# BACKGROUND AND CODEBOOK

# PEW RESEARCH CENTER

# 2017 STEM SURVEY

Background

This document provides background information and codebook details for those wishing to analyze the data from a 2017 Pew Research Center survey of U.S. adults about careers and education in science, technology, engineering and math (STEM). The survey had a sample size of 4,914 adults, 18 years of age or older, living in all 50 U.S. states and the District of Columbia. The survey was conducted by the GfK Group in English and Spanish using the KnowledgePanel, its nationally representative online research panel. KnowledgePanel members are recruited through probability sampling methods and include those with internet access and those who did not have internet access at the time of their recruitment (KnowledgePanel provides internet access for those who do not have it, and if needed, a device to access the internet when they join the panel).

The findings from this survey are detailed in the following report:

January 9, 2018 “Women and Men in STEM Often at Odds Over Workplace Equity”

### <http://www.pewsocialtrends.org/2018/01/09/women-and-men-in-stem-often-at-odds-over-workplace-equity/>

### Sample Design

The sample design for the survey was comprised of three groups: a group of about 2,500 panelists who said they were employed in a STEM occupation in a prior survey, a second group of about 1,900 panelists who were employed in a non-STEM occupation according to prior records, and a third group of about 500 eligible panelists to include other members of the general public including those who are not employed. Thus, the survey design oversamples employed adults and those employed in a science, technology, engineering or math occupation. In all, 8,995 panelists were invited to take part in the survey. The completion rate for this survey, that is the share of panelists invited to participate who completed the survey, was 62.9%. The cumulative response rate, calculated following Callegaro and DiSogra (2008), was 5%.[[1]](#footnote-1)

All respondents were asked to verify their current employment status. Updated occupation information was collected for all employed adults who indicated that their main job had changed since the time of completing their profile survey.[[2]](#footnote-2) Most respondents who said they worked in a STEM occupation were also asked an open-end question to describe their occupation in more detail. These responses were used for final classification as employed in a STEM or non-STEM job where they were available.[[3]](#footnote-3)

STEM occupations included the following job categories: computer and mathematical; architecture and engineering; life and physical sciences; medical doctors; other health care practitioners; health care technologists and technicians; and teachers (both K-12 and postsecondary) who specialize in a STEM subject.[[4]](#footnote-4) Healthcare support occupations and all other occupational categories were classified as non-STEM jobs.

Note that since the survey was conducted in only English and Spanish, the sample of Asians working in STEM jobs are those with proficiency in English. There are not enough Asians working in non-STEM jobs for separate analysis in this survey.

|  |  |  |
| --- | --- | --- |
| Group | Unweighted sample size | Margin of error in percentage points |
| U.S. adults | 4,914 | +/-2.7 |
|  |  |  |
| Has a STEM job | 2344 | *+/-2.8* |
| Does not have a STEM job | 2358 | +/-2.3 |
| Not working | 212 | +/-7.1 |
|  |  |  |
| *Among those in STEM jobs* |  |  |
| Men | 1119 | +/-4.1 |
| Women | 1225 | +/-3.9 |
|  |  |  |
| White | 1845 | +/-3.1 |
| Black | 114 | +/-11.4 |
| Hispanic | 167 | +/-10.4 |
| Asian | 138 | +/-10.0 |
|  |  |  |
| Men in computer jobs | 445 | +/-6.4 |
| Women in computer jobs | 150 | +/-10.6 |
|  |  |  |
| Women with a postgraduate degree | 368 | +/-7.2 |
| Women with a college degree | 479 | +/-6.3 |
| Women with some college or less | 378 | +/-6.7 |
|  |  |  |
| Women who work with mostly men | 208 | +/-9.4 |
| Women who work with mostly women | 719 | +/-5.1 |
| Women who work with an even mix of men and women | 290 | +/-8.0 |
|  |  |  |
| *Among those in non-STEM jobs* |  |  |
| Men | 1239 | +/-3.2 |
| Women | 1119 | +/-3.4 |
|  |  |  |
| White | 1642 | +/-2.7 |
| Black | 206 | +/-7.5 |
| Hispanic | 329 | +/-6.0 |
|  |  |  |
| Parent of child in public school | 909 | +/-5.8 |
| Does not have child in public school | 3999 | *+/-3.1* |
|  |  |  |
| STEM postgrad | 599 | +/-9.3 |
| Non-STEM postgrad | 448 | +/-8.3 |
| College grad | 1514 | +/-5.4 |
| Some college or less | 2269 | +/-3.5 |
| Note: Whites, blacks and Asians are non-Hispanic only; Hispanics are of any race. The margins of error are reported at the 95% level of confidence and are calculated by taking into account the average design effect for each subgroup. | | |

### Margins of error

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%. The margin of error for the entire sample is ±2.7 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 2.7 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.

### Weighting

The data were weighted in a multistep process that begins with a base weight that accounts for differences in probability of selection into the study. Respondents were divided into four mutually exclusive subgroups 1) STEM workers, excluding STEM teachers 2) non-STEM workers, excluding non-STEM teachers 3) Teachers, both STEM and non-STEM 4) Non-workers. Each of these groups was separately weighted using an iterative technique to match population benchmarks. Next, the weighting combined all workers and aligned the combined group to population benchmarks for all workers.[[5]](#footnote-5) In a final step, workers (both STEM and non-STEM) were combined with non-workers, and the weights were further adjusted so that each group’s relative proportions and demographic profile matched estimates for all U.S. adults. At each stage, the resulting weights were trimmed and scaled to the number of completed surveys.

Population benchmarks included: gender by age, race/ethnicity, education, household income, region by metropolitan status, and primary language. Primary language parameters come from the Census Bureau’s 2015 American Community Survey; all other parameters come from the March 2016 Current Population Survey (CPS).

### 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 identifying information. In order to maintain confidentiality, some variables may have been deleted from the dataset or collapsed into categories before being released. These changes include deleting all open-end responses, deleting some geographic data, such as state and collapsing and truncating other variables such as number of science and math courses.

## CODEBOOK

This section describes the variables included in the dataset. It first includes information on variables not included in the questionnaire, which includes paradata and profile variables from respondents. The codebook also includes any variables from the questionnaire that were truncated or collapsed. It then includes a copy of the questionnaire, which provides information on variables from the questionnaire, including variable names, values and value labels.

**VARIABLES**

CaseID Unique respondent identification number

weight Post-Stratification weight – Gen Pop 18+

WORK\_1 [Employed full time (35 hours or more per week) for pay with an organization or company] Do any of the following currently describe you?

1. Yes
2. No

9 Refused

WORK\_2 [Employed part time (less than 35 hours per week) for pay with an organization or company] Do any of the following currently describe you?

1. Yes
2. No

9 Refused

WORK\_3 [Self-employed full time (35 hours or more per week)] Do any of the following describe you?

1. Yes
2. No

9 Refused

WORK\_4 [Self-employed part time (less than 35 hours per week)] Do any of the following describe you?

1. Yes
2. No

9 Refused

EMPLOYED Employment status

1. Employed
2. Not employed
3. Refused

FULLPART Full- or Part-Time Employment

1. Full Time Employee
2. Part Time Employee
3. Not employed
4. Refused

SELFEMPLOYEED Self-Employment

1. Self Employed
2. Not Self Employed
3. Not employed

9 Refused

OCCUPATION\_col Occupation

1 Management

2 Business and Financial Operations

3 Computer and Mathematical

4 Architecture and Engineering

5 Life, Physical and Social Sciences

6 Community and Social Services

7 Lawyer, judge

8 Teacher, except college and university

9 Teacher, college and university

10 Other professional

11 Medical Doctor (such as physician, surgeon, dentist, veterinarian)

12 Other Health Care Practitioner (such as nurse, pharmacist, chiropractor, dietitian)

13 Health Technologist or Technician (such as paramedic, lab technician)

14 Health Care Support (such as nursing aide, orderly, dental assistant)

15 Protective Service

16 Food Preparation and Serving

17 Building and Grounds Cleaning and Maintenance

18 Personal Care and Service

19 Sales (Sales Representative, Retail Sales, Other Sales)

22 Office and Administrative Support

23 Farming, Forestry and Fishing

24 Construction and Extraction or Installation, Maintenance and Repair or Precision Production (such as machinist, welder, baker, printer, tailor)

27 Transportation and Material Moving

28 Armed Services

29 Other

88 Not asked

99 Refused

INDUSTRY\_col Industry (current or main job)

1 Agriculture, Forestry, Fishing and Hunting or Mining, Quarrying, and Oil and Gas Extraction

3 Utilities

4 Construction

5 Manufacturing

6 Wholesale Trade

7 Retail Trade

8 Transportation and Warehousing

9 Information

10 Finance and Insurance

11 Real Estate and Rental and Leasing

12 Professional, Scientific and Technical Services

15 Educational Services

16 Health Care and Social Assistance

17 Arts, Entertainment and Recreation

18 Accommodation and Food Services

19 Other Services and Community/Non-Profit Organizations (except Public Administration)

20 Public Administration

22 Other

88 Not asked

99 Refused

TEACHSTEM Teacher STEM Status

1. STEM Teacher
2. Non-STEM Teacher

8 Not asked (occupation category other than 8 or 9 or not currently employed)

9 Missing/Refused

WORKTYPE\_FINAL STEM Status

1. STEM Worker
2. Non-STEM Worker
3. Not Working
4. Missing/Refused

SCH10\_flag Flag for SCH10 text changes

1. Saw original SCH10 text
2. Saw SCH10A and SCH10B item 5 text changes

DOV\_FORM Assignment for order of Gender/Ethnicity Questions

1. Saw Gender questions first
2. Saw Ethnicity questions first

XSPANISH Survey language

1. English version
2. Spanish version

xparent Parent of 0-17 year olds

1. Parent of 0-17 year old
2. Not a parent of 0-17 year old

PPCM1301\_col Employer type

1. Government
2. Private-for-profit company or working in the family business
3. Non-profit organization including tax exempt and charitable organizations
4. Self-employed
5. Not asked, not employed

9 Refused

DOV\_PPCM0166 # of persons working for employer

1. Under 10
2. 10-24
3. 25-49
4. 50-99
5. 100-499
6. 500-999
7. 1000 or more
8. Not asked, not employed
9. Refused

ppagecat Age – 7 categories

1. 18-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65-74
7. 75+

ppagect4 Age – 4 categories

1. 18-29
2. 30-44
3. 45-59
4. 60+

PPETHM Race/Ethnicity

1 White, non-Hispanic

2 Black, non-Hispanic

3 Other, non-Hispanic

4 Hispanic

5 2+ Races, Non-Hispanic

PPGENDER Gender

1 Male

2 Female

PPHHHEAD Household head

0 No

1 Yes

HH\_INCOME\_col Household income

1 Less than $30,000

2\_ $30,000 to $49,000

3 $50,000 to $74,999

4 $75,000 to $99,999

5 $100,000 or more

PPMARIT Marital status

1 Married

2 Widowed

3 Divorced

4 Separated

5 Never married

6 Living with partner

PPMSACAT MSA Status

0 Non-Metro

1 Metro

PPREG4 Region 4 – Based on State of Residence

1 Northeast

2 Midwest

3 South

4 West

SCH1\_OE1\_col Open-end codes for SCH1 (first mention)

SCH1\_OE2\_col Open-end codes for SCH1 (second mention)

SCH1\_OE3\_col Open-end codes for SCH1 (third mention)

100 Math/mathematics/arithmetic (including geometry, calculus, etc.) and Statistics

101 Science (including chemistry, biology, physics, Earth sciences, etc.) and Engineering

102 English/grammer/writing

103 Reading

104 History/social studies

105 Computers/computer science

106 Music

107 Art/arts

108 Foreign languages (including specific languages: Spanish, Chinese, etc.)

109 Physical education/health/sex education/abstinence

111 Economics/finances/personal finance

112 Manners/respect/anti-bulling/social skills

113 Life skills/home economics

114 Critical thinking/logic/problem solving

300 Other

998 Don’t Know

999 Refused

SCH7\_OE1\_col Open-end codes for SCH7 – other

4 All of the above

11 Lazy/don't care

13 Not interested

14 Just not for them; interested in other things

16 Lack of confidence

17 Mentality of this generation

21 Not enough time spent on these subjects in school; no base

22 Teaching to the test, not engaging students in classes; students can't see practical uses of subjects

24 Cost of school

26 Inadequate resources (teaching, funding, other resources)

31 Don’t think these careers are important/considered prestigious and valued

33 Think these jobs don't make much money

35 Think there are no jobs

36 Don't know about the opportunities presented by these degrees/career prospects

97 Other

98 Don't know

99 Refused

INTEREST2\_OE Open-end codes for INTEREST2

10 Childhood

20 Teenage years; High school

30 College and 20's

40 30+

70 Always interested

80 Can't classify

96 Say already in STEM career

97 Not interested

98 Don't know/Don't remember

99 Refused

INTEREST3\_OE1\_col Open-end codes for INTEREST3 (first mention)

INTEREST3\_OE2\_col Open-end codes for INTEREST3 (second mention)

INTEREST3\_OE3\_col Open-end codes for INTEREST3 (third mention)

10 Chose to pursue something else

11 Found another interest/calling in life

14 Not encouraged to pursue/not supported

76 Got/already had a job in another path/field

21 Specific class turned them off

22 Didn’t do well in the subject/didn't get the grades

24 Lost interest/didn’t have interest in it

25 Seemed too difficult

29 Didn’t see how it was applicable

31 Inadequate teachers

33 Not enough education/no college education

41 Starting a family/taking care of family

49 Other personal circumstances

51 Lack of access to resources/opportunities

52 Expensive/money

53 Large time commitment/too busy

54 A lot of work/classes

71 Lack of jobs/too much competition for jobs

72 Didn’t pay well/other jobs paid more

95 Currently pursuing a STEM career/might in future

96 Did pursue a STEM job/pursued and changed jobs

97 Other

98 Don't know/Don't remember

99 Refused

ETHNJOB2\_OE1 Open-end codes for ETHNJOB2 (first mention)

ETHNJOB2\_OE2 Open-end codes for ETHNJOB2 (second mention)

14 Work harder than others (different standards), don’t make mistakes

40 Automatically assumed to be less competent than male/white counterparts (not turned to for things)/not taken as seriously

41 Only female in the room/minority in workplace

48 Associating them with negative stereotypes

49 Not assertive enough, don’t bring up accomplishments

51 Promoted less/after men/white

52 Turned down for a job/less likely to get hired

53 Passed over for opportunities/assignments

69 General bias against women/minorities

70 A minority in their field (when they're usually a majority)

82 Reverse discrimination by race

83 Reverse discrimination by gender and race

97 Other

98 Don't know/Don't remember

99 Refused

GENDJOB2\_OE1\_col Open-end codes for GENDJOB2 (first mention)

GENDJOB2\_OE2\_col Open-end codes for GENDJOB2 (second mention)

GENDJOB2\_OE3\_col Open-end codes for GENDJOB2 (third mention)

11 Feel need to (constantly) prove themselves/prove capability

14 Work harder than others (different standards), don’t make mistakes

40 Automatically assumed to be less competent than male/white counterparts (not turned to for things)/not taken as seriously

41 Only female in the room/minority in workplace

42 Boys club/camaraderie among male coworkers; excluded; 'good old boys’

43 Criticized/penalized for not behaving how expected to behave (e.g., criticized for assertiveness; personality-based criticisms)

44 Uncomfortable workplace/don’t fit in

45 Harassment

46 Assumed to do less important/menial tasks; patronized

51 Promoted less/after men/white

52 Turned down for a job/less likely to get hired

56 Men/whites in leadership positions; fewer role models/mentors

57 Paid less

60 Hard to balance expected family responsibilities and work

61 People expect they cannot have family and work successfully

69 General bias against women/minorities

70 A minority in their field (when they're usually a majority)

71 A majority in their field

72 Double jeopardy

81 Reverse discrimination by gender

82 Reverse discrimination by race

83 Reverse discrimination by gender and race

97 Other

98 Don't know/Don't remember

99 Refused

DEGREE1\_computer What was your major field of study in college? Mention computer and information sciences

1. Did not study computer and information services
2. Studied computer and information services

DEGREE1\_math What was your major field of study in college? Mention mathematics and statistics (including actuarial sciences)

1. Did not study mathematics and statistics
2. Studied mathematics and statistics

DEGREE1\_life What was your major field of study in college? Mention life science (e.g., biology, biochemical sciences zoology, plant sciences, ecology) or agriculture

0 Did not study life sciences or agriculture

1 Studied life sciences or agriculture

DEGREE1\_physical What was your major field of study in college? Mention physical sciences (e.g., chemistry, physics) or earth sciences (e.g., geology, environmental sciences)

1. Did not study physical science or earth science
2. Studied physical science or earth science

DEGREE1\_engineering What was your major field of study in college? Mention engineering or architecture?

1. Did not study engineering or architecture
2. Studied engineering or architecture

DEGREE1\_health What was your major field of study in college? Mention health-related

1. Did not study health-related
2. Studied health related

DEGREE1\_otherstem What was your major field of study in college? Mention other STEM related

1. Did not study other STEM related
2. Studied other STEM related

DEGREE1\_othernonstem What was your major field of study in college? Mention other non-STEM

1. Did not study other non-STEM related
2. Studied other non-STEM related

DEGREE2\_computer Thinking about your most recent graduate degree, what was your degree field? Mention computer and information sciences

1. Did not study computer and information services
2. Studied computer and information services

DEGREE2\_math Thinking about your most recent graduate degree, what was your degree field? Mention mathematics and statistics (including actuarial sciences)

1. Did not study mathematics and statistics
2. Studied mathematics and statistics

DEGREE2\_life Thinking about your most recent graduate degree, what was your degree field? Mention life sciences (e.g., biology, biochemical sciences, zoology, plant sciences, ecology) or agriculture

0 Did not study life sciences or agriculture

1 Studied life sciences or agriculture

DEGREE2\_physical Thinking about your most recent graduate degree, what was your degree field? Mention physical sciences (e.g., chemistry, physics) or earth science (geology, environmental science)

1. Did not study physical science or earth science
2. Studied physical science or earth science

DEGREE2\_engineering Thinking about your most recent graduate degree, what was your degree field, Mention engineering or architecture

1. Did not study engineering or architecture
2. Studied engineering or architecture

DEGREE2\_health Thinking about your most recent graduate degree, what was your degree field? Mention health-related

1. Did not study health-related
2. Studied health related

DEGREE2\_otherstem Thinking about your most recent graduate degree, what was your degree field? Mention other STEM related

1. Did not study other STEM related
2. Studied other STEM related

DEGREE2\_othernonstem Thinking about your most recent graduate degree, what was your degree

field?

1. Did not study other non-STEM related
2. Studied other non-STEM related

STEM\_DEGREE Respondent holds degree in STEM field or not

1. at least one STEM degree
2. no STEM degrees
3. Not enough information/Don’t know/Refused

SCICOUR2\_t How many college-level science courses have you taken?

15 15 or more

98 Zero or Don’t remember

99 Refused

MATHCOUR2\_t How many college-level math courses have you taken?

15 15 or more

98 Zero or Don’t remember

99 Refused

PPT017\_t Presence of Household Members – Children 0-17

4 4 or more

PPT18OV\_t Presence of household members – Adults 18+

1. 5 or more

PPHHSIZE\_t Household size

6 6 or more

EDUC4CAT Education (categorical)

1. High school graduate or less
2. Some college, including Associate degree
3. Bachelors degree
4. Masters, Professional or Doctorate degree

RACE\_col Race (census)

1. White
2. Black
3. Asian
4. Other race

RECONA\_col And which of the following best describes the kind of work you do?

1 Computer work (such as software developer, data scientists or database administrator)

2 Other

RECONB\_col And which of the following best describes the kind of work you do?

1 Engineer

2 Other

3 Refused

RECONC\_col And which of the following best describes the kind of work you do?

1. Life sciences
2. Physical sciences (include Earth sciences)
3. Social sciences and other

**PEW RESEARCH CENTER**

**2017 STEM QUESTIONNAIRE**

**JULY 11-AUGUST 10, 2017**

**ASK ALL:**

**WORK** Do any of the following currently describe you?

1. Employed full time (35 hours or more per week) for pay with an organization or company

2. Employed part time (less than 35 hours per week) for pay with an organization or company

3. Self-employed full time (35 hours or more per week)

4. Self-employed part time (less than 35 hours per week)

1 Yes

2 No

**ASK IF DOV\_EMPLOYED=1 AND PPWORK=1,2 AND XPCM0160<3-**

**CHANGOCCUP** Have you changed your MAIN job, that is the kind of work you do, since **[insert DOV\_PCMONTH] [insert DOV\_PCYEAR]**, or not?

1 Yes, my main job has CHANGED

2 No, my main job is the SAME

**ASK IF DOV\_EMPLOYED=1 AND PPWORK<2 AND CHANGOCCUP=1 OR XPCM0160=30 OR XPCM0160=31**

**OCCUPATION** In your MAIN job, what kind of work do you do?

1. Management

**[SPACE]**

2. Business and Financial Operations

**[SPACE]**

**Professional**

3. Computer and Mathematical

4. Architecture and Engineering

5. Life, Physical, and Social Sciences

6. Community and Social Services

7. Lawyer or Judge

8. Teacher, except college and university

9. Teacher, college and university

**[SPACE]**

**Health Care**

11. Medical Doctor (such as physician, surgeon, dentist, veterinarian)

12. Other Health Care Practitioner (such as nurse, pharmacist, chiropractor, dietician)

13. Health Technologist or Technician (such as paramedic, lab technician)

14. Health Care Support (such as nursing aide, orderly, dental assistant)

**[SPACE]**

**Service**

15. Protective Service

16. Food Preparation and Serving

17. Building and Grounds Cleaning and Maintenance

18. Personal Care and Service

**[SPACE]**

**Sales**

19. Sales Representative

20. Retail Sales

21. Other Sales

**[SPACE]**

22. Office and Administrative Support

**[SPACE]**

23. Farming, Forestry, and Fishing

**[SPACE]**

**Precision Production, Craft and Repair**

24. Construction and Extraction

25. Installation, Maintenance, and Repair

26. Precision Production (such as machinist, welder, baker, printer, tailor)

**[SPACE]**

27. Transportation and Material Moving

**[SPACE]**

28. Armed Forces

**[SPACE]**

10. Other Professional

29. Other, please specify **[O]**

**ASK IF DOV\_EMPLOYED=1 AND ((PPWORK<2 OR CHANGOCCUP=1) OR (XIND1=22 (NOT ASKED) OR 23 (MISSING))**

**INDUSTRY** Think about the industry in which you currently work at your MAIN job. Which of the following kinds of industries is it?

1. Agriculture, Forestry, Fishing and Hunting

2. Mining, Quarrying, and Oil and Gas Extraction

3. Utilities

4. Construction

5. Manufacturing

6. Wholesale Trade

7. Retail Trade

8. Transportation and Warehousing

9. Information

10. Finance and Insurance

11. Real Estate and Rental and Leasing

12. Professional, Scientific, and Technical Services

13. Management of Companies and Enterprises

14. Administrative and Support and Waste Management and Remediation Services

15. Educational Services

16. Health Care and Social Assistance

17. Arts, Entertainment, and Recreation

18. Accommodation and Food Services

19. Other Services and Community/Non-Profit Organizations (except Public Administration)

20. Public Administration

21. Armed Forces

**ASK IF DOV\_OCCUPAPTION=8 (TEACHER, EXCEPT COLLEGE AND UNIVERSITY)**

**TEACHNC1** Thinking about the kind of work you do…

Do you specialize in teaching particular subjects, or do you not do this in your job?

1 Yes, specialize

2 No, do not specialize

**ASK IF TEACHNC=1 (YES, SPECIALIZE)**

**TEACHNC2** Which of these best describes your teaching specialty area?

1. English
2. Mathematics or statistics
3. Science (includes biology, chemistry, physics, Earth sciences and others)
4. Social science or social studies (includes economics, history, psychology, and others)
5. Physical education
6. Special education
7. Computing and information science
8. Engineering
9. Foreign language
10. Performing or visual arts
11. Business management

**[SPACE]**

12 Something else, please specify **[O]**

**ASK IF DOV\_OCCUPATION=9 (TEACHER, COLLEGE AND UNIVERSITY)**

**TEACHCOL1** Thinking about the kind of work you do…

Which of the following broad areas best describes your specialty?

1. Humanities
2. Mathematics or statistics
3. Life sciences, physical sciences, Earth sciences

4 Social sciences (include economics, political science, psychology, sociology and others)

5 Computing and information science

6 Engineering

7 Business management

8 Law

9 Journalism

10 Architecture

11 Agriculture

12 Performing or visual arts

13 Physical education

14 Allied health professions (such as dentistry, medicine, nursing, pharmacy, public health, veterinary medicine)

15 Something else, please specify **[O]**

**ASK IF DOV\_OCCUPATION=3 (COMPUTER AND MATHEMATICAL)**

**RECONA** And which of the following best describes the kind of work you do?

1. Computer work (such as software developer, data scientist or database administrator)
2. Statistician, mathematician or actuary
3. Other, please specify **[O]**

**ASK IF DOV\_OCCUPATION=4 (ARCHITECTURE AND ENGINEERING)**

**RECONB** And which of the following best describes the kind of work you do*?*

1. Architect or surveyor
2. Engineer
3. Other, please specify **[O]**

**ASK IF DOV\_OCCUPATION=5 (LIFE, PHYSICAL, AND SOCIAL SCIENCES)**

**RECONC** And which of the following best describes the kind of work you do?

1 Life sciences

2 Physical sciences (include Earth sciences)

3 Social sciences (include economics, political science, psychology, sociology and others)

4 Other, please specify **[O]**

**ASK ALL:**

**SCH1** Thinking about what's being taught in the K to 12 public schools these days, what ONE subject should schools emphasize more than they do now?

[OPEN-END]

**ASK ALL:**

**SCH2** Overall, how much would you say you know about the K to 12 public schools…

1. In your local community
2. A lot
3. A little
4. Nothing at all
5. In the U.S. as a whole
6. A lot
7. A little
8. Nothing at all

**ASK ALL:**

**SCH3** How would you rate the K to 12 public schools in your local community in the following areas? **[RANDOMIZE ITEMS]**

1. In providing the knowledge and skills needed for pursuing a four-year college degree
2. Excellent
3. Good
4. Only fair
5. Poor
6. In teaching reading, writing and mathematics
7. Excellent
8. Good
9. Only fair
10. Poor
11. In providing the knowledge and skills needed for pursuing a vocational or technical career
12. Excellent
13. Good
14. Only fair
15. Poor
16. In teaching critical-thinking and problem-solving skills
17. Excellent
18. Good
19. Only fair
20. Poor

**ASK ALL:**

**SCH4** Compared with other developed nations, how would you rate the United States in the following area... education in K to 12 public schools?

1 The U.S. is the best in the world

2 The U.S. is above average

3 The U.S. is average

4 The U.S. is below average

**ASK ALL:**

**SCH5 [RANDOMLY ASSIGN HALF OF RESPONDENTS ITEMS IN ORDER OF A, B, C AND OTHER HALF OF ITEMS IN ORDER C, B, A]**

a. Compared with other developed nations, how would you rate the United States in the following area…education in science, technology, engineering and math in K to 12 public schools?

1 The U.S. is the best in the world

2 The U.S. is above average

3 The U.S. is average

4 The U.S. is below average

b. Compared with other developed nations, how would you rate the United States in the following area…undergraduate education in science, technology, engineering and math in colleges and universities?

1 The U.S. is the best in the world

2 The U.S. is above average

3 The U.S. is average

4 The U.S. is below average

c. Compared with other developed nations, how would you rate the United States in the following area…graduate education in science, technology, engineering and math in universities?

1 The U.S. is the best in the world

2 The U.S. is above average

3 The U.S. is average

4 The U.S. is below average

**ASK ALL:**

**SCH6** Thinking about science, technology, engineering and math education in the nation’s K to 12 public schools these days, do you think each of the following is a big problem, a small problem or not a problem? **[RANDOMIZE ITEMS, SPLIT ON TWO SCREENS, SHOWING 4 ITEMS ON EACH SCREEN]**

* 1. Too little time is spent on these subjects in elementary school
  2. A big problem
  3. A small problem
  4. Not a problem
  5. Teachers do not have curriculum materials that are up-to-date with the newest developments in these subjects
     1. A big problem
     2. A small problem
     3. Not a problem
  6. Students lack interest in learning about these subjects

1. A big problem
2. A small problem
3. Not a problem
   1. Too much emphasis is given to meeting state standards in these subjects
4. A big problem
5. A small problem
6. Not a problem
   1. Teachers do not emphasize the practical uses of these subjects for everyday life
      * 1. A big problem
        2. A small problem
        3. Not a problem
   2. Parents are not involved in supporting school education in these subjects
      * 1. A big problem
        2. A small problem
        3. Not a problem
   3. Students are not willing to work hard to excel in these subjects
      * 1. A big problem
        2. A small problem
        3. Not a problem
7. Teachers rarely use methods that help students think critically and problem-solve in these subjects
8. A big problem
9. A small problem
10. Not a problem

**ASK ALL:**

**SCH7** What's the main reason many young people don't pursue college degrees in science, technology, engineering and mathematics? Is it mostly because… **[RANDOMIZE RESPONSE OPTIONS 1-3 WITH 4 ALWAYS LAST]**

1. They think these subjects are too hard
2. They think these subjects are too boring
3. They think these subjects are not useful for their careers

**[SPACE]**

1. Some other reason (please specify)

**ASK ALL:**

**SCH8** Thinking back to your own experiences in grades K to 12, did you generally like or dislike… **[RANDOMIZE ITEMS]**

* + - * 1. Science classes

1. Liked
2. Disliked
   * + - 1. Math classes
3. Liked
4. Disliked

**ASK IF SCH8a=1 OR 2 (NOT REFUSED)**

**SCH9A** Thinking back to your experiences in grades K to 12, which of these was the main reason you generally **[IF SCH8a=1:**liked**/IF SCH8a=2:**disliked**]** SCIENCE CLASSES? **[SHOW SCH9A AND SCH9B IN SAME ORDER AS SCH8]**

1. I **[IF SCH8a=1:**liked**/IF SCH8a=2:**disliked**]** the way science classes were taught
2. I **[IF SCH8a=1:**liked**/IF SCH8a=2:**disliked**]** the subject matter of the science classes

**ASK IF SCH8B=1 OR 2 (NOT REFUSED)**

**SCH9B** Thinking back to your experiences in grades K to 12, which of these was the main reason you generally **[IF SCH8B=1:**liked**/IF SCH8B=2:**disliked**]** MATH CLASSES?

1. I **[IF SCH8B=1:**liked**/IF SCH8B=2:**disliked**]** the way math classes were taught
2. I **[IF SCH8B=1:**liked**/IF SCH8B=2:**disliked**]** the subject matter of the math classes

**ASK IF SCH8a=1 (LIKED SCIENCE CLASSES)**

**SCH10A** Thinking back to your own experiences in grades K to 12 which of these, if any, describe reasons you generally liked SCIENCE CLASSES? **[RANDOMIZE ITEMS 1-5 WITH 6 ALWAYS LAST]**

*Select all answers that apply*

1. I found science classes easy
2. It was easy to see how science would be useful for the future
3. I felt that I belonged in science classes
4. I liked the labs and hands-on learning experiences
5. I had a lot of support at home or after school to help me do well in these classes
6. None of these

**ASK IF SCH8A=2 (DISLIKED SCIENCE CLASSES)**

**SCH10B** Thinking back to your own experiences in grades K to 12, which of these, if any, describe reasons you generally disliked SCIENCE CLASSES? **[RANDOMIZE ITEMS 1-5 WITH 6 ALWAYS LAST]**

*Select all answers that apply*

1. I found science classes hard
2. It was not easy to see how science would be useful for the future
3. I felt that I didn’t belong in science classes
4. I didn’t like the labs and hands-on learning experiences
5. I didn’t have enough support at home or after school to help me do well in these classes
6. None of these

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**JOBVALU1** Thinking about your own work experiences…

Which of these things, if any, is important to you personally when choosing a job? **[RANDOMIZE ITEMS 1-7 WITH 8 ALWAYS LAST]**

*Select all answers that apply*

1. Having a high-paying job

2. Having flexibility to balance work and family needs

3. Having opportunities for promotion or advancement

4. Making a meaningful contribution to society

5. Having a job that others respect and value

6. Having a job that focuses on helping others

7. Being in a workplace that is welcoming for people like me

**[SPACE]**

8. None of the above

**ASK IF MORE THAN ONE ITEM SELECTED IN JOBVALU1**

**JOBVALU2** And, which of these things is MOST important to you personally when choosing a job? **[SHOW ITEMS SELECTED IN JOBVALU1 IN SAME ORDER, AUTOPUNCH IF ONLY ONE RESPONSE AT JOBVALU1, BUT DO NOT SHOW RESPONDENT]**

1 Having a high-paying job

2 Having flexibility to balance work and family needs

3 Having opportunities for promotion or advancement

4 Making a meaningful contribution to society

5 Having a job that others respect and value

6 Having a job that focuses on helping others

7 Being in a workplace that is welcoming for people like me

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**AHEAD** Thinking about the kind of work you do, would you say each of the following helps, hurts, or makes little difference for your chances of getting ahead in your job? **[RANDOMIZE ITEMS]**

1. Being assertive
2. Helps my chances of getting ahead in my job
3. Hurts my chances of getting ahead in my job
4. Makes little difference
5. Participating in informal social activities with my co-workers
6. Helps my chances of getting ahead in my job
7. Hurts my chances of getting ahead in my job
8. Makes little difference
9. Speaking out about problems I see in the workplace
10. Helps my chances of getting ahead in my job
11. Hurts my chances of getting ahead in my job
12. Makes little difference
13. Having a workplace mentor to advise me
14. Helps my chances of getting ahead in my job
15. Hurts my chances of getting ahead in my job
16. Makes little difference
17. Talking about my personal life at work
18. Helps my chances of getting ahead in my job
19. Hurts my chances of getting ahead in my job
20. Makes little difference
21. Working harder than others
22. Helps my chances of getting ahead in my job
23. Hurts my chances of getting ahead in my job
24. Makes little difference
25. Being vocal about my work and accomplishments
26. Helps my chances of getting ahead in my job
27. Hurts my chances of getting ahead in my job
28. Makes little difference

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**TALENT** For the kind of work that you do, how important, if at all, would you say having a natural ability is or has been for you, personally, to get ahead in your job?

1. Very important
2. Somewhat important
3. Not too important
4. Not at all important

**ASK IF WORK1\_1=1 OR WORK\_2=1 (NOT-SELF EMPLOYED ONLY)**

**PROVE** How often, if ever, do you feel the need to prove yourself at work in order to be respected by your co-workers?

1. All the time
2. Some of the time
3. Not too often
4. Never

**ASK IF WORK1\_1=1 OR WORK\_2=1 (NOT-SELF EMPLOYED ONLY)**

**[RANDOMIZE ORDER OF RESPECTA AND RESPECTB, SHOW ON SAME SCREEN]**

**RESPECTA** How much would you say that your contributions at work are valued by your SUPERVISOR?

1. A lot
2. Some
3. Not too much
4. Not at all

**RESPECTB** How much would you say that your contributions at work are valued by your CO-WORKERS?

1. A lot
2. Some
3. Not too much
4. Not at all

**ASK ALL:**

**FAMSTEM1** Do you have any close family members who work or have worked in a job or career that involves science, technology*,* engineering or math?

1. Yes
2. No

**ASK IF FAMSTEM=1 (YES)**

**FAMSTEM2** These close family members who work or have worked in a job or career that involves science, technology*,* engineering or math are…

*Select all answers that apply*

1 Older than I am

2 About my age or younger than I am

**ASK IF WORKTYPE\_FINAL=2 (EMPLOYED IN IN NON-STEM)**

**INTEREST1** Were you, personally, ever interested in pursuing a job or career that involves science, technology, engineering or math?

1. Yes, I was very interested
2. Yes, I was somewhat interested
3. No, I was not too interested
4. No, I was not at all interested

**[SPACE]**

5 My job or career currently involves science, technology, engineering or math

**ASK IF INTEREST1=1 OR 2 (SOMEWHAT OR VERY INTERESTED)**

**INTEREST2** When were you **[IF INTEREST1=1:**very**; IF INTEREST1=2:**somewhat**]** interested in pursuing a job or career that involves science, technology, engineering or math? [Enter your age at the time. If you don’t recall a specific age, describe the time period in your life.]

[OPEN-END]

**ASK IF INTEREST1=1 OR 2 (SOMEWHAT OR VERY INTERESTED)**

**INTEREST3** What’s the main reason you did not pursue a job or career that involves science, technology, engineering or math?

[OPEN-END]

**ASK ALL:**

**STEMJOB** Compared with jobs in other industries, would you say… **[RANDOMIZE ITEMS, SPLIT ON TWO SCREENS]**

* 1. Jobs in science, technology, engineering and math…

1. Offer higher pay than jobs in other industries
2. Offer lower pay than jobs in other industries
3. Offer similar pay to jobs in other industries
   1. Jobs in science, technology, engineering and math…
4. Offer more opportunities for advancement than jobs in other industries
5. Offer fewer opportunities for advancement than jobs in other industries
6. Offer about the same number of opportunities for advancement as jobs in other industries
   1. Jobs in science, technology, engineering and math…
7. Have more flexibility to balance work and family needs than jobs in other industries
8. Have less flexibility to balance work and family needs than jobs in other industries
9. Have about the same amount of flexibility to balance work and family needs as jobs in

other industries

* 1. Jobs in science, technology, engineering and math…

1. Make a more meaningful contribution to society than jobs in other industries
2. Make a less meaningful contribution to society than jobs in other industries
3. Make about the same contribution to society as jobs in other industries
   1. Jobs in science, technology, engineering and math…
4. Are more well-respected than jobs in other industries
5. Are less well-respected than jobs in other industries
6. Are respected about the same as jobs in other industries
   1. Jobs in science, technology, engineering and math…
7. Are more focused on helping others than jobs in other industries
8. Are less focused on helping others than jobs in other industries
9. Are focused about the same amount on helping others as jobs in other industries
   1. Jobs in science, technology, engineering and math…
10. Attract more of the brightest and most qualified young people than jobs in other industries
11. Attract fewer of the brightest and most qualified young people than jobs in other industries
12. Attract about the same number of the brightest and most qualified young people as jobs in other industries
    1. Jobs in science, technology, engineering and math…
13. Are more difficult to get into than jobs in other industries
14. Are less difficult to get into than jobs in other industries
15. Are similarly difficult to get into as jobs in other industries

**CREATE DOV\_FORM [S]**

**Randomly assign half of respondents into DOV\_FORM=1 and the other half into DOV\_FORM=2**

**IF DOV\_FORM=1, SHOW REASON1 FIRST. IF DOV\_FORM=2, SHOW REASON2 FIRST.**

**ASK ALL:**

**REASON1** As you may know, women are underrepresented in some science, technology, engineering and math jobs in this country.

For each of the following, please indicate whether you think it is a major reason, a minor reason or not a reason why there are not more women working in science, technology, engineering and math jobs. **[RANDOMIZE ITEMS, SHOW REASON1 AND REASON2 IN SAME ORDER]**

a.From an early age, girls are not encouraged to pursue these subjects in school

* 1. A major reason
  2. A minor reason
  3. Not a reason

1. Women are less likely than men to believe that they can succeed in these fields
   1. A major reason
   2. A minor reason
   3. Not a reason
2. Women do not pursue these jobs because there are so few female role models in these fields
   1. A major reason
   2. A minor reason
   3. Not a reason
3. Women face discrimination in the recruitment process, hiring and promotions
   1. A major reason
   2. A minor reason
   3. Not a reason
4. More women are being trained in science, technology, engineering and math than before, but it takes time and the process is slow
   1. A major reason
   2. A minor reason
   3. Not a reason
5. Women are just less interested in science, technology, engineering and math than men
   1. A major reason
   2. A minor reason
   3. Not a reason
6. It is more difficult to build a career while balancing work and family responsibilities in science, technology, engineering and math jobs than jobs in other industries
   1. A major reason
   2. A minor reason
   3. Not a reason

**ASK ALL:**

**REASON2** As you may know, blacks and Hispanics are underrepresented in science, technology, engineering and math jobs in this country.

For each of the following, please indicate whether you think it is a major reason, a minor reason or not a reason why there are not more blacks and Hispanics working in science, technology, engineering and math jobs. **[RANDOMIZE ITEMS, SHOW REASON1 AND REASON2 IN SAME ORDER]**

1. From an early age, blacks and Hispanics are not encouraged to pursue these subjects in school
2. A major reason
3. A minor reason
4. Not a reason
5. Blacks and Hispanics are less likely than others to believe that they can succeed in these fields
6. A major reason
7. A minor reason
8. Not a reason
9. Blacks and Hispanics do not pursue these jobs because there are so few black and Hispanic role models in these fields
10. A major reason
11. A minor reason
12. Not a reason
13. Blacks and Hispanics face discrimination in the recruitment process, hiring and promotions
14. A major reason
15. A minor reason
16. Not a reason
17. More blacks and Hispanics are being trained in science, technology, engineering and math than before, but it takes time and the process is slow
18. A major reason
19. A minor reason
20. Not a reason
21. Blacks and Hispanics are just less interested in science, technology, engineering and math than others
    1. A major reason
    2. A minor reason
    3. Not a reason
22. Blacks and Hispanics are less likely to have access to quality education to prepare them for these fields than others
    1. A major reason
    2. A minor reason
    3. Not a reason

**IF DOV\_FORM=1, SHOW TECH1-TECH3 FIRST. IF DOV\_FORM=2, SHOW TECH4-TECH6 FIRST.**

**ASK ALL:**

**TECH1** How much, if anything, have you heard or read about discrimination against women in the technology industry?

1. A lot
2. A little
3. Nothing at all

**ASK ALL:**

**TECH2** Compared with other industries, do you think there is more, less or about the same amount of discrimination against women in the technology industry?

1. More discrimination against women
2. Less discrimination against women
3. About the same amount of discrimination as other industries

**ASK ALL:**

**TECH3** Do you think discrimination against women is a major problem, a minor problem or not a problem in the technology industry?

1. A major problem
2. A minor problem
3. Not a problem

**ASK ALL:**

**TECH4** How much, if anything, have you heard or read about discrimination against blacks and Hispanics in the technology industry?

1. A lot
2. A little
3. Nothing at all

**ASK ALL:**

**TECH5** Compared with other industries, do you think there is more, less or about the same amount of discrimination against blacks and Hispanics in the technology industry?

1. More discrimination against blacks and Hispanics
2. Less discrimination against blacks and Hispanics
3. About the same amount of discrimination as other industries

**ASK ALL:**

**TECH6** Do you think discrimination against blacks and Hispanics is a major problem, a minor problem or not a problem in the technology industry?

1. A major problem
2. A minor problem
3. Not a problem

**IF DOV\_FORM=1, SHOW GEND1-6. IF DOV\_FORM=2, SHOW ETHN1-6.**

Thinking about your own workplace…

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**GEND1** What is the balance of men and women in your workplace? **[RANDOMIZE OPTIONS 1 AND 2]**

1. There are more men
2. There are more women
3. There is an even mix of men and women

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**GEND2** How would you say your workplace treats women when it comes to the recruitment and hiring process?

1. Usually treated fairly in the recruitment and hiring process
2. Sometimes treated fairly and sometimes treated unfairly
3. Usually treated unfairly in the recruitment and hiring process

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**GEND3** How would you say your workplace treats women when it comes to opportunities for promotion and advancement?

1. Usually treated fairly in opportunities for promotion and advancement
2. Sometimes treated fairly and sometimes treated unfairly
3. Usually treated unfairly in opportunities for promotion and advancement

**ASK IF DOV\_EMPLOYED=1 (EMPOYED)**

**GEND4** Would you say your workplace pays too much, too little or about the right amount of attention to increasing gender diversity?

1. Too much attention
2. Too little attention
3. About the right amount of attention

**ASK ALL:**

**GEND5** How important would you say it is to have gender diversity in workplaces today?

1. Extremely important
2. Very important
3. Somewhat important
4. Not too important
5. Not at all important

**ASK IF GEND5=1,2,3 (EXTREMELY, VERY, SOMEWHAT IMPORTANT)**

**GEND6** Which of these, if any, do you consider important reasons to increase gender diversity in the workplace? **[RANDOMIZE ITEMS a-c WITH ITEM d ALWAYS LAST]**

*Select all answers that apply*

a. Gender diversity in the workplace gives people an equal opportunity to succeed

b. Gender diversity provides other perspectives that contribute to the overall success of companies and organizations

c. Gender diversity makes good business sense because it increases the supply of potential workers

**[SPACE]**

d. None of these

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**ETHN1**  Which of these best describes your workplace? **[RANDOMIZE OPTIONS 1 AND 2]**

1. Most people are the same race and ethnicity as I am
2. Most people are a different race or ethnicity than I am
3. There is a mix of people from different racial and ethnic backgrounds

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**ETHN2** How would you say your workplace treats people in each of the following groups when it comes to the recruitment and hiring process? **[RANDOMIZE ITEMS]**

1. Whites
2. Usually treated fairly in the recruitment and hiring process
3. Sometimes treated fairly and sometimes treated unfairly
4. Usually treated unfairly in the recruitment and hiring process
5. Blacks
6. Usually treated fairly in the recruitment and hiring process
7. Sometimes treated fairly and sometimes treated unfairly
8. Usually treated unfairly in the recruitment and hiring process
9. Hispanics
10. Usually treated fairly in the recruitment and hiring process
11. Sometimes treated fairly and sometimes treated unfairly
12. Usually treated unfairly in the recruitment and hiring process
13. Asian Americans
14. Usually treated fairly in the recruitment and hiring process
15. Sometimes treated fairly and sometimes treated unfairly
16. Usually treated unfairly in the recruitment and hiring process

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**ETHN3** How would you say your workplace treats people in each of the following groups when it comes to opportunities for promotion and advancement? **[SHOW IN SAME ORDER AS ETHN2]**

1. Whites
2. Usually treated fairly in opportunities for promotion and advancement
3. Sometimes treated fairly and sometimes treated unfairly
4. Usually treated unfairly in opportunities for promotion and advancement
5. Blacks
   * 1. Usually treated fairly in opportunities for promotion and advancement
     2. Sometimes treated fairly and sometimes treated unfairly
     3. Usually treated unfairly in opportunities for promotion and advancement
6. Hispanics
7. Usually treated fairly in opportunities for promotion and advancement
8. Sometimes treated fairly and sometimes treated unfairly
9. Usually treated unfairly in opportunities for promotion and advancement
10. Asian Americans
11. Usually treated fairly in opportunities for promotion and advancement
12. Sometimes treated fairly and sometimes treated unfairly
13. Usually treated unfairly in opportunities for promotion and advancement

**ASK IF DOV\_EMPLOYED=1:**

**ETHN4** Would you say your workplace pays too much, too little or about the right amount of attention to increasing racial and ethnic diversity?

1. Too much attention
2. Too little attention
3. About the right amount of attention

**ASK ALL:**

**ETHN5** How important would you say it is to have racial and ethnic diversity in workplaces today?

1. Extremely important
2. Very important
3. Somewhat important
4. Not too important
5. Not at all important

**ASK IF ETHN5=1,2,3 (EXTREMELY, VERY, SOMEWHAT IMPORTANT)**

**ETHN6** Which of these, if any, do you consider important reasons to increase racial and ethnic diversity in the workplace?**[RANDOMIZE ITEMS a-c WITH ITEM d ALWAYS LAST]**

*Select all answers that apply*

a. Racial and ethnic diversity in the workplace gives people an equal opportunity to succeed

b. Racial and ethnic diversity provides other perspectives that contribute to the overall success of companies and organizations

c. Racial and ethnic diversity makes good business sense because it increases the supply of potential workers

**[SPACE]**

d. None of these

**IF DOV\_FORM=1, show GENDJOB1-GENDJOB2 FIRST; IF DOV\_FORM=2, SHOW ETHNJOB1 ETHNJOB2 FIRST**

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**GENDJOB1** Overall, which of these best describes your experience? **[RANDOMIZE OPTIONS 1 AND 2, SHOW IN SAME ORDER AS ETHNJOB1]**

1. My gender has made it harder for me to succeed in my job
2. My gender has made it easier for me to succeed in my job
3. My gender has not made much difference in my job

**ASK IF WORKTYPE\_FINAL=1 (STEM) AND GENDJOB1=1 (HARDER TO SUCCEED)**

**GENDJOB2** Why do you think that your gender has made it harder to succeed in your job?

[OPEN-END]

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**ETHNJOB1** Overall, which of these best describes your experience? **[RANDOMIZE OPTIONS 1 AND 2,**

**SHOW IN SAME ORDER AS GENDJOB1]**

1. My race or ethnicity has made it harder for me to succeed in my job
2. My race or ethnicity has made it easier for me to succeed in my job
3. My race or ethnicity has not made much difference in my job

**ASK IF WORKTYPE\_FINAL=1 (STEM) AND ETHNJOB1=1 (HARDER TO SUCCEED)**

**ETHNJOB2** Why do you think that your race or ethnicity has made it harder to succeed in your job?

[OPEN-END]

**ASK IF WORKTYPE\_FINAL=1 AND ((PPGENDER=1 and PPETHM=2, BLACK MAN) OR (PPGENDER=1 AND PPETHM=4, HISPANIC MAN) OR (PPGENDER=2 AND PPETHM=1, WHITE WOMAN) OR (PPGENDER=2 AND PPETHM=2, BLACK WOMAN) OR (PPGENDER=2 AND PPETHM=4, HISPANIC WOMAN) OR (PPGENDER=2 AND (XRACEM=4 AND PPETHM=3), ASIAN AMERICAN WOMAN))**

**CHANGE** In your view, what would be the MOST EFFECTIVE way to attract more **[IF PPGENDER=1 and PPETHM=2:**black men**; IF PPGENDER=1 AND PPETHM=4:**Hispanic men**; IF PPGENDER=2 AND PPETHM=1:**white women**; IF PPGENDER=2 AND PPETHM=2:**black women**; IF PPGENDER=2 AND PPETHM-4:**Hispanic women**; IF PPGENDER=2 AND (XRACEM=4 AND PPETHM=3):**Asian American women**]** to jobs in science, technology, engineering and math?

[OPEN-END]

*Prompt if refused: You did not give a response. If you are sure you want to skip, click next.*

**IF DOV\_FORM=1, ASK GENDDISC FIRST; IF DOV\_FORM=2, ASK ETHNDISC FIRST.**

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**GENDDISC** Here are a few things that some people have experienced in their workplace because of their gender.

Which, if any, of the following has ever happened to you? **[RANDOMIZE ITEMS a-h with i ALWAYS LAST]**

*Select all answers that apply*

1. Been denied a promotion because of your gender
2. Earned less than a **[IF PPGENDER=1**:woman; **IF PPGENDER=2:** man**]** who was doing the same job
3. Been turned down for a job because of your gender
4. Felt isolated in your workplace because of your gender
5. Received less support from senior leaders than a **[IF PPGENDER=1**:woman; **IF PPGENDER=2**: man**]** who was doing the same job
6. Had someone treat you as if you were not competent because of your gender
7. Been passed over for the most important assignments because of your gender
8. Experienced repeated, small slights at work because of your gender

**[SPACE]**

1. None of these

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**ETHNDISC** Here are a few things that some people have experienced in their workplace because of their race or ethnicity.

Which, if any, of the following has ever happened to you? **[RANDOMIZE ITEMS a-h with i ALWAYS LAST]**

*Select all answers that apply*

1. Been denied a promotion because of your race or ethnicity
2. Earned less than a coworker who was doing the same job because of your race or ethnicity
3. Been turned down for a job because of your race or ethnicity
4. Felt isolated in your workplace because of your race or ethnicity
5. Received less support from senior leaders than another worker who was doing the same job because of your race or ethnicity
6. Had someone treat you as if you were not competent because of your race or ethnicity
7. Been passed over for the most important assignments because of your race or ethnicity
8. Experienced repeated, small slights at work because of your race or ethnicity

**[SPACE]**

1. None of these

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**HARASS1** As far as you know, would you say sexual harassment is a big problem, a small problem or not a problem in your workplace?

1. Big problem
2. Small problem
3. Not a problem

**ASK IF DOV\_EMPLOYED=1**

**HARASS2** Overall, would you say sexual harassment is a big problem, a small problem or not a problem in jobs in the industry where you work?

1. Big problem
2. Small problem
3. Not a problem

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED)**

**HARASS3** Have you ever personally experienced sexual harassment at work, or have you not experienced this?

1. Yes, I have experienced sexual harassment at work
2. No, I have not experienced sexual harassment at work

**ASK ALL:**

**VOTECH** Just a few more questions about your background and experiences…

Have you completed any vocational or technical training, certificate or apprenticeship?

1. Yes
2. No

**ASK IF PPEDUC=11,12,13,14 (ASSOCIATE DEGREE OR MORE)**

**DEGREE1** What was your major field of study in college? (Please fill in as many as apply)

Major field 1 **[OPEN-END TEXT BOX; SINGLE LINE]**

Major field 2 **[OPEN-END TEXT BOX; SINGLE LINE]**

**ASK IF PPEDUC=13,14 (GRADUATE DEGREE)**

**DEGREE2** Thinking about your most recent graduate degree, what was your degree field?

Degree field **[OPEN-END TEXT BOX; SINGLE LINE]**

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED) AND PPEDUC=11,12,13,14 (ASSOCIATE DEGREE OR MORE)**

**RELATE1 [S]** How closely related is your current job to **[IF PPEDUC=11, 12:** your college major(s)**/ IF PPEDUC=13, 14:**the field you received your graduate degree in**]**?

1. Very closely related
2. Somewhat closely related
3. Not very closely related
4. Not at all related

**ASK IF DOV\_EMPLOYED=1 (EMPLOYED) AND PPEDUC=11,12,13,14 (ASSOCIATE DEGREE OR MORE)**

**RELATE2** How often do you use skills and knowledge from your **[IF PPEDUC=11,12:** college major(s)**; IF PPEDUC=13,14:**graduate degree**]** in your current job?

1. All the time
2. Some of the time
3. Not too often
4. Never

**ASK IF PPEDUC=10-14 (SOME COLLEGE OR MORE)**

**SCICOUR1** Have you ever taken any college-level science courses?

1. Yes
2. No

**[SPACE]**

3 Don’t remember

**ASK IF SCICOUR1=1 (TAKEN COLLEGE-LEVEL SCIENCE COURSES)**

**SCICOUR2** How many college-level science courses have you taken? [range 0-50]

\_\_\_\_ science courses

98 Don’t remember

**ASK IF PPEDUC=10-14 (SOME COLLEGE OR MORE)**

**MATHCOUR1** Have you ever taken any college-level math courses?

1. Yes
2. No

3 Don’t remember

**ASK IF MATHCOUR1=1 (TAKEN COLLEGE-LEVEL MATH COURSES)**

**MATHCOUR2** How many college-level math courses have you taken? [range 0-50]

\_\_\_\_ math courses

98 Don’t remember

**ASK IF PPEDUC=10-14 (SOME COLLEGE OR MORE)**

**FIRSTCOLL** Are you the first person in your immediate family to have attended college, or not? [Immediate family includes parents and siblings.]

1. Yes
2. No

**ASK IF WORKTYPE\_FINAL=1 (STEM) AND TEACHSTEM DOES NOT EQUAL 1 (NOT A STEM TEACHER)**

**OCCUP\_OE**

How would you best describe your occupation, that is the kind of work you do in your MAIN job?

[Open-end]

*Prompt if refused: You did not give a response. If you are sure you want to skip, click next.*

**ASK ALL:**

**PARTY** In politics today, do you consider yourself a:

1 Republican

2 Democrat

3 Independent

4 Something else, please specify [OPEN-END]

**IF PARTY=3,4 OR REFUSED**

**PARTYLN** As of today do you lean more to…

1 The Republican Party

2 The Democratic Party

**ASK ALL:**

**IDEO** In general, would you describe your political views as:

1 Very conservative

2 Conservative

3 Moderate

4 Liberal

5 Very liberal

**ASK IF XPARENT=1 (ASK IF HAVE A CHILD UNDER 18)**

**PUBLIC** **[S]**

Do you have any children in kindergarten through 12th grade attending a public school, or not?

1. Yes
2. No

1. See Callegaro, Mario and Charles DiSogra. 2008. “Computing Response Metrics for Online Panels.” Public Opinion Quarterly, 72 (5): 1008-1032. [↑](#footnote-ref-1)
2. Most respondents were first asked if their main job had changed since the time of completing a profile survey. If their job had changed, they were asked their occupation again. However, 388 panelists (8% of the total) were simply asked the occupation question again with those more recent responses used to determine if they currently worked in a STEM or non-STEM job. [↑](#footnote-ref-2)
3. Panelists who were selected to participate as working in a STEM occupation who said their main job had changed and their new occupation was not in STEM were treated as ineligible for the survey. Panelists who were reclassified by researchers to a non-STEM occupation or not working based on their open-end response were treated as eligible for the survey though. Panelists who were selected to participate as working in a non-STEM occupation and those selected to participate from the general sample of panelists who were confirmed as currently working in a STEM job were treated as eligible for the survey and classified as working in a STEM job. [↑](#footnote-ref-3)
4. Teachers who do not work at the college and university level were classified as a STEM worker if they specialize in teaching mathematics or statistics, science, computing and information science, or engineering. Teachers at the university level were classified as a STEM worker if their specialty is mathematics or statistics, life sciences, physical or earth sciences, computing and information science, engineering, architecture, agriculture, or an allied health profession (such as dentistry, medicine, nursing, pharmacy, public health or veterinary medicine). [↑](#footnote-ref-4)
5. This step matched a target estimated from the proportion of STEM and non-STEM teachers based on all respondents who completed the initial screening, regardless of whether or not they qualified. [↑](#footnote-ref-5)