

Name \_\_\_\_\_

Statistics: Reading Guide Chapter 1

## Anticipation Guide

1. Before you read, mark in the left column whether you agree or disagree with each statement in the center column.
2. As you read the chapter, record evidence to support or refute each statement in the space provided.
3. After you read, mark in the right column whether you now agree or disagree with each statement. Be prepared to share in class how your thinking was confirmed or changed after reading the text.

Before Reading	Statement/Evidence	After Reading
Agree Disagree	1. <i>Statistics is mostly about using formulas and math.</i> Evidence:	Agree Disagree
Agree Disagree	2. <i>How data is collected can affect how useful that data is.</i> Evidence:	Agree Disagree
Agree Disagree	3. <i>Numerical data (such as weight in pounds, age, shoe size) should be labeled as a <u>quantitative</u> variable.</i> Evidence:	Agree Disagree
Agree Disagree	4. <i>Gender (male/female) is a <u>categorical</u> variable.</i> Evidence:	Agree Disagree
Agree Disagree	5. <i>The best way to make sure we have data that provides useful information is to collect a lot of it.</i> Evidence:	Agree Disagree

The W's:

Who - the individual cases about which we  
gather information (Not always people)

What - the variable (category) being  
measured and recorded

Where - where was the data collected

When - when was the data collected

How - how was the data collected

## Text pg. 10

## Data In YOUR World

The World's Richest Female Singer: **Madonna!**

American singer-songwriter and actress Madonna topped the 2013 list of the world's richest female singers. With over 300 million albums sold worldwide, she stood alone among a Who's Who of great singers as the only woman with a net worth of over a billion dollars. Runner-up to Madonna was Mariah Carey, at \$900 million.

Seven of the world's 10 wealthiest women singers were Americans, with Canadian Celine Dion the richest non-American to make the list. Dion was in fourth place, behind Madonna, Carey, and Barbra Streisand. England's Cher Lloyd was the youngest singer to crack the Top 10.



Singer	Country	Birth Year	Albums Sold (millions)	Grammys Won	Estimated Net Worth (millions)
Madonna	USA	1958	300	7	\$1,100
Mariah Carey	USA	1969	100	5	\$900
Barbra Streisand	USA	1942	240	8	\$660
Celine Dion	Canada	1968	220	5	\$610
Britney Spears	USA	1981	100	1	\$600
Cher Lloyd	England	1993	< 1	0	\$500
Ayumi Hamasaki	Japan	1978	53	0	\$500
Beyonce Knowles	USA	1981	118	17	\$500
Janet Jackson	USA	1966	100	5	\$400
Tina Turner	USA	1939	180	8	\$350

(Sources: clicktop10.com, Wikipedia)

1. What are the W's from the article?

Who? Top 10 female singers

What? Country, birth year, Albums sold, # Grammy Won,  
Est. Net worth

When? 2013

Where? World

Why? To find out who were the top 10.

How? ~~Data from clicktop10.com~~, wikipedia  
and other sources  
(not specifically stated)

2. How many records are displayed?

10

3. What are the types of variables?

a. Name - Identifier

b. Country - Categorical

c. Birth year - Quantitative / Categorical

d. # of albums sold - Quantitative

e. Grammy's won - Quantitative

f. Net Worth - Quantitative

## Stats Starts Here

Statistics can be fun! Learning to think clearly with data will open your eyes to seeing the world more clearly.

What statistics have you heard about?

## What Is (Are?) Statistics?

- Statistics (the discipline) is a way of reasoning, along with collection of tools and methods, designed to help us understand the world.
- Statistics (plural) are particular calculations made from data. For example, the mean and the median are statistics.
- Data are values with a context.



## What is Statistics Really About?

- Statistics is about variation.
- People have different opinions about important issues. It can be important to see how their answers vary.
- When we take measurements in an experiment, we expect individual measurements to be slightly different. How much difference is simply due to random variation? And when is a difference so large that we believe something other than random variation is at work?

Using a ruler, measure the width of the paper.

Write your answer on a small slip of paper.