Alaska | | 1 | | 10 |
| Arizona | 150 | 139 | 25 | 920 |
| Arkansas | | 115 | 38 | 1,640 |
| California | 590 | 110 | 85 | 5,250 |
| Colorado | 365 | 700 | 22 | 2,550 |
| Connecticut | | 3 | | 47 |
| Delaware | | 4 | | 16 |
| Florida | | 17 | 37 | 1,670 |
| Georgia | | 155 | 58 | 1,040 |
| Hawaii | | 9 | 11 | 133 |
| Idaho | 250 | | 14 | 2,240 |
| Illinois | 56 | 4,700 | 18 | 1,130 |
| Indiana | 50 | 3,700 | 31 | 860 |
| Iowa | 155 | 21,300 | 25 | 3,800 |
| Kansas | 75 | 1,840 | 37 | 5,800 |
| Kentucky | 49 | 340 | 58 | 2,110 |
| Louisiana | | 8 | 19 | 790 |
| Maine | | 5 | | 85 |
| Maryland | | 21 | 12 | 182 |
| Massachusetts | | 9 | | 39 |
| Michigan | 81 | 1,170 | 17 | 1,130 |
| Minnesota | 135 | 8,100 | 23 | 2,300 |
| Mississippi | | 575 | 19 | 930 |
| Missouri | 83 | 2,850 | 85 | 3,850 |
| Montana | 220 | 176 | 8 | 2,550 |
| Nebraska | 76 | 3,200 | 20 | 6,250 |
| Nevada | 80 | 2 | 7 | 460 |
| New Hampshire | | 4 | | 32 |
| New Jersey | | 10 | 6 | 27 |
| New Mexico | 81 | 1 | 20 | 1,310 |
| New York | 75 | 70 | 22 | 1,450 |
| North Carolina | 27 | 8,800 | 45 | 810 |
| North Dakota | 66 | 140 | 3 | 1,750 |
| Ohio | 117 | 2,230 | 47 | 1,250 |
| Oklahoma | 53 | 2,120 | 75 | 4,300 |
| Oregon | 195 | 9 | 23 | 1,280 |
| Pennsylvania | 94 | 1,140 | 39 | 1,610 |
| Rhode Island | | 2 | | 5 |
| South Carolina | | 255 | 36 | 335 |
| South Dakota | 270 | 1,270 | 12 | 3,700 |
| Tennessee | 39 | 210 | 110 | 1,760 |
| Texas | 730 | 810 | 810 | 11,100 |
| Utah | 280 | 810 | 11 | 810 |
| Vermont | | 4 | | 260 |
| Virginia | 83 | 280 | 45 | 1,510 |
| Washington | 55 | | 24 | 1,110 |
| West Virginia | 32 | 4 | 19 | 385 |
| Wisconsin | 83 | 310 | 22 | 3,400 |
| Wyoming | 355 | 83 | 8 | 1,270 |
| United States | 5,245 | 67,776 | 2,105 | 88,526 |

Excerpts from George Washington's Letters About Agriculture

Long before cell phones, email and social media, people relied heavily on letters for sharing all kinds of information. The following are quotes from letters George Washington wrote to an English agriculturalist, Arthur Young, and others. Read the quotes, and then rewrite them in modern English, as though you were writing them to a friend today. Try to guess the meaning of unfamiliar words by reading them in context. Pay attention to punctuation, capitalization and spelling that is different from what is considered correct today. Circle examples of capitalized words or punctuation that would be considered incorrect today.

1. I have a prospect of introducing into this Country a very excellent race of animals also, by means of the liberality of the King of Spain. One of the Jacks which he was pleased to present to me (the other perished at sea) is about 15 hands high, his body and Limbs very large in proportion to his height; and the Mules which I have had from him appear to be extremely well formed for Service. I have likewise a Jack and two Jennets from Malta, of a very good size, which the Marquis de la Fayette sent to me. The Spanish Jack seems calculated to breed for heavy, slow draught; and the other for the Saddle or lighter carriages. From these, altogether, I hope to secure a race of extraordinary goodness, which will stock the Country. Their longevity and cheap keeping will be circumstances much in their favor. I am convinced, from the little experiments I have made with ordinary Mules, (which perform as much labor, with vastly less feeding than horses) that those of a superior quality will be of the best cattle we can employ for the harness. And indeed, in a few years, I intend to drive no other in my carriage: having appropriated for the sole purpose of breeding them, upwards of 20 of my best mares.

George Washington
(Letter to Arthur Young, December 4, 1788)

2. . . . Of hogs many, but as these run pretty much at large in the Woodland (which is all under fence) the number is uncertain

George Washington
(Letter to Arthur Young, December 12, 1793)

3. Every improvement in husbandry should be gratefully received and peculiarly fostered in this Country, not only as promoting the interests and lessening the labour of the farmer, but as advancing our respectability in a national point of view; for in the present State of America, our welfare and prosperity depend upon the cultivation of our lands and turning the produce of them to the best advantage.

George Washington
(Letter to Samuel Chamberlain, April 3, 1788)

4. When I speak of a knowing farmer, I mean one who understands the best course of crops; how to plough, to sow, to mow, to hedge, to Ditch and above all, Midas like, one who can convert everything he touches into manure, as the first transmutation towards Gold; in a word one who can bring worn out and gullied lands into good tilth in the shortest time.

George Washington
(Letter to George William Fairfax, June 30, 1785)

5. To tell a farmer. . . that his Cattle & ca. Ought to be regularly penned in summer and secured from bad weather in winter, and the utmost attention paid to the making of manure for the improvement of his fields at both seasons; that his oxen should be well attended to, and kept in good and fit condition, thereby enabling them to perform the labor which they must undergo; to remind him of these things would, I say, be only observing what every Farmer must be thoroughly sensible of his duty enjoins...

George Washington
(Letter to William Pearce, September 23, 1793)

6. I think it would be no unsatisfactory experiment to fat one bullock altogether with Potatoes; another, altogether with Indian meal; and third with a mixture of both: keeping an exact account of the time they are fattening, and what is eaten of each, and of hay, by the different steers; that a judgement may be formed of the best and least expensive mode of stall feeding beef for market, or for my own use.

George Washington
(Letter to William Pearce, December 7, 1794)

7. No wheat that has ever yet fallen under my observation, exceeds the White which some years ago I cultivated extensively; but which, from inattention during my absence from home of almost nine years has got mixed or degenerated as scarcely to retain any of its original characteristic properties. But if the march of the Hessian Fly, Southerly, cannot be arrested. . .this White Wheat must yield the palm to the yellow bearded, which alone, it seems, is able to resist the depredations of that destructive insect. This makes your present of it to me more valuable. It shall be cultivated with care.

George Washington
(Letter to John Beale Bordley, August 17, 1788)

Source: The George Washington Papers at the Library of Congress, 1741-1799