

STUDENT RESOURCES

BIG DATA IN THE BIG GAME

THE BIG QUESTION

Who watches the big games?

BACKGROUND

The “big game” is a national phenomenon that is recognizable by people of all ages and influences multiple facets of society, including schools. Sports can have a strong influence on our society and culture, even if you do not actively play. As many Americans choose to tune in and cheer on their favorite team, it has become clear that championship games impact advertising, food consumption, and can even alter schedules. After analyzing data on viewership and spending for past big games, you are now going to ask “Who watches the big games?” and collect your own data to help answer the question.

THE STEPS

Review the information and data starting on page 5 of this document. Now that you have some background information on viewership for these popular sporting events and the impact this viewership can have on our country and your community, you are now going to collect your own data to help answer the question, “Who watches the big games?”

STEP 1

After considering some of the important issues related to viewership and media consumption, you will work independently or with a small group to create a short survey to capture your own data. The goal here is to gather useful information that will help you better understand diverse experiences and recognize trends or shared experiences. To help create, administer, and collect useful data from your survey, you may choose to refer to the “Collecting Data: Tips and Tricks” handout in this document.

STEP 2

After you have created your survey, consider how you will administer your survey and who might take your survey. To get the most useful information and results that will help answer your big question, ensure that your survey has diverse representation in responses and that your survey is easy to complete.

STEP 3

After you administer the survey, consider how you will analyze your data. As you review the results, consider a few of the questions below:

- What did you learn?
- How could it be visualized for others to understand? Would displaying the data in charts and graphs help you to analyze the data and see trends?
- Does your data reflect a wide range of people? Does your sample represent the overall group of people (the population) you wanted to study?
- What other questions come to mind?

STEP 4

So now that you have seen the results, consider how you can use this information to make a positive impact or take informed action to solve a problem. To do this, take some time to consider questions from the “Data Reflection: Problem Solving For The Future” handout in this document.

COLLECTING DATA TIPS AND TRICKS

CREATING YOUR SURVEY

Keep the survey focused

- Keep in mind that it may be difficult to get respondents to complete a lengthy survey. Work to keep your survey focused on your research question.

Response scales can be helpful to determine the intensity of feeling

- While it is fine to use *yes/no* or binary questions, consider including questions that provide a range of structured responses based on how strongly you feel about a topic. Responses may range from “*never*” or “*not at all*,” all the way to “*always*” or “*extremely*.”

Try not to ask biased or leading questions

- When framing questions, avoid value statements or language that leads a respondent to a particular answer or desired response.

Create opportunities to clarify Yes/No Questions

- Create opportunities for respondents to clarify as to why they said yes or no by including qualifiers like “*to what degree*” or “*how often*.”

For more information on creating your survey, consider visiting an online resource such as:

[11 Tips for building effective surveys | Qualtrics](#)

ADMINISTERING YOUR SURVEY

Survey platform

- As you create your survey, consider how you will administer the survey to yield the best results. You may choose to simply administer the survey in a paper form and calculate the data by hand, or you may choose to use one of the many digital platforms to increase efficiency. Many of these platforms are available at no cost and can calculate the results for you in a variety of ways. Check with your teacher or the adult in charge about which sites are best for you to access.

Sample size and population

- It’s important to capture responses from individuals with diverse backgrounds because their experiences may lead them to have different answers and perspectives. Gathering perspectives from diverse groups can help provide a more holistic understanding of your ideas on what populations are most likely to watch the biggest sporting events during the year.

For more information on sample size, consider visiting an online resource such as:

[How many survey responses do I need to be statistically valid? | SurveyMonkey](#)

STUDENT HANDOUT 2

DATA REFLECTION: PROBLEM SOLVING FOR THE FUTURE

1. What does the data tell me?
 - a. *What surprised you?*
 - b. *What did you expect?*
 - c. *Did you notice any patterns?*

2. What could I have done differently to collect more **accurate** data?
 - a. *How many responses do I have?*
 - b. *Did responses represent a valuable sample size?*
 - c. *Was there confusion from the respondents on any of my questions?*

3. How can this data help me answer the question: *"Who watches the big games"*

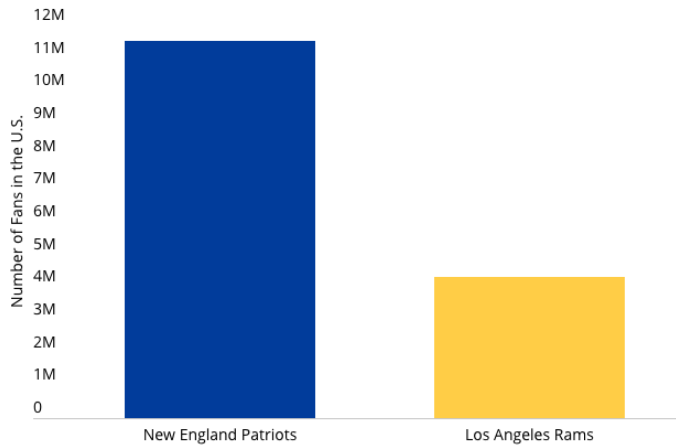
4. What might be the best way to display or visualize this data for others?

5. Who might need to see this data?

6. How might I or someone else use this data to make a positive impact or take informed action?

7. What additional questions or information might you like to ask in a follow-up survey?

NATIONAL FAN BASE SIZES OF SUPER BOWL LIII TEAMS



Source: Nielsen Sports Sponsorlink (January–December 2018)

Nielsen: [Is Bigger Better? New England Patriots and Los Angeles Rams Fans Compared](#), 2019

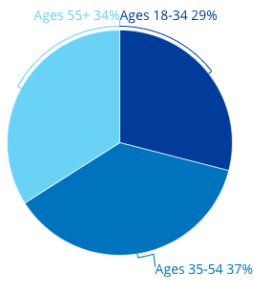
STUDENT HANDOUT 3

DEMOGRAPHICS OF SUPER BOWL LIII TEAM FANS

New England Patriots

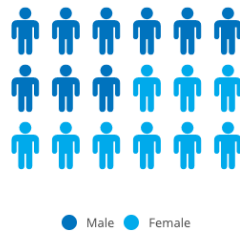
Age Groups (18+)

< New England Patriots Fa... >



Gender

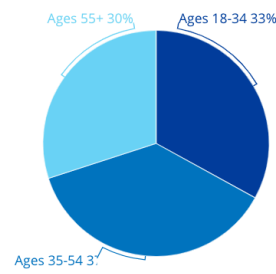
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Los Angeles Rams

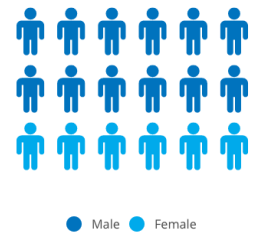
Age Groups (18+)

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Gender

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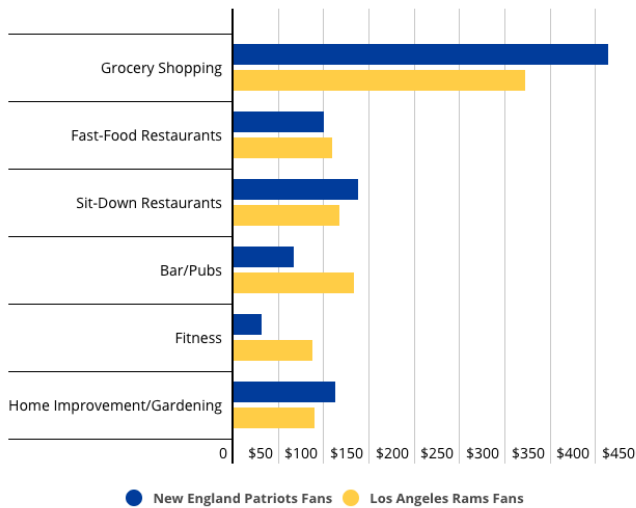
Source: Nielsen Sports Sponsorlink (January–December 2018)

Nielsen: [Is Bigger Better? New England Patriots and Los Angeles Rams Fans Compared](#), 2019

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MONTHLY SPENDING HABITS OF SUPER BOWL LIII TEAM FANS

Fans of the New England Patriots and Los Angeles Rams compared

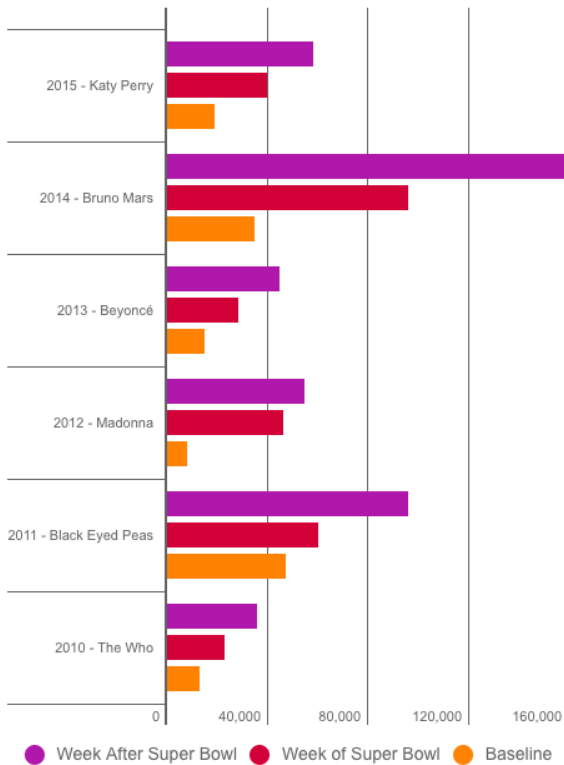


Source: Nielsen Sports Sponsorlink (January - December 2018)

Nielsen: [Is Bigger Better? New England Patriots and Los Angeles Rams Fans Compared](#), 2019

STUDENT HANDOUT 3

THE EFFECT OF SUPER BOWL HALFTIME PERFORMANCES

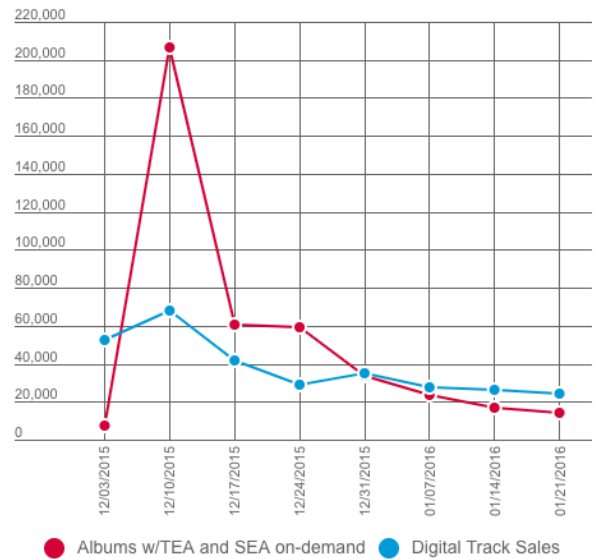


Methodology: Music consumption includes album sales and track equivalent album sales (10 digital track downloads = 1 album) and streaming equivalent albums (1,500 streams = 1 album). Sales, streams and downloads for two weeks leading up to Super Bowl week averaged to establish baseline; compared to week of Super Bowl and week after Super Bowl.

Note: Chart week for these years ends on Sunday at midnight, which means week of Super Bowl week includes only a few hours during/after game.

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COLDPLAY'S "A HEAD FULL OF DREAMS" MUSIC CONSUMPTION



Methodology: Music consumption includes album sales and track equivalent album sales (10 digital track downloads = 1 album) and streaming equivalent albums (1,500 streams = 1 album).

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Nielsen: [The Super Bowl: The Biggest Concert of the Year, 2016](#)

STUDENT HANDOUT 3

HISTORICAL SUPER BOWL VIEWERSHIP

SUPER BOWL	DATE	NETWORK	HH RATING	HH SHARE	AVG # OF HOMES (000)	AVG # OF PERSONS 2+ (000)	NFC CHAMP	AFC CHAMP
LII	Feb. 4, 2018*	NBC	43.1	68	51,500	103,471	Philadelphia**	New England
LI	Feb. 5, 2017*	FOX	45.3	70	53,650	111,319	Atlanta	New England**
SUPER BOWL 50	Feb. 7, 2016*	CBS	46.6	72	54,251	111,864	Carolina	Denver**
XLIX	Feb. 1, 2015*	NBC	47.5	71	55,341	114,442	Seattle	New England**
XLVIII	Feb. 2, 2014*	FOX	46.7	69	54,134	112,191	Seattle**	Denver
XLVII	Feb. 3, 2013*	CBS	46.4	69	52,998	108,693	San Francisco	Baltimore**
XLVI	Feb 5, 2012*	NBC	47	71	53,910	111,346	New York Giants**	New England
XLV	Feb 6 2011*	FOX	46	69	53,282	111,041	Green Bay**	Pittsburgh
XLIV	Feb 7 2010*	CBS	45	68	51,728	106,476	New Orleans**	Indianapolis
XLIII	Feb 1 2009*	NBC	42	64	48,139	98,732	Arizona	Pittsburgh**
XLII	Feb 3 2008*	FOX	43.1	65	48,665	97,448	New York Giants**	New England
XLI	Feb 4 2007 *	CBS	42.6	64	47,505	93,184	Chicago	Indianapolis**
XL	Feb 5 2006 *	ABC	41.6	62	45,867	90,745	Seattle	Pittsburgh**
XXXIX	Feb 6 2005	FOX	41.1	62	45,081	86,072	Philadelphia	New England**
XXXVIII	Feb 1 2004	CBS	41.4	63	44,908	89,795	Carolina	New England**
XXXVII	Jan 26 2003	ABC	40.7	61	43,433	88,637	Tampa Bay**	Oakland
XXXVI	Feb 3 2002	FOX	40.4	61	42,664	86,801	St. Louis	New England**
XXXV	Jan 28 2001	CBS	40.4	61	41,270	84,335	NY Giants	Baltimore**
XXXIV	Jan 30 2000	ABC	43.3	63	43,618	88,465	St. Louis**	Tennessee

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XXXIII	Jan 31 1999	FOX	40.2	61	39,992	83,720	Atlanta	Denver**
XXXII	Jan 25 1998	NBC	44.5	67	43,630	90,000	Green Bay	Denver**
XXXI	Jan 26 1997	FOX	43.3	65	42,000	87,870	Green Bay**	New England
XXX	Jan 28 1996	NBC	46	68	44,145	94,080	Dallas**	Pittsburgh
XXIX	Jan 29 1995	ABC	41.3	62	39,400	83,420	San Francisco**	San Diego
XXVIII	Jan 30 1994	NBC	45.5	66	42,860	90,000	Dallas**	Buffalo
XXVII	Jan 31 1993	NBC	45.1	66	41,990	90,990	Dallas**	Buffalo
XXVI	Jan 26 1992	CBS	40.3	61	37,120	79,590	Washington**	Buffalo
XXV	Jan 27 1991	ABC	41.9	63	39,010	79,510	NY Giants**	Buffalo
XXIV	Jan 28 1990	CBS	39	63	35,920	73,852	San Francisco**	Denver
XXIII	Jan 22 1989	NBC	43.5	68	39,320	81,590	San Francisco**	Cincinnati
XXII	Jan 31 1988	ABC	41.9	62	37,120	80,140	Washington**	Denver
XXI	Jan 25 1987	CBS	45.8	66	40,030	87,190	NY Giants**	Denver
XX	Jan 26 1986	NBC	48.3	70	41,490	92,570	Chicago**	New England
XIX	Jan 20 1985	ABC	46.4	63	39,390	85,530	San Francisco**	Miami
XVIII	Jan 22 1984	CBS	46.4	71	38,880	77,620	Washington	LA Raiders**
XVII	Jan 30 1983	NBC	48.6	69	40,480	81,770	Washington**	Miami
XVI	Jan 24 1982	CBS	49.1	73	40,020	85,240	San Francisco**	Cincinnati
XV	Jan 25 1981	NBC	44.4	63	34,540	68,290	Philadelphia	Oakland**
XIV	Jan 20 1980	CBS	46.3	67	35,330	76,240	LA Rams	Pittsburgh**
XIII	Jan 21 1979	NBC	47.1	74	35,090	74,740	Dallas	Pittsburgh**
XII	Jan 15 1978	CBS	47.2	67	34,410	78,940	Dallas**	Denver

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XI	Jan 09 1977	NBC	44.4	73	31,610	62,050	Minnesota	Oakland**
X	Jan 18 1976	CBS	42.3	78	29,440	57,710	Dallas	Pittsburgh**
IX	Jan 12 1975	NBC	42.4	72	29,040	56,050	Minnesota	Pittsburgh**
VIII	Jan 13 1974	CBS	41.6	73	27,540	51,700	Minnesota	Miami**
VII	Jan 14 1973	NBC	42.7	72	27,670	53,320	Washington	Miami**
VI	Jan 16 1972	CBS	44.2	74	27,450	56,640	Dallas**	Miami
V	Jan 17 1971	NBC	39.9	75	23,980	46,040	Dallas	Baltimore**
IV	Jan 11 1970	CBS	39.4	69	23,050	44,270	Minnesota	Kansas City**
III	Jan 12 1969	NBC	36	70	20,520	41,660	Baltimore	NY Jets**
II	Jan 14 1968	CBS	36.8	68	20,610	39,120	Green Bay**	Oakland
I	Jan 15 1967	CBS	22.6	43	12,410	26,750	Green Bay**	Kansas City
I	Jan 15 1967	NBC	18.5	36	10,160	24,430	Green Bay**	Kansas City

HH = Household

Note: Super Bowl 1 (January 1967) aired on CBS and NBC

*Live + Same Day Viewing Estimates include DVR playback on the same day, defined as 3 a.m.-3 a.m.

**Denotes winner

Source: Nielsen

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Nielsen: [Super Bowl LIII Draws 98.2 Million TV Viewers](#), 2019