The Weekly Newsletter of Sydney Boys High School
Vol 6 No 15 June 32005

## From the Principal

The Strategic Planning Process
Last week a statement on the proposed strategic planning process was published in High Notes. The School Council wants the process to be facilitated professionally. The P \& C has been approached to finance the facilitator with the school using Teacher Professional Learning funds to relieve teachers engaged in the planning process. Our intention is to have a broad consultative process and to produce a 3-year plan to unite our endeavours.

## Closure of the Tennis Courts



Regrettably, I was forced to close the tennis courts until further notice. Several students sustained minor injuries while playing basketball on the courts. The surface is breaking up. It is pointless to spend money on emergency maintenance when our preparations for redevelopment are at an advanced stage. Boys will have to get use to playing on Moore Park West until the new basketball courts are constructed on the Flat.

## Committee Meeting Minutes

All school Committees and SubCommittees of the Parents and Citizens Association need to keep minutes of their proceedings. A copy of these should be provided to the Principal. I think it is appropriate for all groups to follow the lead of the Rugby Committee and publish their minutes in High Notes.

## Another email service for parents

Parents who supply the school office with an email address can now have two useful information streams. There is an existing arrangement whereby a reminder about High Notes with a link to the current edition can be emailed to
you each week. Now we are introducing an attendance report email service. An updated report on your son's attendance record can now be sent to you on a daily or weekly basis. To get your electronic High Notes, send your email address to 90003@sydneyboys-h.schools.nsw.edu.au.
If you would like to have your son's attendance record sent to you sent the email address to dowdellb@sydneyboys-h.schools.nsw.edu.au If you are concerned about privacy issues, you could open an account just for the purpose of school-home communications.

## Using our website

I urge all parents to visit the school's website www.sydneyboyshigh.com There are many pages of interest within the navigation bar including the High Communities and Links sections. Thank you to Raymond Roca Creativity for the impressive Debating site. All debaters need to use this site for online registration. Students who want to assist the school and build their skills in web page design and maintenance are invited to discuss a webmaster role with the appropriate MIC.

## Wipeout at Weigall

After watching seconds volleyball assert
 their superiority over St Ignatius, I felt ready for further successes. My optimism was misguided. At
Weigall our nemesis, Sydney Grammar School, used the 'bowling alley' to great effect, shutting down our attacks and denying us room to set up connected passes. Their throwing from the sidelines in all grades was very effective. Our lower grades had their measure. The second XI have played good football all season so far and looked the goods leading 1-0 at the break. In the second
half, defensive confusion led to the first goal back. Regrettably, good through balls and sheer pace left our defenders a metre behind and Lachlan Street on his own against the attackers. Two more goals went in and our attack could not counter. The side learnt the hard way the value of dropping back fast to stall an opposition break out. First grade followed the coach's instructions in the first half and pressured the Grammar danger area for most of the half. It was a real arm wrestle with neither side able to crack close marking defence. High created some good chances but failed to convert. The second half was a complete contrast. High was trapped in its own half for the rest of the game. A defensive lapse and skilful play let in the first goal. Soon after a penalty was awarded against the goal keeper. Thereafter, the side lost composure and tried to play 'catch up' football. Two certain goals were butchered. A fired up Grammar side smashed home their advantage. Our boys have to stay composed and finish better. They have the skills but need to communicate their way to a win.

The junior rugby sides played well in good contests. The third grade fixture was abandoned. First grade started off with a bang scoring a couple of nicely constructed tries and holding the mobile Grammar pack. The Grammar full back ran smart angles, had plenty of speed and used it to create overlaps. Two slick backline tries resulted. At 12-14 down, High was right in it at half time. Our boys played without the ball and some lost lineout possession put pressure on our defence. A nicely executed forwards try put Grammar ahead. Several more tries were conceded as the Grammar pack got on top and our defenders tired. High fought back with a try by Pat McDonnell, converted by Cameron Conway. However, the Grammar boys proved to be too big and relentless, running out convincing winners 45-22.

## High Talent

Our under 15 fencers placed $3^{\text {rd }}$ in the state finals competition. Well done, boys!

## Warm addition to our uniform

Students can now purchase a High beanie from the High Store. Keep your head warm when travelling to school or to sport. Teachers may allow boys to wear beanies in class during the first two periods on cold days.

## Dr K Jaggar

## From the Rugby Master's Desk:



As we approach the 2005 GPS competition it is time to reflect on our season thus far. This year we asked the GPS rugby convenors to extend our Year group teams to include Year 11 players in the 16 s age group, which was accepted.

We are fielding the same number of teams (12) as we did in 2004, although the mix has changed. There are two Open teams, two 16s, four 15s, two 14 s and two 13 s . We have played 55 matches, winning 23, losing 27 and drawing five. Several pre-season opponents aware of our Year group teams requested that we play at a level higher than last year in order to provide more competitive matches. We saw this as a positive recognition of our improving standard of rugby and important preparation for the tough GPS campaign. There have been some very encouraging results during the pre-season.

- 16As 0-13 loss to TAS $2^{\text {nd }} \mathrm{XV}$
- $3^{\text {rd }} \mathrm{XVs} 5-20$ loss to Chevalier 2nd $^{\text {nd }} \mathrm{XV}$
- 16Bs $10-0$ win against TAS $4^{\text {th }} \mathrm{XV}$
- 15As 36-0 win against Oxley's 16As
- 15Bs 12-0 win against TAS 16Bs
- 15Cs 0-0 draw with Oxley's 15As
- 15Ds $17-15$ win against Cranbrook
- 14As only losing one match in the pre-season to TAS 15As
- 14Bs 7-7 draw with Cranbrook, having conceded a large score in 2004 as 13Bs
- 13As with four wins from six starts.
- 13Bs 22-33 loss to TAS 13As.

Serdar Bolen and the $1^{\text {st }} \mathrm{XV}$ have been quietly going about their business blending different combinations of youth and experience during the trials. They went into the match with Grammar with confidence, coming off two sound performances against TAS (36-17 win) and Cranbrook (17-17 draw). The big forward pack is well led by Captain Ian Kwok and senior player Tom Mainprize setting solid platforms for the backs to attack. Cameron Conway, Pat McDonnell and Will Kwok provide the stability for the attacking flair of Mark Carroll to come to the fore. There was no better example of this than in the 70 m raid by High against Cranbrook which saw the flying Suren Wickramasinghe touch down in the corner.

As each week passes we will be rigorously tested by our GPS opponents. I urge all players to have confidence in your coaches, your individual and collective abilities to "weather the storms" and put your game plans into action. Try to improve some aspect of your game each week even if the current game score is out of reach. We are always looking towards the future $1^{\text {st }}$ fifteens whether you are currently an A, B, C or D player.

In response to the request for High to support Technical Aid to the Disabled, I have received a pledge from Mr John Kwok, father of Ian ( $1^{\text {st }}$ XV), Will ( $1^{\text {st }} \mathrm{XV}$ ) and Alden (13As) of "a dollar a point" scored by our $1^{\text {st }} \mathrm{XV}$ in the GPS competition. Any other organisation or individual wishing to support this cause in a similar way can contact me on 93610027 during school hours.

## G Stein

MIC Rugby

## Rugby Committee Meeting Summary



The third meeting of the SBHS Rugby Committee for 2005 was held on 25/5/05. The following is a summary of the meeting:

Attended: Rob Fetherston, Judy Fetherston, John Evans, John Bull, Serdar Bolen, Kel O’Keefe, Katherine Deacon, Derry O’Rourke, Adrian Vertoudakis, G Stein.

- Welcome to new member Derry O’Rourke.
- Money banked from two home games was $\$ 831.00$ and $\$ 2740.05$ respectively. All expenses from those days not paid as yet. Some receipts were handed in this evening. A full report will tabled mid-season.
- Parking money cheque was forwarded to Treasurer by Geoff Stein.
- R Fetherston will need the appropriate documentation to be the second signatory for the committee.
- Future income options for rugby - Copayments were discussed. Principle generally accepted from the point of the provision of appropriate medical assistance
at home games. ASF donations were also discussed.
- P\&C representation and registration - K. Deacon agreed to keep the committee informed of P\&C requirements. Registration important for voluntary workers and insurance coverage as well as the allocation of future parking days. P\&C are currently working on a pro-forma to make reporting an easier and uniform process.
- Medical coverage at home games - Three levels will operate. 1. Professional medical service on site all day. 2. Cadets rostered during the day to the first aid room to dispense simple first aid such as ice packs, bandaging etc. 3 . Each team to seek the help of a parent with appropriate medical background to assess on field injuries and the appropriate first aid.
- First aid room needs more visible signage.
- High Spirit Award - To be implemented and distributed by coaches as appropriate.
- Team email lists - Parents and players to gather email addresses so that an age group list can be compiled and be passed on to J. Mittleheuser via coach, committee member or G Stein.
- New Barbeque - Investigate the purchase of an appropriate barbeque for rugby.
- High/ Syd. Uni. raffle - Proposal tabled. 6000 tickets @ \$5 (\$2 to SU and \$3 to High). 13, 14 and 16 age groups targeted as 15 s have their own Gold Coast trip fundraising at present. Money raised to be distributed $40 \%$ to 2006 season, $30 \%$ to 2005 season and $30 \%$ to S Bolen. Three opportunities to sell tickets at Telstra Stadium before Wallaby tests (11/6/05, 9/7/05 and 13/8/05).

Proposal moved: J Bull, seconded: R Fetherston. Passed unanimously.

- Charing Cross Hardware donation Acknowledgement and signage should be ready for Riverview game 18/6/05.
- $1^{\text {st }}$ XV role models $-K$. Deacon expressed concern about the language of the first grade players at the end of the Cranbrook game and the need for an awareness of responsible leadership and appropriate role modelling by senior players in the presence of junior players.
- J Mittleheuser, via J Bull, reported a successful parking day last Saturday with a good roll up of 14 parents and boys.
- Meeting concluded at 7.10 pm .
- Next meeting will be held on Wednesday $29^{\text {th }}$ June at 6 pm in Room 901. Everyone is welcome.

G Stein, MIC Rugby, SBHS

## Volleyball Report \#3

## CHS News



In one of the most heavily publicised matches on the school calendar, Sydney High came up against Belmore Boys in a volleyball showdown that would put the winner into the State Championships. Still smarting from our loss to Belmore last year in the State Championships, and wary of the strength of the team, we approached the match with a solid lead up and a steady work ethic. We were ready for the showdown of a lifetime.

From the first ball, we exploded onto the court and asserted our dominance and experience. We controlled the pace of play and the options used. Clean, consistent but strong hitting and a watertight defence gave us a commanding lead at one stage of seventeen points to three.

What followed was an increase in unforced errors as the pressure was dropped. This is a common problem when coming up against weaker opponents. However, we won the match in straight sets with a lot of support from our crowd.

It can be seen that Belmore's three Regional representatives did not match up to our six (past and present), let alone High's four State representatives. The juggernaut that is $1^{\text {st }}$ Grade Volleyball continued on its path without the slightest hiccup, remaining undefeated this year. Next week we have a match against the relatively unknown Marrickville that will decide which arm of the State Championships we enter into. Hopefully, we will continue to be undefeated and unrivalled in the fine old sport of Volleyball.
Karl Kruszelnicki

## GPS News High Vs Riverview

## Second Grade

The fourth game of the GPS season for second grade took place in the High Gym against St Ignatius College at 9am. After easily winning the last two matches against Scots and Newington, second grade were not anticipating a very competitive game.

Through numb fingers and stiff limbs, second grade took the lead with a 25-13 first set against what seemed like an inexperienced St Ignatius team.

The team heated up after the post-first-set talk, where the team would do court sprints for every ball that touched the ground without first touching us. This inspired the whole team, resulting in some excellent cover displayed by Jordan, Ping and both Davids. Balraj and George continue to overwhelm the opposition with their relentless blocking, denying every shot that attempted to make its way into our half of the court.

Ed continues his consistent setting and serving game after game, which resulted in some emphatic hits by Gary, Steven, and our half awake captain Sam Chhor in the last two sets, lifting the scores consistently to a 25-13, 25-9, 25-8 victory for High.


The highlight of the game goes to Jordan Luong, who closed out the last set with a 10 point serving streak, followed by a powerful jump serve that left the opposition speechless.

Consistent serving and increased confidence will be an aspect second grade will look to improve, and will no doubt help High in future.

Second grade look forward to a more challenging match against Grammar this coming week and hopefully more interesting games as the season progresses.
Henry Dang

## First Grade Report from last week against Newington

A confident High Volleyball team faced a slightly larger, but less skilled Newington team.

In this match, our aim was to play aggressively without making errors. We started off following the game plan with quick balls through the middle and lower balls to the outside.

Newington's defence was not at the level we were used to attacking against. This led to High winning a majority of the points played.

Our use of aggressive serving caused us to win strings of 3 to 5 points per service round.

The match went by rather quickly with High winning 3 sets to 0 .
Fahmy Balgahom

An invitation is extended to
all P\&C Sub-committee Chairs to attend the next General Meeting of the P\&C
to be held 15th June 2005, at 7.30pm
Staff Common Room

## THE ANNUAL GENERAL MEETING

of The Sydney High School Foundation Inc
will be held on
Tuesday 21 June 2005 commencing at 8.00 pm in the School Boardroom

For any enquiries please contact the Secretary at
PO Box 888 Strawberry Hills 2012
Phone enquiries 0427070569

## Macquarie University Parent Liaison Program 2005

The Parent Liaison Program aims to give parents and families of Year 12 students information regarding study at Macquarie University.

Information evenings led by the Vice-Chancellor will be held at Macquarie University on Tuesday 28 June and Wednesday 27 July 2005 from $6.00 \mathrm{pm}-7.30 \mathrm{pm}$. These sessions will provide information on admissions, the UAI, transition to university from high school and HECS-HELP and FEE-HELP university loan schemes.

Bookings are essential. More information and booking forms are available at http://www.hscandbeyond.mq.edu.au/ or by phoning 0298509446.

## Sydney Boys High School \& Sydney Girls High School

UNIVERSITIES EVENING

For Parents and Students in Years 10, 11 and 12

## GREAT HALL

Sydney Boys High School

7pm - 9 pm
Wednesday 8 June
University and Faculty Representatives from the following tertiary institutions will be present:

Australian National University Macquarie University<br>University of New South Wales University of Sydney<br>University of Technology, Sydney

## Entertainment Books

Available from Mr Barris in the History Staff Room for $\mathbf{\$ 6 0}$


These books contain vouchers which entitle the bearer to discounts at many eating venues in Sydney.

The books are great value and will save you hundreds of dollars if you regularly eat out.

Also, part of the purchase price is a commission to Sydney Boys High rowing, which will provide financial help for the rowing program.
C Barris

## Communities

Yes there is so much on the web site now that it has become a labyrinth. I am happy with the basic navigation, but finding a specific item has lately been difficult.

So: GOOGLE SITE SEARCH to the rescue. Now at the top of the front page http://neilwhitfield.tripod.com and at the foot of each blog page http://neilwhitfield.tripod. com/blog/ you will find a Google Search Box than allows you to search the Communities and ESL Site OR the web. If you choose the former, you will quickly locate what you need on our pages.

I have tried it thoroughly and find it very efficient. There is a time lag of course before the most recent entries are found, but it is not all that long.

I have also removed quite a few graphics from the front page of the site so that it should load much more reliably.

This should all make the site much more useful. Neil Whitfield

## From the Mathematics Faculty:

Count Him In by Linton Weeks, Washington Post
Maths? It's All Around to Be Found. One Writer Is Positive He's Equal to the Task.

Math is hot. The TV show "Numb3rs," featuring a crime-solving mathematician, is a hit. In the past
few years there has been a run of popular math movies, including "Pi," "Good Will Hunting" and "A Beautiful Mind", the Russell Crowe film about Nobel Prize-winning mathematician John Nash that grossed more than $\$ 170$ million.

Professor Dan Rockmore, on the terrace of his Upper East Side apartment, sees math problems wherever he looks, some much easier to solve than others.


The truth is, math has been hot for eons. It has given civilization, among other things, time, distance, weight, currency, commerce, computers, "Sesame Street," speedometers, the NFL, Pixar, Yahoo!, iPods and "The Da Vinci Code." It makes life easier, more manageable and more orderly.

Except when it comes to the problems that can't be solved.

Dan Rockmore is fascinated by just such a problem. He's 43, an easygoing, wire-haired professor of mathematics at Dartmouth College and author of the just-published "Stalking the Riemann Hypothesis: The Quest to Find the Hidden Law of Prime Numbers."

The Riemann hypothesis is one of the Seven Millennium Problems posed by the Clay Mathematics Institute in Cambridge, Mass., and whoever proves it will win $\$ 1$ million. The seven, writes Stanford mathematician Keith Devlin, are "the hardest and most important unsolved mathematics problems in the world; they have resisted numerous attempts at solution, over many years, by the best mathematical minds around."

So far, none has been conclusively solved. But that doesn't keep mathematicians from trying.

To understand how someone can spend hours, days, years wrestling with an insoluble problem, you have to look at the world through a mathematician's eyes. That's where Rockmore comes in. He's not one of those fluky-flakey number nerds you read about. He's a hiker, a tennis player, a distance runner. He's got a loving family, a Manhattan pied-à-terre and patience enough to explain math to the unmathematical. He
is an expositor who scored higher on his verbal SATs than on his math and he has agreed to spend the afternoon walking you through some of the toughest concepts in math -- literally.

Over lunch at Il Mediterraneo, near his apartment on the Upper East Side, he begins with a piece of cake. Say that you and he want to split a single piece of want a fair agree that the cake choose the Dan cuts it middle and piece that
 cake. You each share, so you Dan will slice and you will half you want. down the you take the you think is slightly larger. Now Dan feels like he has gotten an equal portion -- he cut it in half, remember -and, because you were given a choice, you believe that you have gotten slightly more than Dan got. Miraculously, the two halves will seem to add up to more than a whole.

This is known as the Mathematics of Envy and it's only one small way that a mathematician tries -tries -- to make sense of this complex and perplexing world.

Mathematicians move around the world in different ways from the rest of us. They live in a parallel reality -- seeing numbers where we see words, equations where we see poetry. "In order to understand the universe," Galileo wrote in the 17th century, "you must know the language in which it is written. And that language is mathematics."

Rockmore gestures toward wine bottles that are stored, bottoms out, in cubbyholes above the cafe bar. "I see circles and polyhedra," he says.

On this clear blue, purified spring day, Dan takes a postprandial stroll and Manhattan becomes a three-dimensional chalkboard. Between the geometry of architecture and calculus of urban life, you begin to see the sidewalks and the skyscrapers through a mathematician's eyes and somewhere along the way, theoretical math becomes, well, more concrete.

A sunflower at a florist's shop helps illustrate Fibonacci numbers. A stack of tomatoes at a greengrocer suggests Kepler's Conjecture. A stand of seven trees leads back around to a conversation about the Riemann Hypothesis. It's like taking a
tour of a familiar place with a foreign-tongued guide.

## Things You Can Count On

Dan Rockmore has long been enamored of numbers. He remembers as a little boy, walking with his physicist father to buy a newspaper in the morning. He talked to his dad about fractions; sometimes he counted his steps. Decades later he speaks and writes of math -- and the beauty of proofs -- with the reverence of a loving son. "We count. That's what we do," he says. "I have always assumed that everybody did it."

We are also, he says, hemmed in by math. "Life is about being creative within bounds", Rockmore says. "You can be infinitely creative, but there are some hard and fast rules." Often those rules are represented by numbers. You only have two hands. There are only 24 hours in a day. The alphabet has 26 letters; the major musical scale seven notes.

In "Stalking", he writes that the natural numbers -the plain old numbers we use every day, such as one, two, three, four, etc. -- seem to have been with us from the beginning of time. They "are implicit in the journey of life, which is a nesting of cycles imposed upon cycles, wheels within wheels. One is the instant. Two is the breathing in and out of our lungs, or the beat of our hearts. The moon waxes and wanes; the tides ebb and flow. Day follows night, which in turn is followed once again by day. The cycle of sunrise, noon and sunset gives us three. Four describes the circle of the seasons."

Though you won't have to count much in this article, you must understand that there are two types of natural numbers: composites and primes. Composites, such as $4,6,8,9,10,12$ and so on, can be divided by smaller numbers. The primes -$2,3,5,7,11,13,17$ and so on -- cannot be divided by smaller numbers, except 1. Prime numbers have a practical application these days; we use them in e-commerce to encrypt digital information, which makes it harder for identity thieves to steal our Social Security and credit card numbers on the Internet.

Mathematicians were intrigued by the primes long before there were computers. Euclid, a 3rdcentury BC mathematician in Greece, pointed out that there are an infinite number of primes. Leonhard Euler, an 18th-century Swiss
mathematician, discovered that primes appear in certain series. CF Gauss, an early 19th-century German known as "the prince of mathematics," tried to figure out why the primes are farther and farther apart as you count higher and higher. And in 1859, German genius Georg Friedrich Bernhard Riemann put forward a hypothesis that prime numbers occur -- along that never-ending number line -- in a certain pattern. He concocted a formula that helps to predict when the next prime will occur. Today it is called the Riemann Hypothesis. It has not been proved, beyond the shadow of a doubt, that Riemann's formula can predict the primes all the way out to infinity. That is why mathematicians still fiddle with the hypothesis and why Rockmore wrote his book.


Pointing to $a$ sparkling yellow-andblack sunflower at Apple Tree Flowers on the corner of 69th Street and Second Avenue, Rockmore speaks of Leonardo Pisano Fibonacci, a $13^{\text {th }}$ Century Italian mathematician. Fibonacci is famous for figuring out a special sequence of natural numbers. He began with 0 , then 1 . From then on, he added the previous two numbers to find the next. For example, 1, 2, 3, 5, 8, 13, 21, 34. A simpleenough pattern -- called the Fibonacci series -- but it becomes profound when you discover that the numbers pop up throughout the natural world: in certain flower petals, pine cones and the seed head of a sunflower, where the number of spirals -usually 34 or 55 or 89 -- allows nature to pack as many seeds as possible into a circle.

A few blocks away, Rockmore pauses in front of a display of vegetables at the Garden Deli. The tomatoes are stacked neatly, one layer latticed atop another. Mathematicians marvel at the ways spheres fill up space, he says. Johannes Kepler asserted in 1611 that this way of stacking -- called "face-centered cubic packing" -- is the most efficient, but for centuries no one could prove it. A proof is a very detailed, logical process for verifying a mathematical assertion.

In 1998 Thomas Hales at the University of Pittsburgh posted a proof of the Kepler theorem online that, assuming that one is dealing with
perfect spheres and perfect cubes, was eventually accepted by the math community.

## The Green Space Theorem

To really contemplate natural numbers and everyday math, Central Park is the place to go. Historically, great math problems and solutions have sprung from walks in a park. Euler, for example, pondered a famous conundrum while strolling through the parks of Konigsberg. Two rivers flowed through the East Prussian town, among two islands and the mainland. All in all, there were seven bridges connecting three pieces of land. Townsfolk made a game out of trying to cross all seven bridges during a single walk -without backtracking.

As mathematicians often do, Euler took the fun out of the game. First he turned the problem into a diagram of networks (lines representing the paths) and nodes (dots representing the land masses). An odd node had an odd number of lines jutting out from it; an even node had an even number of lines. Euler then showed that it was impossible to walk in a continuous circuit -- without retracing your steps -- unless the diagram had no odd nodes or two odd nodes. Since the Konigsberg Bridge Problem had four odd nodes, it proved impossible.

While sitting on a bench, Rockmore tells the story of the 20th-century Hungarian mathematician George Polya, who was in Zurich for some years. Meandering through a park one afternoon, Polya kept running into a colleague and his girlfriend. The colleague believed that Polya was making contact on purpose. Perhaps eager to prove that he wasn't hitting on his friend's girl, Polya devised the Random Walk Problem. He eventually published a mathematical proof showing that if you walk around enough in an infinite grid, you will return to the same points over and over.

Gesturing toward a clump of seven trees in Central Park, Rockmore also returns to certain points. Seven, of course, is a prime. And primes remind Rockmore of Riemann and the seven Millennium Problems.

A Russian math whiz named Grigori Perelman posted a solution in 2002 to one of the problems -the Poincare Conjecture. The conjecture, crafted in the early 1900s, asks if the properties of the two-dimensional surface of a sphere behave in the same way as the properties of a three-dimensional
surface of a sphere, which is something we cannot see but can only imagine.

James Carlson, president of the institute, says that after two years of scrutiny by the professional community, Perelman's proof "still looks good." The institute's board of advisers will have to agree before he gets the money.

The seven problems are incredibly dense. Rockmore says he doesn't completely understand the Yang-Mills Theory, which is the mathematical theory underlying quantum physics. Another of the problems -- the Navier-Stokes Equations that would explain the ways that fluids flow -- is "not well defined", Rockmore says.


Readable explanations of the problems can be found in Devlin's book, "The Millennium Problems: The Seven Greatest Unsolved Mathematical Puzzles of Our Time." The problems are also listed on the Clay Mathematics Institute Web site, http://www.claymath.org .

Some of the problems, Rockmore says, may be impossible to solve. "Maybe the Riemann Hypothesis turns out to be wrong," Rockmore says. "Some poor schmo may prove that. But he wouldn't get the million dollars."

## Addition and Subtraction

There is much about mathematics that is unclear. For centuries, theoretical mathematics coexisted with uncertainty. "The literature is filled with incorrect theorems in the early 19th century," Rockmore says, but later in the century mathematicians began to insist on more precision.

Since then there has been more pressure to be precise, even as the world has become harder and
harder to explain. But the occasional imprecision of mathematics remains a constant. "The zeitgeist affects mathematics," Rockmore says.

And mathematics affects the zeitgeist. Computers have given us the puffed-up notion that we can quantify just about anything -- even love. Rockmore points to eHarmony.com, the online matching service that relies on 29-question surveys to pair compatible people. As the Web site explains it: "The eHarmony.com compatibility matching models were created using factor analyses, multiple regression and discriminant analyses on data gathered from married couples." In other words, feelings are distilled to factors; attraction to analysis.

Back at the restaurant, you and Dan were given three pieces of bread. They brought to mind the Mathematics of Guilt, as described by British mathematician Rob Eastaway in "Why Do Buses Come in Threes? The Hidden Mathematics of Everyday Life." In Eastaway's example, the vicar's wife invites five friends over for tea. She offers her guests a plate of biscuits -- four are chocolate and one plain. All the guests like chocolate biscuits. The first guest takes a chocolate biscuit. So do the second and third. The fourth person knows that if she chooses the last chocolate biscuit, the fifth person will be forced to eat a plain one. She feels guilty and so doesn't take either one. The question, Eastaway asks, is: Should the other guests also have felt guilty, and if so, how do you decide mathematically the amount of guilt each guest should feel?

But guilt is not always based on taking the last biscuit. And love is not always founded on compatibility. Even the piece of cake that two people share might have a blemish on one half or a frayed corner on the other.

## Academic Merit Lists Semester 1

## Year 12

Congratulations to the following boys in Year Twelve whose excellent academic achievements in Semester 1 are recognised.
These students were placed in the top $50 \%$ of students in at least eight units of study at the Half-Yearly examinations

Nicholas BULL Frank CAI
Anthony CHAU Henry CHEN
Louis CHEUNG
Hae-Sang CHUNG
William CLEGG Alan DAM
Vishan DE SILVA
Varun DESAI
Jamie FONG
Damitha FONSEKA
Nathan FRAZI
Jack GOUGH
Daniel GUO
Ranald GUO
Gabriel GUTNIK
Cameron HALLS
Yang HE
John HOLLOWAY
Li-Bin HUA
Peter HUANG
Jeffrey JONG
Thomas KALDOR
James KANG
Joshua KRAINDLER
Karl KRUSZELNICKI
Raj KUMAR
Shaheen KUMAR
Winston LU
Gabriel McMANUS
Sen MITSUJI
Naeef MOSTAFA
Hung NEO
Martin NGUYEN
Benjamin NHAM
Ian NOMCHONG
Daniel ONG
Edward OVADIA

Gantheepan PASUPATHY
Viraj PATEL
Peter PEREIRA
Jason PHUNG
Ryan PHUNG
Sayanthan PRABAKARAN
Dawei QI
Anuranga RAJASEKERA
Nicholas ROUCEK
Omar SALEM
Manusha SAMARAWEERA
Rakshinder SANGHA
Anik SARKAR
Mitchell SEOW
Sanjiv SINGARAYAR
Victor SIRINOPAKUL
Mischa STEEN
Atif Zaki SYED
Mitchell TAYLOR
Daniel THOMAS
Philip TIAN
Alexander TIEDGEN
Charley TRAN
Philip TRIPP
Jim TSAO
Arun VAIRAV
Edward WANG
Michael WANG
Tom WEI
Dominic WONG
Paul WONG
Wesley WONG
Andrew WU
Steven XUE
Chen YANG
Richard YAO
Ronald YU
John ZHANG

## Year 8

Congratulations to the following boys in Year Eight whose excellent academic achievements in Semester 1 are recognised.
In students' best 9 subjects points were awarded as follows - HD: 6, D: 5, C: 3, PM: 2, P: 1, with the qualifying total being 42

Adrian ANG
Alexander BELOKOPYTOV
Timothy BURSTON
Julian BYRNES
Yiming CAO
Matthew CHAN
Jack CHEN
Simon CHENG
Benjamin DIEP
Matthew DINH
James ERIKSSON
Stephen GAROFANO
Desmond HI
Harry HUH
Jeremy IRELAND
Brandon JIANG
Christian KATSIKAROS
Vincent KHOU
Phillip KURTS
Danny LAM
Victor LAM
Brian LAU
Matthew LAU
Daniel LO
Edward LU
Simon LU
Mark LUCCHITTI
Maxeem MIKHA
Kent NGUYEN
Thomas NGUYEN
David PENG
Shane PONRAJ
Daniel SHAN
Avish SHARMA
Wilson SZET
Matthew TONG
Anthony TSIAILIS
Jack WACHSMANN
Thomas WILSON
Jeffrey WONG
Bohan YANG
Michael YIU
Shorson ZHANG

## HIGH STORE

School beanies have arrived - designed by your own SRC!

There are limited stocks, so be quick - $\$ 20$ each. Other non-school beanies will be confiscated

## Michelle Gentele

## FROM THE LIBRARY

Access Andrews Library Catalogue via the Internet!!!!
Great news!! Thanks to the generous benefactors of our library via the Library Fund we have just acquired a piece of software which allows our students, teachers and even parents to access our Library Catalogue Enquiry from the Web.

If you are working on or designing an assignment you can check to see what the Library has to offer you. (Do not forget students can borrow videos and DVDs)


News on the Premier's Reading Challenge and the Sydney Boys High Reading Challenge

Parents please continue to check that your sons are happily engaged in meeting these two considerable challenges. (They have to read 20 books to qualify for either challenge) Please sign the entry sheet only if you see your son reading the books he discusses with you. I am happy to have your help monitoring how well your son is reading.

Year 7 students continue to amaze me with the amount of reading they did last year. This year's response to: "How many books did you read last year?" is the best I have encountered in 4 years at this school with approx $80 \%$ having read 20 or more books last year. We look forward to fabulous English results in the future with so many dedicated readers coming through our school.

Anyone just beginning the challenge now will have to read at least one novel a week and extra during school holidays to get to the 20 - it is quite a challenge. Don't forget that any books read
since September last year can be entered legitimately in this year's Challenge.

Thanks to the wonderful parents and students who have been assisting me to read the books for the Literacy Circles programme

Mrs Crothers

## REMINDER TO PARENTS CHANGE OF ADDRESS



If you have recently changed your address or have changed your employment the school needs to know.

There have been a number of occasions when Administration have had difficulty contacting parents because of change of workplace. This is extremely important in a case of emergency. If parents are going to be out of the country for any length of time the Principal needs to know this information as well.

Please ask your son to obtain a change of details form from the Main Office and also change forms for travel when changing your address

# Sydney Girls High School and Sydney Boys High School Parents and Citizens Associations 

Invite you to the 2005 Joint Meeting

The topic for the evening is

# Raising a Gifted Adolescent - Creating a Resilient Family 



Guest Speaker: Andrew Fuller,<br>Clinical Psychologist and Family Therapist

Andrew Fuller is the author of HELP YOUR CHILD SUCCEED AT SCHOOL, (Inyahead Press) RAISING REAL PEOPLE (ACER), FROM SURVIVING TO THRIVING (ACER), WORK SMARTER NOT HARDER and BEATING BULLIES. Andrew has also co-authored a series of programs for the promotion of resilience and emotional intelligence used in over 2000 schools in Britain and Australia called THE HEART MASTERS. He is a Fellow of the Department of Psychiatry and the Department of Learning and Educational Development at the University of Melbourne.

# WEDNESDAY 22 JUNE <br> at 7.30 pm 

## in the CAMPBELL HALL

SYDNEY GIRLS HIGH SCHOOL
Come and hear Andrew Fuller's presentation which will be followed by question time and refreshments.


## Great Hall, SBHS

Free food and Drinks served
www.issbh.cjb.net |issbh@issbh.cjb.net

## GPS Music Festival

## Nominations are now open for the 2005 GPS music festival.

This festival involves the best musicians from the GPS schools combining together to incorporate a Choir, Symphony Orchestra, Concert Band, Percussion Ensemble and Stage Band. Last year the works played included, Hindson's RPM, Dvorak New World, Sydney by Night, and the Handel's Hallelujah Chorus.

It is expected that all senior students will nominate to be a part of this festival. Year 12 students are welcome to participate.

Students will be selected for the ensembles based on standard and ensemble participation at school. The minimum standard to be eligible for the ensembles are AMEB $5^{\text {th }}$ Grade. Instruments such as viola, cello, double bass, French horn, oboe and bassoon are always in demand.

All students in the ensemble program are encouraged to apply, there are five ensembles to fill and there will be a reserve list.

The top performers in the Symphony Orchestra last year were all from Sydney Boys High.

The festival dates are:
Sunday August $14^{\text {th }} \quad$ Rehearsal
Friday September $2^{\text {nd }} \quad$ Rehearsal
Saturday September $3^{\text {rd }}$ Concert
Exact times to be confirmed
All rehearsals and the performance are to be held at Newington College, Stanmore.
Please fill in the nomination form and return to the music office by Friday.
Name $\qquad$ Roll $\qquad$
Instrument $\qquad$
Yes I would like to be considered for the 2005 GPS music festival.
I understand that I must attend the two rehearsals and performance as stated above.
$\qquad$ No I would not like to participate in the GPS music festival because

This helps us to plan future events.
Signed $\qquad$ Date $\qquad$
Student
Signed $\qquad$
Parent/guardian

## State of the Arts



## Lost Guitar:

An electric guitar in a black soft case has been misplaced. If anyone has seen it, please contact the school or music department.

## High Profile in Education Week

Education expo
The year 8 Jazz Band: Nevin Spoljaric, Matthew Wong, Mishu Osinski, Steven Zheng, Hong-Wei Li, Matthew Chan, Shane Ponraj, Patrick Desmond, Abraham Yuen, Daniel Lo, Tim Siu, Phil Kurts, Danny Lam, Nicholas Dimitropoulos with special guests Chapman Siu and Francis Wong represented the school at the Education Expo last Sunday.
Eastgardens Shopping Centre
Year 7, 8 and 9 music ensembles had a great time performing for the shoppers at Eastgardens last Friday. They played a variety of music from jazz, rock and classical.
The following ensembles will be performing at the Winter Music Festival
Symphony Orchestra, Junior Strings, Guitar Ensembles, Year 10 \& Senior Bands (jazz and concert), Year 9 Jazz Band, Year 7 Concert Band, Italy Tour Band. Please note it is a requirement to perform in the concert bands before being invited to play in the jazz bands.
Music Winter Festival is on June $\mathbf{2 3}^{\text {rd }}$ at 6.00 pm.
I would like to purchase the following tickets (number)
__ \$12 Adult $\qquad$ \$9 Concession $\qquad$ \$25 Family Total cost \$ $\qquad$

Student name $\qquad$ Roll $\qquad$

Ensemble $\qquad$ Instrument $\qquad$

Type of Payment:Cheque $\qquad$ Cash $\qquad$ B/Card $\qquad$ M/Card $\qquad$ Visa $\qquad$
Payable to music committee

Name on Card $\qquad$ Expiry date $\qquad$
Contact Number $\qquad$

Card No. $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$ Signature $\qquad$

## Workshop and Concert

On Tuesday $7^{\text {th }}$ June the Concert Bands are invited to participate in a workshop with students from other local schools. This will be held in the SCEGGS (Sydney Church of England Girls Grammar School) Great Hall (215 Forbes Street Darlinghurst, down St Peter's Street). The students will be workshopped on a combination of familiar and unfamiliar pieces. Major Frank Rugers will be conducting the workshop with assistance from other musicians in the Australian Army Reserve Band.
The students will be given a short break for dinner, where pizzas and drinks will be provided in the SCEGGS staff dining room.
At 6 pm the concert will commence in the Great Hall. The very entertaining University of New South Wales Regimental Band will perform a concert featuring a variety of musical styles from Classical through to Jazz. Both instrumental and vocals will be featured and it is suitable for all ages. There is no charge for parents to attend the concert although a ticket is required for seating purposes.

Timings for the day will go as follows: there is a cost of $\$ 5$ to pay for the pizza

```
4:00-5:15pm Workshop in the Great Hall
5:15-5:45pm Dinner in the Staff Dining Room (cost is $5.00)
6:00-7:30pm Concert in the Great Hall
```

As some of the ensembles will not be performing at the Winter Festival, this performance will count toward their award points.

Please return this slip to the Music Office by Monday $30^{\text {th }}$ May

My son will be attending the Workshop and Concert.
Payment of $\$ 5.00$ is included
$\square$ My son is unable to attend the Workshop and Concert
Because $\qquad$

I would like $\qquad$ extra tickets for the Concert (no extra cost)

Student Name $\qquad$ Roll $\qquad$
$\qquad$


## Sunday UNSWR Presentation Ceremony.

Four cadets CUO Will Clegg, Cpl Anthony Ho, Cdt Anthony Hopkins and Cdt Peter Nguyen represented the unit at the UNSWR parade on Sunday. The parade was to recognise the bravery and promotional awards of the UNSWR unit. There was a display of the arms and the boys had a tour around the arms room and the armour.

## Rock Climbing.

The unit had some great experiences and team building exercises at the Sydney Uni Ledge Gym last Tuesday. All of the boys that participated achieved a much higher level of climb than they expected and a great time was had by all. Climb of the day was awarded to Sgt Adam FarrowPalmer for rescuing the rope that got stuck in the pulley. The next climbing day will be a platoon competition.

## Coming Up:

Low ropes, bush cooking, platoon sports competition, team tug-of-war, bivouac, annual camp, laser skirmish, abseiling.

## The Unit needs your help.

We have been given a set of poly uniforms for the boys. This is the ceremonial trousers and shirt to be worn at all parades. They are in need of laundering and ironing. If you have access to a service or dry cleaning contacts, we would love to hear from you. If you have some spare time and would like to help out or take some shirts home to wash, it would be greatly appreciated. Just send in a note with your son.
The school contact for the cadet unit is Kathy Jackson in the music office.

## DPCU Uniforms.

Boys are reminded that they should wear their cadet uniform with pride. It should be neatly ironed and boots are to be polished. There is an iron and polish in the orderly room which can be opened before the parade for boys to shine their boots. Headdress should also be worn.

