

# C<sub>3</sub> BONDS

VOLUME 3, ISSUE 2

HOLIDAY 2004  
YEAR 1

## IMPLEMENTATION UNDERWAY FOR C<sub>3</sub> CLASSROOM TEACHERS

With the first round of classroom visits completed and the first semester of the 2004-05 academic year coming to an end, C<sub>3</sub> takes a look at the implementation of its strategies and concepts within the classrooms of its teacher participants. From data collected during the Program Coordinator's observations, the following statistics were noted: 28% of the classes were



engaged in investigative experiences with 56% of them done within one class period and 3% considered ongoing experiences. 16% of these experiences included data that was analyzed mathematically through graphing or other means. 100% of the C<sub>3</sub> teachers were using materials and information gained from the project with 86% focusing on higher level questioning techniques and 53% implementing sponge activities or class openers. 78% of the classrooms were using science activities from the summer project or follow up workshops while 86% incorporated classroom management



techniques emphasized in the program. 91% demonstrated that their supplies and materials were in use and 63% had highlighted laboratory safety procedures. 9% of all teachers were integrating science disciplines while 34% integrated math with science, 41% integrated history with science, and 53% were integrating science with other subjects. 97% of lessons observed utilized the



learning cycle and 48% of the lessons were taught through inquiry. 6% of the students were engaged in experimental design, 6% had engaged in a jigsaw and 22% through carousel strategies. 25% had learned through demonstrations and 25% had completed molecular level drawings. 97% of classes observed were utilizing cooperative learning, 72% of those with assigned tasks and 9% included in a group grading process.



72% of the teachers emphasized student communication skills and 81% had incorporated alternative assessment techniques. 9% were using student journals and 25% used learning logs. 1% had introduced conceptests, 28% of teachers had implemented concept maps and 59% card sorts. 1% indicated the use of demonstration assessment while 6% had students engaged in performance assessment. 3% demonstrated the use of preassessments, 3% student portfolios, and 13% utilized rubrics. 16% incorporated projects with 9% of the projects individual and 6% group



projects. 28% of all teachers emphasized real world connections during their learning experiences, 13% highlighting careers in chemistry and 19% integrating technology into the science learning experiences. It looks like we're off to an excellent start and the C<sub>3</sub> team thanks each teacher for the terrific work done so far. Great!



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### C<sub>3</sub> STAFF

BILL DEESE  
LINDA RAMSEY  
CATHI COX  
MARTHA GARBER  
DAVID MERCHANT

(318) 257-4878

(318) 257-4772

(318) 257-2942

(318) 257-3852 FAX

P.O. Box 3179 T.S.

Louisiana Tech University

Ruston, Louisiana 71272

wcdeese@latech.edu

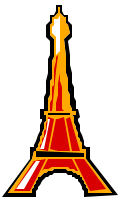
lramsey@latech.edu

ccox@latech.edu

<http://c3.latech.edu>

## C<sub>3</sub> WAS "LIVIN' LARGE IN LAFAYETTE"!!

The C<sub>3</sub> team hosted a joint workshop session for both Year 1 and Year 2 participants during the annual Louisiana Science Teachers Association Conference held in Lafayette, Louisiana. As part of the conference kickoff short courses, 27 C<sub>3</sub> teachers from Louisiana, Arkansas, and Texas joined together to engage in a lively workshop session entitled "Learning to Be Leaders While Livin' It Up in Lafayette". Kicking things off with a highly energetic activity that required each person to "Find Someone Who" knew anything from a list of things typically associated with Lafayette and LSTA. And the session was off and running in typical C<sub>3</sub> fashion—fast and fun! Following the awarding of fabulous prizes to all the winners, Mole Day projects were honored with **Natalie Rowe, C.E. Byrd High School**, taking home the award for Year 1 (related story on page 4). Cooperative groups then engaged in a series of "Meaningful Mind Games" before exploring "Broken Colored Squares." The teachers used this experience as a means of looking at effective communication skills while problem solving. The "Two Foot Feat" challenge followed as each group worked together to con-



struct a two foot tower using only 50 straws and just as many paper clips. Each group worked together to design the tower that could stand freely while supporting the greatest amount of weight and the competitive edge came out all around the room! Year 1 teacher **Abbra Mack, North Little Rock High School**, was on the winning team that produced a tower able to hold more washers than we could



count! With more fabulous prizes presented, the whole group then dove into "Leading Into Inquiry", a series of experiences focused on implementing inquiry into the science classroom. Each cooperative group first worked through a card sort that focused on the essential features of inquiry and how it evolves from less to more student self-direction. From there, the teachers reviewed case studies on different levels of inquiry found in secondary science classrooms. The C<sub>3</sub> team followed by facilitating a discussion that focused on the effective implementation of inquiry, using teacher input and reflections as its basis. Thanks to everyone for their typical energy and enthusiasm—the mayhem was wonderful! It was a great initiation for this year's conference and plans are already underway for next year's meeting. C<sub>3</sub> will see you there!

## LSTA FILLED WITH C<sub>3</sub> FOLKS



The 2004 Louisiana Science Teachers Association Convention was filled to the brim with C<sub>3</sub> teachers as both Year 1 and Year 2 groups gathered in Lafayette for the annual event held October 28-30, 2004. Several of the C<sub>3</sub> participants presented breakout sessions while all in attendance made the rounds and gained resources and strategies from the sessions and courses they attended. And of course made the most of their Acadian hosts as they enjoyed the fabulous cuisine and exciting nightlife offered in the area. Those spotted from Year 1 include **Donna Alford (Downsville Elementary School)**, **Stacy Campbell (Ruston High**

**School)**, **Lydia Clary (Weston High School)**, **Pat Edington (Ruston Junior High School)**, **Willia Hatter (Homer High School)**, **Tonya Jones (Carencro High School)**, **Jennifer McSween (Ouachita Christian High School)**, **Abbra Mack (North Little Rock High School)**, **Tammy Pilgreen and Evelyn Scott (Lillie Middle School)**, **Mary Beth Plair (East Thibodaux Middle School)**, **Natalie Rowe (C.E. Byrd High School)**, and **Sherri Stevens (Livonia High School)**. Thank you for representing C<sub>3</sub> in such an outstanding way! As always, you were fantastic!!



**MARK YOUR CALENDARS NOW!!**

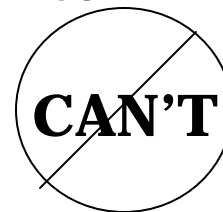


*Dates To Remember:*

**December 17, 2004: Deadline for ALL Semester One materials and assignments**

**February 19-20, 2004: Year 1 Workshop Weekend #2**

**DON'T USE FOUR LETTER WORDS:**



**"LOST TIME IS NEVER FOUND AGAIN."**

*Benjamin Franklin*

## BREAKING DOWN THE BOARD

Year 1 C<sub>3</sub> teachers are currently engaged in two different online assignments as their Blackboard experience continues. With 79% of the Year 1 participants successfully completing the Learning Cycle assignment and discussion, 36% have now addressed Assignment #2. The second discussion stems from the first video lesson and critique that each teacher is required to complete during the first semester of the 2004-05 academic year. After completing the filming and subsequent critique of the video lesson, each teacher reflected on the following: *was arranging the taping of the lesson difficult, what type of assistance did you receive in order to accomplish your goal, how did you feel during the filming process, what type of reaction or response did your students have to you filming their class, describe your feelings as you began reviewing and critiquing*



*your video, what is the main thing you want to work on before you video your second lesson next semester, do you have any "words of wisdom" for your C3 colleagues who haven't completed their first video yet?* Hats off to **Tammy Pilgreen (Lillie Middle School)**, who was actually brave enough to initiate this often intimidating online discussion. Kudos as well to **Willia Hatter (Homer High School)**, **Stacy Campbell (Ruston High School)**, **Donna Alford (Downsville Elementary School)**, and **Lydia Clary (Weston High School)** for jumping in and supporting **Tammy** and each other in the development of the ongoing posts. Cathi appreciates the excellent job that everyone is doing with the online learning community and encourages each Year 1 participant to complete ALL assignments by 2005—don't be left in your colleagues' dust!



## 2005 CLASSROOM VISITS ARE RIGHT AROUND THE CORNER!

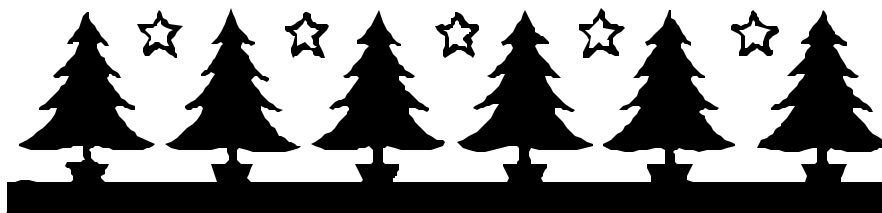
With the first set of classroom visits now completed, Cathi is already gearing up for the next round of teacher observations. Slated to begin in early January, the visits will be similar to what the C<sub>3</sub> teachers have already experienced. However, during the second round we will be looking for more of you to implement strategies that you might not have had a chance to try during the earlier part of the academic



year. The areas needing more focus and attention can be noted in the implementation data recorded in our opening article. Each C<sub>3</sub> teacher is encouraged to think of additional strategies that they can try and then challenged to work diligently toward further implementation in 2005. Let's really put our C<sub>3</sub> experiences to work for us as we get the new year underway—make 2005 a year to remember!!



M E R R Y  
C H R I S T M A S F R O M  
T H E C <sub>3</sub> T E A M !!!

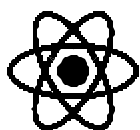




# SPOTLIGHT ON C<sub>3</sub> SUCCESS

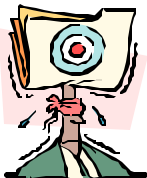


**Tonya Jones, Carencro High School,** engaged her students in an exciting learning cycle lesson that focused on atomic theory. She began with a “Box Investigation” that challenged cooperative groups to determine what was inside the



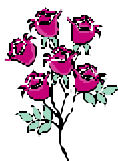
sealed box. Student groups then constructed “ExSTRAWordinary Atomic Models” using only straws, toothpicks, and pipe cleaners. A rubric guided and evaluated the student projects.

Excellent!! . . . **Natalie Rowe, C.E. Byrd High School,** also . . . challenged her students during the study of atomic theory. Cooperative groups carousoled through a series of stations that focused on Rutherford’s experiment; at each station, students performed “Atomic Target Practice” as they rolled a marble beneath a cardboard flat on corks. Collecting data from the path of the marble, the students then determined the shape of the object beneath the cardboard. Great! . . . **Willia Hatter, Homer High School,** used the “Cousin Bill” learning



experience as an exploration to guide her students toward the discovery of periodic trends. Following the card sort, she was able to relate concepts back to the work done with “Cousin Bill.” **Willia** also provided an

excellent connection to chemistry based careers at the end of the lesson. Terrific! . . . During the study of plants, **Donna Alford, Downsville Elementary School,** had her students choose a plant, then create a model of it. Cooperative groups worked together to construct the model, including all appropriate parts of the plant. Groups then presented their models to the class, explaining each part while using appropriate terminology. **Donna** was not only able to use this as an extension in her learning cycle, but an assessment as well. Wonderful! . . . **Mary Beth Plair, East Thibodaux Middle School,** is successfully using the learning cycle AND C<sub>3</sub> in her physical education classes! Class began with probing questions to engage the students before having



them explore their own heart rate. Following exercise and further exploration, **Mary Beth** discussed the physical phenomena that occurred. Student groups then completed a card sort and worked on language skills by developing sentences using the terms focused on

during the lesson. They even presented mini-posters reflecting their work! Fantastic!! . . . **Sherri Stevens, Livonia High School,** developed a modified jigsaw for her students to engage in when studying acids and bases. Poster presentations were made by each group to represent the information obtained through the jigsaw research. **Sherri** then followed with a card sort that included pictures of substances that were to be classified as acid, base, or neutral. Good job! . . . And as usual, the C<sub>3</sub> teachers continue to delight and dazzle Cathi as she makes her way into each classroom represented. Excellent job everyone. Way to really let your light shine!!



## MARKING A MAGNIFICANT MOLE DAY!!

On October 23 (or a day close to it!), teachers and students across the country engaged in the annual Mole Day Celebration. C<sub>3</sub> teachers were challenged to develop something special in their classrooms in an effort to initiate their students into the wild and wacky world of celebrating the mole! Dangling “fabulous prizes” out there as an incentive, Cathi asked anyone who organized something for Mole Day to submit it in the second annual C<sub>3</sub> Mole Day Challenge. And **Natalie Rowe, C. E. Byrd High School,** was the only one brave enough to step out there and try it! She took home the prize for engaging her students in the following: each had to participate in mole day activities by teaching six people about the mole and having them sign off on an individual rubric provided; the group had to include a parent, two teachers, and three other students not in their class. Students also developed a project and presented it to their class. Some of the excellent ideas included Mole-opoly, Moletin Boards and posters, Mole Puns, Mole Day Song, Mole Day Campaign Signs, Mole Day Costume, Mole-biles (to hang in the room!), Mole Day Poem/Story/Cartoon, Mole Day Flag, Mole Pinata, Stuff Mole, Mole Day Greeting Cards, Mole Day Treats (MOLEasses cookies, Avogadro Dip, Taco-mole Sauce, GuacoMOLE Dip), Mole Day Magnets, Mole Day T-shirt, and Mole Day Brochures. All projects had to have prior teacher approval. What fun!! Thanks for going for it **Natalie**—great job!



# CONGRATULATIONS

C<sub>3</sub> congratulates **Willia Hatter, Homer High School**, on receiving a 2004-05 QSM Grant from the state of Louisiana. **Willia** will use the funds to order further science materials from the C<sub>3</sub> bid list in an effort to improve the science instruction for students at **Homer High**. Outstanding! . . .



**Donna Alford, Downsville Elementary School**, is receiving a new set of flat-topped desks for her classroom. Her principal offered this incentive for teachers implementing cooperative learning during more than 50% of the learning experience time and **Donna** is there! Wonderful! . . . And, hats off to **Natalie Rowe** and her colleagues at **C.E. Byrd High School**—the school has been named a “4 Star School” by the state of Louisiana. Great job everyone!



## PLAY YOUR CARDS RIGHT!!

With all the emphasis on cards and card sorts in C<sub>3</sub>, it's no wonder that **Willia Hatter, Homer High School**, created a great bulletin board to carry on this theme. Entitled “Play Your Cards Right,” the bulletin board border was made from actual playing cards. Then, classroom rules were printed on larger versions of the real cards. Not only eye-catching, it proved to be an effective way to reinforce rules for students to follow. Great!



**DID YOU KNOW . . .** That **Tonya Jones, Carencro High School**, has been named “Bearbacker of the Month” twice at her school? Now that sounds like someone good to have on your side! Way to go, **Tonya**—keep up the good work with the CHS Bears!!



## WISHING A SPEEDY RECOVERY . . .

C<sub>3</sub> continues to remember **Linda Bates, El Dorado High School**, and **Tammy Pilgreen, Lillie Middle School**. Both teachers continue to recuperate at home following surgeries that took them out of circulation for a while. Here's wishing both a speedy recovery and continued good health in the new year!!



## We Do Extra Curricular, Too!



**Donna Alford, Downsville Elementary School**, is serving as her school's 4-H Leader and recently attended the “Leaders Lunch and Serve” event sponsored by the union Parish LSU Ag Center. **Donna** was featured in a local newspaper because of her excellent work in this area. Keep it up—your efforts and energy are certainly appreciated by your students and respected by C<sub>3</sub>.



## GETTING A “FACELIFT”

**Stacy Campbell, Ruston High School**, and her family are busy settling into their “new” home, courtesy of a brand new addition that was recently built on. Looks like Santa came early for the **Campbells!!** Enjoy!



**GREAT PEOPLE TALK ABOUT IDEAS**  
**AVERAGE PEOPLE TALK ABOUT THINGS**  
**SMALL PEOPLE TALK**

“IF YOU KEEP DOING THINGS THE SAME WAY, YOU WON'T EVER GET DIFFERENT RESULTS” *advice passed along to a new recruit by his first employer*

**MAY YOUR DREAMS COME ALIVE IN 2005!**



*Happy New Year to the C<sub>3</sub> Crew!!*



**REMEMBER WHERE YOU HAVE BEEN, FOCUS ON WHERE YOU ARE GOING**

## BULLETIN BOARD:

Check out a super web site for sponge questions and problem solving puzzles: Visit <http://www.usaweekend.com> Click on frame games, then archives for a complete list

**GOOD AS GOLD!** This link is for gold, but the site has information for all elements. Go to this link and type in your weight. It will calculate the amount of gold in your body.

<http://www.webelements.com/webelements/elements/text/Au/biol.html>

Then go to this link and type in the amount of gold in your body. It will give you the market price for the gold you contain.

The Center for Science Education at EDC invites you to:

High School Students Working As Scientists Work: A 7 Session Online Course for High School Teachers

~January 28 through March 24, 2005~

~\$149~

~Earn Graduate Credit for additional fee~

Visit <http://cse.edc.org/highschool> for further information and online registration.

Course description:

This seven-session on-line course is about the infusion of scientific thinking strategies into your current lesson plans, adapting those lesson plans so that students take a more scientifically disciplined, inquiry approach to the reading, laboratory, discussion, and lecture experiences they have in class.

During the course, you will examine the myths and realities of doing inquiry in the high school classroom and develop a richer conception of inquiry. You will have opportunities to experiment on your individual lessons with a context-rich learning-cycle structure. In addition, you will use research-based resources to try to defend the idea that scientific thinking should be a goal in the science classroom. Each weekly session consists of three components:

- . Reflect on the topic of the week through related reading and teaching,
- . Post those reflections on the Web site, and
- . Participate in an exchange of comments on other participant reflections

Participating fully in the course requires a total of 30 hours in 7 sessions over 8 weeks.

**GOT GRAPHING WOES?** Check out the following web site for additional resources:

<http://nces.ed.gov/nceskids/graphing/>

CHEMISTRY QUIZZES:

<http://www.1001-periodic-table-quiz-questions.com/>  
Wow! This site offers an amazing array of chemistry-related quizzes for teachers to access, covering elementary grades right through high school.

Join an NSTA Committee

NSTA President-elect Mike Padilla is seeking candidates to serve on NSTA's standing committees, advisory boards, and panels beginning June 1, 2005. Read more about the exciting positions available, and how you can lend your talent and expertise and really make a difference in the science education we provide to students by visiting [http://science.nsta.org/nstaexpress/nstaexpress\\_2004\\_10\\_25\\_comm.htm](http://science.nsta.org/nstaexpress/nstaexpress_2004_10_25_comm.htm).

With the click of a mouse, you can choose from over 2000 instructional videos, 20,000 video clips, and 1500 images to use in your classroom. Contact [edserv@lpb.org](mailto:edserv@lpb.org) for your school's password to this free service. Be sure to mention your parish and school when requesting your password!

**Help your students learn about molar mass, molecular volume, and Avogadro's number. Visit the following site for a terrific activity!**

<http://www.flinnsci.com/homepage/ctlmindex.html>.

Free Classroom Materials from Channel Islands Marine Sanctuary. The Channel Islands National Marine Sanctuary in Oxnard, California has developed a number of classroom materials that use real data from research efforts in the Sanctuary. They can be found at <http://channelislands.noaa.gov> and include the following: Plumes & Blooms details the biological processes that make the Channel Islands unique. Marine Mammal Sightings Database allows users to see and report marine mammals. Monitoring a Habitat teaches students how marine biologists monitor marine habitats.

**Have a question about classroom strategies in science or math that you would like help with? Contact the Math and Science Mentoring Archives at**

<http://www.sedl.org/scimast/archives/>

The archives contain questions posed by teachers about instructional resources, teaching strategies, content, and assessment issues. You may submit your own question or read those already posted!

Designing a Lunar-Based Mission to Mars  
<<http://www.nsip.net/download.cfm>> (Grades 5-8 or 9-12; Individuals or Teams 2-4)  
If you could send a mission from the Moon to Mars, how would you do it and why? Define your science questions, then design a mission to answer them! You may design a robotic mission (orbiter, flyby, lander, etc.) or even send humans to explore firsthand!

## A DAY OF CELEBRATION, A YEAR OF FUN!



### Don't Miss Out on Mole Day 2005!

The National Mole Day Foundation, Inc, has all the scoop on how "molementum" is growing!! Don't miss this opportunity to "moletiply" the enthusiasm for chemistry in your classroom by "moletivating" those around you while having loads of fun. Be a part of the excitement as C<sub>3</sub> continues to celebrate all things molar when October 23 rolls around next year. Begin thinking about how you can create your own unique Mole Day celebration between 6:02 AM and 6:02 PM on Mole Day. Dine at a "Mole-inspired buffet", sponsor "Mole-ympiads", crown student "Mole royalty", sing "Mole tunes", and just generally join the "Famoley" as you enjoy what is becoming the Mardis Gras of Chemistry! For more information on National Mole Day, visit [www.moleday.org](http://www.moleday.org) or e-mail [mole@mhtc.net](mailto:mole@mhtc.net) Become a member now!!

## MOLE DAY PUNS from Mole Day 2004

Developed by Students in the classroom of  
Natalie Rowe, C.E. Byrd High School



What did Avogadro invent for his wife to use as night cream? (*Oil of Molay*)

How did Avogadro get through the desert? (*he rode a ca-mole*)

What area did Avogadro explore? (*the South Mole*)

What is the mole's favorite soup? (*Molestrone*)

What kept Avogadro in bed for two months? (*mole-onucleosis*)

What did Avogadro get when he mixed ice cream, chocolate syrup, and milk together? (*chocolate mole-ted*)

What are moles made of? (*mole-ecules*)

What did Avogadro call his church service? (*a molar mass*)

What happens when a mole bites a dog? (*it becomes mole-icious*)

What kind of make-up does the mole wear on his eyelashes? (*mole-scara*)

**Duct tape is like The Force. It has a light side, a dark side, and it holds the universe together.**

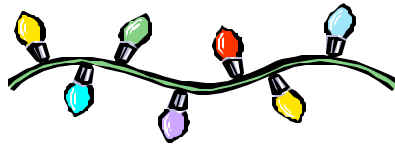
*Carl Zwanzig*

## IS THERE A SANTA CLAUS? INQUIRING MINDS WANT TO KNOW . . .

As a result of an overwhelming lack of requests, and with research help from that renown scientific journal SPY magazine (January, 1990) - I am pleased to present the annual scientific inquiry into Santa Claus.

1. No known species of reindeer can fly. BUT there are 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not COMPLETELY rule out flying reindeer which only Santa has ever seen.
2. There are 2 billion children (persons under 18) in the world. BUT since Santa doesn't (appear) to handle the Muslim, Hindu, Jewish, and Buddhist children, that reduces the workload to 15% of the total - 378 million according to Population Reference Bureau. At an average (census) rate of 3.5 children per household, that's 91.8 million homes. One presumes there is at least one good child in each.
3. Santa has 31 hours of Christmas to work with, thanks to the different time zones and the rotation of the earth, assuming he travels east to west (which seems logical). This works out to 822.6 visits per second. This is to say that for each Christian household with good children, Santa has 1/1000th of a second to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining presents under the tree, eat whatever snacks have been left, get back up the chimney, get back into the sleigh, and move on to the next house. Assuming that each of these 91.8 million stops are evenly distributed around the earth (which, of course, we know to be false but for the purposes of our calculations we will accept), we are now talking about 0.78 miles per household, a total trip of 75.5 million miles, not counting stops to do what most of us must do at least once every 31 hours, plus feeding and etc. This means that Santa's sleigh is moving at 650 miles per second, 3,000 times the speed of sound! For purposes of comparison, the fastest man-made vehicle on earth, the Ulysses space probe, moves at a poky 27.4 miles per second - a conventional reindeer can run, tops, 15 miles per hour.
4. The payload on the sleigh adds another interesting element. Assuming that each child gets nothing more than a medium sized-lego set (two pounds), the sleigh is carrying 321,300 tons, not counting Santa, who is invariable described as overweight. On land, conventional reindeer can pull no more than 300 pounds. Even granting that "flying reindeer" (see point #1) could pull TEN TIMES the normal amount, we cannot do the job with eight, or even nine. We need 214,200 reindeer. This increases the payload - not even counting the weight of the sleigh - to 353,430 tons. Again, for comparison - this is four times the weight of the Queen Elizabeth.
5. 353,000 tons traveling at 650 miles per second creates enormous air resistance - this will heat the reindeer up in the same fashion as spacecraft re-entering the earth's atmosphere. The lead pair of reindeer will absorb 14.3 QUINTILLION joules of energy. Per second. Each. In short, they will burst into flame almost instantaneously, exposing the reindeer behind them, and create deafening sonic booms in their wake. The entire reindeer team will be vaporized within 4.26 thousandths of a second. Santa, meanwhile, will be subjected to centrifugal forces 17,500.06 times greater than gravity. A 250-pound Santa (which seems ludicrously slim) would be pinned to the back of his sleigh by 4,315,015 pounds of force.

In conclusion - If Santa ever DID deliver presents on Christmas Eve, he's dead now. Merry Christmas!!



## The 12 Days of Christmas (Louisiana Style!)

On the first day of Christmas, my true love gave to me, a possum in a pine tree.

On the second day of Christmas, my true love gave to me, two snapping turtles, and a possum in a pine tree.

On the third day of Christmas, my true love gave to me, three French hens (actually Cajun),  
two snapping turtles, and a possum in a pine tree.

On the fourth day of Christmas, my true love gave to me, four whippoorwills,  
three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the fifth day of Christmas, my true love gave to me, five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the sixth day of Christmas, my true love gave to me, six ducks-a-flyin', five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the seventh day of Christmas, my true love gave to me, seven gators swimming, six ducks-a-flyin',  
five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the eighth day of Christmas, my true love gave to me, eight chicks-a-peckin', seven gators swimming,  
six ducks-a-flyin', five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the ninth day of Christmas, my true love gave to me, nine boys crawfishin', eight chicks-a-peckin',  
seven gators swimming, six ducks-a-flyin', five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the tenth day of Christmas, my true love gave to me, ten trappers trapping, nine boys crawfishin',  
eight chicks-a-peckin', seven gators swimming, six ducks-a-flyin', five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the eleventh day of Christmas, my true love gave to me, eleven Jazz musicians, ten trappers trapping,  
nine boys crawfishin', eight chicks-a-peckin', seven gators swimming, six ducks-a-flyin', five golden shrimp.  
Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.

On the twelfth day of Christmas, my true love gave to me, twelve Cajuns fiddlin', eleven Jazz musicians, ten trappers trapping, nine boys  
crawfishin', eight chicks-a-peckin', seven gators swimming, six ducks-a-flyin',  
five golden shrimp.

Four whippoorwills, three French hens (actually Cajun), two snapping turtles, and a possum in a pine tree.



## Eleven Things They Don't Teach You In School

- RULE #1: Life is NOT fair - get used to it.
- RULE #2: The world won't care about your self-esteem. The world will expect you to accomplish something BEFORE you feel-good about yourself.
- RULE #3: You will NOT make \$40,000 a year right out of high school. You won't be a vice-president with a car phone until you earn both.
- RULE #4: If you think your teacher is tough, wait till you get a boss. He doesn't have tenure.
- RULE #5: If you mess up, it's not your parents' fault, so don't whine about your mistakes - learn from them.
- RULE #6: Flipping burgers is not beneath your dignity. Your grandparents had a different word for burger-flipping - they called it opportunity.
- RULE #7: Before you were born, your parents weren't as boring as they are now. They got that way from paying your bills, cleaning your clothes and listening to you talk about how cool you are. So, before you save the rain forest from the parasites of your parent's generation, try delousing the closet in your own room.
- RULE #8: Your school may have done away with winners and losers, but life has not. In some schools they have abolished failing grades and they'll give you as many times as you want to get the right answer. This doesn't bear the slightest resemblance to ANYTHING in real life.
- RULE #9: Life is not divided into semesters. You don't get summers off and very few employers are interested in helping you find yourself. Do that on your own time.
- RULE #10: Television is NOT real life. In real life, people actually have to leave the coffee shop and go to jobs.
- RULE #11: Be nice to nerds. Chances are, you'll end up working for one.

---- Bill Gates, 2002, speaking at a high school event, "Eleven Things You Don't Learn in School."

## LESSONS OF THE GEESE



In the fall when you see geese heading south for the winter flying in the "V" formation, you might be interested in knowing what science has discovered about why they fly that way.

It has been learned that as each bird flaps its wings, it creates uplift for the bird immediately following; by flying in a "V" formation, the whole flock adds at least 71% greater flying range than if each bird flew on its own.

Quite similar to people who are part of a team and share a common direction get where they are going quicker and easier, because they are traveling on the trust of one another and lift each other up along the way.

Whenever a goose falls out of formation, it suddenly feels the drag and resistance of trying to go through it alone and quickly gets back into formation to take advantage of the power of the flock.

If we have as much sense as a goose, we will stay in formation and share information with those who are headed in the same way that we are going.

When the lead goose gets tired, he rotates back in the wings and another goose takes over; it pays to share leadership and take turns doing hard jobs.

The geese honk from behind to encourage those up front to keep their speed; words of support and inspiration help energize those on the front line, helping them to keep pace in spite of the day-to-day pressures and fatigue.

It is important that our honking be encouraging, otherwise it's just, well, honking!

Finally, when a goose gets sick or wounded and falls out, two geese fall out of formation and follow the injured one down to help and protect him. They stay with him until he is either able to fly or until he is dead, then they launch out with another formation to catch up with their group.

When one of us is down, it's up to the others to stand by us in our time of trouble. If we have the sense of a goose, we will stand by each other when things get rough. We will stay in formation with those headed where we want to go.

The next time you see a formation of geese, remember their message: it is indeed a reward, a challenge, and a privilege to be a contributing member of a team.