



NMSR Reports

The Newsletter of the
New Mexicans for Science and Reason

NMSR Reports, David E. Thomas, Editor, 801 Fitch Ave., Socorro, NM 87801 © 2017

NOVEMBER MEETING:

NEW MEXICANS FOR SCIENCE
AND REASON WILL HEAR
Kim Johnson and Jesse Johnson
on the
NM Science Standards Kerfuffle
7:00 PM November 8th, 2017

==>**CNM MAIN CAMPUS,**
Student Resource Center<==

==>Room 204<==

Bring a friend!

have been criticized roundly for their removal of important, “controversial” science topics. (SEE STORY, PAGE 3).

Kim and Jesse will discuss what really happened behind the scenes at PED, legislative remedies, and more.



December 13th, 2017 Meeting: TBD

Coming in March: “Life, elevated” with hummingbird biologist Chris Witt

ELECTION OF OFFICERS!

Our esteemed treasurer, Nancy Shelton, has retired! We thank her for her many years of dedicated service.

Nancy has been succeeded by Debbie Thomas, who was elected the new NMSR Treasurer at our October meeting. Other officers re-elected include Dave Thomas, President; John Covan, Vice-President; and Eddy Jacobs, Asst. Neutron Generator. Welcome aboard the board, Debbie!

FUTURE MEETINGS ANNOUNCED

November 8th, 2017 NMSR Meeting:
Kim Johnson & Jesse Johnson, on “The NM Science Standards Kerfuffle”!



At our November 8th meeting, longtime NMSR members Kim Johnson and Jesse Johnson will discuss the latest regarding the NM PED’s proposed science standards, which



Nancy Shelton



Debbie Thomas

New Mexicans for Science & Reason (NMSR)

NMSR is a non-profit group with the goals of promoting science, the scientific method, rational thinking, and critical examination of dubious or extraordinary claims. NMSR meets at 7 PM on the second Wednesday of each month, in Albuquerque, New Mexico, at CNM's Student Resource Center, room 204 (@ Richard Barr Boardroom). NMSR Reports is its official newsletter.

NMSR officers:

Dave Thomas, President

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Kim Johnson, Industrial Physicist

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Marilyn Savitt-Kring, Science Mom

Harry Murphy, Physicist, Medical Quackery

Membership: \$20/year, includes newsletter, make your check payable to NMSR, send to treasurer (Shelton).

Newsletter available in hard-copy and downloadable PDF.

NMSR Advisors:

- **Mark Boslough**,
Physicist (Impacts, Climate Change,
Global Warming). Sandia National Labs.
- **Kendrick Frazier**
Editor, Skeptical Inquirer
- **John Geissman**
Professor of Paleomagnetism, UNM
- **Alan Hale**
Southwest Institute for Space Research
- **Randy Thornhill**
Professor of Biology, UNM

Cyber-Cypher Clue: X = J.

Bonus Puzzle Clue: Use the Map as a Guide!

WANTED: READER ARTICLES & COMMENTARY

Got something to share with NMSR members? Send it in! ATTN: Dave Thomas, Editor, NMSR Reports.

REMEMBER, our next NMSR meeting is at 7 PM on **WEDNES., NOVEMBER 8th, 2017**, at Student Resource Center, room 204 at CNM!

PUZZLE TIME!

[Please send solutions to Dave Thomas at: nmsrdave@swcp.com, or at 801 Fitch Ave., Socorro NM 87801.]

Cyber-Cypher: NOVEMB. PUZZLE

(Submitted by Dave Thomas)

The following letters are a simple substitution cypher. If R stands for L, R will stand for L everywhere. Your Cyber-Cypher Clue: Clue? Oh, well - if you must, see p. 2.

" D R J Q ' F W Q J Y Y I L
F I P L ' C P N V C N D R J V X S A F
N R J E F D Q O Q O A A ; F I P C P ' A
O J F F J Z P N C P N A J Q . " -
K N Q K V P K K J Y O C P O A Y D V F ,
J Q E C J E J A P R A B D P Q B P
A F N Q R N C R A V J C Q T
A B I J J K A .

SUPER SECRET WORD!

However you prefer to do the cypher itself (above or below), simply duplicate those actions on the alphabetized row of cypher letters below. You'll build an answer key, and you'll also reveal - the Super Secret Word!

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

OCTOBER CYPHER SOLUTION

"I'M CERTAINLY NOT GOING TO MOVE A HIGH-TECH COMPANY HERE, BECAUSE I'M NOT GOING TO GET A SCIENTIFICALLY EDUCATED POPULATION."
- KIM JOHNSON, ON PROPOSED NM STANDARDS

Esteemed October Code Crackers: Mike Arms*, Austin Moede*, and Terry Lauritsen*.

*Secret Word: "MARIONET GUY"

Need more Secret Word Cryptograms?

SOCORRO STUMPER

New puzzles every week at

www.nmsr.org/SocorroStumper.htm

November Bonus: “Too Early for Sunset?”*Submitted by Dave Thomas*

New Orleans, Louisiana has a latitude of 30 degrees North, and a longitude of 90 degrees West. Imagine that you are in NOLA on the day of the summer solstice (June 21st). At noon, you observe the Sun as being directly south. Two hours later, at 2:00 PM, the Sun has moved 15 degrees per hour towards the West, and thus has an azimuth (here, south-towards-west) of 30 degrees.

In the official “Flat Earth” model, the Sun is 40 miles in diameter, and moves above the flat earth at a height of 3,000 miles. On the summer solstice, observers on the Tropic of Cancer (23.5°N) will see the sun directly overhead at noon. Therefore, on the solstice, the Flat Earth Sun will move in a circle 3000 miles above the Tropic of Cancer, and will be directly south of New Orleans, and a bit north of the Yucatan (latitude 23.5°N, longitude 90°W) at noon.



The November Bonus: Assuming that the Earth is *Flat*, like the map above, (A) what is the latitude/longitude of the Sun at 2:00 PM on the Summer Solstice? (B) What is the Azimuth of the Sun at 2:00 PM, as observed from New Orleans, LA?

The October Bonus:

Derive the approximation for the distance d to the horizon for an object at height h above the earth, $d \approx$

$\sqrt{2hR}$, where R = radius of Earth (~ 3960 miles), and also for the angle of dip of the horizon, $d/R \cdot 180/\pi$ in degrees.

Assuming Mt. Wahdoo-ainoh is five miles above the surrounding terrain, what is the distance to the horizon from its summit? And the Dip Angle of the horizon?

ANSWER: $d = 199$ miles, dip angle = 2.9°.

Congrats: Keith Gilbert (NM), Harold H. Gaines (KS), Rocky S. Stone (NM), Allen Robnett (NM), Gene Aronson (NM), Brian Pasko (NM)!

PED BACKS DOWN ON STANDARDS - MAYBE.

After NM’s Public Education Department (PED) put forward new science standards in September, loosely based on national Next-Generation Science Standards (NGSS), but with references to evolution, age of the earth, and climate change deleted, the public protested in a big way. Science teachers and their associations, senators and school board members, business people, sixty-one fellows of Los Alamos National Labs, and even the editorial board of the Albuquerque Journal publicly told PED that this was a very bad idea. The story garnered national attention. You can find a compendium of links to dozens and dozens of stories on this issue on the NMSR website, at www.nmsr.org/ped2017.htm.

On October 12th, KOBTV4 reported on interim Secretary of Education Chris Ruskowski, who said "*We have 89 districts. We have 100 charter schools. All of them have different values. ... We need to allow for districts and charter schools to have the flexibility they need and the local control they need to do what they need to do for their own communities.... If we’re going to build critical thinkers, we want to make sure we’re not imposing our values on our kids, that our kids are actually getting the chance to make up their minds for themselves.*"

At a crowded hearing in Santa Fe on October 16th (many were turned away from attending), one person after another implored the

PED to stick with the non-diluted NGSS standards. A few days later, PED announced that it would adopt the full NGSS, along with six New Mexico-specific additions.

The science and teaching communities are cautiously optimistic. Has the PED restored the deleted section on embryology? Just what are the new changes, and are they really needed? Kim and Jesse Johnson will have the latest inside scoop at our November 8th meeting.

October 11th, 2017 NMSR Meeting: Fienning and Thomas!

At our October 11th meeting, our resident master of macabre magic, Bill Fienning, performed a few of his most diabolical and cunning effects.



Dave Thomas had an update on the surprising growth of the Flat Earth Movement. You can see

Dave’s animated maps demolish FE claims, at www.nmsr.org/flatter.htm.

Dave also showed how the horizon appears below true level at altitude (the Magdalena Mtns). “NMSR West” members Frank and Keith Thomas repeated the experiment at sea level, where the horizon *is* at true level. These two wouldn’t happen if the Earth was flat!



NMSR thanks Bill and Dave for an enchanting evening.

Yes, we have a NEW Treasurer!
 DUES - check the date on your mailing label. If it's time for you to renew, or to make a contribution, please send a check to DEBBIE THOMAS, NMSR Treasurer, 3205 Alcazar NE, Albuquerque, NM 87110
 Name _____
 Address _____
 Membership \$20 per annum*
 On the Net? Ask for the Paperless NMSR Reports! Send an email to nmsrdave@swcp.com "Dave Thomas"
 *For Renewals that are above the \$20 annual amount, the excess will be applied to the NMSR budget. Thanks!

The NMSR e-mail list is fun! It’s an e-mail list with news announcements of interest to NMSR members, discussions about news of the times, and more. To join, send a request to nmsrdave@swcp.com.

Thanks to: John Covan, Eddy Jacobs, Nancy Shelton, Debbie Thomas, Frank & Keith Thomas, and all our Puzzlers!

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<p>The Science Standards KERFUFFLE! Weds., Nov. 8th 7:00 PM CNM SRC 204</p>	<p>IN THIS ISSUE: Future Meetings Announced New Puzzles! PED Relents on Science Standards ? October Meeting: Magic, Flat Earth</p>	