# BACKGROUND AND CODEBOOK

# PEW RESEARCH CENTER

# 2014 GENERAL PUBLIC SCIENCE SURVEY

### Background

This document provides background information and codebook details for those wishing to analyze the data from a 2014 Pew Research Center survey of U.S. adults about science issues. The survey includes questions about views on climate change, energy issues, genetically modified foods, and biomedical issues, among other topics. It also includes questions to measure science knowledge. The survey was conducted by telephone with a national sample of 2,002 adults (801 respondents were interviewed on a landline telephone and 1,201 were interviewed on a cellphone), 18 years of age or older, living in all 50 U.S. states and the District of Columbia. Interviews were completed in English and Spanish by live, professionally trained interviewing staff under the direction of Princeton Survey Research Associates International from August 15 to August 25, 2014.

The findings from this survey are detailed in multiple reports and FactTank posts, available on the Pew Research Center website including:

January 29, 2015 “Public and Scientists’ Views on Science and Society”

<http://www.pewinternet.org/2015/01/29/public-and-scientists-views-on-science-and-society/>

July 1, 2015 “Americans, Politics, and Science Issues

<http://www.pewinternet.org/2015/07/01/americans-politics-and-science-issues/>

October 22, 2015, “Religion and Science”

<http://www.pewinternet.org/2015/10/22/science-and-religion/>

### Survey Design

A combination of landline and cell random digit dial (RDD) samples was used to reach a representative sample of all adults in the United States who have access to either a landline or cellular telephone. Both samples were disproportionately stratified to increase the incidence of African American and Hispanic respondents. Within each stratum, phone numbers were drawn with equal probabilities. The landline samples were list-assisted and drawn from active blocks containing one or more residential listings, while the cell samples were not list-assisted but were drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers. Both the landline and cell RDD samples were disproportionately stratified by county based on estimated incidences of African American and Hispanic respondents.

### Margin of Sampling Error

|  |  |  |
| --- | --- | --- |
| Margins of Error | | |
|  | **Sample size** | **Margin of error  in percentage points** |
| All adults | 2,002 | +/-3.1 |
|  |  |  |
| Men | 1,007 | +/-4.3 |
| Women | 991 | +/-4.4 |
|  |  |  |
| White, not Hispanic | 1,213 | +/-4.0 |
| Black, not Hispanic | 258 | +/- 8.0 |
| Hispanic | 360 | +/-6.6 |
|  |  |  |
| 18-29 | 351 | +/-7.4 |
| 30-49 | 515 | +/-6.1 |
| 50-64 | 610 | +/-5.6 |
| 65 and older | 496 | +/-6.2 |
|  |  |  |
| NET College graduate or more | 813 | +/-4.8 |
| Postgraduate degree | 356 | +/-7.3 |
| College degree | 457 | +/-6.5 |
| Some college | 482 | +/-6.3 |
| High school graduate or less education | 698 | +/-5.2 |
|  |  |  |
| *College graduate or more* |  |  |
| Have degree in a science field | 300 | +/-8.0 |
| No degree in a science field | 509 | +/-6.1 |
|  |  |  |
| *Science knowledge* |  |  |
| More knowledge | 1,010 | +/-4.3 |
| Less knowledge | 992 | +/-4.4 |
| Note: The margins of error are reported at the 95% level of confidence and are calculated by taking into account the average design effect.  PEW RESEARCH CENTER | | |

Statistical results are weighted to correct known demographic discrepancies, including disproportionate stratification of the sample. The margins of error table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey.

The survey’s *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample – the one around 50%. For example, the margin of error for the entire sample is ±3.1 percentage points. This means that in 95 out of every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 3.1 percentage points away from their true values in the population. Sampling errors and statistical tests of significance used in this report take into account the effect of weighting. In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

### Interviewing Procedures

|  |  |  |
| --- | --- | --- |
| Margins of Error, Continued | | |
|  | **Sample size** | **Margin of error  in percentage points** |
| *Party affiliation* |  |  |
| Republican/lean Rep. | 737 | +/-5.1 |
| Democratic/lean Dem. | 959 | +/-4.5 |
|  |  |  |
| *Political ideology* |  |  |
| Conservative | 698 | +/-5.2 |
| Moderate | 721 | +/-5.1 |
| Liberal | 496 | +/-6.2 |
|  |  |  |
| *Party by Ideology* |  |  |
| Conservative Republican | 299 | +/-8.0 |
| Moderate/liberal Republican | 150 | +/-11.3 |
| Independent | 737 | +/-5.1 |
| Moderate/conservative Democrat | 373 | +/-7.1 |
| Liberal Democrat | 279 | +/-8.3 |
|  |  |  |
| *Religious affiliation* |  |  |
| NET Affiliated | 1,548 | +/-3.5 |
| NET Protestant | 911 | +/-4.6 |
| White evangelical | 304 | +/-7.9 |
| White mainline | 278 | +/-8.3 |
| Black Protestant | 186 | +/-10.1 |
| NET Catholic | 448 | +/-6.5 |
| White Catholic | 241 | +/-8.9 |
| Hispanic Catholic | 174 | +/-10.5 |
| NET Unaffiliated | 419 | +/-6.7 |
|  |  |  |
| *Attend worship services* |  |  |
| Weekly or more | 742 | +/-5.1 |
| Less than weekly | 1,239 | +/-3.9 |
| Note: The margins of error are reported at the 95% level of confidence and are calculated by taking into account the average design effect.  PEW RESEARCH CENTER | | |

All interviews were conducted using a Computer Assisted Telephone Interviewing (CATI) system, which ensures that questions were asked in the proper sequence with appropriate skip patterns. CATI also allows certain questions and certain answer choices to be rotated, eliminating potential biases from the sequencing of questions or answers.

For the landline sample, half of the time, interviewers asked to speak with the youngest adult male currently at home and the other half of the time asked to speak with the youngest adult female currently at home, based on a random rotation. If no respondent of the initially requested gender was available, interviewers asked to speak with the youngest adult of the opposite gender who was currently at home. For the cellphone sample, interviews were conducted with the person who answered the phone; interviewers verified that the person was an adult and could complete the call safely.

Both the landline and cell samples were released for interviewing in replicates, which are small random samples of each larger sample. Using replicates to control the release of the telephone numbers ensures that the complete call procedures are followed for all numbers dialed. As many as seven attempts were made to contact every sampled telephone number. The calls were staggered at varied times of day and days of the week (including at least one daytime call) to maximize the chances of making contact with a potential respondent.

### Questionnaire Development

The Pew Research Center developed the questionnaire. The design of the questionnaire was informed by consultation with a number of staff at the Pew Research Center, senior staff of the American Association for the Advancement of Science (AAAS) and several outside advisers. Questionnaire development is an iterative process. A pilot study was conducted August 5-6, 2014 with 101 adults living in the continental U.S. The sample was drawn from fresh RDD landline phone numbers (n=25) and a sample of cellphone numbers from respondents interviewed in recent RDD omnibus studies (n=76). The tested questionnaire included a number of open-ended questions to gauge what respondents had in mind when thinking about the positive and negative effects of science on society. As a final step, a traditional pretest was conducted Aug. 12, 2014, with 24 adults living in the continental U.S. The sample was drawn from fresh RDD landline phone numbers and a sample of cellphone numbers from respondents interviewed in recent RDD omnibus studies. The interviews were conducted in English under the direction of Princeton Survey Research Associates International. The interviews tested the questions planned for the study questionnaire in the full survey context. The final questionnaire lasted about 22 minutes, on average.

### Weighting

All point estimates should be derived from weighted data. Point estimates based on unweighted

data will not be representative of the general public.

Several stages of statistical adjustment or weighting are used to account for the complex nature of the sample design. The weights account for numerous factors including (1) the different, disproportionate probabilities of selection in each strata, (2) the overlap of the landline and cell RDD sample frames and (3) differential nonresponse associated with sample demographics.

The first stage of weighting accounts for different probabilities of selection associated with the number of adults in each household and each respondent’s telephone status.[[1]](#footnote-1) This weighting also adjusts for the overlapping landline and cell RDD sample frames and the relative sizes of each frame and each sample. Due to the disproportionately stratified sample design, the first-stage weight was computed separately for each stratum in each sample frame.

After the first-stage weight adjustment, two rounds of poststratification were performed using an iterative technique known as raking. The raking matches the selected demographics to parameters from the U.S. Census Bureau’s 2012 American Community Survey data.[[2]](#footnote-2) The population density parameter was derived from 2010 census data. The telephone usage parameter came from an analysis of the July-December, 2013 National Health Interview Survey.[[3]](#footnote-3) Raking was performed separately for those asked each form of the questionnaire using sample balancing, a special iterative sample weighting program that simultaneously balances the distributions of all variables using a statistical technique called the Deming Algorithm. The raking corrects for differential nonresponse that is related to particular demographic characteristics of the sample. This weight ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the population.

The first round of raking was done individually for three racial/ethnic groups (Hispanics, non-Hispanic blacks, and all other non-Hispanics). The variables matched to population parameters for each race/ethnicity group were gender, age, education and region. The variables matched to population parameters for Hispanic respondents also included nativity (U.S. born versus foreign born). The variables for other non-Hispanic respondents also included race (white race versus some other or mixed race).

|  |  |  |
| --- | --- | --- |
| Public Knowledge About Science Topics  % of U.S. adults giving a correct response on each | | |
| Identify… | 2014 |
| The main concern about the overuse of antibiotics | 74 |
| Whether lasers work by focusing on sound waves, or not | 65 |
| What nanotechnology deals with | 64 |
| An example of a chemical reaction | 63 |
| The main function of red blood cells | 76 |
| The gas most scientists believe case the temperature to rise | 71 |
|  |  |
| **Five or six correct** | **47** |
| **Four or fewer correct** | **53** |
| Survey of U.S. adults Aug. 15-25, 2014.  PEW RESEARCH CENTER | | |

A second round of poststratification raking was performed on the total sample for each form. Each form was raked to the following demographic variables: gender by age, gender by education, age by education, census region, race/ethnicity, population density and household

telephone status (landline only, cellphone only, or both landline and cellphone).

### Measuring Science Education

The survey also included a measure of science training at the college level or above. Survey respondents who had completed at least a four-year college degree were asked whether or not they held a degree in a scientific field. Responses among those holding a degree in a science field as compared to those with degrees in some other field are shown throughout the report.

### Measuring Science Knowledge

The survey questionnaire included six questions designed to measure factual knowledge about a range of science topics. The set included five multiple-choice questions and one true-false question. Respondents were asked to identify the main concern about the overuse of antibiotics, the mechanism behind lasers, that nanotechnology deals with extremely small things, an example of a chemical reaction, the main function of red blood cells, and the gas most scientists believe cause the average temperature to rise. The set of questions included a mix of biological and physical science topics; some involved aspects of science that are likely to come up in adult life (e.g., the main concern about the overuse of antibiotics) or in following the news (e.g., the gas most scientists believe cause temperatures in the atmosphere to rise). A majority of adults provided a correct answer to each of the six questions. The alpha reliability coefficient for the scale of six items is 0.62.[[4]](#footnote-4)

The KNOSCT\_COUNT variable included in the dataset is a count of the number of correct answers each respondent gave to the six science knowledge questions.

### Protection of Respondent Confidentiality

As a matter of policy to maintain confidentiality, the Pew Research Center does not release respondent names, contact numbers, or any other uniquely identifying information. In order to maintain confidentiality, some variables may have been collapsed into categories before being released. These changes are identified in each variable’s codebook description.

## CODEBOOK

This section describes the variables included in the dataset. For complete detail on question wording, filtering, and order, see the full questionnaire.

The Stata version of the dataset was created using StatTransfer. As a result, the names of variables along with variable labels and value labels in the Stata file may be truncated; users should consult this codebook for full details on variable labels and value labels.

Questions in the survey may be filtered based on responses to previous questions or based on random assignment to one of two forms. System missing data indicate respondents who were not asked a question because of the skip patterns in the questionnaire. Note, however, that in some questions asked of a subset of eligible respondents and filtered on previous questions subject to backcoding, the term “undesignated” is used to denote those respondents (and differentiate them from those whose values are system missing) who did not receive the question even though they should have received it.[[5]](#footnote-5)

**SAMPLE AND CREATED VARIABLES**

CASEID Unique respondent identification number

WEIGHT Weight variable

SAMPLE Sample type

1 Landline

2 Cell phone

INT\_DATE Interview date

LANG Language interview conducted in

1 English

2 Spanish

CREGION Census region (based on self-reported zipcode, or sample geographic information for

those respondents who do not provide a zipcode and those whose zipcode cannot be

matched)

1 Northeast

2 Midwest

3 South

4 West

STATE State (based on self-reported zipcode, or sample geographic information for

those respondents who do not provide a zipcode and those whose zipcode cannot be

matched)

1. Alabama
2. Alaska
3. Arizona
4. Arkansas
5. California
6. Colorado
7. Connecticut
8. Delaware
9. District of Columbia
10. Florida
11. Georgia
12. Hawaii
13. Idaho
14. Illinois
15. Indiana
16. Iowa
17. Kansas
18. Kentucky
19. Louisiana
20. Maine
21. Maryland
22. Massachusetts
23. Michigan
24. Minnesota
25. Mississippi
26. Missouri
27. Montana
28. Nebraska
29. Nevada
30. New Hampshire
31. New Jersey
32. New Mexico
33. New York
34. North Carolina
35. North Dakota
36. Ohio
37. Oklahoma
38. Oregon
39. Pennsylvania
40. Rhode Island
41. South Carolina
42. South Dakota
43. Tennessee
44. Texas
45. Utah
46. Vermont
47. Virginia
48. Washington
49. West Virginia
50. Wisconsin
51. Wyoming

USR Community type from zip code (based on self-reported zipcode, or sample geographic information for those respondents who do not provide a zipcode and those whose zipcode cannot be matched)

R Rural

S Surburban

U Urban

DENSITY Recoded population density

1. Lowest fifth
2. Highest fifth

FORM Indicates which form of the questionnaire respondent received. Respondents were randomly assigned to each form.

1 Form 1

2 Form 2

**MAIN SURVEY**

**ASK ALL:**

Q1 All in all, are you satisfied or dissatisfied with the way things are going in this country today?

1 Satisfied

2 Dissatisfied

9 Don’t know/Refused (VOL.)

**ASK ALL:**

Q2 We’d like you to compare the United States to other industrialized countries in a few different areas. (First,) what about... **[INSERT ITEM; READ AND RANDOMIZE]**? **[READ FOR FIRST ITEM, THEN AS NECESSARY:** Do you think the U.S. is the BEST IN THE WORLD, above average, average or below average in **[ITEM]** compared to other industrialized countries?]

a. Its scientific achievements

b. Its military

c. Its economy

**NO ITEM D**

e. Science, technology, engineering and math education for grades K to 12

f. Its political system

**FORM 1 ONLY:**

gF1. Medical treatment

**FORM 2 ONLY:**

hF2Its health care

**RESPONSE CATEGORIES**

1 Best in the world

2 Above average

3 Average

4 Below average

9 Don't know/Refused (VOL.)

**ASK ALL:**

Now I’d like to ask you some questions about science.

Q3 How much do you ENJOY keeping up with news about science – a lot, some, not much, or not at all?

1 A lot

2 Some

3 Not much

4 Not at all

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q4 Overall, has science made life easier or more difficult for most people?

1 Easier

2 More difficult

3 Not had much of an effect **(VOL.)**

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

Q5 Has science had a mostly positive or mostly negative effect on the quality of **[INSERT ITEM; RANDOMIZE]** in the U.S.? What about **[NEXT ITEM]**? [**IF NECESSARY**: Has science had a mostly positive or mostly negative effect on the quality of **[ITEM]** in the U.S.?]

a. Food

b. Health care

c. The environment

**RESPONSE CATEGORIES**

1 Mostly positive

2 Mostly negative

3 Not had much of an effect **(VOL.)**

9 Don’t know/Refused **(VOL.)**

**ASK ALL**

Q6 Which of these statements best describes your views, even if neither is exactly right?

**[READ; DO NOT RANDOMIZE RESPONSE OPTIONS]**

1 One, Public opinion should play an important role to guide policy decisions about scientific issues, OR

2 Two, Public opinion should NOT play an important role to guide policy decisions about scientific issues because these issues are too complex for the average person to understand

3 Neither/Both **[VOL. DO NOT READ]**

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

Q7 In your opinion, generally do you think... **[READ AND RANDOMIZE]**

1 Science and religion are often in conflict [OR]

2 Science and religion are mostly compatible

9 **[VOL. DO NOT READ]** Don’t know/Refused

**ASK ALL:**

Q8 Now thinking about your own religious beliefs, does science sometimes conflict with your own religious beliefs, or doesn’t it?

1 Yes, science conflicts with own religious beliefs

2 No, science does not conflict with own religious beliefs

9 Don’t know/Refused **(VOL.)**

**IF Q8=1 AND FORM 1, ASK:**

Q9F1 Can you tell me some ways in which science conflicts with your own religious beliefs? [OPEN END; ACCEPT UP TO THREE RESPONSES; PROBE ONCE IF “DON’T KNOW,” AND PROBE FOR CLARITY, BUT DO NOT PROBE FOR ADDITIONAL RESPONSES]

1 Answer given

9 Don’t know/Refused

NOTE: Verbatim responses are held to protect respondent confidentiality. Coded responses are included below

Q9f1\_code1 FIRST MENTION: Can you tell some ways in which science conflicts with your own religious beliefs?

VERBATIM RESPONSES CODED INTO THE FOLLOWING CATEGORIES

1. Abortion
2. Evolution, Creation, Darwinism
3. Global warming/climate change
4. Belief in God or denial of God by others
5. Stem cell research
6. Belief in Bible, miracles, or conflict with Bible
7. Medical, pills, blood transfusion, natural healing
8. Cloning or animals and cloning
9. Birth control or artificial insemination
10. Euthanasia, right to die
11. Gay marriage, homosexuality
12. Vaccinations
13. Space travel, exploration of universe
14. Life after death beliefs
15. Genetics, genetic engineering
16. Belief in science, not religion
17. Schools/News media/Political leaders
18. General—science and religion conflict
19. Other—unclear response
20. Don’t know

Q9f1\_code2 SECOND MENTION: Can you tell some ways in which science conflicts with your own religious beliefs?

VERBATIM RESPONSES CODED INTO THE FOLLOWING CATEGORIES

1. Abortion
2. Evolution, Creation, Darwinism
3. Global warming/climate change
4. Belief in God or denial of God by others
5. Stem cell research
6. Belief in Bible, miracles, or conflict with Bible
7. Medical, pills, blood transfusion, natural healing
8. Cloning or animals and cloning
9. Birth control or artificial insemination
10. Euthanasia, right to die
11. Gay marriage, homosexuality
12. Vaccinations
13. Space travel, exploration of universe
14. Life after death beliefs
15. Genetics, genetic engineering
16. Belief in science, not religion
17. Schools/News media/Political leaders
18. General—science and religion conflict
19. Other—unclear response
20. Don’t know

Q9f1\_code3 THIRD MENTION: Can you tell some ways in which science conflicts with your own religious beliefs?

VERBATIM RESPONSES CODED INTO THE FOLLOWING CATEGORIES

1. Abortion
2. Evolution, Creation, Darwinism
3. Global warming/climate change
4. Belief in God or denial of God by others
5. Stem cell research
6. Belief in Bible, miracles, or conflict with Bible
7. Medical, pills, blood transfusion, natural healing
8. Cloning or animals and cloning
9. Birth control or artificial insemination
10. Euthanasia, right to die
11. Gay marriage, homosexuality
12. Vaccinations
13. Space travel, exploration of universe
14. Life after death beliefs
15. Genetics, genetic engineering
16. Belief in science, not religion
17. Schools/News media/Political leaders
18. General—science and religion conflict
19. Other—unclear response
20. Don’t know

**NO QUESTION 10 THROUGH 11**

**ASK ALL:**

Q12 In your opinion, do government investments in [INSERT ITEM; RANDOMIZE] usually pay off in the long run, or are they not worth it*?*

a. Basic scientific research

b. Engineering and technology

**RESPONSE CATEGORIES**

1 Yes, pay off in long run

2 No, aren’t worth it

9 Don’t know/Refused (VOL.)

**ASK ALL:**

Q13 Which of these comes closer to your view? **[READ AND RANDOMIZE RESPONSE OPTIONS]**

1 Government investment in research is ESSENTIAL for scientific progress [OR]

2 Private investment will ensure that enough scientific progress is made, even without government investment

9 **[VOL. DO NOT READ]** Don’t know/Refused

**NO QUESTION 14 THROUGH 15**

**[RANDOMIZE QUESTIONS 16-18 IN BLOCKS WITH QUESTIONS Q20F1 to Q23 IN BLOCKS]**

**ASK ALL:**

Now a few questions about some issues...

ASK ALL:

Q16 Which comes closer to your view? **[READ AND RANDOMIZE]**

1 Humans and other living things have evolved over time **[OR]**

2 Humans and other living things have existed in their present form since the beginning of time

9 **[VOL. DO NOT READ]** Don’t know/Refused

**IF EVOLVED (1 in Q16), ASK:**

Q17 And do you think that...**[READ OPTIONS AND RANDOMIZE]**?

1 Humans and other living things have evolved due to natural processes such as natural selection, OR

2 A supreme being guided the evolution of living things for the purpose of creating humans and other life in the form it exists today

9 **[VOL. DO NOT READ]** Don’t know/Refused

**ASK ALL:**

Q18 From what you’ve heard or read, do scientists generally agree that humans evolved over time, or do they not generally agree about this?

1 Yes, scientists generally agree that humans evolved over time

2 No, scientists do not generally agree that humans evolved over time

9 Don’t know/Refused **(VOL.)**

**NO QUESTION 19**

**ASK FORM 1 ONLY:**

Q20F1 Which of these three statements about the earth’s temperature comes closest to your view?

**[READ AND RANDOMIZE FIRST TWO OPTIONS; KEEP THIRD OPTION LAST]**:

1 The earth is getting warmer mostly because of natural patterns in the earth’s environment

2 The earth is getting warmer mostly because of human activity such as burning fossil fuels [OR]

3 **[READ LAST]** There is no solid evidence that the earth is getting warmer

9 **[VOL. DO NOT READ]** Don’t know/Refused

**ASK FORM 2 ONLY:**

Q21AF2 From what you’ve read and heard, is there solid evidence that the average temperature on earth has been getting warmer over the past few decades, or not?

1 Yes

2 No

3 Mixed/some evidence **(VOL.)**

9 Don’t know/Refused **(VOL.)**

**ASK IF EARTH IS GETTING WARMER (Q.21AF2=1):**

Q21BF2 Do you believe that the earth is getting warmer **[READ AND RANDOMIZE]**?

1 Mostly because of human activity such as burning fossil fuels [OR]

2 Mostly because of natural patterns in the earth’s environment

9 **[VOL. DO NOT READ]** Don’t know/Refused

**ASK IF EARTH IS NOT GETTING WARMER (Q.21AF2=2):**

Q21CF2 Do you think that we just don’t know enough yet about whether the Earth is getting warmer or do you think it’s just not happening?

1 Just don’t know enough yet

2 Just not happening

9 Don’t know/Refused **(VOL.)**

**NO QUESTION 22**

**ASK ALL:**

Q23 From what you’ve heard or read, do scientists generally agree that the earth is getting warmer because of human activity, or do they not generally agree about this?

1 Yes, scientists generally agree that the earth is getting warmer because of human activity

2 No, do not generally agree that the earth is getting warmer because of human activity

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

On another topic.

Q24 All in all, do you favor or oppose **[INSERT ITEM; RANDOMIZE]**? Do you favor or oppose **[NEXT ITEM]**?

a. The use of animals in scientific research

b. Building more nuclear power plants to generate electricity

c. The increased use of fracking, a drilling method that uses high-pressure water and chemicals to extract oil and natural gas from underground rock formations

d. The increased use of genetically engineered plants to create a liquid fuel replacement for gasoline

e. Allowing more offshore oil and gas drilling in U.S. waters

f. Allowing more people access to experimental drugs before clinical trials have shown the drugs to be safe and effective for that disease or condition

**RESPONSE CATEGORIES**

1 Favor

2 Oppose

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

Q25 Thinking about childhood diseases, such as measles, mumps, rubella and polio... **[READ AND RANDOMIZE]**

1 Should parents be able to decide NOT to vaccinate their children [OR]

2 Should all children be required to be vaccinated

9 Don’t know/Refused (VOL.)

**NO QUESTION 26**

**ASK ALL:**

Q27 Thinking about the use of biological engineering to create artificial organs for humans needing a transplant operation, would you say this is making appropriate use of medical advances OR is it taking medical advances too far?

1 Appropriate use of medical advances

2 Taking medical advances too far

9 Don't know/Refused (VOL.)

**ASK ALL:**

Q28 Which of these statements comes closest to your point of view, even if neither is exactly right? **[READ IN ORDER**]

1 One, The growing world population will NOT be a major problem because we will find a way to stretch our natural resources OR

2 Two, The growing population WILL be a major problem because there won’t be enough food and resources to go around?

9 Don't know/Refused (VOL.)

**ASK ALL:**

On another topic.

Q29 Do you think the SPACE STATION has been a good investment for this country, or don’t you think so?

1 Good investment

2 Not a good investment

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q30 The cost of sending human astronauts to space is considerably greater than the cost of using robotic machines for space exploration. As you think about the future of the U.S. space program, do you think it is essential or not essential to include the use of human astronauts in space?

1 Essential

2 Not essential

9 Don't know/Refused **(VOL.)**

**NO QUESTION 31**

**ASK ALL:**

Q32 From what you’ve heard or read, would you say that **[READ AND RANDOMIZE 1-2]**

1 Scientists generally believe that the universe was created in a single, violent event, often called “the Big Bang” OR

2 Scientists are divided in their views about how the universe was created

3 Both/Neither **(VOL.)**

9 Don’t know/Refused **(VOL.)**

**[RANDOMIZE ORDER OF Q33 AND Q34]**

**ASK ALL:**

Q33 Would you say that changing a baby's genetic characteristics to make the baby more intelligent is making appropriate use of medical advances OR is it taking medical advances too far?

1 Appropriate use of medical advances

2 Taking medical advances too far

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q34 Would you say that changing a baby's genetic characteristics to reduce the risk of serious diseases is making appropriate use of medical advances OR is it taking medical advances too far?

1 Appropriate use of medical advances

2 Taking medical advances too far

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

On a different topic.

Q35 Do you think it is generally safe or unsafe to eat foods grown with pesticides?

1 Generally safe

2 Generally unsafe

9 Don't know/Refused **(VOL.)**

**NO QUESTION 36**

**ASK ALL:** Scientists can change the genes in some food crops and farm animals to make them grow faster or bigger and be more resistant to bugs, weeds, and disease.

**ASK ALL:**

Q37 When you are food shopping, how often, if ever, do you LOOK TO SEE if the products are genetically modified? **[READ]**

1 Always

2 Sometimes

3 Not too often, OR

4 Never

5 Someone else in HH does the food shopping **(VOL.)**

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

Q38 Do you think it is generally safe or unsafe to eat genetically modified foods?

1 Generally safe

2 Generally UNsafe

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q39 From what you’ve heard or read, would you say scientists have a clear understanding of the health effects of genetically modified crops OR are scientists NOT clear about this?

1 Scientists have a clear understanding

2 Scientists do NOT have a clear understanding

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q40 Which of these statements best describes your views, even if neither is exactly right?

**[READ; RANDOMIZE RESPONSE OPTIONS]**

1 Churches and other houses of worship should express their views about policy decisions on scientific issues

2 Churches and other houses of worship should keep out of policy decisions on scientific issues

3 Neither/Both **[VOL. DO NOT READ]**

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Q41 Just your impression: Do you think of scientists as...**[RANDOMIZE ORDER OF:]** a politically liberal group/a politically conservative group **[THEN]** or as neither in particular?

1 A politically liberal group

2 A politically conservative group

3 Neither in particular

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

Here’s a different kind of question. As far as you know...

**[RANDOMIZE KNOSCT14 THROUGH KNOSCT19]**

**ASK ALL:**

KNOSCT14 Which of these is a major concern about the overuse of antibiotics? **[READ AND**

**RANDOMIZE]**

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 It can lead to antibiotic resistant bacteria *(Correct)*

2 Antibiotics are very expensive

3 People will become addicted to antibiotics

8 (VOL.) Don’t know

9 (VOL.) Refused

**ASK ALL:**

KNOSCT15 Is the following statement true or false? Lasers work by focusing sound waves. [**IF NECESSARY**: Is this statement true or false?]

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 True

2 False *(Correct)*

8 **(VOL.)** Don’t know

9 **(VOL.)** Refused

**ASK ALL:**

KNOSCT16 Does nanotechnology deal with things that are extremely **[READ AND RANDOMIZE]**

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 Small *(Correct)*

2 Large

3 Cold [OR]

4 Hot

8 **(VOL.)** Don’t know

9 **(VOL.)** Refused

**ASK ALL:**

KNOSCT17 Which is an example of a chemical reaction? **[READ AND RANDOMIZE]**

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 Water boiling

2 Sugar dissolving [OR]

3 Nails rusting *(Correct)*

8 **(VOL.)** Don’t know

9 **(VOL.)** Refused

**ASK ALL:**

KNOSCT18 What is the main function of red blood cells? Is it... **[READ AND RANDOMIZE]**

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 To fight disease in the body

2 To carry oxygen to all parts of the body [OR] *(Correct)*

3 To help the blood to clot

8 **(VOL.)** Don’t know

9 **(VOL.)** Refused

**ASK ALL:**

KNOSCT19 What gas do most scientists believe causes temperatures in the atmosphere to rise? Is it [**READ AND RANDOMIZE**]

[**INTERVIEWER NOTE: IF NO ANSWER, PROBE ONCE**: We’re just looking for your best guess on this.]

1 Carbon dioxide *(Correct)*

2 Hydrogen [OR]

3 Helium

4 Radon

8 **(VOL.)** Don’t know

9 **(VOL.)** Refused

KNOSCT\_COUNT Count of correct answers to the science knowledge questions

0 None correct

1 1 correct

2 2 correct

3 3 correct

4 4 correct

5 5 correct

6 6 correct

**ASK ALL:**

Now, just a few questions for statistical purposes only

SEXZ Just to confirm, are you male or female? **[DO NOT READ LIST]**

1 Male

2 Female

3 Other **(VOL.)**

8 Don’t know **(VOL.)**

9 Refused **(VOL.)**

**ASK ALL:**

AGEREC (Recoded AGE) What is your age?

\_\_\_\_ years

90 90 or older

99 Don’t know/Refused (VOL.)

**ASK ALL:**

EDUC2 What is the highest level of school you have completed or the highest degree you have received? **[DO NOT READ]**

1 Less than high school (Grades 1-8 or no formal schooling)

2 High school incomplete (Grades 9-11 or Grade 12 with NO diploma)

3 High school graduate (Grade 12 with diploma or GED certificate)

4 Some college, no degree (includes some community college)

5 Two year associate degree from a college or university

6 Four year college or university degree/Bachelor’s degree (e.g., BS, BA, AB)

7 Some postgraduate or professional schooling, no postgraduate degree (e.g. some graduate school)

8 Postgraduate or professional degree, including master’s, doctorate, medical or law degree (e.g., MA, MS, PhD, MD, JD, graduate school)

9 Don't know/Refused

[MAKE FULL NOTE AVAILABLE FOR INTERVIEWERS: Enter code 3-HS graduate if R completed vocational, business, technical, or training courses after high school that did NOT count toward an associate degree from a college, community college or university (e.g., training for a certificate or an apprenticeship)]

**ASK IF EDUC2=6,7,8:**

SCIDEG [**INSERT IF EDUC2=6,7**: your degree] [**INSERT IF EDUC2=8**: one or more of your degrees] in a scientific field, or not?

**[INTERVIEWER NOTE: IF RESPONDENT CANNOT ANSWER BUT OFFERS DEGREE/AREA OF STUDY, PLEASE RECORD.]**

1 Yes

2 No

3 Can’t answer, listed area of study [SPECIFY] (VOL.)

9 Don't know/Refused (VOL.)

**ASK ALL:**

HISP Are you of Hispanic, Latino, or Spanish origin, such as Mexican, Puerto Rican or Cuban?

1 Yes

2 No

9 Don't know/Refused (VOL.)

**ASK ALL:**

RACE Which of the following describes your race? You can select as many as apply. White, Black or African American, Asian or Asian American or some other race. **[RECORD UP TO FOUR IN ORDER MENTIONED BUT DO NOT PROBE FOR ADDITIONAL]** **[IF R VOLS MIXED BIRACIAL, PROBE ONCE:** What race or races is that?**]**

RACECMB combined variable created based on responses to RACE

RACE3m1 first mention

RACE3m2 second mention

RACE3m3 third mention

RACE3m4 fourth mention

1 White (e.g., Caucasian, European, Irish, Italian, Arab, Middle Eastern)

2 Black or African-American (e.g., Negro, Kenyan, Nigerian, Haitian)

3 Asian or Asian-American (e.g., Asian Indian, Chinese, Filipino, Vietnamese or other Asian origin groups)

4 Some other race **(SPECIFY\_\_\_\_ IF NEEDED:** What race or races is that?**)**

5 Native American/American Indian/Alaska Native **(VOL.)**

6 Pacific Islander/Native Hawaiian **(VOL.)**

7 Hispanic/Latino **(VOL.)** (e.g., Mexican, Puerto Rican, Cuban)

8 Don't know **(VOL.)**

9 Refused (e.g., non-race answers like American, Human, purple) **(VOL.)**

**ASK ALL:**

RACETHN Race/ethnicity based on responses from HISP and RACE

1 White non-Hispanic

2 Black non-Hispanic

3 Hispanic

4 Other

9 Don’t know/Refused **(VOL.)**

**ASK IF HISPANIC (HISP=1 OR RACE=7):**

BIRTH\_HISP Were you born in the United States, on the island of Puerto Rico, or in another country?

1 U.S.

2 Puerto Rico

3 Another country

9 Don't know/Refused **(VOL.)**

**ASK IF NOT HISPANIC (HISP=2,9 AND RACE≠7):**

USBORN Were you born in the United States or in another country?

1 Yes, born in U.S.

2 No, some other country

3 Puerto Rico **(VOL.)**

4 Other U.S. Territories (includes Guam, Samoa, U.S. Virgin Islands) **(VOL.)**

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

MARITAL Are you currently married, living with a partner, divorced, separated, widowed, or have you never been married? **[IF R SAYS “SINGLE,” PROBE TO DETERMINE WHICH CATEGORY IS APPROPRIATE]**

1 Married

2 Living with a partner

3 Divorced

4 Separated

5 Widowed

6 Never been married

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

PARENT Are you the parent or guardian of any children under 18 now living in your household?

1 Yes

2 No

9 Don't know/Refused **(VOL.)**

**ASK IF NOT BORN IN US, PUERTO RICO OR US TERRITORIES (BIRTH\_HISP=3,9 OR USBORN=2,9):**

CITIZEN Are you a citizen of the United States, or not? {QID:citizen\_meth}

1 Yes

2 No

9 Don’t know/Refused **(VOL.)**

**ASK ALL:**

RELIG What is your present religion, if any? Are you Protestant, Roman Catholic, Mormon, Orthodox such as Greek or Russian Orthodox, Jewish, Muslim, Buddhist, Hindu, atheist, agnostic, something else, or nothing in particular?

**[INTERVIEWER: IF R VOLUNTEERS “nothing in particular, none, no religion, etc.” BEFORE REACHING END OF LIST, PROMPT WITH: And would you say that’s atheist, agnostic, or just nothing in particular?]**

1 Protestant (Baptist, Methodist, Non-denominational, Lutheran, Presbyterian, Pentecostal, Episcopalian, Reformed, Church of Christ, etc.)

2 Roman Catholic (Catholic)

3 Mormon (Church of Jesus Christ of Latter-day Saints/LDS)

4 Orthodox (Greek, Russian, or some other orthodox church)

5 Jewish (Judaism)

6 Muslim (Islam)

7 Buddhist

8 Hindu

9 Atheist (do not believe in God)

10 Agnostic (not sure if there is a God)

11 Something else **(SPECIFY:\_\_\_\_\_\_)**

12 Nothing in particular

13 Christian **(VOL.)**

14 Unitarian (Universalist) **(VOL.)**

15 Jehovah’s Witness **(VOL.)**

99 Don't Know/Refused **(VOL.)**

**ASK IF SOMETHING ELSE OR DK/REF (RELIG=11, 99):**

CHR Do you think of yourself as a Christian or not? **[IF R NAMED A NON-CHRISTIAN RELIGION IN PREVIOUS QUESTION (e.g. Native American, Wiccan, Pagan, etc.), DO NOT READ (ENTER "NO" CODE 2)]**

1 Yes

2 No

9 Don't know/Refused **(VOL.)**

**ASK IF CHRISTIAN (RELIG=1-4, 13,15 OR CHR=1):**

BORN Would you describe yourself as a "born again" or evangelical Christian, or not?

1 Yes, would

2 No, would not

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

ATTEND Aside from weddings and funerals, how often do you attend religious services... more than once a week, once a week, once or twice a month, a few times a year, seldom, or never?

1 More than once a week

2 Once a week

3 Once or twice a month

4 A few times a year

5 Seldom

6 Never

9 Don't know/Refused **(VOL.)**

**ASK ALL:**

INCOME Last year, that is in 2013, what was your total family income from all sources, before taxes? Just stop me when I get to the right category. **[READ]**

1 Less than $10,000

2 10 to under $20,000

3 20 to under $30,000

4 30 to under $40,000

5 40 to under $50,000

6 50 to under $75,000

7 75 to under $100,000

8 100 to under $150,000 [OR]

9 $150,000 or more

10 **[VOL. DO NOT READ]** Don't know/Refused

**ASK ALL:**

REG Which of these statements best describes you? **[READ IN ORDER] [INSTRUCTION: BE SURE TO CLARIFY WHETHER RESPONDENT IS ABSOLUTELY CERTAIN THEY ARE REGISTERED OR ONLY PROBABLY REGISTERED; IF RESPONDENT VOLUNTEERS THAT THEY ARE IN NORTH DAKOTA AND DON’T HAVE TO REGISTER, PUNCH 1]**

1 Are you ABSOLUTELY CERTAIN that you are registered to vote at your current address [OR]

2 Are you PROBABLY registered, but there is a chance your registration has lapsed [OR]

3 Are you NOT registered to vote at your current address

9 **[VOL. DO NOT READ]** Don’t know/Refused

**ASK ALL:**

PARTY In politics TODAY, do you consider yourself a Republican, Democrat, or independent?

1 Republican

2 Democrat

3 Independent

4 No preference **(VOL.)**

5 Other party **(VOL.)**

9 Don't know/Refused **(VOL.)**

**ASK IF INDEP/NO PREF/OTHER/DK/REF (PARTY=3,4,5,9):**

PARTYLN As of today do you lean more to the Republican Party or more to the Democratic Party?

1 Republican

2 Democrat

9 Other/Don't know/Refused **(VOL.)**

**ASK ALL:**

IDEO In general, would you describe your political views as... **[READ]**

1 Very conservative

2 Conservative

3 Moderate

4 Liberal [OR]

5 Very liberal

9 **[VOL. DO NOT READ]** Don't know/Refused

**ASK ALL:**

HH1 How many people, including yourself, live in your household?

**INTERVIEWER NOTE: HOUSEHOLD MEMBERS INCLUDE PEOPLE WHO THINK OF THIS HOUSEHOLD AS THEIR PRIMARY PLACE OF RESIDENCE, INCLUDING THOSE WHO ARE TEMPORARILY AWAY ON BUSINESS, VACATION, IN A HOSPITAL, OR AWAY AT SCHOOL**. **THIS INCLUDES INFANTS, CHILDREN AND ADULTS.**

1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight or more

9 Don’t know/Refused

**ASK IF MORE THAN ONE PERSON IN HH (HH1>1):**

HH3 How many, including yourself, are adults, age 18 and older?

1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. Seven
8. Eight or More

9 Don’t know/Refused

**ASK ALL:**

EMINUSE Do you use the internet or email, at least occasionally?

1 Yes

2 No

8 Don’t know **(VOL.)**

9 Refused **(VOL.)**

**ASK ALL:**

INTMOB Do you access the internet on a cell phone, tablet or other mobile handheld device, at least occasionally?

1 Yes

2 No

8 Don’t know **(VOL.)**

9 Refused **(VOL.)**

**ASK ALL LANDLINE SAMPLE:**

QL1. Now thinking about your telephone use... Do you have a working cell phone?

1 Yes, have cell phone

2 No, do not

9 Don't know/Refused **(VOL.)**

**ASK IF NO CELL PHONE AND MULTI-PERSON HOUSEHOLD (QL1=2,9 AND HH1>1):**

QL1a. Does anyone in your household have a working cell phone?

1 Yes, someone in household has cell phone

2 No

1. Don't know/Refused **(VOL.)**

**ASK ALL CELL PHONE SAMPLE:**

QC1. Now thinking about your telephone use... Is there at least one telephone INSIDE your home that is currently working and is not a cell phone?

1 Yes home telephone

2 No, no home telephone

9 Don't know/Refused **(VOL.)**

1. Telephone status refers to whether respondents have only a landline telephone, only a cellphone, or both kinds of telephone. [↑](#footnote-ref-1)
2. ACS analysis was based on all adults, excluding those living in institutional group quarters. [↑](#footnote-ref-2)
3. See Blumberg, Stephen J. and Julian V. Luke. 2014. “[Wireless substitution: Early Release of Estimates from the National Health Interview Survey, July-December, 2013.](http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201407.pdf)” National Center for Health Statistics. [↑](#footnote-ref-3)
4. Alpha reliability coefficient for a scale based on the same six items asked in the 2013 Pew Research Center/Smithsonian Magazine survey was 0.68. [↑](#footnote-ref-4)
5. By way of example, when asked about their religious identification, those respondents identifying their religion as “something else” were asked to specify what their religion is, and interviewers recorded their response verbatim. One respondent indicated that his or her religion is “Quaker,” which was backcoded to Protestant. This respondent should have been asked the question “BORN,” but since they were not categorized as Protestant or Christian during the interview they did not receive this question. This respondent is therefore coded as “undesignated” on this question. [↑](#footnote-ref-5)