

May 12<sup>th</sup> 2017

Dear Parents,

The sun has been shining on Balcarras this week and the site team have just planted up the bedding plants – summer is on its way and it's a good feeling.

### **Paul Greenway steps down as Head of Graveney**

Yesterday Graveney House had a special assembly to say thank you to Mr Paul Greenway who today steps down as Head of Graveney after twenty years in post. He has been an absolutely superb pastoral leader during that time and I know students in his house will be sorry to see him go. The good news is that he isn't leaving the school – rather next year he will be an Assistant Head at the school with responsibilities for pastoral care. From Monday morning Mrs Siobhan Winterbottom takes over as Head of Graveney.

### **Public exams**

Year 11 and Year 12 go on study leave this week and Year 13 will do so in two weeks' time. The school is very much gearing itself for the exams and we're very optimistic about how the students will do. I would like to pay tribute to the outgoing year groups – Year 11 have been a fine vintage and I am delighted that the overwhelming majority of them will be joining the Sixth Form. To those who are leaving for an apprenticeship or some other route I wish you all the best. Year 13 have also been a pleasure to teach and we wish them all the best for the future.

### **Sporting achievements**

There have been some great successes in recent weeks.

On Sunday May 7<sup>th</sup> the KS3 Boys – Alfie Hancock, Connor Hay, Scott McKenzie and Ben Powell – competed in the National Schools Badminton Championships in Milton Keynes.



They came 6<sup>th</sup> overall which is absolutely superb – congratulations to them and to their coach, Rob Dundas. Reaching a National Final is a superb achievement.

On Tuesday April 25<sup>th</sup> Balcarras competed in the Cheltenham and District Swimming Competition.

It took us 109 years to win the Webb Shield for the Open Relay when we claimed it in 2016, and now we've retained it! The girls also won their version of the Webb Cup – double celebration. Well done swimmers!





The week before the U-19's football team played in the District Final against Pate's. Having lost 5 District finals in a row, across a range of year groups, we were nervous – but we didn't need to be – the boys were dominant throughout – winning 3-1. Well done to them.

## **Young Enterprise**

Last week we also won the Gloucestershire Young Enterprise Competition once again. Our dominance in this event is a great tribute to the quality of our Young Enterprise provision, led by Luke Perry, but also to the ingenuity, dedication and determination of our students. Well done to them and we expect big things in the Regional Finals.

## **The Forthcoming Election**

I believe that education should play a prominent role in the forthcoming election campaign and I think that we should all impress on local candidates the importance of prioritising education and investing in it more substantially. In my view there is no alternative to a significant increase in the overall schools budget. Whatever the constraints on the national budget are – to starve education of funding flies in the face of common sense – we have to invest in the future. If we give our children a sub-standard education we will impair their ability to compete in an increasingly globalised world.

Unfortunately selection has emerged once again as an issue in education policy. By now you're probably aware of my views – to increase selection is to ignore all of the evidence – it does nothing to increase social mobility but in fact reduces it. We should instead continue the drive to improve all schools for the benefit of all children.

## **Sixth Form Debate Competition**

On Wednesday April 5<sup>th</sup> the Sixth Form Debate final was fought between a Y13 team and a Y12 team. Joe Hughes and Chloe Marshall 13E proposed and Simeon Elliott and Grace Shepherd 12E opposed the motion: 'This House believes in the light of the London Terrorist attack all police in the UK should be armed'.



The school hall was packed with students and staff and the guest adjudicator was our previous Headteacher, Mr Chris Healy.

I can honestly say that it was the highest quality final that I can remember in my time at the school. It was a close decision but in the end the judging panel gave it to Joe and Chloe – well done to them and my thanks to all those staff who were involved and particularly to Miss Niblett who organised the whole thing.

## GCSE Art Exhibition

My congratulations to the Year 11 art students who put together a superb exhibition of their work and to their teachers for inspiring them and supporting them. I think it's been a great year for the Arts at Balcarras – the production, the carol concert and now this all serve to prove that the arts are alive and well.

## Year 11 Ball

The ball was held at the Regency Hotel, Staverton on Friday May 11<sup>th</sup> and it was another great event. The students looked stunning – photos are on the website. I'd like to thank the organisers – Mrs Roylance and Mrs Williams-Holland. How they arrange it for the £15 cost I don't know.

## Communication with staff

As parents you are very welcome to email the school [admin@balcarras.gloucs.sch.uk](mailto:admin@balcarras.gloucs.sch.uk). We will get back to you as soon as we can but it's not always possible to do so on the same day.

Could I also ask that if you want to see a member of staff that you make an appointment with the member of staff. Thank you.

## #Music4 Balcarras

I will be writing to you shortly about a funding campaign we are launching to buy equipment for the new music block. Although we have secured all of the essential funding for the build itself, we are looking to find some extra funds to kit out the department.

There are two exciting ways you can be involved – more info to follow.

## Intermediate Maths Challenge

Just before Easter **108** Y9, Y10 and Y11 mathematicians took part in the UKMT intermediate maths challenge. The paper consisted of 25 multiple choice problem solving questions. On Wednesday the 73 winning students received their certificates and prizes at the presentation ceremony in the library. Of the 73 winners, 38 received bronze awards, 25 received silver awards and a record 10 achieved gold awards. A special mention should go to Simon Nicholls who scored 105 and top scored and also to 11 students who qualified for the follow on kangaroo competition.

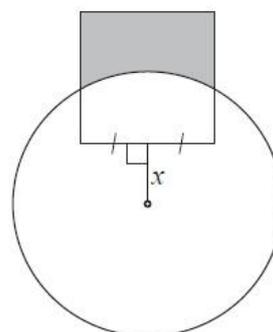


This is one of the questions from the paper, the solution is at the end of the newsletter.

25. The diagram shows a circle with radius 2 and a square with sides of length 2. The centre of the circle lies on the perpendicular bisector of a side of the square, at a distance  $x$  from the side, as shown. The shaded region – inside the square but outside the circle – has area 2.

What is the value of  $x$ ?

- A  $\frac{\pi}{3} + \frac{\sqrt{3}}{2} - 1$       B  $\frac{\pi}{3} + \frac{\sqrt{3}}{4} - 1$       C  $\frac{\pi}{3} + \frac{1}{2}$   
D  $\frac{\pi}{3} + 1$                       E  $\frac{\pi}{3}$



Simon Critchley, Head of Mathematics

### **Stretch & Challenge Day**

On Wednesday April 26<sup>th</sup>, 21 Year 5 students from local primary schools attended an exciting English stretch and challenge day. The goal was to create a newspaper in a day and the students rose to the challenge brilliantly! The day began with an all-important news team breakfast; while we ate pastries and fruit, the students had the opportunity to discuss the news and the issues that mattered to them. We then had to embark on actually creating the newspaper! With some valuable help from Year 7 and Year 9 students, the students worked tirelessly to write their news stories, interview students and find the appropriate pictures.



A great day was had by all and Mrs Young and I were incredibly impressed by the Year 5 students and their fantastic attitude and writing skills. The newspaper will be delivered to local primary schools in the next few weeks - we hope they are proud of their achievement!

Hannah Wranosky, English department

### **Homestay trip to Annecy and the French Alps for Years 9 &10**

The MFL department are launching a brand new homestay trip to Annecy and the French Alps for Years 9 & 10 (16<sup>th</sup>-20<sup>th</sup> July 2017)

During the visit your son/daughter will be able to explore some of the fascinating cultural and historical sights of France including the beautiful towns of Annecy, La Clusaz and Le Grand Bornand in the Alps.

This visit will also provide an excellent opportunity to put the French learnt in the classroom into practice with their host families. During their stay, the students will have four hours of French tuition with native speakers from the Alliance française. We cannot stress enough the motivational value of a trip to France for those preparing for their exams or simply wanting to enjoy the French way of living. Pupils will stay in pairs in French families and will have the opportunity to undertake a diverse range of activities including sledging on the hills, having a picnic looking over Mont Blanc, a boat ride on Lake Annecy, a visit to a local cheese farm and of course go shopping.

For more information, please collect a letter in the MFL department or email me [ki@baccarras.gloucs.sch.uk](mailto:ki@baccarras.gloucs.sch.uk)

Katleen Iskra, MFL department

### **DofE Year 10 Expeditions**

Just a quick note to remind Year 10 pupils and parents about the forthcoming practise DofE expedition on May 20<sup>th</sup> and 21<sup>st</sup>. Pupils should have returned medical and permission slips, but if there are any changes to these details please let me know urgently. There will be after school sessions for kit on Thursday May 11<sup>th</sup> and training on Wednesday May 17<sup>th</sup>. All pupils must be at both meetings please. Many thanks.

Vicky Bull, DofE co-ordinator

## PTFA News

### Unwanted school uniform

The PTFA is looking for any unwanted school uniform in good, clean condition that parents would be willing to donate. Please send it in to school where it will be collected in Reception. Thank you to all who have already donated their unwanted uniform to the school.

### Buying school uniform

The PTFA will be selling second hand uniform on Wednesday June 7<sup>th</sup> from 6-7pm in the foyer outside the school hall.

### Midsummer Music

Midsummer Music is 7:00 – 9:30pm on Friday 23<sup>rd</sup> June.

Tickets will be on sale from June 5<sup>th</sup> from Reception.



### Keep the date free!

We are delighted to announce the date for this year's **Balcarras Ball is Friday October 13<sup>th</sup> 2017**. Tickets will go on sale at Midsummer Music and sold out last year on that evening – best to be there if you wish to go! The ball will be held at Cheltenham Park hotel and the theme is Casino Royale.

### Senior citizens coffee morning (Balcarras Community Arts Project)

Senior citizens are warmly invited to join us at Balcarras

On **Monday 3<sup>rd</sup> July**

For a FREE morning of coffee, cake and conversation!

**10am -12 noon**

\*\*There will also be dance entertainment from Balcarras students\*\*



If you would like to attend this event, then please book your place by contacting Mrs Siobhan Winterbottom Tel: 01242 515881 Email: [sw@balcarras.gloucs.sch.uk](mailto:sw@balcarras.gloucs.sch.uk) We look forward to seeing you there! *On the day, please arrive at main reception.*

## Lesson Times – Summer Term

### Early Finish during exams season

As in recent years, we are going to move the timings of the school day while the main examinations are taking place. This means that the school day will finish a little earlier – to the undoubted delight of pupils!

The change of times will be from **Monday 15<sup>th</sup> May** until **Friday 16<sup>th</sup> June**.

Monday - Thursday		Friday	
08:50	Warning bell for registration	08:45	Warning bell for registration
08:55 – 09:00	Registration (am)	08:50 – 08:55	Registration (am)
09:00 – 10:00	Lesson 1	08:55 – 09:55	Lesson 1
10:00 – 11:00	Lesson 2	09:55 – 10:55	Lesson 2
11:00 – 11:20	Break	<b>10:55 – 11:10</b>	Break
11:20 – 12:20	Lesson 3	11:10 – 12:10	Lesson 3
12:20 – 13:20	Lesson 4	12:10 - 13:10	Lesson 4
13:20 – 14:15	Lunch	<b>13:10 – 13:45</b>	Lunch
<b>14:15 – 14:20</b>	Registration (pm)	13:45 – 14:05	Registration (pm)
<b>14:20 – 15:20</b>	Lesson 5	14:05 – 15:05	Lesson 5
<b>15:20</b>	End of school day	<b>15:05</b>	End of school day

On **Monday 19<sup>th</sup> June** the school will revert to normal times for Monday – Thursday.

However .... the **Early Finish Fridays** will change slightly and will be as follows:

Monday - Thursday		NEW Friday times	
08:50	Warning bell for registration	<b>08:50</b>	Warning bell for registration
08:55 – 09:00	Registration (am)	<b>08:55 – 09:00</b>	Registration (am)
09:00 – 10:00	Lesson 1	09:00 – 10:00	Lesson 1
10:00 – 11:00	Lesson 2	10:00 – 11:00	Lesson 2
11:00 – 11:20	Break	11:00 – 11:15	Break
11:20 – 12:20	Lesson 3	11:15 – 12:15	Lesson 3
12:20 – 13:20	Lesson 4	12:15 - 13:15	Lesson 4
13:20 – 14:15	Lunch	13:15 – 13:50	Lunch
14:15 – 14:35	Registration (pm)	13:50 – 14:10	Registration (pm)
14:35 – 15:35	Lesson 5	14:10 – 15:10	Lesson 5
15:35	End of school day	<b>15:10</b>	End of school day

### Balcarras is on Facebook!

Alongside our @Balcarras Twitter you may also now follow [Facebook.com/BalcarrasSchool](https://www.facebook.com/BalcarrasSchool) for updates and news about school life and events.

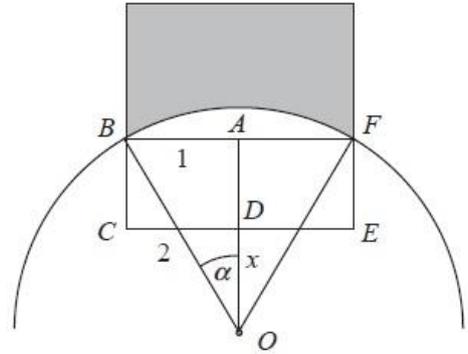


Yours sincerely,

*Dominius Burke*

Headteacher

25. A The diagram shows part of the diagram in the question. Point  $O$  is the centre of the circle and points  $A, B, C, D, E, F$ , are as shown. Consider triangle  $BOF$ :  $BF$  is equal in length to the side of the square so  $BF = 2$ . Also  $OB = OF = 2$  as they are both radii of the circle. So triangle  $BOF$  is equilateral. Therefore  $\angle BOF = 60^\circ$ , so the area of sector  $BOF = \frac{60}{360} \times \pi \times 2^2 = \frac{2\pi}{3}$ .



By Pythagoras' Theorem:  $OA = \sqrt{2^2 - 1^2} = \sqrt{3}$ .

So the area of triangle  $BOF = \frac{1}{2} \times 2 \times \sqrt{3} = \sqrt{3}$ . Therefore the area of the segment bounded by arc  $BF$  and line segment  $BF = \frac{2\pi}{3} - \sqrt{3}$ . The area of rectangle  $BFEC = BF \times AD = 2 \times (\sqrt{3} - x)$ .

The shaded region has area 2, so the area of the above segment + area of rectangle  $BFEC =$  area of the given square minus 2 =  $4 - 2 = 2$ .

Hence  $\frac{2\pi}{3} - \sqrt{3} + 2\sqrt{3} - 2x = 2$ . So  $x = \frac{\pi}{3} + \frac{\sqrt{3}}{2} - 1$ .