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Friday 20th September 2024



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Dear Parents & Carers,

As we come to the end of another busy fortnight at Ravens Wood, I'm pleased to say our students have settled back into school life following the summer break. Our new Year 7 and Year 12 students, in particular, have navigated these first weeks with great success. They are now finding their way around the school confidently and embracing the opportunities and challenges of life at Ravens Wood.

Our Year 7s have been especially busy, beginning their journey with us by undertaking their Cognitive Abilities Tests (CATs). These assessments provide us with valuable insights into each child's abilities, helping us better support their learning in the months ahead.

Alongside their academic start, Year 7 also enjoyed an exciting overnight trip to Penshurst Place with The Bushcraft Company. Over two days, they experienced an unforgettable 'back-to-nature' adventure. From learning survival skills, living under canvas, and cooking over open fires, to exploring the woodland environment, our students fully immersed themselves in the wild. It was a fantastic opportunity for personal growth, teamwork, and fun—a wonderful way to bond with new friends and make lasting memories.

We were also delighted to welcome George Underwood, former student, artist, and musician, into the school on Wednesday. George, who is working in conjunction with War Child on charitable initiatives, led a workshop with our students, where he shared insights about his work and guided them in creating a bespoke art piece. His visit was truly inspirational, providing our students with the chance to learn from his experiences both as an artist and as a humanitarian. During his visit, George was interviewed on-site by Metro and BBC News, highlighting the significance of his charitable work and his connection to Ravens Wood and another former student, David Bowie.

In Sixth Form news, it has been a pleasure to meet the families of our Year 12 and 13 students at our 'Meet the Tutor' events over the last fortnight. These meetings are so important in forging the strong partnership between home and school, which is vital for success in the Sixth Form. We look forward to our Year 11 parents and carers joining us for their event on Wednesday 25th September.

This Saturday we hold our annual Open Morning, where we look forward to welcoming prospective families to Ravens Wood. We are extremely grateful to our students who will be assisting as ambassadors for the school. Their enthusiasm and dedication help us showcase the best of Ravens Wood. A special thank you also goes to our talented musicians, who will be performing, and to those students representing us in sporting fixtures during the morning. These events truly highlight the experiences and opportunities available at our school.

Thank you all for your continued support, and I wish you a relaxing and enjoyable weekend.

Ms M. Lester
Headteacher



WELCOME TO YEAR 12 STUDENTS AND FAMILIES

It was fantastic to welcome our Year 12 cohort and their families to our 'Meet the Tutor' evening. It was a brilliant opportunity for parents/carers to meet their child's new form tutor along with Ms Brock, our SENCO and Mrs Borley, our Head of Careers. We have been extremely impressed with how the students have settled in and look forward to working with them on their Sixth Form journey.

[#LearnLeadExcel](#)

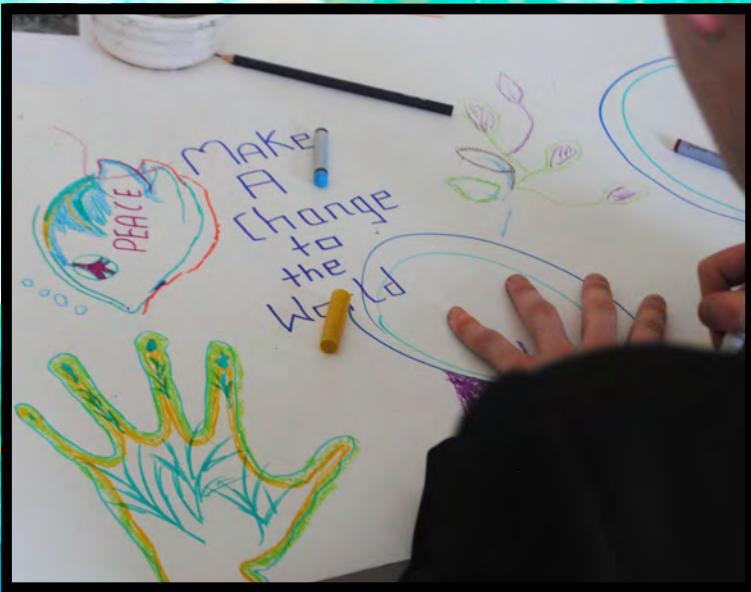


Sixth Form Academies

A massive thank you and well done to all students who have applied/auditioned/trialled for our bespoke Academy provision. The Sixth Form team will work alongside academy leads and finalise students who will be part of these exciting groups. A big thank you also goes to all staff involved in this process and the delivery of something that really is a unique selling point of our Sixth Form.



GEORGE UNDERWOOD RETURNS



We are thrilled to announce that George Underwood, a well-known artist and former pupil of Ravens Wood, visited our school on Wednesday, 18th September. George, who collaborated with David Bowie on iconic album covers, led two student workshops in Art. These sessions were in collaboration with the charity, War Child and the intention was for this to be filmed by the BBC as part of a documentary. George reminisced about his school days at RWS with David Bowie and Peter Frampton, talking about how being an RWS student inspired them to achieve their dreams! Students produced amazing work along with George that represents how we can use art and music to aspire peace; students were seen on BBC News London at 6:30pm on Thursday 19th of September and did amazingly well when interviewed. We are so proud of their dedication and the hard work they displayed in the workshop.



RWS Sixth Form News

Sixth Form Open Evening

Wednesday 13th November 2024 – 5.45pm to 8.00pm
For entry to Sixth Form Autumn 2025/2026



Come along and meet the Sixth Form Team and visit the departments to find out more about the variety of post-16 opportunities at Ravens Wood School.



**Talks will be held in the Main Hall at
5.45pm and 6.30pm**

BUSHCRAFT TRIP 2024

'This week I went on a camping trip with other students in Year 7. We went to the woods and it took a long time. We got to make fires, collect wood and cook burgers on it and smores. It was really fun! In the tents it was really fun to be with my new friends. I also made a grapple hook with sticks and rope.'
- Carter



'I had a great time at Bushcraft. Not only was it fun with my friends, but I got to learn something essential to survive too.' - Leon



'We did activities like building shelters, making traps, starting a fire and playing games. My favourite part was making new friends and facing my fears.' - Dylan



'I had a great experience at Bushcraft, my favourite part was carving pieces of wood and singing songs around the fire' - Thomas



'This year in Bushcraft we did trap building, shelter building, played fun games and sat around a campfire. It was the first time I have slept in a tent and it's an experience that I won't forget!' - Arthur



'Bushcraft was great and I think everyone had a blast! I spoke to people I'd never spoken to before and made so many new friends. My favourite part was playing games or cooking burgers - I can't decide!' - Charlie



OUR FIRST TWO WEEKS OF SCIENCE

On Wednesday 18th September, we hosted our first women in STEM A level support drop in sessions. We would like to build a strong community of empowered female scientists at RWS, by giving the girls a dedicated workspace where they can seek support from each other and from their biology, chemistry or physics teachers. Please join us on Wednesdays in Lab 10 if you haven't already!

If you are a budding chemist in years 7-9, you can sign up to Salter's Chemistry Club - a free online resource with activities that support the KS3 curriculum and allow you explore careers in Chemistry. There will be teacher points awarded for any activities you complete! Sign up using the QR code or by clicking the link:
<https://salterschemistryclub.co.uk/register>

Whizz bang Year 7 Science Club will launch on Tuesday 24th September, where we will spend the first session extracting DNA from fruits! Sign up is available now on parent pay and costs just £5 a term. Please email ewi@rws.uk.net if you have any queries.



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CHEMISTRY


the salters' institute chemistry club

SIGN UP TO CHEMISTRY CLUB

Each month discover the chemistry behind a new theme by completing fun, interactive content released every week day.

SPACE EMOTIONS FOOD
 TEXTILES OCEANS

www.salterschemistryclub.co.uk/register



UNLOCKING HOPE: INNOVATIONS AND INSIGHTS IN SICKLE CELL ANEMIA

INTRODUCTION

- Sickle cell disease is a genetic condition caused by a gene mutation that reduces red blood cells' affinity to oxygen.
- This causes them to become hard and agglutinate inside of blood vessels, often resulting in severely painful blockages.
- Sickle Cell Disease currently affects 20 million people worldwide, and is more prevalent in BAME people.
- Other complications include severe pain crises, strokes, and potentially multiple organ failure. Some complications can be fatal if immediate medical attention isn't provided.

DIAGNOSIS

- The most common methods of tests for SCD are a complete blood count (CBC), Haemoglobin (Hb) and high-performance liquid chromatography (HPLC).
- A CBC measures the amount of red blood cells, haemoglobin, white blood cells and platelets.
- This can be used to diagnose SCD as it usually presents itself through low haemoglobin level of 6-11 g/dl (due to a reduced amount of red blood cells circulating in the blood) and an elevated white blood cell and platelet count is a highly sensitive and precise chromatography method of identification of abnormal haemoglobins.
- HPLC works by injecting the blood sample into the stream of the solvent, which flows through a column packed with a separation medium.

PATHOLOGY

- SCD is a monogenic disorder due to a single base pair mutation in the beta-globin gene, resulting in an amino acid substitution.
- The hydrophilic amino acid glutamic acid is substituted for valine which is hydrophobic.
- Sickle cell disease is the result of homozygous or compound heterozygous abnormal beta alleles.
- Red blood cells (RBCs) that contain mutated haemoglobin or HbS alleles undergo polymerisation when exposed to deoxygenated environments and form insoluble strands and tactoids, becoming rigid, forming a sickle shape.
- In contrast, RBCs containing healthy haemoglobin or HbA can adapt well to deoxygenated environments, rearranging themselves to bind to CO₂ molecules and reverting back when CO₂ is released.
- The usual half-life of a RBC is usually around 120 days but due to HbS haemoglobin becoming rigid and more dense, half-life drops to 10-20 days.
- This is because RBCs that contain HbS may affect blood flow and endothelial vessel wall integrity, and so are flagged as dysfunctional. This causes premature haemolysis to occur which is the rupture or destruction of RBCs, resulting in a low RBC count.



CURRENT TREATMENTS AND THEIR FEASIBILITY WITHIN THE NHS

- Management of SCD under the NHS is specific to the needs of each patient, and involves the creation of a unique care plan managed by a multi-disciplinary healthcare team.
- Several drugs exist for management of Sickle Cell Disease, most of which aim to either manage pain, or reduce the risk and occurrence of vaso-occlusive episodes. These medications include:
 1. Hydroxyurea - This is a medication often used for SCD in pediatrics. It works by increasing the lifespan of erythrocytes, as well as concentration of Fetal Haemoglobin (HbF), while also reducing neutrophil and platelet counts to reduce clotting and systemic inflammation which may trigger vaso-occlusive episodes.
 2. Blood transfusions - Used in crisis replenish blood with non-sickled cells.
- People with severe SCD may be considered for NHS bone marrow transplants. However, most people with sickle cell are currently not able to be cured, with current procedures being invasive, inaccessible to the wider population, and expensive, with a considerable risk of complications, while also necessitating a suitable transplant match.
- The NHS currently spends £76 million annually in order to fund treatment for sickle cell disease.

CRISPR-Cas9 Gene Therapies - A New Approach

- Clustered Regularly Interspaced Palindromic Repeats (CRISPR/Cas9) is a gene-editing technology which utilises sequences from the bacterial genome, alongside CRISPR-associated immune-system proteins (namely Cas9), to make precise cuts in DNA strands.
- The technology uses a guide-RNA (gRNA) 18-20 nucleotides in length to bind to specific base sequences on DNA strands - this allows the Cas9 enzyme to bind to specific genes on DNA strands and cut them.
- Cut strands of DNA are then either repaired by one of two pathways:
 1. Non-homologous end-joining: ends of cut strands rejoin, generally with random insertion of bases and deletion of others.
 2. Homology-directed repair: Homologous template DNA strand is used to repair the cut strand; this template strand can be engineered, thus allowing for precise gene editing, and theoretically edits as small as a single base pair.
- By engineering gRNAs with base sequences complementary to target genes, these genes can be precisely cut, stopping their transcription - this is a mechanism for gene silencing.



1 - Bluebird Lyfgenia

- World's first gene therapy approved for use in patients (MRHA approval 16/11/2023)
- Uses gene editing via lentiviral vectors to modify the patient's own haematopoietic stem cells to include a HbB gene capable of producing HbA¹⁰⁰ a form HbA with a lower risk of sickling than HbS.
- This increases HbA conc. Relative to HbS which reduces sickling.

2 - CasGevy

- Approved by MRHA Nov. 2023 for patients 12 and above - first ever approved CRISPR-Cas9 therapy.
- BCL11A is a gene involved in silencing of Fetal Haemoglobin - by reducing activity, transcription of the HbF gene is increased.
- CasGevy uses CRISPR-Cas9 to edit the BCL11A gene in the patient's stem cells, reducing its activity.
- This increases concentration of HbF in erythrocytes post-treatment, which displaces HbS, thus reducing sickling.

Success in Clinical Trials

Both CasGevy and Lyfgenia have seen significant success in either greatly reducing or entirely eliminating incidences of Vaso-Occlusive Crises (VOCs) in the year immediately following the one-time treatment.

- CasGevy: 93.5% of 31 evaluated participants did not experience severe VOCs >= 12 months post-treatment. 100% did not require hospitalisation for VOC.
- Lyfgenia: 88% of 32 evaluated patients did not experience VOCs in the 6-18 months following treatment. Complete resolution of VOCs in 100% of adolescents.

Hematologic malignancies have occurred in patients treated with Lyfgenia, but not CasGevy, resulting in an FDA black box warning:

- 2 patients in Study 1 Group A developed acute myeloid leukaemia
- 1 patient in Study 1 Group C diagnosed with Myelodysplastic Syndrome

Patients receiving either therapy require lifelong monitoring for hematologic malignancies.

Economic Feasibility

Currently, the only curative treatment for SCD offered on the NHS is a bone marrow transplant - this requires a donor match to be found which is often not possible, and carries considerable risks of rejection, and vaso-occlusive disease, which affects around 1 in 20 transplant recipients.

- Currently CasGevy is the more affordable of the two therapies, with a list price of \$2.2m, compared to Lyfgenia's \$3.1m price tag - this makes both therapies likely prohibitively expensive for NHS use, with bone marrow transplants being considerably less expensive, providing the patient is eligible and a donor is found.
- If the Nationale Institute for Care Excellence (NICE) were to consider approving either therapy for NHS use, it is possible a lower price agreement could be negotiated.
- NICE has recently recommended the use of viral vector-based gene therapies for treatment of hemophilia following phase two trials of Hemgenix, despite a list price of £2.6m, having considerably negotiated a lower price.



REFERENCED WORKS

Last year, 7 of our Year 12 students entered the prestigious Imperial College Healthcare prize where they were challenged to create a research poster. Each student received a commendation certificate for their submissions. Please see one of the submissions below which is currently being displayed in the Science department.

And finally, a MASSIVE well done to our Year 11 cohort who have had a fantastic start to their revision, having completed weekly quizzes on Educake. Year 11 can also attend an Educake support session on Wednesday mornings at 8 am in Lab 10 with Mr Precious if they need somewhere to use the computers to complete this work.



Rugby

We begin our Cup campaigns with the U14's playing Saint Olaves and the U15's playing Dukes of York Military School in the Kent Cup. In the National Cup our U15's play Dulwich College and our 1st XV play Whitgift. Well done to all our Year 7's representing the school in their first fixture versus Gravesend Grammar. We will be fielding 22 teams versus The Judd School next week, with our Rugby Academy fielding a 1st, 2nd and 3rd XV.

Athletics



Troy represented Kent Athletics in the 200m for the Inter County Southern Area Athletics Championships. Troy ran well, finishing second to the current No1 UK Sprinter at the U15 level with a time of 23.41 in his heat. Troy ran a Personal Best in the final, clocking 22.91secs to come second.

This was Troy's last competitive race for the season and what a fantastic way to end it. Overall he has achieved the 7th fastest UK time in 200m for u15s.

Well done Troy

PD Praise



PD STUDENTS OF THE WEEK

Freddie in Year 10
Charlie in Year 9

Ms McDonagh has been highly impressed with all of her students this week in PD. Thank you for all your hard work in your first sessions.

The following two students have shown maturity and had an excellent start in Maths in PD:



Isaiah in Year 11
Reece in Year 11



Archie McLaren has made progress at RWS on his return after the summer break. Ms Green is very impressed.



For the safety of our students, parents/carers are reminded they should not drive in to the school site to drop off or pick up students at the start and end of our school day. Students may be dropped off safely in one of the adjacent roads and walk in. Only parents/carers with agreed permission will be able to come on to site at this time.

Parking is very limited and therefore not permitted on site for any activities during or after the school day ie. Sporting fixtures. Parents/carers are reminded to park outside of the premises and buzz at the pedestrian gate to enter the school site. Spectators are also required to sign in with Main Reception up to 4.00pm.



RWS CAREERS

Careers
@



The Careers Office is located in the library. Students can come and see us for Careers Guidance and Information and any questions they may have and to plan their next steps!



Mrs Hayden
(hha@lpgs.Bromley.sch.uk) –
Trust Careers Lead
Onsite at RWS every Tuesday



Mrs Borley
(lbo@rws.uk.net) –
Full Time Careers Officer
Careers Office



KS3
Monthly Pick



Banned Books: On Display



From the gifted storyteller of *Rooftoppers* and *The Explorer*, this award-winning Waterstones Book of the Year kicks off an enchanting fantasy series.

Set in the Archipelago, a group of hidden islands teeming with every magical creature imaginable, this novel invites readers on an exhilarating adventure and a rescue mission to protect this extraordinary realm from extinction.

In this novel, Rundell creates a remarkably vivid magical world that rivals the classics of Narnia and Hogwarts.

Banned Books Week is an annual event originating in the USA, celebrating the freedom to read. This display offers a valuable opportunity for students to explore diverse perspectives and engage with books that have been challenged, burnt or censored throughout history.

By showcasing these titles, we are encouraging critical thinking, open dialogue, and a deeper understanding of important social issues.

This week is a reminder of the importance of intellectual freedom, the right of individuals to access information, and the idea that no singular person or group should dictate what others can read.

LUNCHTIME ACTIVITIES

DON'T FORGET

Our library isn't just a haven for readers - it's also a welcoming space for students to unwind, play games and enjoy a break from the hustle and bustle of the playground.



HOSTED BY THE PSFA

Ravens Wood

QUIZ night



Enjoy!

Friday
OCT 11th

BRING YOUR OWN
DRINKS & NIBBLES

6.30PM TO 9.30PM IN MAIN HALL

**Teams of up to 8ppl - Ticket price
includes Heads & Tails game entry to
win £50 cash!**

*Tickets Available to buy via Parentpay £7.50 each
or on the door*

**Please donate a prize for the christmas tombola/raffle on
quiz night for a chance to win a bottle of champagne**

Any queries to : Ravenswoodpsfa@yahoo.com

****Please ensure all visitors leave the premises by 10pm****



Diversity & Inclusion in Action

SEND FUN FOOTBALL

(Especially for children with Special Educational Needs & Disabilities)

Join our inclusive sessions for D/deaf, disabled and/or neurodivergent children, young people and their families.

- ▶ When: **Saturdays**
- ▶ Time: **12:30 – 1:30 pm**
- ▶ Age: **5-11 years**
- ▶ Cost: **Free**
- ▶ Where: **Gray's Farm Primary Academy,
Grays Farm Road, Orpington, BR5 3AD**

Everyone welcome!
Sessions adapted to the needs of participants.



Register here

<https://mcdonaldsfunfootball.co.uk/FunFootball>



**For more information,
please contact us:**



07756 826105



admin@dynamicmail.co.uk

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Access
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Est. 2002

Friends of Ravens Wood Fund

You will recall that we wrote to you in May this year, regarding becoming a 'Friend of Ravens Wood School'. By giving a regular amount or annual donation to the fund, it makes a real difference in the school being able to keep resources and equipment up to date, enriching and enhancing the unique and special opportunities available to your child/children.

Donations have been made via standing order in the past, however, this system is changing to a 'Just Giving' platform. Donations can be made either monthly or as a one-off single payment as you prefer. The amount you donate is entirely your decision, but £10 per month or £120 per year is a suggested contribution rate. Please follow the URL: Ravens Wood School Fund - JustGiving or scan the QR code below to get started.

Reminder to update bank details

Please be advised that should you currently be donating via standing order you will need to cancel this with your bank, as the account currently being used is closing, and we would encourage you to use the new system.

In addition, if you are a UK taxpayer you are able to make a Gift Aid declaration which allows the school to claim tax you have already paid back from the Inland Revenue, meaning that every pound you donate will be worth an extra 25 pence. Please tick the relevant box when prompted on the Just Giving platform.

We are extremely grateful for the support we have received from our parents and carers, and do hope that you will consider helping the school in this way. Please scan the QR code or follow the URL link as detailed above.

Yours faithfully

The Finance Department
Ravens Wood School



Attendance **1st Place with 100% - 7E, 7G, 8B, 8D, 9F & 10H**

2nd Place with 99% - 7A, 7F, 7D, 8A, 8G, 8C, 10G & 10F

3rd Place with 98% - 7C, 9B, 10C, 10D & 11A



Dates for your Diary

Open Day - Saturday 21st September

Year 12 Team Building Trip - Friday 27th September

Sixth Form Open Evening - Wednesday 13th November; 5:45pm - 8:00pm



Please check the SOCS website for regular updates regarding sporting fixtures
<https://sport.rws.uk.net>

Parent/Carer Webinar Dates September - December 2024

Helping Your Child with Anxiety, Fears & Worries for Primary Parents

Thurs 12th Sept @ 12:00
Weds 9th Oct @ 5:30pm
Sat 16th Nov @ 10:00am
Mon 9th Dec @ 12:00

Helping Your Child with Anxiety, Fears & Worries for Secondary Parents

Mon 23rd Sept @ 5:30pm
Sat 12th Oct @ 10:00am
Weds 27th Nov @ 12:00
Weds 11th Dec @ 12:00

Helping Children with Sleep for Primary Parents

Sat 21st Sept @ 10:00am
Mon 28th Oct @ 12:00
Thurs 21st Nov @ 5:30pm
Weds 4th Dec @ 12:00

Emotionally Based School Avoidance

Sat 7th Sept @ 10:00am
Mon 7th Oct @ 12:00
Thurs 7th Nov @ 5:30pm
Thurs 12th Dec @ 12:00

Changing from Primary to Secondary School

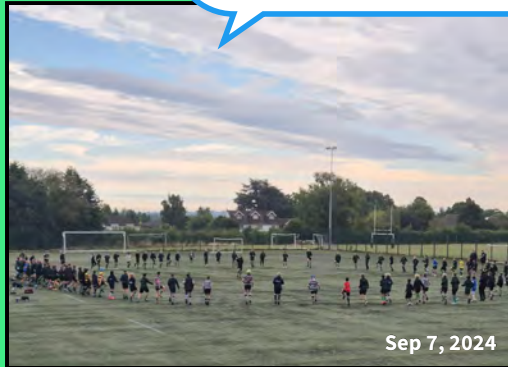
Sat 14th Sept @ 10.00am
Tues 24th Sept @ 4.00pm

Scan QR code to Book





Ravens Wood School @rw_school
 Over 100 RWS7 students attended the second set of rugby trials this morning. Amazing dedication.
 #WeAreBlackandGreen ❤️❤️



Ravens Wood School @rw_school
 Our 6th form students had their first assembly of the year today with Ms Prescott leading on the RWS values. We look forward to a successful year!
 #LearnLeadExcel #WeAreBlackandGreen ❤️❤️



Ravens Wood School @rw_school
 Our Therapy dog Toby, was slowly introduced to the school today. Welcome to Toby!
 #LearnLeadExcel ❤️❤️



Ravens Wood School @rw_school
 The 'Growing Greens' gardening club shared their produce today with the School's catering team @AccentCatering. The tomatoes, apples and pears will be used in the Ravens Wood's cookery club that will be starting again shortly.
 #LearnLeadExcel ❤️❤️



Ravens Wood School @rw_school
 Our open day for prospective Year 7 students is on Saturday 21st September, 9am -12pm. There will be presentations from the Headteacher at 9.30am & 10.30am, and an opportunity to tour the school and meet staff & students. We look forward to seeing you
 #WeAreBlackandGreen ❤️❤️



Ravens Wood School @rw_school
 Our RWS7 Bushcraft Residential has been going really well. Students and staff have been getting very involved in the team-building activities.
 #WeAreBlackandGreen ❤️❤️

