Appendix B: Topline

PEW RESEARCH CENTER GENERAL PUBLIC SCIENCE SURVEY TOPLINE AUG. 15-25, 2014 N=2,002

NOTE: ALL NUMBERS ARE PERCENTAGES. ANY PERCENTAGES GREATER THAN ZERO BUT LESS THAN 0.5% ARE REPLACED BY AN ASTERISK (*). COLUMNS/ROWS MAY NOT TOTAL 100% DUE TO ROUNDING.

ASK ALL:

Q.1 All in all, are you satisfied or dissatisfied with the way things are going in this country today?

Aug 15-25,

2014⁵⁶
26 Satisfied
70 Dissatisfied
4 Don't know/Refused (**VOL.**)

ASK ALL:

Q.2 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?]

		Best in the world	Above <u>average</u>	<u>Average</u>	Below <u>average</u>	(VOL.) DK/Ref
a.	Its scientific achievements Aug 15-25, 2014 Apr 28-May 12, 2009	15 17	39 47	34 26	9 5	3 4
	TREND FOR COMPARISON: AAAS scientists survey:					
	Sept 11-Oct 13, 2014 ⁵ May 1-June 14, 2009	⁷ 45 49	47 45	6 5	1 1	*
b.	Its military	-				
	Aug 15-25, 2014 Apr 28-May 12, 2009	39 42	37 39	15 13	5 3	3 3
c.	Its economy					
	Aug 15-25, 2014 Apr 28-May 12, 2009	7 12	26 22	36 33	29 31	2 3

⁵⁶ Trends not shown. See <u>Pew Research</u> for trends from 1988 to present.

⁵⁷ Survey of AAAS members conducted online. The share giving no answer to each question is listed under the "DK/Ref. (VOL.)" column. The question stem for the AAAS survey was "Compared with other industrialized countries, how would you rate the United States with regard to its overall scientific achievements?" RESPONSE OPTIONS: Best in the world; Above average; Average; Below average."

0.2 CONTINUED...

Q.2 C	SNITHOED	Best in	Above	Avorago	Below	(VOL.)
NO ITEM D		the world	<u>average</u>	<u>Average</u>	<u>average</u>	DK/Ref
e.	Science, technology, engineering and math education for grades K to 12 Aug 15-25, 2014	7	22	39	29	3
	TREND FOR COMPARISON: AAAS scientists survey: Sept 11-Oct 13, 2014	⁵⁸ 1	15	38	46	*
f.	Its political system Aug 15-25, 2014 Apr 28-May 12, 2009	12 19	22 31	32 29	31 16	3 5
FORM gF1.	1 ONLY: [N=1,001] Medical treatment Aug 15-25, 2014	17	34	29	20	1
	TREND FOR COMPARISON: AAAS scientists survey: Sept 11-Oct 13, 2014	⁵⁹ 25	39	22	13	*
FORM hF2.	2 ONLY: [N=1,001] Its health care Aug 15-25, 2014 Apr 28-May 12, 2009	9 15	16 23	32 32	39 27	3 2

ASK ALL:

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

How much do you ENJOY keeping up with news about science - a lot, some, not much, or not at Q.3

Aug 15-25,		Apr 28-May 12,
<u>2014</u>		<u>2009</u>
37	A lot	35
35	Some	41
18	Not much	16
9	Not at all	8
1	Don't know/Refused (VOL.)	1

⁵⁸ AAAS scientists question stem was: "Compared to other industrialized countries, how would you rate the United States in

the following area... science, technology, engineering and math education for grades K to 12?"

59 AAAS scientists question stem: "Compared to other industrialized countries, how would you rate the United States in the following area...medical treatment?"

Q.4 Overall, has science made life easier or more difficult for most people?

	Apr 28-May 12,
	<u>2009</u>
Easier	83
More difficult	10
Not had much of an effect (VOI) 1
Don't know/Refused (VOL.)	6
	Easier More difficult Not had much of an effect (VOI

ASK ALL:

Q.5 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.?]

	Food	Mostly positive	Mostly <u>negative</u>	(VOL.) Not had much of an effect	(VOL.) DK/Ref
a.	Food Aug 15-25, 2014 Apr 28-May 12, 2009 ⁶⁰	62 66	34 24	1 2	3 8
b.	Health care Aug 15-25, 2014 Apr 28-May 12, 2009	79 85	18 10	1 1	3 4
c.	The environment Aug 15-25, 2014 Apr 28-May 12, 2009	62 66	31 23	2 2	5 8

ASK ALL

Q.6 Which of these statements best describes your views, even if neither is exactly right? [READ; DO NOT RANDOMIZE RESPONSE OPTIONS]

Aug 15-25, <u>2014</u> 60	(One) Public opinion should play an important role to guide policy decisions about scientific issues, OR
35	(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
2	Neither/Both (VOL.)
2	Don't know/Refused (VOL.)

QUESTIONS 7 THROUGH 9 HELD FOR FUTURE RELEASE NO QUESTION 10-11

⁶⁰ In 2009, the question stem did not explicitly mention "in the U.S.". The question wording was: "Has science had a mostly positive or mostly negative effect on the quality of [INSERT ITEM; RANDOMIZE]? What about [NEXT ITEM]? [IF NECESSARY: Has science had a mostly positive or mostly negative effect on the quality of [ITEM]?"

Q.12 In your opinion, do government investments in **[INSERT ITEM; RANDOMIZE]** usually pay off in the long run, or are they not worth it?

		Yes, pay off in the long run	No, aren't worth it	(VOL.) DK/Ref
a.	Basic scientific research			
	Aug 15-25, 2014	71	24	5
	Apr 28-May 12, 2009	73	18	9
b.	Engineering and technology			
	Aug 15-25, 2014	72	22	6
	Apr 28-May 12, 2009	74	17	9

ASK ALL:

Q.13 Which of these comes closer to your view? [READ AND RANDOMIZE RESPONSE OPTIONS]

Aug 15-25,	Ар	r 28-May 12,
<u>2014</u>		<u>2009</u>
61	Government investment in research is ESSENTIAL for scientific progress [OR]	60
34	Private investment will ensure that enough scientific progress is made, even without government investment	29
5	Don't know/Refused (VOL.)	11

NO QUESTION 14-15

Now a few questions about some issues...

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

Which comes closer to your view? [READ AND RANDOMIZE]: Humans and other living things 0.16 have evolved over time [OR] Humans and other living things have existed in their present form since the beginning of time.

IF EVOLVED (Q.16=1), ASK:

And do you think that...[READ OPTIONS AND RANDOMIZE]: Humans and other living things have evolved due to natural processes such as natural selection [OR] A supreme being guided the evolution of living things for the purpose of creating humans and other life in the form it exists today?

-		Evolved	over time			
		Due to	Supreme	(VOL.)	Existed in	(VOL.)
		natural	being guided	DK/	present form	DK/
	<u>Total</u>	<u>processes</u>	<u>evolution</u>	<u>Ref</u>	since beginning	<u>Ref</u>
Aug 15-25, 2014	65	35	24	5	31	4
Feb 27-Mar 16, 2014	61	34	23	4	34	5
Mar 21-Apr 8, 2013	60	32	24	4	33	7
Apr 28-May 12, 2009 ⁶¹	61	32	22	7	31	8
TRENDS FOR COMPARIS	ON:					
AAAS scientists survey	_					
Sept 11-Oct 13, 2014 ⁶	² 98	90	8	1	2	*
May 1-June 14, 2009	97	87	8	2	2	1

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

Q.18 From what you've heard or read, do scientists generally agree that humans evolved over time, or do they not generally agree about this? TRENDS FOR

			COMPA	
Aug 15-25,		Apr 28- May 12,	Julv	July
<u>2014</u>		2009	2006 ⁶³	2005
66	Yes, scientists generally agree that humans evolved over time	60	62	54
29	No, scientists do not generally agree that humans evolved over time	28	28	33
6	Don't know/Refused (VOL.)	11	10	13

NO QUESTION 19

⁶¹ Similar questions on beliefs about evolution were asked in Pew Research surveys in July 2006 and July 2005. Beliefs about evolution were preceded by a question about whether or not respondents believed in God. That survey context may influence responses to questions about evolution. For details see topline in "Many Americans Uneasy with Mix of Religion and Politics", August 24, 2006.

62 The nested Q17 responses do not add to the net of 98% on Q16 due to rounding.

Garage Ga scientists that humans evolved over time, or not?"

[RANDOMIZE QUESTIONS 16-18 IN BLOCKS WITH QUESTIONS Q20F1 to Q23 IN BLOCKS] ASK FORM 1 ONLY: [N=1,001]

Q.20F1 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]:

Aug 15-25,	Ap	or 28-May 12,
<u>2014</u>		2009 ⁶⁴
50	The Earth is getting warmer mostly because of	49
	human activity such as burning fossil fuels [OR]	
23	The Earth is getting warmer mostly because of	36
	natural patterns in the Earth's environment	
25	There is no solid evidence that the Earth is getting warme	r 11
2	Don't know/Refused (VOL.)	4

TRENDS FOR COMPARISON:

AAAS scientists survey ⁶⁵	Mostly b/c of human activity such as burning fossil fuels	Mostly b/c of natural patterns in Earth's <u>environment</u>	No solid evidence Earth getting <u>warmer</u>	<u>No answer</u>
Sept 11-Oct 13, 2014	87	9	3	1
May 1-June 14, 2009	84	10	4	2

⁶⁴ Response options for the 2009 survey were, "The Earth is getting warmer mostly because of natural changes in the atmosphere; the Earth is getting warmer mostly because of human activity such as burning fossil fuels; the Earth is not getting warmer."

getting warmer."

65 Question wording for 2009 and 2014 scientists survey: "From what you've read and heard, do you think ... [RANDOMIZE RESPONSE OPTIONS 1 & 2]." One of the response options in 2009 was worded differently. It read "the Earth is getting warmer mostly because of natural changes in the atmosphere."

[RANDOMIZE QUESTIONS 16-18 IN BLOCKS WITH QUESTIONS Q20F1 to Q23 IN BLOCKS] ASK FORM 2 ONLY: [N=1,001]

Q.21AF2 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?

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

Q.21BF2 Do you believe that the Earth is getting warmer [READ AND RANDOMIZE: mostly because of human activity such as burning fossil fuels/mostly because of natural patterns in the Earth's environment]?

Yes, solid evidence				(VOL.)			
		Mostly b/c of human	Mostly b/c of			Mixed/	
		activity such as	natural patterns in	(VOL.)		some	(VOL.)
	<u>Total</u>	burning fossil fuels	Earth's environment	DK/Ref	<u>No</u>	<u>evidence</u>	DK/Ref
Aug 15-25, 2014 ⁶⁶	72	46	22	3	25	1	2
Feb 27-Mar 16, 2014	4 61	40	18	3	35	1	3
Oct 9-13, 2013	67	44	18	4	26	2	5
Mar 13-17, 2013	69	42	23	4	27	1	4
Oct 4-7, 2012	67	42	19	6	26	1	6
Nov 9-14, 2011	63	38	18	6	28	1	8
Feb 22-Mar 1, 2011	58	36	18	5	34	2	5
Oct 13-18, 2010	59	34	18	6	32	1	8
Sep 30-Oct 4, 2009	57	36	16	6	33	2	8
April, 2008	71	47	18	6	21	3	5
January, 2007	77	47	20	10	16	1	6
August, 2006	77	47	20	10	17	1	5
July, 2006	79	50	23	6	17	1	3
June, 2006	70	41	21	8	20	1	9

[RANDOMIZE QUESTIONS 16-18 IN BLOCKS WITH QUESTIONS Q20F1 to Q23 IN BLOCKS] ASK FORM 2 ONLY: [N=1,001]

Q.21AF2 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?

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

Q.21CF2 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?

Aug 15-25,		Feb 27-Mar 16	Oct 9-13
<u>2014</u>		<u>2014</u>	2013 ⁶⁷
25	NET No solid evidence (Q.21AF2)	35	26
11	Just don't know enough yet	17	12
13	Just not happening	17	13
1	Don't know/Refused (VOL.)	1	1
75	Solid evidence/Some evidence (VOL.)	65	74
	/Don't know (VOL.)(Q.21AF2)		

NO QUESTION 22

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⁶⁶ These questions have since been asked in a May 7-June 7, 2015 survey with 5,122 respondents; the results are similar. See Pew Research Center's June report "Catholics Divided Over Global Warming: Partisan Differences Mirror Those Among General Public."

⁶⁷ Prior to October 2013, follow-up question was not asked of those who said there was no solid evidence.

[RANDOMIZE QUESTIONS 16-18 IN BLOCKS WITH QUESTIONS Q20F1 to Q23 IN BLOCKS] ASK ALL:

Q.23 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?

		Oct	Oct	Oct-	Apr 28-
Aug 15-25,		9-13	4-7	13-18	May 12
<u>2014</u>		<u>2013</u>	2012	<u> 2010</u>	2009
	Yes, scientists generally agree that the Earth is	5			
57	getting warmer because of human activity	54	45	44	56
	No, scientists do not generally agree that the E	arth			
37	is getting warmer because of human activity	37	43	44	35
6	Don't know/Refused (VOL.)	10	12	12	9

ASK ALL:

On another topic.

Q.24 All in all, do you favor or oppose [INSERT ITEM; RANDOMIZE]? Do you favor or oppose [NEXT ITEM]?

		<u>Favor</u>	<u>Oppose</u>	(VOL.) DK/Ref
a.	The use of animals in scientific research Aug 15-25, 2014 Apr 28-May 12, 2009	47 52	50 43	3 6
	TRENDS FOR COMPARISON: AAAS scientists survey Sept 11-Oct 13, 2014 May 1-June 14, 2009	89 93	9 5	2 2
b.	Building more nuclear power plants to generate electricity ⁶⁸ Aug 15-25, 2014 Apr 28-May 12, 2009	45 51	51 42	4 7
	TRENDS FOR COMPARISON: AAAS scientists survey Sept 11-Oct 13, 2014 May 1-June 14, 2009	65 70	33 27	2 3
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 ⁶⁹ Aug 15-25, 2014 Sep 4-8, 2013 Mar 13-17, 2013	39 44 48	51 49 38	10 7 14
	TREND FOR COMPARISON: AAAS scientists survey Sept 11-Oct 13, 2014	31	66	3

⁶⁸ Other Pew Research surveys have asked for views about "government policies to address America's energy supply" including opinions about "the government promoting the use of nuclear power." See "Continued Support for Keystone XL Pipeline," Sep. 26, 2013.

69 A Pew Research survey conducted Nov. 6-9, 2014 repeated this question in a three-question set. See "Little Enthusiam,"

Familiar Divisions After the GOP's Midterm Victory, Q.69 on the topline.

Q.24 CONTINUED...

d.	The increased use of genetically engineered plants to create	<u>Favor</u>	<u>Oppose</u>	(VOL.) DK/Ref
u.	a liquid fuel replacement for gasoline Aug 15-25, 2014	68	26	6
	TREND FOR COMPARISON:			
	AAAS <i>scientists survey</i> Sept 11-Oct 13, 2014	78	21	2
e.	Allowing more offshore oil and gas drilling in U.S. waters ⁷⁰ Aug 15-25, 2014	52	44	4
	TREND FOR COMPARISON: AAAS scientists survey Sept 11-Oct 13, 2014	32	66	2
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 Aug 15-25, 2014	54	43	3
	· .			

ASK ALL:

Q.25 Thinking about childhood diseases, such as measles, mumps, rubella and polio... [READ AND RANDOMIZE RESPONSE OPTIONS]

Aug 15-25,		Apr 28-May 12,
<u>2014</u>		<u>2009</u> ⁷¹
68	Should all children be required to be vaccinated [OR]	69
30	Should parents be able to decide NOT to vaccinate their children	28
1	Don't know/Refused (VOL.)	3

TRENDS FOR COMPARISON:

		Parents should be	
	All children should	able to decide NOT	
	be required to be	to vaccinate	
AAAS scientists survey ⁷²	<u>vaccinated</u>	their children	No answer
Sept 11-Oct 13, 2014	86	13	1
May 1-June 14, 2009	82	17	1

NO QUESTION 26

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⁷⁰ Other Pew Research surveys have asked for views about "government policies to address America's energy supply" including opinions about "the government allowing more offshore oil and gas drilling in U.S. waters." See "Continued Support for Keystone XL Pipeline." Sep. 26, 2013.

for Keystone XL Pipeline," Sep. 26, 2013.

71 Answer choices for 2009 surveys were, "The Earth is getting warmer mostly because of natural changes in the atmosphere; The Earth is getting warmer mostly because of human activity such as burning fossil fuels; The Earth is not getting warmer."

72 AAAS scientists question wording was "Thinking about childhood diseases, such as measles, mumps, rubella and polio, do you think...[RANDOMIZE REPONSE OPTIONS 1 & 2: Parents should be able to decide NOT to vaccinate their children/All children should be required to be vaccinated]"

Q.27 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?

Aug 15-25,

2014

74 Appropriate use of medical advances
23 Taking medical advances too far
3 Don't know/Refused (VOL.)

ASK ALL:

Q.28 Which of these statements comes closest to your point of view, even if neither is exactly right? **FREAD IN ORDER1**

[-11 -11 -11		
Aug 15-25,		Mar 21-Apr 8,	Apr 6-May 6,
<u>2014</u>		<u>2013</u>	1999 ⁷³
38	(One) The growing world population will NOT be a major	37	42
	problem because we will find a way to stretch our		
	natural resources [OR]		
59	(Two) The growing population WILL be a major problem	61	56
	because there won't be enough food and resources		
	to go around		
	Neither/Both equally (VOL.)	1	1
3	Don't know/Refused (VOL.)	2	1

TREND FOR COMPARISON:

	The growing world		
	population will NOT	The growing world	
	be a major	population WILL be	
AAAS scientists survey	<u>problem</u>	a major problem	No answer
Sept 11-Oct 13, 2014	17	82	*

ASK ALL:

On another topic.

Q.29 Do you think the SPACE STATION has been a good investment for this country, or don't you think so?⁷⁴

Aug 15-25,

2014
64 Good investment
29 Not a good investment
7 Don't know/Refused (VOL.)

TREND FOR COMPARISON:

		Not a good	
AAAS scientists survey	Good investment	<u>investment</u>	No answer
Sept 11-Oct 13, 2014	68	31	2

 73 In 1999 survey, response options one and two were randomized.

⁷⁴ For other Pew Research surveys with questions related to the U.S. space program see "Majority Sees U.S. Leadership in Space as Essential," July 5, 2011.

Q.30 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?

Aug 15-25,

2014

59 Essential
3 Not essential
3 Don't know/Refused (VOL.)

TREND FOR COMPARISON:

AAAS scientists survey	<u>Essential</u>	Not essential	No answer
Sept 11-Oct 13, 2014	47	52	1

NO QUESTION 31

ASK ALL:

Q.32 From what you've heard or read, would you say that [READ AND RANDOMIZE 1-2]

Aug 15-25,	
<u>2014</u>	
42	Scientists generally believe that the universe was created in a single, violent event, often called "the Big Bang"
52	Scientists are divided in their views about how the universe was created
2	Both/Neither (VOL.)
5	Don't know/Refused (VOL.)

[RANDOMIZE ORDER OF Q33 AND Q34] ASK ALL:

Q.33 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?⁷⁵

Aug 15-25,

2014

15 Appropriate use of medical advances
83 Taking medical advances too far
2 Don't know/Refused (VOL.)

⁷⁵ A similar question was asked on the Virginia Commonwealth University Life Sciences Survey September 3-26, 2003. Question wording was, "Would you say that changing a baby's genetic characteristics for cosmetic purposes such as eye or hair color is making appropriate use of medical advances or is it taking medical advances too far?" Fully 94% of adults said this was taking medical advances too far, 4% said it was an appropriate use of medical advances, 2% volunteered don't know or gave no response. For details see "Public Values Science But Concerned About Biotechnology"

[RANDOMIZE ORDER OF Q33 AND Q34] ASK ALL:

Q.34 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?

Aug 15-25, Sept 3-26,

2014
46 Appropriate use of medical advances
50 Taking medical advances too far
4 Don't know/Refused (VOL.)

VCU Life Sciences Survey
Sept 3-26,

2003
41
550
54
6

ASK ALL:

On a different topic.

Q.35 Do you think it is generally safe or unsafe to eat foods grown with pesticides?

Aug 15-25,

2014
28 Generally safe
69 Generally unsafe
3 Don't know/Refused (VOL.)

TREND FOR COMPARISON:

AAAS scientists survey	<u>Generally safe</u>	Generally unsafe	No answer
Sept 11-Oct 13, 2014	68	31	1

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. ⁷⁶

ASK ALL:

Q.37 When you are food shopping, how often, if ever, do you LOOK TO SEE if the products are genetically modified? **[READ]**

Aug 15-25,	
<u>2014</u>	
25	Always
25	Sometimes
17	Not too often
31	Never
1	Someone else in HH does the food shopping (VOL.)
1	Don't know/Refused (VOL.)

⁷⁶ Introduction to question set from ABC News, July 2003

Q.38 Do you think it is generally safe or unsafe to eat genetically modified foods?

Aug 15-25,

2014
37 Generally safe
57 Generally UNsafe
6 Don't know/Refused (VOL.)

TREND FOR COMPARISON:

AAAS scientists survey	<u>Generally safe</u>	<u>Generally unsafe</u>	No answer
Sept 11-Oct 13, 2014	88	11	1

TRENDS FOR COMPARISON:

ABC News: 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. Do you think this genetically modified food, also known as bio-engineered food, is or is not safe to eat?

	ABC News	ABC News
	July 2003	July 2001
Safe	46	35
Unsafe	46	52
No opinion (VOL.)	9	13

ASK ALL:

Q.39 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?

Aug 15-25,

2014
28 Scientists have a clear understanding
67 Scientists do NOT have a clear understanding
4 Don't know/Refused (VOL.)

Q40 AND 41 HELD FOR FUTURE RELEASE

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.]

Aug 15-25,		Mar 7-10,
<u>2014</u>		2013 ⁷⁷
74	It can lead to antibiotic-resistant bacteria (Correct)	77
26	NET Incorrect/No answer	23
8	Antibiotics are very expensive	6
15	People will become addicted to antibiotics	10
2	Don't know/Refused (VOL.)	7

[RANDOMIZE KNOSCT14 THROUGH KNOSCT19] 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.]

	(Correct)	NET incorrect/		
	<u>False</u>	no answer	True	<u>DK/Ref</u>
Aug 15-25, 2014	65	35	27	9
Mar 7-10, 2013	48	52	19	34
May 19-June 6, 2010	60	40	21	19
June 18-21, 2009	47	53	21	31
TREND FOR COMPARISON:				
General Social Survey, 2012	45	55	24	31
General Social Survey, 2010	48	52	19	33
General Social Survey, 2008	48	52	24	28
General Social Survey, 2006	45	55	17	38

[RANDOMIZE KNOSCT14 THROUGH KNOSCT19] 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.]

Aug 15-25,		Mar 7-10,
<u>2014</u>		<u>2013</u>
64	Small (Correct)	65
36	NET Incorrect/No answer	35
8	Large	3
6	Cold	2
13	Hot	4
1	Don't know/Refused (VOL.)	26

⁷⁷ 2013 Pew Research Center/Smithsonian Magazine survey. Introduction to series of questions was "Here are some questions about things you might have learned in school or seen in the news. For each statement that I read, please tell me if it is true or false. If you don't know, just tell me so, and we will skip to the next question..." Survey administration did not include probe and was conducted on an omnibus survey.

[RANDOMIZE KNOSCT14 THROUGH KNOSCT19] **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

Aug 15-25,		Mar 7-10,
<u>2014</u>		<u>2013</u>
63	Nails rusting (Correct)	66
37	NET Incorrect/No answer	34
15	Water boiling	12
<i>17</i>	Sugar dissolving	12
5	Don't know/Refused (VOL.)	10

[RANDOMIZE KNOSCT14 THROUGH KNOSCT19]

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.]

Aug 15-25,		Mar 7-10,
<u>2014</u>		<u>2013</u>
76	To carry oxygen to all parts of the body (Correct)	78
24	NET Incorrect/No answer	22
12	To fight disease in the body	9
8	To help the blood to clot	6
4	Don't know/Refused (VOL.)	7

[RANDOMIZE KNOSCT14 THROUGH KNOSCT19]

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.]

Aug 15-25, 2014		Mar 7-10 2013	June 18-21 2009	Apr 28-May 12 2009
<u>2011</u> 71	Carbon diavida (Carract)	<u>2013</u> 58	<u>2005</u> 65	<u>2005</u> 66
/ 1	Carbon dioxide (Correct)	36	03	00
29	NET Incorrect/No answer	42	35	34
9	Hydrogen	10	7	7
5	Helium	8	4	4
7	Radon	7	5	6
7	Don't know/Refused (VOL.)	16	20	17

TOTAL NUMBER CORRECT, KNOSCT14 THROUGH KNOSCT19

Aug 15-25,		Mar 7-10,
<u>2014</u>		$\frac{2013^{78}}{1}$
27	6 of 6	23
20	5 of 6	20
20	4 of 6	20
14	3 of 6	15
10	2 of 6	10
7	1 of 6	8
1	0 of 6	4

SELECTED BACKGROUND QUESTIONS⁷⁹

ASK IF EDUCATION IS FOUR YEAR COLLEGE OR UNIVERSITY, SOME POSTGRADUATE OR PROFESSIONAL SCHOOLING, OR POSTGRADUATE OR PROFESSIONAL DEGREE, including master's, doctorate, medical or law degree

SCIDEG Is [INSERT IF EDUC=6,7: your degree] [INSERT IF EDUC=8: one or more of your

degrees] in a scientific field, or not?

AMONG THOSE WITH A COLLEGE DEGREE OR MORE [N=813]

Aug 15-25,	
<u>2014</u>	
40	Yes
59	No
*	Can't answer, listed area of study [SPECIFY] (VOL.)
0	Don't know/Refused (VOL.)

ASK ALL:

IDEO In general, would you describe your political views as... **[READ]** very conservative, conservative, moderate, liberal or very liberal?

Aug 15-25,	
2014 ⁸⁰	
35	Conservative or very conservative
36	Moderate
24	Liberal or very liberal
5	Don't know/Refused

COMBINATION OF PARTY IDENTIFICATION AND IDEOLOGY

14	Conservative Republican
8	Moderate or liberal Republican
39	Independent
17	Moderate or conservative Democrat
12	Liberal Democrat
10	Other/No preference/Don't know/Refused

⁷⁸2013 Pew Research Center/Smithsonian Magazine survey. Total number correct based on questions asked in both surveys. Note that introduction to the series of questions differed across the two surveys. The 2013 survey encouraged respondents to give a "don't know" response and did not probe for respondents best guess. Alpha reliability coefficient for the six item scale of knowledge about science based is 0.62 in 2014 and 0.68 in 2013.

⁷⁹ See questionnaire for question wording on demographic background questions.

⁸⁰ Trends not shown.

ASK ALL:

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

				(VOL.) No	(VOL.) Other	(VOL.)	Lean	Lean
Re	<u>epublican</u>	Democrat	Independent		party	DK/Ref	Rep	Dem
Aug 15-25, 2014	22	30	39	5	*	3	15	15
Aug 20-24, 2014	24	31	37	4	1	4	15	16
Jul 8-14, 2014	25	34	37	2	1	1	16	15
Apr 23-27, 2014	24	30	41	2	1	2	18	17
Jan 23-Mar 16, 2014	22	31	41	3	1	2	17	17
Feb 14-23, 2014	22	32	39	4	1	2	14	17
Jan 15-19, 2014	21	31	41	3	1	2	18	16
Dec 3-8, 2013	24	34	37	3	*	2	17	15
Oct 30-Nov 6, 2013	24	32	38	4	*	2	16	14
Oct 9-13, 2013	25	32	37	3	1	3	16	18
Sep 4-8, 2013	26	32	38	3	1	1	17	15
Jul 17-21, 2013	19	29	46	3	*	2	19	18
Yearly Totals								
2013	23.9	32.1	38.3	2.9	.5	2.2	16.0	16.0
2012	24.7	32.6	36.4	3.1	.5	2.7	14.4	16.1
2011	24.3	32.3	37.4	3.1	.4	2.5	15.7	15.6
2010	25.2	32.7	35.2	3.6	.4	2.8	14.5	14.1
2009	23.9	34.4	35.1	3.4	.4	2.8	13.1	15.7
2008	25.7	36.0	31.5	3.6	.3	3.0	10.6	15.2
2007	25.3	32.9	34.1	4.3	.4	2.9	10.9	17.0
2006	27.8	33.1	30.9	4.4	.3	3.4	10.5	15.1
2005	29.3	32.8	30.2	4.5	.3	2.8	10.3	14.9
2004	30.0	33.5	29.5	3.8	.4	3.0	11.7	13.4
2003	30.3	31.5	30.5	4.8	.5	2.5	12.0	12.6
2002	30.4	31.4	29.8	5.0	.7	2.7	12.4	11.6
2001	29.0	33.2	29.5	5.2	.6	2.6	11.9	11.6
2001 Post-Sept 11	30.9	31.8	<i>27.9</i>	5.2	.6	3.6	11.7	9.4
2001 Pre-Sept 11	27.3	34.4	30.9	5.1	.6	1.7	12.1	13.5
2000	28.0	33.4	29.1	5.5	.5	3.6	11.6	11.7
1999	26.6	33.5	33.7	3.9	.5	1.9	13.0	14.5
1998	27.9	33.7	31.1	4.6	.4	2.3	11.6	13.1
1997	28.0	33.4	32.0	4.0	.4	2.3	12.2	14.1
1996	28.9	33.9	31.8	3.0	.4	2.0	12.1	14.9
1995	31.6	30.0	33.7	2.4	.6	1.3	15.1	13.5
1994	30.1	31.5	33.5	1.3		3.6	13.7	12.2
1993	27.4	33.6	34.2	4.4	1.5	2.9	11.5	14.9
1992	27.6	33.7	34.7	1.5	0	2.5	12.6	16.5
1991	30.9	31.4	33.2	0	1.4	3.0	14.7	10.8
1990	30.9	33.2	29.3	1.2	1.9	3.4	12.4	11.3
1989	33	33	34					
1987	26	35	39					