

ART TO ZOO

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200 Years and Counting: How The U.S. Census Tracks Social Trends



Herman Hollerith's electric tabulating machine, initially used in the 1890 count, was a dramatic step in processing census returns. National Museum of American History, Smithsonian Institution

You're about to be counted!

Once every 10 years, the U.S. government carries out a population census; 1990 marks the 200th year since the first census.

The Constitution calls for a census to be carried out once a decade to provide updated population figures to use in determining the number of seats each state should have in the House of Representatives.

Over its 200-year history, however, the census has grown into far more than a simple head count. It has become a means of gathering a range of basic demographic information—about a population that is now about 66 times bigger than it was in 1790.

Collecting, processing, and disseminating this much information is a formidable and costly undertaking, but up-to-date population facts are essential to planning.

The census, which solicits a response from every household in the United States, provides such facts on a scale no other data collection operation in the country can match. The Bureau of the Census also conducts other, smaller *sample surveys** all the time, updating the information from the decennial census, and gathering data in other areas (such as in education and employment).

It is on the decennial census that this ART TO ZOO

focuses. The Lesson Plan loosely follows the order of the census process: your students begin by learning how the data are collected and move on to learn how the data are used. As they do so, they will become familiar with some key demographic trends. They will also be writing, filling out forms, analyzing data, and interpreting information from graphs, tables, and other information displays.

The children will like the idea that everyone counts equally in the census. Emphasize that each person's answers are just as important to the census as every other person's—your students' answers are just as important as the President's—because the goal of the census is not to describe individual achievement, but to track the trends that individuals add up to—what will come in the future to be called our history, the social patterns that characterize our era.

Lesson Plan

Step 1: Introducing the Census—the Population Map

Give each of the children a copy of the Pull-Out Page and ask them to look at the Population Map. Make sure they all recognize that it shows the United States.

Then explain that the map shows how the country would look if it were nighttime and every household turned on one light.** Explain that the people who usually live together in a housing unit, whether or not they are related, constitute a household.

Ask: Where do a lot of people live? Where do very few live? Can you think of why they may be distributed the way they are? Can you find where *we* are? Are we in an area with many people?

Now ask: Would it really be possible to see these lights? Would every household ever really turn on just one light, all at the same time?

Of course not. Then how did the people who made this map know how many lights there should be and where they should go?

... You can get a hint by seeing who made the Population Map. (The credit line next to the picture gives this information.) Do you know who they are? Do you know what the census is?

When the children have shared what they know, give them a few more basics about what the census is and how the Bureau of the Census gets its information (the opening of this ART TO ZOO gives a starter).

* A sample survey is a statistical study in which conclusions are drawn about a whole population, based on data on only some members (the sample) of that population. Most surveys you read about are sample surveys.

For their results to be dependable, the sample must be well selected. Even a good gravy may contain a single lump. If that's what you get when you take a taste, your sample is misleading. This can happen in a survey as well as in a kitchen.

The decennial census actually contains both a complete census and a sample survey. Most households receive the so-called *short form* of the census questionnaire (the form reproduced in this ART TO ZOO). But the remaining 17.7 million households receive the *long form*, which contains all the short form questions but also contains an additional group of questions that appear only on long forms.

In other words, the short form data that everyone contributes constitute a complete census of the U.S. population. The data that come from the questions that are only on the long form constitute a (large) sample survey.

** This is a simplification. Each dot on the map actually represents 1,000 lights, not a single one. You could explain this to the children by saying that every household has turned on a light, but that it takes one thousand lights to create enough brightness to show up from so far away.

Continued on page 2



Finally, ask: What is the date on the map? How long ago was that? Are there exactly the same number of people now as then? Why not? Is everyone living in the same place now as then?

How can the 1990 census help update this map?

Step 2: Collecting Census Data

Give each student a copy of the census short form reproduced on page 3, and tell the children that these are the questions that everyone in the United States is supposed to answer. Have them read through the form and ask about whatever they don't understand.

Then give them each a copy of "Meet the Johnsons" (in the box below), and tell them: This is a description of an imaginary family, the Johnsons. Read the article through. Then pretend you are Leonard Johnson, the family member who is going to fill in the short form, and fill it in.

The article gives all the information the children will need. Point out that it also gives information they won't need. An important part of their job is to pick out the required facts.

Keeping Secrets

The law requires people to answer census questions, and the same law protects the confidentiality of their answers. Bureau of the Census employees are not allowed to reveal census information about any individual or family. What you say on the census form will remain secret for 72 years—until your students are old enough to be great-great-grandparents!

This confidentiality is very important. If people thought that other individuals, organizations, or government agencies could learn what they answered, many might hesitate to answer honestly . . . or to answer at all.

When people don't answer, *undercounts* occur: the census count is smaller than the actual population. Since census counts are often the basis of allocating funds and services, an undercount means that people will get less than they are entitled to. An undercount means people will lose out.

When the kids have finished, go over their answers and give them plenty of time to discuss the process.

Finally, remind them that April 1, 1990, is Census Day: their own families too will be answering these questions (and those who get the long form will be answering additional ones as well). Have the children take the completed Johnson forms home and compare this imaginary family's answers with those that their own family will be giving on the real form: ask each child to list 3 ways that their own family's answers will be different, and 3 ways (if possible) that they will be the same. The children's answers should be *categories* (not specifics like names or age of individuals, which will, of course, vary). For example: Is their household a different size? Do they rent their home? Is their race or ethnic background different? Are there people who are not relatives living in their household?

Be flexible in the answers you accept: the point of this activity is simply to have the children connect the census with their own lives.

Be sure the kids bring their Johnson forms back to class. They will be using them again in Step 3.

Step 3: Tabulating the Data

When the Johnsons have completed the form, they will mail it in to the Bureau of the Census.

High-speed cameras there will microfilm their questionnaire, and another machine will record their fill-in-the-dot answers on computer tape.

All the millions and millions of forms from households around the country will go through the same process. Altogether, the information from the 1980 census produced about 5,000 miles of microfilm; the 1990 one is likely to generate even more. And even though most census information is collected by mail, the work of almost half a million Census employees (most of them hired on a temporary basis) will still be required to complete the 1990 census. Many of these census workers will be going to the homes of people who need help to answer the census questionnaires correctly.

The Bureau of the Census has to submit the population count to the President not more than 9 months after Census Day. The President will pass this infor-

mation on to the House of Representatives for use in determining the number of seats each state will have there. The states will also be using the census data to draw legislative and congressional district boundaries.

Several years will pass, however, before the Bureau of the Census has finished analyzing all these data and making them available to the public (in the form of computer tapes, reports, books, etc.).

These publications will contain many tables, graphs, charts, and other displays, because these are ways of organizing the data so you can see trends.

When you have explained this, have the children turn to the Pull-Out Page and look at the census information* displayed there.

First, check that they remember what these ways of displaying statistical information are called. Ask: Which is a table . . . a bar graph . . . a pie chart . . . a line graph?

Then check how well the children remember how to read information off these different kinds of displays by asking them very specific questions like the following (make up as many additional questions as you think your students need):

1. What was the U.S. population in 1950? When was the population approximately 30 million people?
2. When did 40 percent of the people in the United States live in cities? What percentage of the population lived in cities in 1980?
3. What was the median age in 1860? In 1920?
4. What was the average number of people per household in 1880? In 1930?
5. What was the number of divorces per 1,000 people in 1910? In 1980?
6. What percentage of children live with both parents? What percentage live with their mothers only?
7. What proportion of the U.S. population is Black . . . Hispanic . . . white? Out of a hundred people how many, on average, will be Black . . . Hispanic . . . white?
8. In what region is the population growing the fastest? Where is it growing the most slowly? How fast is it growing in your region?
9. What was the most common kind of housing unit in 1980? What was the least common?

● **Where do the Johnsons fit?** The information displays that the children have been looking at summarize what millions and millions of individual people reported about their lives. . . . Have the children finish this step by thinking about this connection between statistics and actual people—by writing under each display a sentence that describes Rebecca Johnson in terms of the display. Under figure 1, for example, they might write "Rebecca Johnson was one of the people living in the United States in 1990." Or under figure 4, "Rebecca Johnson's household is larger than the national average."

When the children have finished practicing reading-specific information off the displays, have them do the Pull-Out Page match-ups, which encourage them to focus on the meaning of each display *as a whole*.

Continued on page 4



* All the Pull-Out Page displays are based on Bureau of the Census information, but they include data from other surveys as well as from the decennial census.

To understand figure 3, your students need to know what a *median* is. This very common statistical concept is simple to understand: it is the middle value of a ranked group of values.

The children will grasp this easily through a concrete description: Imagine a group of numbers. Line them up in order, from the smallest to the largest. *The middle one is the median.* This is true no matter how large the group is and no matter what the numbers represent.

For example, if the numbers are 2, 6, 12, 14, and 22 . . . then the median is 12. (If the group consists of an *even* number of values, then the median is the average of the two middle ones. For example, if the group consists of 2, 6, 12, 14, 15, and 22 . . . then the median is $(12 + 14) \div 2 = 13$.)

You may want the children to practice with a couple of real examples. For instance, have a group of kids line up in order of height. Then ask their classmates to point out which child's height is the median for the line-up.

Meet the Johnsons

One of the millions of families around the United States who are filling out the 1990 census short form are the Johnsons. They live at 4192 Hollerith Way, N.W., in Washington, D.C., in a row house with 7 rooms and a small back yard. They bought this house six years ago, and would guess that it is now worth just over \$82,000. The house is mortgaged. There are five people in the Johnson household, all Black. They are (in order of age):

● **Ella G. Mason**, 66 years old, born 1924, Jacqueline Johnson's mother. Has lived in the household since her husband died 6 years ago. Does volunteer work at her church.

● **Leonard F. Johnson**, 41 years old, born 1949, is a youth worker.

● **Jacqueline A. Johnson**, 38 years old, born 1952, Leonard's wife, is a nurse in a local hospital.

● **Rebecca M. Johnson**, 11 years old, born 1979, Leonard and Jacqueline's daughter. Is in the 6th grade, loves animals, wants to be a veterinarian.

● **Jeremy ("Chip") L. Johnson**, 9 years old, born 1981. Rebecca's brother. Is in the 4th grade, favorite hobby is magic tricks, wants to be a television sportscaster.



Ella G. Mason

Leonard F. Johnson



Jeremy Johnson



Jacqueline Johnson (left), Rebecca Johnson (right), and friend (center).

Facsimile of the 1990 Census Questionnaire: Basic Form

The 1990 census must count every person at his or her "usual residence." This means the place where the person lives and sleeps most of the time.

List on the numbered lines below the name of each person living here on Sunday, April 1, including all persons staying here who have no other home. If EVERYONE at this address is staying here temporarily and usually lives somewhere else, follow the instructions given in question 1b below.

- Include**
- Everyone who usually lives here such as family members, housemates and roommates, foster children, roomers, boarders, and live-in employees
 - Persons who are temporarily away on a business trip, on vacation, or in a general hospital
 - College students who stay here while attending college
 - Persons in the Armed Forces who live here
 - Newborn babies still in the hospital
 - Children in boarding schools below the college level
 - Persons who stay here most of the week while working even if they have a home somewhere else
 - Persons with no other home who are staying here on April 1
- Do NOT include**
- Persons who usually live somewhere else
 - Persons who are away in an institution such as a prison, mental hospital, or a nursing home
 - College students who live somewhere else while attending college
 - Persons in the Armed Forces who live somewhere else
 - Persons who stay somewhere else most of the week while working

Print last name, first name, and middle initial for each person. Begin on line 1 with the household member (or one of the household members) in whose name this house or apartment is owned, being bought, or rented. If there is no such person, start on line 1 with any adult household member.

LAST	FIRST	INITIAL	LAST	FIRST	INITIAL
1			7		
2			8		
3			9		
4			10		
5			11		
6			12		

If EVERYONE is staying here only temporarily and usually lives somewhere else, list the name of each person on the numbered lines above, fill this circle and print their usual address below. DO NOT PRINT THE ADDRESS LISTED ON THE FRONT COVER.

House number _____ Street or road/Rural route and box number _____ Apartment number _____
 City _____ State _____ ZIP Code _____
 County or foreign country _____ Names of nearest intersecting streets or roads _____

QUESTIONS ASKED OF ALL HOUSEHOLDS

NOW PLEASE ANSWER QUESTIONS H1a-H26 FOR YOUR HOUSEHOLD

H1a. Did you leave anyone out of your list of persons for Question 1a on page 1 because you were not sure if the person should be listed — for example, someone temporarily away on a business trip or vacation, a newborn baby still in the hospital, or a person who stays here once in a while and has no other home?
 Yes, please print the name(s) and reason(s). _____ No

H1b. Did you include anyone in your list of persons for Question 1a on page 1 even though you were not sure that the person should be listed — for example, a visitor who is staying here temporarily or a person who usually lives somewhere else?
 Yes, please print the name(s) and reason(s). _____ No

H2. Which best describes this building? Include all apartments, flats, etc., even if vacant.
 A mobile home or trailer
 A one-family house detached from any other house
 A one-family house attached to one or more houses
 A building with 2 apartments
 A building with 3 or 4 apartments
 A building with 5 to 9 apartments
 A building with 10 to 19 apartments
 A building with 20 to 49 apartments
 A building with 50 or more apartments
 Other

H3. How many rooms do you have in this house or apartment? Do NOT count bathrooms, porches, balconies, foyers, halls, or half-rooms.
 1 room 2 rooms 3 rooms 4 rooms 5 rooms 6 rooms 7 rooms 8 rooms 9 or more rooms

H4. Is this house or apartment —
 Owned by you or someone in this household with a mortgage or loan?
 Owned by you or someone in this household free and clear (without a mortgage)?
 Rented for cash rent?
 Occupied without payment of cash rent?

H5a. Is this house on ten or more acres?
 Yes No

b. Is there a business (such as a store or barber shop) or a medical office on this property?
 Yes No

Answer only if you or someone in this household OWNS OR IS BUYING this house or apartment —
H6. What is the value of this property; that is, how much do you think this house and lot or condominium unit would sell for if it were for sale?
 Less than \$10,000 \$10,000 to \$14,999 \$15,000 to \$19,999 \$20,000 to \$24,999 \$25,000 to \$29,999 \$30,000 to \$34,999 \$35,000 to \$39,999 \$40,000 to \$44,999 \$45,000 to \$49,999 \$50,000 to \$54,999 \$55,000 to \$59,999 \$60,000 to \$64,999 \$65,000 to \$69,999 \$70,000 to \$74,999 \$75,000 to \$79,999 \$80,000 to \$89,999 \$90,000 to \$99,999 \$100,000 to \$124,999 \$125,000 to \$149,999 \$150,000 to \$174,999 \$175,000 to \$199,999 \$200,000 to \$249,999 \$250,000 to \$299,999 \$300,000 to \$399,999 \$400,000 to \$499,999 \$500,000 or more

Answer only if you PAY RENT for this house or apartment —
H7a. What is the monthly rent?
 Less than \$80 \$80 to \$99 \$100 to \$124 \$125 to \$149 \$150 to \$174 \$175 to \$199 \$200 to \$224 \$225 to \$249 \$250 to \$274 \$275 to \$299 \$300 to \$324 \$325 to \$349 \$350 to \$374 \$375 to \$399 \$400 to \$424 \$425 to \$449 \$450 to \$474 \$475 to \$499 \$500 to \$524 \$525 to \$549 \$550 to \$599 \$600 to \$649 \$650 to \$699 \$700 to \$749 \$750 to \$999 \$1,000 or more

b. Does the monthly rent include any meals?
 Yes No

	PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5	PERSON 6	PERSON 7	
Last name	_____	_____	_____	_____	_____	_____	_____	
First name	_____	_____	_____	_____	_____	_____	_____	
Middle initial	_____	_____	_____	_____	_____	_____	_____	
Relationship	START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented. If there is no such person, start in this column with any adult household member.	If a RELATIVE of Person 1: <input type="radio"/> Husband/wife <input type="radio"/> Brother/sister <input type="radio"/> Natural-born or adopted son/daughter <input type="radio"/> Grandchild <input type="radio"/> Other relative <input type="radio"/> Stepson/stepdaughter If NOT RELATED to Person 1: <input type="radio"/> Roomer, boarder, or foster child <input type="radio"/> Unmarried partner <input type="radio"/> Housemate, roommate <input type="radio"/> Other nonrelative	START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented. If there is no such person, start in this column with any adult household member.	If a RELATIVE of Person 1: <input type="radio"/> Husband/wife <input type="radio"/> Brother/sister <input type="radio"/> Natural-born or adopted son/daughter <input type="radio"/> Grandchild <input type="radio"/> Other relative <input type="radio"/> Stepson/stepdaughter If NOT RELATED to Person 1: <input type="radio"/> Roomer, boarder, or foster child <input type="radio"/> Unmarried partner <input type="radio"/> Housemate, roommate <input type="radio"/> Other nonrelative	START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented. If there is no such person, start in this column with any adult household member.	If a RELATIVE of Person 1: <input type="radio"/> Husband/wife <input type="radio"/> Brother/sister <input type="radio"/> Natural-born or adopted son/daughter <input type="radio"/> Grandchild <input type="radio"/> Other relative <input type="radio"/> Stepson/stepdaughter If NOT RELATED to Person 1: <input type="radio"/> Roomer, boarder, or foster child <input type="radio"/> Unmarried partner <input type="radio"/> Housemate, roommate <input type="radio"/> Other nonrelative	START in this column with the household member (or one of the members) in whose name the home is owned, being bought, or rented. If there is no such person, start in this column with any adult household member.	
Sex	<input type="radio"/> Male <input type="radio"/> Female							
Race	<input type="radio"/> White <input type="radio"/> Black or Negro <input type="radio"/> Indian (Amer.) (Print the name of the enrolled or principal tribe.) <input type="radio"/> Eskimo <input type="radio"/> Aleut <input type="radio"/> Asian or Pacific Islander (API) <input type="radio"/> Chinese <input type="radio"/> Japanese <input type="radio"/> Filipino <input type="radio"/> Asian Indian <input type="radio"/> Hawaiian <input type="radio"/> Samoan <input type="radio"/> Korean <input type="radio"/> Guamanian <input type="radio"/> Vietnamese <input type="radio"/> Other API <input type="radio"/> Other race (Print race)	<input type="radio"/> White <input type="radio"/> Black or Negro <input type="radio"/> Indian (Amer.) 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Age	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	a. Age _____ b. Year of birth _____	
Marital status	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	<input type="radio"/> Now married <input type="radio"/> Separated <input type="radio"/> Widowed <input type="radio"/> Never married <input type="radio"/> Divorced	
Spanish/Hispanic origin	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)	<input type="radio"/> No (not Spanish/Hispanic) <input type="radio"/> Yes, Mexican, Mexican-Am., Chicano <input type="radio"/> Yes, Puerto Rican <input type="radio"/> Yes, Cuban <input type="radio"/> Yes, other Spanish/Hispanic (Print one group, for example: Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.)
FOR CENSUS USE	<input type="radio"/>							



Step 4: Using Census Data

Ask the children to think now of all the millions and millions of bits of information that the census collects. Each time someone fills in a circle on the census form, she is creating another bit.

Having all these bits is a little like having millions of blocks; you can pick out the kinds you want, and build them into whatever shapes you want. When people want to answer a question, they can pick out just those bits of census information that help, and combine them in whatever way is useful. . . . For example, if someone wants to find out how many Black people own their homes, they can look just at those people who identified themselves as Black, and see how they answered the question about home ownership.

Of course, it's computers that make it possible to do this with a collection of data the size of the census.

People got the numbers for the Pull-Out displays in this way. These displays give general information like the country's total population. But census data is also put together for much smaller areas—for states, counties, towns, even for neighborhoods—so people can use this data to plan for the whole country . . . or to see what's happening a few blocks from home.

Have your students think about this by inventing questions that could be answered by the right bits of information from the census short form. They can look at their copies of the form as they do this.

These instructions in the abstract may sound confusing, but a few examples (with whatever accompanying explanations seem necessary) should get the children going. For instance: How many people live in Rhode Island? How many people in Nebraska own their own homes? How many Hispanic children live in El Paso? How many elderly people pay rents of over \$500 a month?

After you have given enough examples so the children understand what to do, give them plenty of time to create examples of their own—perhaps out loud at first, and then in writing as homework.

Later, point out that they can use census data from other years to compare current situations with past ones: When was the population half as large as it is now? How many women over 25 have never been married compared to 20 years ago? and so on.

This activity can be done with simple examples or with more complicated ones (involving percentages, for example), depending on the level of sophistication of your class.

• Finally, have the kids think of these kinds of combinations from the users' points of view. Which question or questions from the census short form would be helpful to the following users? (Carry out this activity orally in class. Give the hints if the children need them.)

—A state is deciding where its funding for bilingual (Spanish-English) education should be spent. (*Hint: Who uses this kind of program?*)

—The Boy Scouts are trying to decide where to start new troops. (*Hint: Who joins Scout troops?*)

—A church is deciding where to locate its senior citizen center. (*Hint: Who uses a senior center?*)

—A government agency is deciding where to fund programs that help people repair run-down houses. (*Hint: How much money is run-down housing usually worth?*)

—A Korean-language newspaper is deciding where to locate. (*Hint: Who will its readers be?*)

—A city is figuring out in what neighborhood to build a new playground. (*Hint: Who uses playgrounds?*)

—A young couple is deciding in which part of town to look for a reasonably priced apartment. (*Hint: What question tells you about rental costs?*)

—A city government has to decide which public library branch should house its biggest collection of large-print books for grown-ups. (*Hint: At what age are people most likely to have trouble reading regular print?*)

—A school district is trying to figure out whether more elementary schools are going to be needed 10 years from now. (*Hint: What kind of people are likely to have school-age children in 10 years?*)

Step 5: The Population Map Again — The Census is You . . . and You . . . and You . . .

A simple and fun way to conclude is to have the children make their Population Map personal. First have the children cut out and mount the map, so it has a border around it and space for writing under it.

Then say: Use a small colored sticker to mark each community where you know someone (or several people). Number the stickers and provide a key at the bottom of the page. The key should give the name of the community and of the person (or people) you know there. Do this as homework and ask your parents to help you think of as many people as possible.

The next day, ask the children to total the number of people in all the households on their maps. Write the totals on the board and have the children figure out a grand total for the class—they will be surprised at the number of people in the United States that the class has some connection with.

Older children will have fun figuring out what fraction of the total population (expected to be about 250 million in 1990) their class knows.

Multicultural Approaches to Teaching Music

A symposium to help teachers meet the challenge of cultural diversity in their classrooms will be held March 26–28 in Washington, D.C. Sessions on African-American, Hispanic-American, Asian-American, and Native American music will be led by an ethnomusicologist, performers, and an experienced music educator.

The symposium is offered by the Music Educators National Conference in cooperation with the Smithsonian's Office of Folklife Programs, the Society for Ethnomusicology, and MENC's Society for General Music. To register call toll free, 1-800-525-0930. For more information write Multicultural Symposium, MENC, 1902 Association Drive, Reston, VA 22091, or call 703-860-4000.

ART TO ZOO brings news from the Smithsonian Institution to teachers of grades three through eight. The purpose is to help you use museums, parks, libraries, zoos, and many other resources within your community to open up learning opportunities for your students.

Our reason for producing a publication dedicated to promoting the use of community resources among students and teachers nationally stems from a fundamental belief, shared by all of us here at the Smithsonian, in the power of objects. Working as we do with a vast collection of national treasures that literally contain the spectrum from "art" to "zoo," we believe that objects (be they works of art, natural history specimens, historical artifacts, or live animals) have a tremendous power to educate. We maintain that it is equally important for students to learn to use objects as research tools as it is for them to learn to use words and numbers—and you can find objects close at hand, by drawing on the resources of your own community.

Our idea, then, in producing ART TO ZOO is to share with you—and you with us—methods of working with students and objects that Smithsonian staff members have found successful.

Smithsonian National Seminar for Teachers

You don't have to live in Washington to study at the Smithsonian!

"Teaching Writing Using Museums and Other Community Resources," a special eight-day course, will be offered by the Smithsonian Institution this summer for elementary and secondary teachers living more than 75 miles outside Washington, D.C.

The course carries graduate credit from the University of Virginia. Tuition and fees will total approximately \$325.

"Teaching Writing Using Museums" will survey ways in which teachers can use local museum exhibits and such diverse resources as cemeteries and houses as tools for teaching writing. In addition to working on formal and informal exercises, participants will interview several Smithsonian staff writers to learn about various approaches to writing.

This three-credit course is open to full-time classroom teachers (grades 5–12), school librarians (media specialists), and curriculum specialists. Interpreters for hearing-impaired participants can be provided for all class work.

Classes will meet from July 10 to 19 in Washington, D.C. Specially priced housing may be available in a conveniently located college dormitory. Participants arrange their own meals.

Enrollment is limited. Applications must be post-marked by March 30. Notices of acceptance will be mailed by May 2.

For an application, including complete information, write:

National Seminars
Office of Elementary and Secondary Education
Arts and Industries Building, Room 1163
Smithsonian Institution
Washington, D.C. 20560

Or, telephone (voice) 202/357-3049 or (Telecommunications Device for the Deaf) 202/357-1696.

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NATIONAL ZOOLOGICAL PARK
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People... and more people

Figure 1
Population: 1790 to 1990

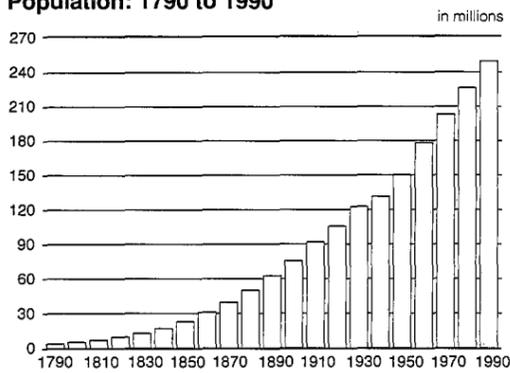


Figure 2
Percent of People Living in Urban Areas: 1790 to 1980

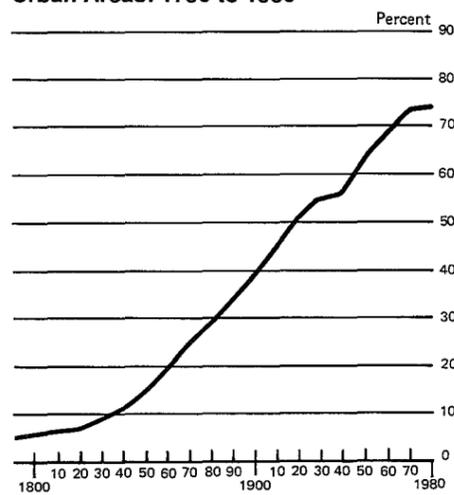


Figure 3
Median Age: 1800 to 1990

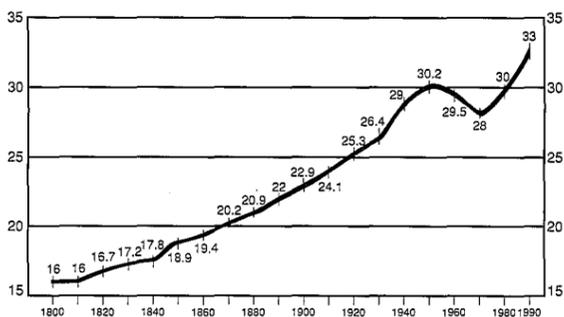
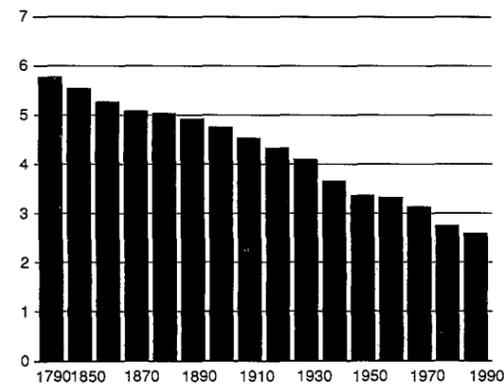


Figure 4
Average Number of Persons per Household: 1790 to 1990



Census Match-Ups

Each of the following sentences gives a fact that people have learned from census data. Each of these facts is also shown in one of the figures on this page. Which figure goes with which sentence? (Write the figure number in the blank after each sentence.)

- A. The population of the United States is about double what it was in 1930. _____
- B. Except for the period after World War II, when an unusually large number of children were born, the median age of Americans has been rising. _____
- C. About $\frac{2}{3}$ of all households lives in single-family houses. _____
- D. For 200 years, U.S. households have been growing smaller. _____

- E. Many more marriages end in divorce than in the past. _____
- F. Over 1 in 10 people live in cities. _____
- G. Throughout our history, more Americans have lived in rural areas than in cities. _____
- H. Only 3 out of 4 children live with their parents. _____
- I. The population is growing faster in the West than in any other part of the country. _____





The U.S. Population in 1980. Each dot represents 1,000 households. Bureau of the Census, U.S. Department of Commerce

ages are ending in
past. _____
e in this country are

tory, more and
ive been living in

ldren live with both

rowing faster in the
her part of the

Figure 5
Number of Divorces per
1,000 People: 1910 to 1980

1910—	.9
1920—	1.6
1930—	1.6
1940—	2.0
1950—	2.6
1960—	2.2
1970—	3.5
1980—	5.2

All of the figures are based on data compiled by the Bureau of Census, U.S. Department of Commerce.

Figure 6
Who Children under 18
Were Living with in 1983

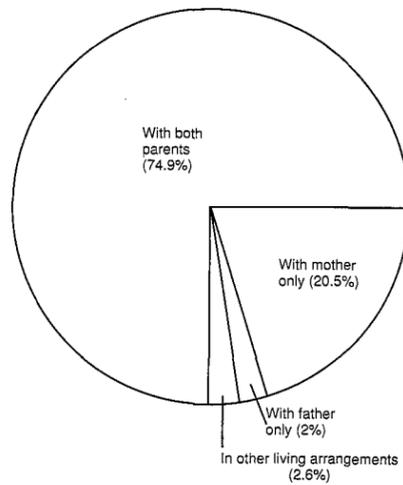


Figure 7
Percent Distribution of the Population
by Race and Spanish Origin: 1980

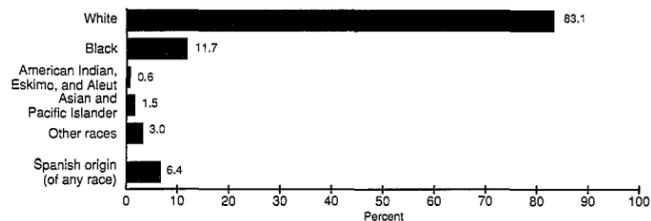


Figure 8
Percent Change in Population
by Region: 1980 to 1990

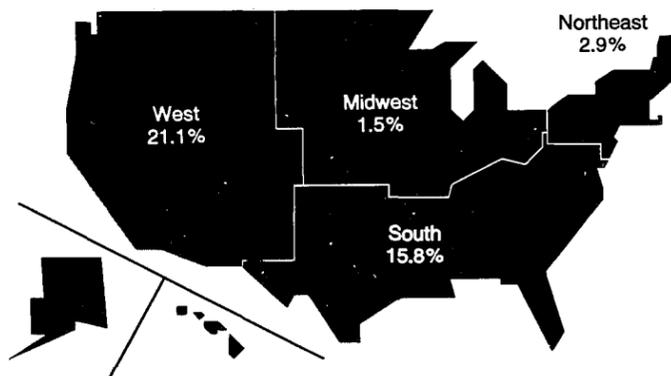
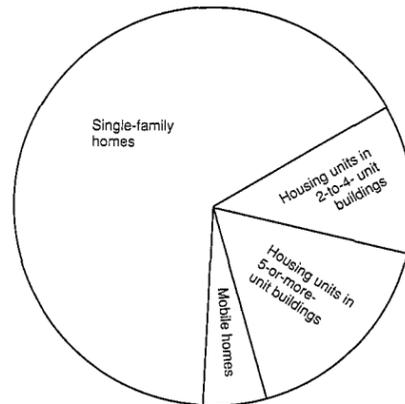


Figure 9
Types of Housing Unit: 1980



Gente... y mas gente

Figure 1
Población: 1790 a 1990

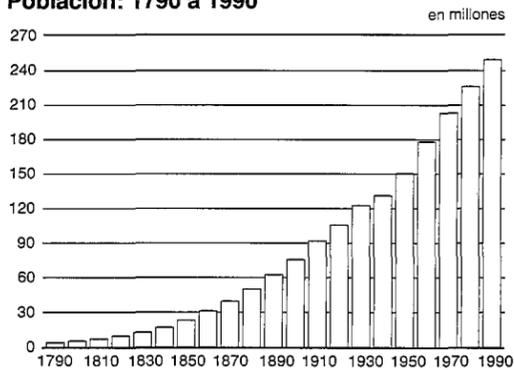


Figure 2
Porcentaje de gente que vive en áreas urbanas: 1790 a 1980

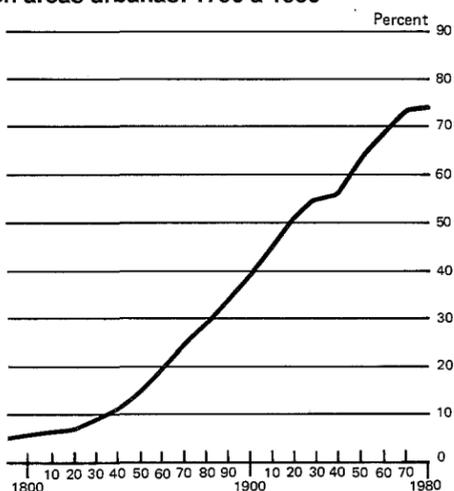


Figure 3
Mediara de Edad: 1800 a 1980

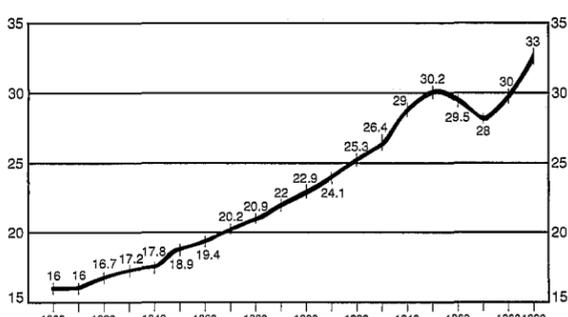
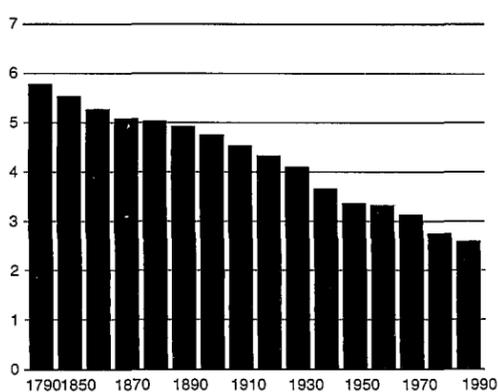


Figure 4
Número promedio de personas por hogar: 1790 a 1990



¿Cuál va con cuál?

Cada una de las siguientes oraciones proporciona datos que la gente ha aprendido sobre el censo. Cada uno de estos datos aparece también en cada uno de los gráficos en esta página. ¿Qué gráfico va con cada oración? (Escribe el número del gráfico en cada espacio en blanco al final de cada oración.)

- A. La población de los Estados Unidos es ahora aproximadamente el doble de lo que era en 1930. _____
- B. Excepto por el período posterior a la Segunda Guerra Mundial, cuando nacieron un número extraordinario de niños, la edad promedio de los norteamericanos ha estado aumentando. _____
- C. Cerca de dos tercios de todos los hogares están compuestos por familias de un solo padre. _____

- D. Por 200 años, los Estados Unidos han cambiado de tamaño. _____
- E. Muchos más matrimonios terminan en divorcio que en matrimonio. _____
- F. Más de 1 persona vive en cada hogar. _____
- G. A través de nuestra historia, más personas viven en ciudades. _____
- H. Solo 3 de 4 niños viven con sus padres. _____
- I. La población está creciendo más rápidamente en el oeste que en el este del país. _____



Traducido por el Dr. Ricardo Inestroza



La población de los Estados Unidos en 1980. Cada punto representa 1000 hogares. [Oficina de Censo, Departamento de Comercio de los Estados Unidos]

hogares de los
disminuído de

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n 10 este país es

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ue en cualquier otra

Figure 5
Número de divorcios por cada
1000 personas: 1910 a 1980

1910—	.9
1920—	1.6
1930—	1.6
1940—	2.0
1950—	2.6
1960—	2.2
1970—	3.5
1980—	5.2

Todas las ilustraciones están basadas en datos recopilados por la Oficina de Censo, Departamento de Comercio de los Estados Unidos.

Figure 6
Ilustración que demuestra con quien vivían
los niños menores de 18 años, en 1983

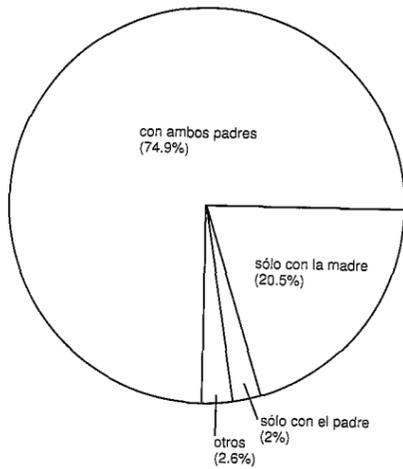


Figure 7
Porcentaje de Distribución de la Población
por Raza y Origen Hispano: 1980

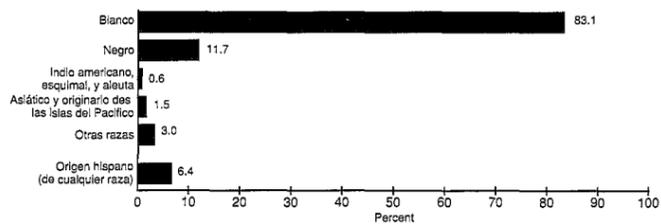


Figure 8
Cambio en la Población, en
Porcentajes, por región: 1980 a 1990

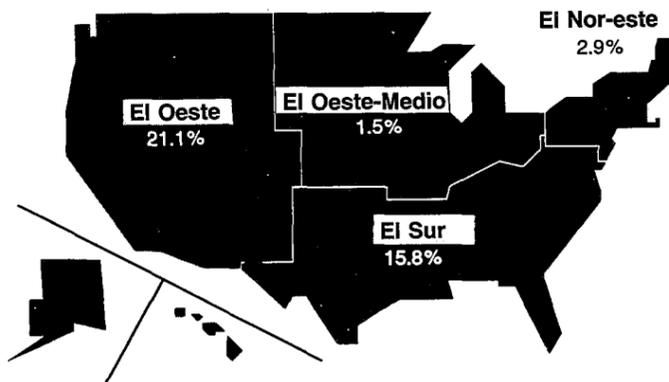


Figure 9
Tipos de Unidad Habitacional: 1980

