

<b>Unit 1: Day 4: Statistics in the Media</b>		
<p>Minds On: 10</p> <p>Action: 35</p> <p>Consolidate:30</p> <p>Total=75 min</p>	<p><b>Learning Goal:</b> Students will</p> <ul style="list-style-type: none"> <li>• Interpret statistics presented in the media</li> <li>• Explain how the media misuses statistics</li> <li>• Assess the validity of the conclusions presented in the media</li> </ul>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Chart paper</li> <li>• Markers</li> <li>• News/magazine articles</li> <li>• BLM1.4.1</li> <li>• BLM1.4.2</li> </ul>
<b>Assessment Opportunities</b>		
<b>Minds On...</b>	<p><b>Whole Class → Discussion</b></p> <p>Lead students in a discussion about statistics in the media and ask them to:</p> <ul style="list-style-type: none"> <li>• reflect on some sources of statistics (e.g., news, magazines, newspapers) and the type of statistics (e.g., percentages, percentiles, averages, etc) reported in the media and the various purposes they may serve (e.g., to inform, to educate, to promote, for political agenda, etc.)</li> <li>• reflect on any recent advertisements or media announcements involving statistics that they may have recently heard on the radio, on TV, or read in a newspaper, magazine, or on the internet</li> </ul>	<p>Bring in some newspaper or teen magazine advertisements for use during the Minds On discussion.</p> <p>Consider the literacy skills of your students when assigning reading materials.</p> <p>Refer to Think literacy – Reading different text forms: Reading Informational Text for more information on supporting students with these readings</p>
<b>Action!</b>	<p><b>Whole Class → Activity Instructions</b></p> <p>Distribute BLM 1.4.2 to each student and explain today’s activities.</p> <p><b>Small Groups → Expert Groups</b></p> <p>Divide students into small groups and send each group to a station that has one of the four media articles on BLM 1.4.1 (4-6 copies of each article per station) or articles of your choice. Instruct students to read the article individually and to answer the questions on BLM 1.4.2. Groups should summarize their findings on chart paper in preparation for a presentation to the class.</p> <p><b>Mathematical Process Focus: Reflecting</b> - students think about the reasonableness of the article through various questions.</p> <p><b>Learning Skills (Initiative)/Observation/Rating Scale:</b> Observe how the students individually demonstrate initiative as they work in their groups.</p>	
<b>Consolidate Debrief</b>	<p><b>Small Groups → Presentation</b></p> <p>Groups should present their findings about their article to the class. Allow time for the class to give feedback and discuss the ideas and statistics found in the article.</p> <p><b>Expectations/presentation/oral feedback:</b> Give groups oral feedback on their presentations.</p>	
<i>Application</i>	<p><b>Home Activity or Further Classroom Consolidation</b></p> <p>Find another article in a newspaper/magazine/online which uses statistics to support an argument/arguments. Write a summary report, similar to the one you presented to the class today, on the article you found. Use BLM 1.4.2 as a guideline for your report.</p>	

## Media Articles – Validity, Relevance, Usefulness

Article #1: From: [http://www.usaweekend.com/06\\_issues/060521/060521teens\\_and\\_celebs.html#survey](http://www.usaweekend.com/06_issues/060521/060521teens_and_celebs.html#survey)

Issue Date: May 21, 2006

### 19th Annual Teen Survey

#### Exclusive results: Teens & Celebrities

"Teen People's" managing editor, *Lori Majewski*, shares her unique perspective as we explore the surprising responses American teens gave on the subject of fame and fortune.

**When I was a teenager** growing up in New Jersey in the 1980s, my girlfriends and I were obsessed with Duran Duran. We went to see their concerts, swooned over their videos on MTV, and snatched up every album, 45 and 12-inch remix we could find (yes, this was in the days of vinyl and cassettes). Although our goal was to someday meet any or all of the band members, we never thought we would get closer to them and their fabulous VIP lives than the posters on our walls. The same went for other friends who adored Rob Lowe and the Coreys (Haim and Feldman). These celebrities may as well have lived on another planet.

One could argue that the relationship between teens and celebrities had remained relatively unchanged from the Elvis Presley mania of the mid- 1950s to the boy-band craze of the late '90s. However, as managing editor of "Teen People," I have learned that this generation of teenagers is not satisfied with merely staring at posters or even rubbing shoulders with their favorite stars -- they want to *be* them. And in their minds, it is far from an impossible dream.

Consider the currency of the many celebrity weeklies and websites: showing boldfaced names doing banal things like taking the garbage to the curb, talking on their cellphones or making the ever-popular Starbucks run. Today's kids constantly see stars being just like the rest of us, so it's little wonder they believe they can be just like them.

Furthering this notion? Reality TV. Teens know that at any minute, MTV might come to their town and turn them and their friends into the next big things, just like it did with the young stars of the California-based "Laguna Beach: The Real Orange County." The real-life soap is so popular that one of its main players, Lauren "LC" Conrad, 20, scored her own spinoff, "The Hills;" meanwhile, her Laguna nemesis, Kristin Cavallari, 19, is being offered movie roles.

The more proactive star wannabes don't wait for fame to come to them. They try out for TV talent shows like "American Idol." Hey, even if they can't carry a tune, they can make a spectacle of themselves during the audition and score big money, like "Idol's" William Hung. Teens who don't want to subject themselves to Simon Cowell have found other paths to stardom. By uploading inexpensive homemade videos to websites such as YouTube.com, one can literally become an overnight sensation. Using her webcam to capture herself and another girl singing the Backstreet Boys' "Get Down," one girl recently received more than 152,000 hits with her cute but unremarkable clip.

Because so many teens see themselves as stars, it's no wonder they have a different relationship with bona fide celebrities than any previous generation. USA WEEKEND Magazine's Teens & Celebrities survey reveals that although more than a third (36%) believe talent is more important than personality in a celebrity, only slightly fewer teens (32%) said personality outranks talent. So of course teens think they have a decent shot at stardom when they don't think it requires them to be a singer or actor of extraordinary skill.



How influential are teen favorites such as Lindsay Lohan (left) Nick Lachey and Beyonce Knowles?

The survey also finds that teens want to look and act like famous people, and although that has been true through the ages, they're taking more drastic steps to do so. About 60% think teens want to pierce a body part or get a tattoo because a celebrity has. Roughly half agree that their own peers drink or smoke cigarettes because they see their idols doing it. And 77% believe that when a star loses weight, teenagers are prone to do the same -- although only 13% admit to having gone on a diet to look more like a celebrity.

There's a paradox in these survey results: Teens aspire to be like stars, but they don't necessarily view them as role models. When it comes to issues such as war and politics, celebrities rank dead last on the list of people teens say influence their opinions, behind parents, friends, teachers and the media. That's why they tend to tune out most stars who talk about environmental issues and world peace. According to the survey, 78% of teens say they don't think more about charitable causes when celebrities participate in fundraisers, and more than half (52%) suspect that stars use charity events for self-promotion.

These stats don't mean we're raising a generation of skeptics -- just smart kids. Dubbed by USA WEEKEND as "Generation Give" last year, today's teens are able to distinguish a passionate star from one who's just looking for good press. There are true celebrity humanitarians, like Angelina Jolie, who demonstrates her commitment to developing nations. Seeing her practice what she preaches makes teenagers, many of whom call her an inspiration, put even more energy into doing good works. Indeed, in last year's Teens & Volunteering survey, 96% of teens say they volunteer.

Every year, "Teen People's" April issue features "20 Teens Who Will Change the World." And every year, we find that the scope of what these teens are doing -- and where they're doing it -- broadens. In 2006, we found teens who volunteered in locales like Sri Lanka, Guinea and Peru. At our luncheon honoring these kids, celebrity host Nick Lachey called them an inspiration and was just as excited to meet these do-gooders as they were to meet him. It makes you wonder: Maybe by the time the next generation of teens comes around, the stars will be striving to be just like them.

Last fall, more than 17,000 students in grades 6 to 12 took USA WEEKEND's 19th annual teen survey in themagazine or at our website. Highlights from the unscientific survey are reported here.

### Highlights from the Teens & Celebrities Survey Results

Do you agree or disagree with this statement: When celebrities make the following choices, a lot of teens want to do the same

	Agree	Disagree
Lose weight	77%	23%
Pierce a body part	62%	38%
Get a tattoo	58%	42%
Drink alcohol	48%	52%
Smoke cigarettes	47%	53%
Take drugs	39%	61%
Have a baby	25%	75%

Have you ever dieted because you wanted to look more like a celebrity?

Yes 13%	No 87%
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MAP 4C

Unit 6, Lesson 5

When it comes to what you think about important issues like war and politics, rate how much influence each of the following people’s opinion has on you, on a scale of 0 to 5 (with 0 being no influence at all and 5 being extremely influential):

	0	1	2	3	4	5
My parents	5%	4%	6%	15%	23%	47%
My friends	8%	8%	17%	24%	25%	18%
Celebrities	28%	21%	18%	18%	9%	6%
The media	22%	18%	19%	19%	13%	9%
My teachers	13%	11%	14%	24%	24%	14%

When celebrities participate in raising money for special causes, such as Live 8 or Hurricane Katrina relief, does that:

	Yes	No
Encourage you to donate money	37%	63%
Make you think more about the cause	22%	78%
Increase your respect for the celebrity	30%	70%
Make you suspect they are just promoting themselves	52%	48%

**DEMOGRAPHICS**

Sex:

Male	33%
Female	67%

Race:

White	72%
Black	11%
Hispanic	8%
Asian	2%
Multiracial	4%
Other	3%

Grade in school:

6th grade	10%
7th grade	16%
8th grade	19%
9th grade	15%
10th grade	16%
11th grade	12%
12th grade	12%

## Media Articles – Validity, Relevance, Usefulness

**Article #2:** From: [http://www.usaweekend.com/98\\_issues/980503/980503teen\\_report\\_cover.html](http://www.usaweekend.com/98_issues/980503/980503teen_report_cover.html)

Issue date: May 1-3, 1998

### Teens tackle their identity crisis

**USA WEEKEND's exclusive survey of 272,400 students shows teens are riddled with self-doubt about everything from their looks to their relationships with adults -- and determined to find answers.**

**T**he Teens & Self-Image survey attracted an unprecedented 272,400 students to write in and confess their shortcomings and chronicle their determination to improve themselves. While the survey is non-scientific, its results support and echo those of other recent studies on topics including teens' relationships with their parents, their faith and themselves.

The overwhelming majority of teens who took USA WEEKEND's survey, conducted in partnership with Channel One, say they feel good about themselves. But almost as many express misgivings about who they are -- especially about their appearance in a media-saturated world that emphasizes good looks.

The struggle to carve out an identity and fit in remains the paradox of the teen years. Among the complex issues disclosed by USA WEEKEND's survey on Teens & Self-Image:



Like Drew Vannier, 13, of Auburn, Calif., half of boys surveyed want to be in better shape. Drew bikes to keep pounds off.

**Looks are key**, and only 4 in 10 respondents consider themselves attractive. Half the girls want to lose weight and, evidence that our culture's obsession with form over content is no longer limited to girls, half the boys want to tone up.

"Our culture is so nuts about this, and it's only getting worse, not better," says Susan Mackey, a therapist with the Family Institute at Northwestern University. "Instead of getting less bad for girls, it's getting worse for boys."

**Teens find lots of imperfections.** Almost 9 in 10 -- 85 percent -- cite ways they'd like to improve. After losing weight and toning up, the top three are their grades, doing better in sports, and having a better relationship with their parents. Only 15 percent like themselves "the way I am."

**Faith is central** in many students' everyday lives. When asked the most important influence in their lives, survey respondents picked religion second only to their parents.

**Depression is common.** More than half say they occasionally are "really depressed"; 1 in 5 often feel despondent. And 1 in 3 have friends who have talked about or actually tried to commit suicide -- the third leading cause of death among 15- to 24-year-olds. (Last year, about 2,000 teens committed suicide, and the rate of adolescent suicide has tripled in the past 10 years, studies show.) "The culture has projected low expectations," says William Damon, director of Stanford University's Center on Adolescence. "There are no heroes anymore. They are very cynical."

**Families aren't communicating enough.** Asked how often they have a conversation that lasts longer than 15 minutes with a parent, only a third say daily. About 1 in 5 -- 17 percent -- say they almost never talk to their parents for more than 15 minutes. Another 17 percent say they do so only a few times a month. And one-third say adults generally don't value their opinion.

**Teens show a healthy self-respect.** Asked to choose from a list of qualities, 8 in 10 say they are kind, 3 in 4 say they are honest, and 7 in 10 say they have a good sense of humor. Slightly more than 6 in 10 say they are smart, self-confident or creative. Least admired of a dozen qualities they were asked to rank: being popular, rich or tough. "That's a heartening sign," says Rebecca A. Eder, director of psychology for St. Louis Children's Hospital and a specialist in self-concept. "The qualities they picked for being admirable were very human qualities."

**Identity crises aren't limited to girls.** "Sure, the adolescent years are hard on girls' self-esteem, but they're hard on boys, too," says Stanford teen expert Damon. Adds St. Louis psychologist Eder: "Now, it's not just important for girls to look like Barbie, but for boys to look like Arnold Schwarzenegger."

The survey results confirm findings that problems typically associated with girls are now becoming more visible in boys. Teen respondents across the board, and minority teens slightly more so, believe good looks matter when it comes to personal achievement, specifically making friends, winning the respect of others, and succeeding in life.

Even at 13. Says Drew Vannier, a seventh-grader from Auburn, Calif.: "What you look like is what your reputation is." Drew already knows a life of dieting and exercise. "Kids called me names like fatso and tub of lard." Now, he lifts weights every day, plays indoor soccer and rides his bike a lot. At 5 feet 4 inches and 140 pounds, "I don't get called fatso anymore."

Sarah Freshley, 17, a 10th-grader in Louisville, despairs of her 5-foot-9, 150-pound frame. "When I see myself in the mirror, I don't like my body. I go to school and see these skinny girls. The guys give them more attention."



1 in 2 teens participate in sports, including Carrie Marchenkoff, 16, of Adams, N.Y. She hopes basketball will help her get into college.

**When it comes to looks, minorities' self-image is healthiest.** Non-white adolescents tend to feel better about themselves physically than whites, something experts say reflects a different set of values. Asked how satisfied they are with their looks, almost 4 in 10 minority teens answer "very," compared with 3 in 10 whites.

"African Americans have a more flexible view of beauty -- the whole notion that beauty is just not skin deep," says Mark Nichter, of the University of Arizona. In a three-year study of 300 girls ages 14-17, Nichter found that "African-American girls were notably less concerned with standards for an 'ideal girl' depicted in the media." Explains Sharon Ames-Dennard of the Association of Black Psychologists, "Black children are not so hung up on [weight] because they've accentuated other aspects of themselves."

Not only are there notable differences among teens, but survey results also point to conflicts within individual teens -- conflicts emblematic of adolescence, experts say. "Overall, most adolescents will tell you things are fine, particularly to adults and authority figures," says Mackey, the therapist at Northwestern. "But that doesn't mean there aren't issues."

### WHAT 272,400 TEENS SAY

The overwhelming majority of survey respondents -- 9 in 10 -- feel good about themselves. Boys, minorities and students with strong religious beliefs feel best. Nearly as many say they feel healthy. Still, 7 in 10 say they've been depressed. Girls are more likely than boys to feel depressed ...

And nearly 1 in 3 say they have a friend who has discussed or attempted suicide.

**1 in 3** say they rarely or never have a conversation with a parent that lasts longer than 15 minutes.

Only 1 in 3 converse daily with a parent for at least 15 minutes.

**Just 3 in 10** are very satisfied with their looks. And boys are as obsessed with having a perfect body as girls are. Half of boys say they want to bulk or tone up, while half of girls want to lose weight.

**1 in 3** teen respondents say adults don't value their opinions. Friends, they say, are the most understanding.



## Media Articles – Validity, Relevance, Usefulness

**Article #3:** From <http://www.cbc.ca/canada/story/2007/07/18/crime-stats.html>

### Canada's crime rate lowest in 25 years: StatsCan report

**Offences down in every province, territory in 2006 but youth crime rate up by three per cent**

**Last Updated: Wednesday, July 18, 2007 1:47 PM ET**

Driven by a decline in non-violent felonies, Canada's crime rate reached a 25-year low in 2006, with every province and territory recording a drop, Statistics Canada said Wednesday.

The overall crime rate was 7,518 per 100,000 people, down three per cent from 2005.

However, the report also found that even though the overall rates decreased, those for more serious violent offences have remained steady from 2005. The rate of violent offences was 951 per 100,000 people in 2006, for a total of 310,307 countrywide.

More people committed violent offences, such as attempted murder, aggravated assault, assault with a weapon, robbery, kidnapping and forcible confinement. But that was offset by a 10-per-cent drop in the national homicide rate, to 1.85 homicides per 100,000 people. Police reported a total of 605 homicides in 2006, 58 fewer than in 2005. In the preceding two years, the rate had climbed.

University of Ottawa criminologist Ron Melchers told CBC Newsworld that the drop in areas such as property crime, breaking and entering and car thefts could be attributed to increased security measures for homes and cars as well changes in demographics.

"But there are some disturbing trends," Melchers said, pointing out that although minor assaults were down, the more serious ones — including those with weapons — had climbed.

"More disturbing yet," he said, "they're going up among young offenders who are 12 to 17 years of age."

The rate of youth crimes rose by three per cent in 2006, with 74,000 youth charged with a criminal offence. It was the first increase in three years, due to "increases in mischief and disturbing the peace," according to the report.

The rate of young people accused of homicide was also the highest since 1961, when statistics were first collected. Last year, 84 youths were accused of homicide involving 54 victims.

Province/territory:	Overall crime rate (per 100,000 population)	Change from 2005 (in %)
National	7,518	-3
British Columbia	11,365	-5
Alberta	9,523	-6
Saskatchewan	13,711	-4
Manitoba	11,678	-1
Ontario	5,689	-2
Quebec	5,909	-3
New Brunswick	6,111	-5
Nova Scotia	8,069	-2
P.E.I.	6,793	-11
Newfoundland and Labrador	6,055	-2
Yukon	20,593	-9
Northwest Territories	41,468	-5
Nunavut	31,265	-11

*Source: Statistics Canada*

Cont...

## **Saskatchewan has highest crime rate — again**

For the ninth year in a row, Saskatchewan recorded the highest crime rate of all the provinces, with 13,711 crimes per 100,000 people. It was followed by Manitoba (11,678 per 100,000) and British Columbia (11,365 per 100,000). That was despite a four-per-cent drop in overall crime in Saskatchewan.

"It's not exactly an honour," Melchers said, adding that "it has a lot to do with a very large concentration of very disadvantaged Saskatoon residents."

Saskatchewan, with 40 homicides in 2006, also reported the highest murder rate among the provinces — 4.1 homicides per 100,000 people.

The overall crime rate dropped most in Prince Edward Island and Nunavut, where it was down 11 per cent, followed by declines of about five per cent in Alberta, New Brunswick and B.C. The lowest crime rate was recorded in Ontario (5,689 offences per 100,000 population).

According to the Statistics Canada report, the city with the highest total crime rate was Regina (12,415 crimes per 100,000 people). The city with the lowest crime rate was Quebec City (4,931 per 100,000).

Contrary to a common misconception about big cities, Melchers said, large urban areas such as Toronto are among the safest communities in the country.

"No one will believe that if you say that in a conversation with neighbours, but urban areas are generally very, very safe," he said.

Higher crime rates are more the trend in large western cities, such as Winnipeg, Regina and Saskatoon, Melcher said.



## Media Articles – Validity, Relevance, Usefulness

### Article #4: From:

[http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20070711/environment\\_poll\\_070711](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20070711/environment_poll_070711)

### Canadians greener, but still room for improvement

*CTV.ca News Staff*

*Updated: Wed. Jul. 11 2007 2:14 PM ET*

Canadian householders are making changes to be greener, but still engage in many practices that have a negative impact on the environment, a new study suggests.

The [Statistics Canada study](#) found some good habits on the rise in recent years:

- Almost six in 10 households now use compact fluorescent bulbs;
- About four in 10 have a programmable thermostat;
- More households composted;
- More had water-saving showerheads and toilets.

But other aspects of household behaviour have not changed much since the mid-1990s, the use of chemical pesticides on lawns and gardens, which was down only slightly in 2006 from 1994.

Only Quebec saw a significant reduction of pesticide use -- from 30 per cent of households in 1994 to 15 per cent. The drop is attributed to strict regulations imposed in recent years.

While vehicle emissions contributed largely to Canada's greenhouse gas emissions, according to the federal government, most motorists travelled to work alone in a car or truck.

Some 83 per cent of households had at least one motor vehicle in 2006, while more than 10 per cent had three or more vehicles.

The survey also examined drinking water habits. Almost three out of every 10 households drank bottled water predominantly in 2006, whether they had a municipal or private water supply.

The remaining households drank tap water, but half of those homes treated the water in some way. While the majority used devices to improve the taste or appearance of their water, 40 per cent did so over concerns about possible bacterial contamination.

The study found a large increase in the number of households with water-saving devices. In 2006, 60 per cent of households had a water-saving showerhead, compared to 42 per cent in 1994.

About 41 per cent had a water-saving toilet, nearly triple the 15 per cent who had one in 1994

Household recycling rates have climbed significantly, the study found, but detailed data won't be released until Friday when it's presented in the inaugural issue of EnviroStats, Statistics Canada's new publication of analysis on environmental issues.

The survey showed households are taking advantage of new power-saving devices. Between 1994 and 2006, the proportion using at least one compact fluorescent light bulb more than tripled from 19 per cent to 59 per cent.

Composting rates have grown slightly, up to 27 per cent of households from 23 per cent, with the initiative most popular in Atlantic Provinces.

Electronic waste, such as old computers and gadgets, is a growing environmental problem, the survey found. Almost 20 per cent of households threw the devices in the garbage, not at special waste depots.

The Households and the Environment Survey polled more than 28,000 households by telephone in early 2006.

With files from The Canadian Press



- b) Why was the data collected?
  - c) Where was the data collected?
  - d) How was the data collected?
- 6) Is there any additional information you wish you had about the data? If so, what?
- 7) Do you feel that the true purpose of collecting the data was identified in the article? Explain.
- 8) Do you feel the statistics were used properly in the article, or misused? Explain.
- 9) If they were misused, why do you think they were misused?
- 10) What is your overall impression of the use of statistics in this article?