



SILVER STATE-ISTICS

Nevada Chapter of American Statistical Association



Nevada Chapter Newsletter

Vol. 13 No. 2

Dear Nevada ASA Members and Friends,

Read on for information on
what our Chapter has been up to and
what we are planning for the future.

Please keep an eye on our website
for more details on all upcoming events.

www.amstat.org/chapters/nevada/

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Coming Events



Our Annual Meeting will take place in the South
Friday and Saturday October 14-15. Stay tuned for
announcements of this and other events.



From the President's Desk



Debra Stiver

Summer greetings to our Nevada ASA colleagues and
friends! NV-ASA had a very busy and productive spring
schedule. The 2016 K-12 student poster contest, held

during March, was again a huge success due to the
efforts of David Thiel, coordinator of the competition,
several NV-ASA members who served as judges, and
other volunteers from Clark County where the contest
takes place annually. Both the northern and southern
regions of our Nevada Chapter held spring socials that
involved discussion on interesting topics and some good
dining; see more details below. We welcomed several
new potential (and former) members at the socials; I
hope they consider becoming permanent members of our
far-flung chapter. New membership brings new ideas,
expertise and energy!

It's time to highlight the upcoming 2016 Joint Statistical
Meetings (JSM) being held the first week of August in
Chicago. The 2016 theme is *The Extraordinary Power
of Statistics*. The American Statistical Association
partners with several other professional organizations
including the Institute of Mathematical Sciences and the
Statistical Society of Canada to host North America's
largest gathering of statistical professionals and students.
The JSM program offers a wide variety of invited, topic-
contributed, and technical sessions and provides many
opportunities for professional development through
continuing education and personal skills development
courses, roundtable discussions, poster competitions and
social meetings. Attendees are also treated to a large
Expo which provides a wide array of professional tools
such as software and the latest literature on statistical
theory and techniques. Budding statisticians and
employers can participate in the JSM Career Service
where hundreds of applicants can explore career
opportunities offered by attending employers.
Representatives from local chapters, including your NV-
ASA chapter, participate in sponsored business meetings
and chapter workshops. During these sessions, our
chapter learns of new resources provided by ASA and
networks with representatives from other ASA chapters,
all in the spirit of improving what ASA has to offer its
membership.

The *ASA President's Invited Address* this year will be
given by Joe Palca of NPR. He will be speaking on the
topic of *Science and News: A Marriage of Convenience*,
continuing with one of ASA's advocacies in the use of
statistical science in society. Please see the national

website (amstat.org) for information on the conference and also the many and varied resources available on the site.

Our Nevada Chapter was founded in 2002 after Nevada members of the national ASA responded positively to an initiative to hold organizational meetings in both Reno and Las Vegas. The NV-ASA was approved as the ASA's 79th Chapter by the Council of Chapters Governing Board in January, 2002. Sadly, our Chapter was notified of the passing this past fall of one of our colleagues, Mrs. **Dorothy Wilson**. Dorothy was a founding member of the Nevada Chapter and served as a board member during the early years of the chapter. Her statistical career included 16 years of employment at Caesar's in Las Vegas. We send our heartfelt condolences to her family and will be ever grateful for the role she played in our Chapter.. ❖

Northern Nevada Spring Event

On April 29, 2016, we met at Cafe de Thai in Reno for the Northern Nevada social. About 20 people of all ages showed up, including some teens and younger children. We had a delicious dinner, followed by a talk by Dr. Javier Rojo of UNR. Dr. Rojo spoke on the Statistics Department at Berkeley, and told many stories about Fisher, Neyman, and Lehmann and their contributions to the field of Statistics. It was an enjoyable and worthwhile time. Dr. Rojo related that he had worked personally with Lehmann and he was really close to him, but that the Berkeley crowd found Fisher extremely unlikable. ♦



Southern Nevada Social

The Chapter held a Spring Social Thursday, April 21 at Hometown Eats in Las Vegas. Attendees were invited to share stories about their (curious, inspirational, even crazy) experiences in the practice of statistics. Charles Davis started by describing a project attempting to explore correlations between personality and longevity (once released to the wild) - of juvenile desert tortoises. The metrics for personality turned out to actually be relevant and useful predictors of survival, at least in the short term. Chad Cross followed by describing a field study of the mortality rate of bald eagles in the vicinity of large-scale wind turbine electric generators. Hokwon Cho described studies in Asia related to low birth rates and government policies.

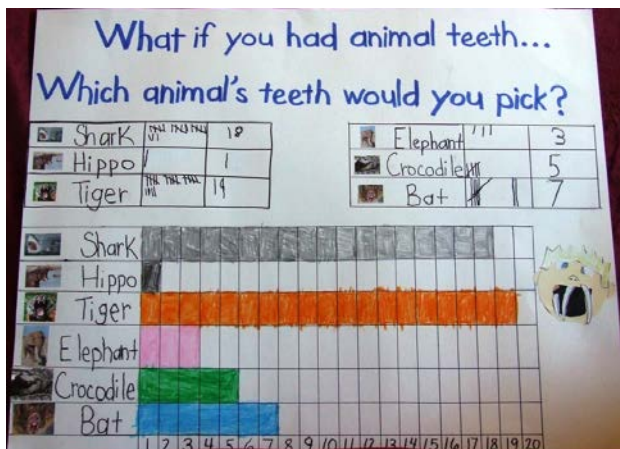
Charles then told of a rather incorrect model used (and recommended in ASTM and EPA guidance) for the analysis of low-level chemical measurements, using Poisson distributions for the rounded data rather than an appropriate continuous distributions for data which are then rounded and left-censored. One is tempted to protest such inappropriateness, but should do some cost-benefit analysis before proceeding to do so: what battles does one want to fight at this time or even during one's lifetime? Marvin Javier told us of bringing up the issue of multiple comparisons with the investigators in a sponsored research project (how many tests did you do to find your significant results, and why don't you want to even mention this issue in your report even though you're in good shape in this regard?). Dave Thiel described a local high school club's experiment some years ago, which asked students at lunch whether a Beatles retrospective album should or should not include the famous song "Banana Republic". Student answers were quite swayed by other students' responses; nobody wanted to appear ignorant. But the song was fictitious!

Chih-Hsiang Ho described a situation which occurred some years ago, where statistical evidence contradictory to established pronouncements of SMEs (subject-matter experts) was discounted, in a matter of considerable local and national importance and controversy. Charles followed by describing a related study which attempted to quantify the probability of inadvertent human intrusion into low-level radioactive waste burial grounds – over the next 10,000 years! Like the desert tortoise story, this one managed reasonable credibility as well, in this case by relying on careful collaboration with selected SMEs. Chad then told of a paper he once submitted attacking results of another person, only to have that person assigned by the journal as a reviewer! It was published by the second journal he submitted it to.

Charles then described a current project in which the legal and logistical impediments to obtaining data adequate to answer the study's question with our usual scientific standards are overwhelming. These were so bad that nobody, even the company he had done similar studies with for the same customer twice before, could even formulate a credible bid. So the customer wanting the study first hired him directly to help write a SOW (Statement Of Work) on which one could actually come up with a plan and a bid. He and that company were the only ones to respond, and are now wrapping up that project. This all goes back to Step 1 of the Data Quality Objectives process: Decide on what (or sometimes who) the problem is that is to be solved! ☺

A total of 339 students from 23 schools submitted 233 posters to our 13th annual NV-ASA K-12 Poster Competition. First, second, and third places were awarded at all grade levels, along with several honorable mention awards. Here are the first, second, and third place winners.

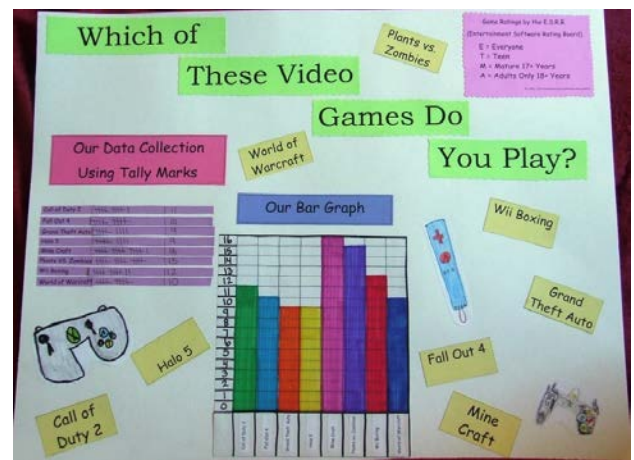
First: *What if You Had Animal Teeth ... Which Animal's Teeth Would You Pick?*, by Adreann Brey, Zaire Bryant, Ryder Chase, Zachary Finger, Leah Hoover, Zaequan Larkins, Madden Leong, Ridsen Miller, Gracie Mulhollan, Baya Nevarez, Viannei Perez, Abigail Rogers, Blake Smith, Aleksey Suslin, Emma Tweddle, Ayden



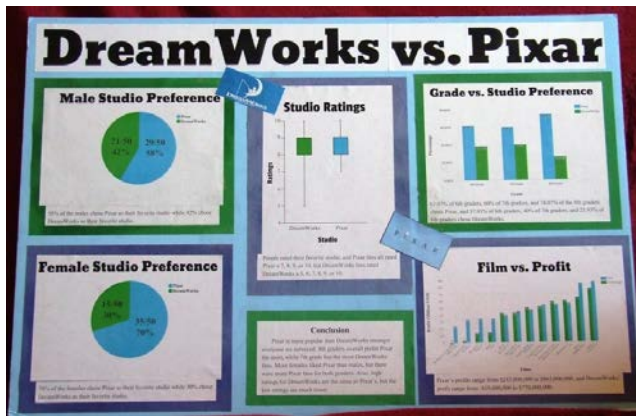
Second: *Which Kind of Ice Cream Would You Pick?*, by Olyvia Agee, Cameron Bolding, Adalyn Campbell, Kyle Charley, Haden Columbus, Kason Hedges, Daniel Hernandez, Mason Hillstrom, Alex Hotzendorf, Thien Huynh, Alyssa Ireland, Tyler Latiolait, Alyssa Montano, Lea Palma-Martinez, Alaina Ptak, Isaiah Ruiz, Brady Schreibman, Avrie Stephens, Samantha Staley, and Maddison Tippetts, 1st grade, Eileen Connors Elementary School (advisor: Amy Farrell).



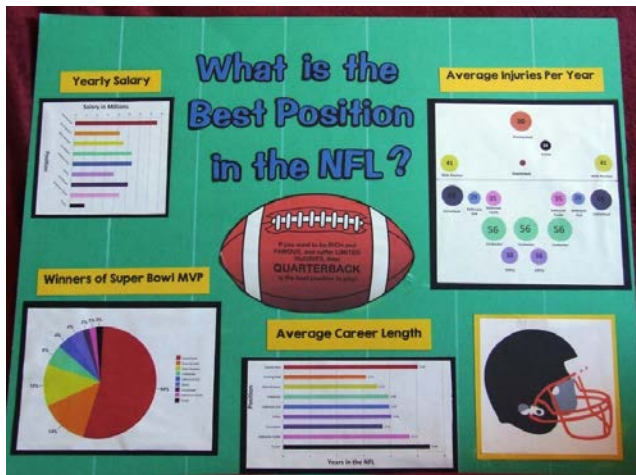
Third: *Which of These Video Games Do You Play?*, by Teagan Adams, Anthony Alfreno, Aaden Arroyo, Jocelyn Atkins, Jayda Blake, Aryanna Butler, Jace Carrillo, Edward Castillo, Arianah Davis, Giovanni Gamboa, Joshua Kureekattil, Luke Lawrence, Victoria Najera, Ramsden Neagu, Ezekiel Parson, Hailey Thurston, Carson Van Doremalen, and Ashton Whytock, 1st grade, Eileen Connors Elementary School (advisor: Shelley Marin).



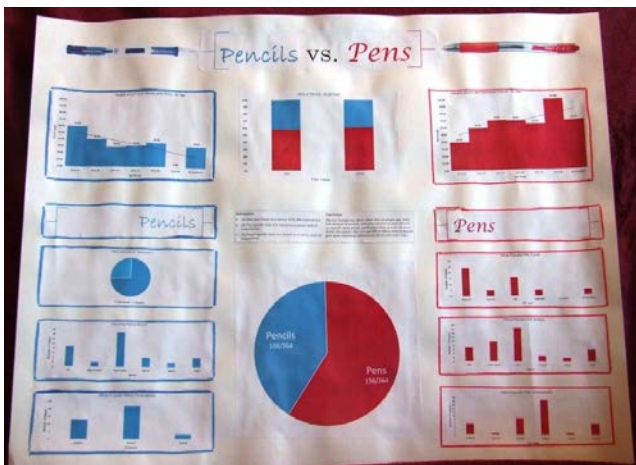
First: *Dreamworks vs. Pixar* by Amanda Chang and Jadyan Tian, 6th grade, Hyde Park Middle School (advisor: Judy Kraus).



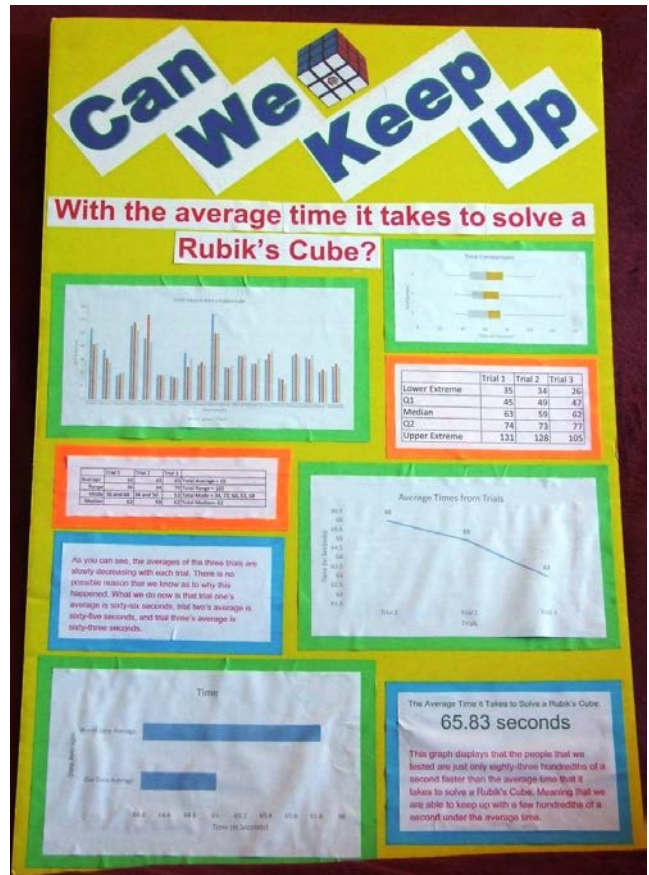
Second: *What is the Best Position in the NFL?*, by Alex Fiore, 6th grade, Hyde Park Middle School (advisor: Jude Kraus). This poster won First Place in the National Competition in the 4-6 category. Congratulations to Alex and advisor Judy!



Third: *Pencils vs. Pens* by Sanjay Soni, 6th grade, Hyde Park Middle School (advisor: Judy Kraus).

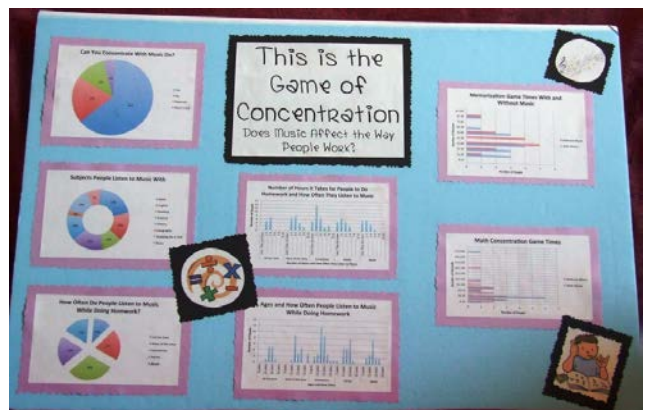


Also, our Honorable Mention winner in the 4-6 category is *Can We Keep Up With the Average Time It Takes to Solve a Rubik's Cube*, by Aryaman Bisen, Fikreabe Getachew, Colin Jewell, and Aaron Luyen, 6th grade, Hyde Park Middle School (advisor: Judy Kraus). This poster won Third Place in the National Competition. Congratulations to Aryaman, Fikreabe, Colin, Aaron, and advisor Judy!



7-9

First: *This is the Game of Concentration* by Megan Huynh, 7th grade, Hyde Park Middle School (advisor: Denise Romanoski).



[illegible]

Lacrosse

Ground Balls Win Games

Ground Balls in Relationship to Wins
A 2001-02 NHL Game
A 2001-02 NHL Game
A 2001-02 NHL Game

Ground Balls Scored by Wins

Percentage of Games Won, Tied, and Lost When Getting More Ground Balls than the Opponent

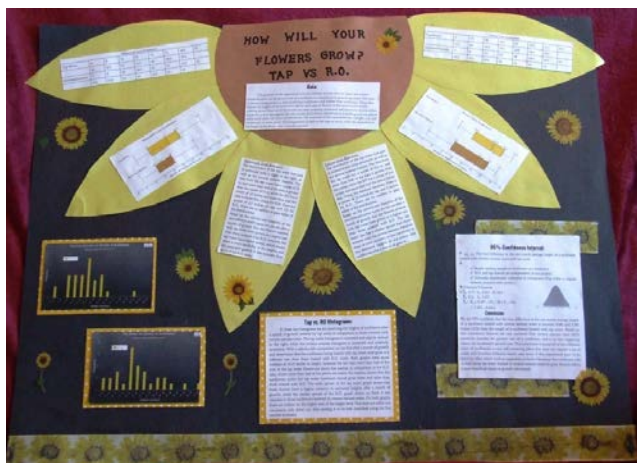
Professional Games

College Games

High School Games

Coach: "Scoop through it!"

First: *How Will Your Flowers Grow?* Tap vs. R.O. by Mariah Ward, 12th grade, West Career and Technical Academy, Las Vegas (advisor: Barbara Pratt).



PROJECT 1: Bar Graph (Left)

Bar graph showing data for two categories (A and B) across three groups (1, 2, 3). The y-axis is labeled '100'.

Category	Group 1	Group 2	Group 3
A	~40	~60	~80
B	~20	~40	~60

PROJECT 2: Table (Top Center)

Table with 4 columns: NAME, AGE, HEIGHT, WEIGHT. Rows include: JANE DOE, JOHN DOE, JILL DOE, JIM DOE.

NAME	AGE	HEIGHT	WEIGHT
JANE DOE	12	5'0"	100
JOHN DOE	13	5'5"	120
JILL DOE	14	5'8"	130
JIM DOE	15	6'0"	150

PROJECT 3: Photograph (Top Right)

Photograph showing two hands holding small objects, possibly coins or tokens.

PROJECT 4: Pie Chart (Middle Right)

Pie chart showing data distribution. Legend: 100%, 200%, 300%.

Category	Percentage
100%	~60%
200%	~30%
300%	~10%

PROJECT 5: Text Project (Bottom Left)

Text project titled "The Importance of..." with a large bar graph showing data for two categories (A and B) across three groups (1, 2, 3). The y-axis is labeled '100'.

Category	Group 1	Group 2	Group 3
A	~40	~60	~80
B	~20	~40	~60

PROJECT 6: Text Project (Bottom Center)

Text project titled "The Importance of..." with a large bar graph showing data for two categories (A and B) across three groups (1, 2, 3). The y-axis is labeled '100'.

Category	Group 1	Group 2	Group 3
A	~40	~60	~80
B	~20	~40	~60

PROJECT 7: Text Project (Bottom Right)

Text project titled "The Importance of..." with a large bar graph showing data for two categories (A and B) across three groups (1, 2, 3). The y-axis is labeled '100'.

Category	Group 1	Group 2	Group 3
A	~40	~60	~80
B	~20	~40	~60

[illegible]

Nevada State College, Henderson, NV, has added three concentrations to its B.S. degree in mathematics. Students have the option of choosing: (1) concentration in general mathematics - this is the traditional degree in mathematics; (2) concentration in mathematics education - this allows students to complete a degree in mathematics while also fulfilling the necessary coursework to become a secondary mathematics teacher; and (3) concentration in statistics and applied

mathematics - this degree will allow students to complete several upper-division courses in statistics and mathematical modeling.



July 30-August 4, 2016
Chicago, Illinois

RENO R Users Group

An R Users Group has been formed in Reno. Meetings are held at the NDOW Western Region Offices, 1100 Valley Road, Reno, NV 89512. Their most recent was held June 9, 6:00-8:00p, featuring Shiny Applications, an open source R package which provides an elegant and powerful framework for building web applications. It can help you turn your analyses into interactive web applications without requiring knowing HTML, CSS, or JavaScript.

Previous meetings have focused on the “Hadleyverse” (Mitchell Grits, April 7) and “Going Parallel” (Matt McAnear, May 12). Contact Mitchell (mitchellgritts@gmail.com) to join the group’s email list.

**John Oliver Takes On
Science and Statistics**

On YouTube you can find HBO shows of the comedian John Oliver. About mid-May he did one called *Last Week Tonight with John Oliver: Scientific Studies*, about the conduct of scientific studies and particularly how they are reported in the popular media, which sort of fits in with the theme of this year’s JSM – see the President’s message above. Early in the show he takes on *P*-hacking, describing an interesting exercise reported by Nate Silver’s FiveThirtyEight group which reminded us that if you look at enough data you can find amazing correlations. He reports rather accurately on the problem with replication studies (who wants to be known as the second one to find something, and how does that help tenure, promotion, and/or funding?). He actually presents a chart on a meta-analysis of relative risk of cancer related to various predictors. (You may recall the recent “news flash” once again presenting a relationship between cell phone proximity and cancer – based on incomplete and premature reporting of a study with mice,

in which the control group mice actually died younger than the treatment group! See the Las Vegas RJ for Sunday, June 5.) Finally, his team came up with a segment on TODD Talks (NOT TED Talks), which dumb down the science to increase entertainment value. TODD stands for Trends, Observations and Dangerous Drivel. You’ll enjoy watching this. Warning – there’s a little rough language. ❖

Joining NV-ASA!

Only a minority of the people who receive this newsletter are members of the Nevada Chapter of the American Statistical Association (NV-ASA). Dues are nominal: \$20 per year, \$10 a year for members of the national ASA, and \$2 for student members of the national ASA. There are two ways to join. You can join NV-ASA when you renew your national ASA membership (or join for the first time); this can be done on-line at www.amstat.org. Otherwise, whether a national ASA member or not, you can join through PayPal on our website www.amstat.org/chapters/nevada/ or by contacting our Treasurer Guogen Shan. Any way you do it, please obtain an information form from our website, complete it, and send it to Dr. Shan at the address listed on the form.

Why should you join? NV-ASA events provide opportunities for networking and contact with other statisticians working in a wide variety of areas in Nevada. But in addition to that, a major reason is that your dues support the outreach activities of the NV-ASA including the K-12 Poster Competition and Career Days. Our financial needs are not great, so long as we all pitch in our modest amounts. *

NV-Chapter Officers and Others

Elected and voting officers are

President:	Debra Stiver (2014-2017)
Past President:	Alicia Chancellor Hansen (2014-2017)
Southern Vice President:	Charles Davis (2015-2016)
Northern Vice President:	Erick Gremlich (2016-2017)
Secretary:	Gayle Allenback (2016-2017)
Treasurer:	Guogen Shan (2015-2016)
Chapter Representative:	Chad Cross (2014-2016)

Also involved are

Education Committee Co-Chair:	David W Thiel
Webmaster:	Alicia Chancellor Hansen
Newsletter co-Editor:	Charles Davis
Newsletter co-Editor:	Hokwon Cho

Co-Editors:
Charles B. Davis
Hokwon A. Cho

Typesetting:
Hokwon A. Cho

Silver State-istics welcomes news items and letters from members and friends of the NV-ASA on matters of interest to the Chapter and the profession. Manuscript or items can be sent as a Microsoft Word document, PDF, or within an e-mail.

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For contact information, please see our website.



www.amstat.org/chapters/nevada/