

Highfield CE Primary School

Weekly Update

A message from Mrs Walford and Mrs Bond

Dear Parents,

We hope that you had a wonderful Christmas break with your loved ones.



As we step into the new year, we would like to extend a warm welcome back to all our families. May this year bring you and your children happiness, prosperity, and fulfilment.

I am delighted to share that our recent 'values day' was a tremendous success, and we are immensely proud to witness the positive impact it has already had on our school community. The children are embracing our new values – **peace, courage, and respect** – with enthusiasm and integrity.



Our vision is to create a school where everyone appreciates the beauty of a life lived in Christian values, and where staff, children and parents work together to reflect the life of Jesus in our community.

We pray that our children will live and learn with the courage to always do what is right. They will seek to bring peace to every situation and respect and value others and celebrate the rich diversity in our community.

We believe our values will enable children to spread their wings and bring the transforming power of Christian values to the world around them, in their own unique way.



Term **Spring** Number **1**
Date **5.1.24**



Theme of
collective worship
next week:

PEACE



info@highfieldshool.co.uk



02380 555793



Highfield CE Primary School, Hawthorn Rd,
Southampton, SO17 1PX

Thank you HSFF for funding these wonderful new boards in both departments. We hope you enjoy them! We also hope that you enjoy reading our values leaflets which explains how our vision and values are lived out at school.



We use a butterfly image to represent how our children spread their wings and bring the transforming power of Christian values to the world around them, in their own unique way.

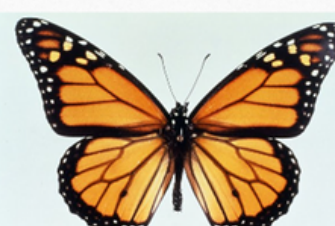
Why a butterfly?

Their wings are mirror images of each other, and here at Highfield, we want our lives to reflect the life and example of Jesus.

Butterflies are beautiful, and a life of courage, peace and respect is beautiful and brings joy to others

They transform from caterpillars to butterflies, in the same way that we are always growing and changing

Each butterfly has its own unique pattern. Each of us is unique, and we are all beautiful in our own ways.



Together, let's continue nurturing an environment where these values thrive, fostering a supportive and inclusive community for our pupils.

Wishing you a wonderful start to the year ahead.



School Improvement Priorities

2023/2024

Attendance

National attendance rate across the academic year to date was **93.4%** The absence rate was, therefore, 6.6% across all schools.

Highfield CE Primary attendance to date this week: **95.67%**

Writing



As we have been focussing on making writing memorable, year 5 and 6 kick started their literacy unit with a Harry Potter day! We are looking forward to seeing their outcomes.

Developing Leadership



During the INSET day we looked at what our role is as a middle leader. Teachers completed and Middle Leader audit so that we can ensure any staff who are not confident, will be given training and coaching they need. We also looked at how we can ensure the monitoring of our subjects is robust and informs our next steps but looked specifically at learning walks and lesson observations.

Curriculum



The teachers completed a INSET day on Tuesday where we looked at the progression of skills and knowledge of all subjects and we aligned the National Curriculum subject statements to the units we teach.

Christian Values



We launched our new school values - Peace, Respect, Courage. We hope you enjoy reading all about them in our new leaflet.



DATES FOR YOUR DIARY:



All useful dates have been updated onto our website and can be found here:

<https://highfieldceprimaryschool.co.uk/>

Monday 8th January - MINDS parent talk at 9.30am. Details sent separately.

Wednesday 10th January - Year 5/6 trip to the Mosque

Friday 12th January - Year R height and weight checks with the school nursing team.

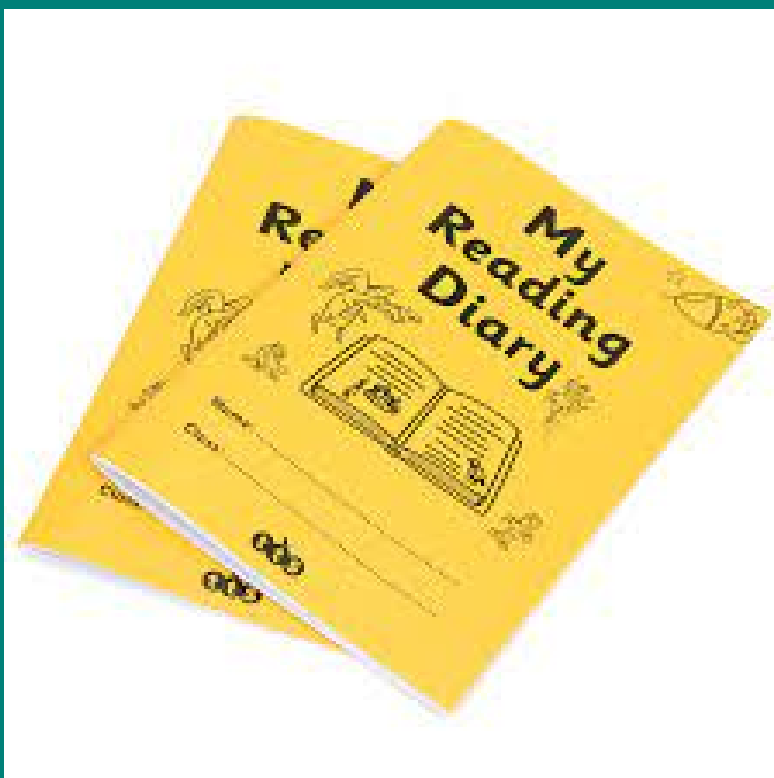
Monday 15th January - Assembly on active travel (council led)

Tuesday 16th January - SCITT open Event 5pm - junior hall

Wednesday 17th January - Additional parent's evening - invitation only

Monday 22nd January - Parent Forum 4.30pm - 5.30pm

ONLINE - joining link to follow.



Reading Diary.

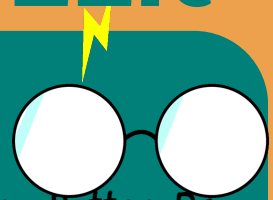
Reminder

Please can children fill out and bring in their reading diaries EVERY DAY. We only had 8x in one class today and it is essential they are in school each day.



IN SCHOOL THIS WEEK

HARRY POTTER DAY

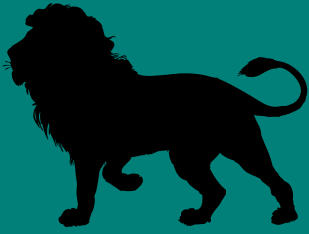


We're thrilled to share the magical moments of our Year 5/6 Harry Potter Day, where our young wizards and witches immersed themselves in a day of enchantment and adventure! From the heart-pounding matches of Quidditch to the captivating artistry of potion-making, the children delved into the wizarding world with enthusiasm. Crafting their very own wands allowed for creativity to soar, while the creation of Howlers added a touch of excitement. The Sorting Hat Quiz brought a sense of anticipation as each child discovered the Hogwarts house they would belong to. The children had a magical time working on their quidditch skills! After watching some highlights from the International Quidditch World Cup, they practiced their broom flying and snitch catching! The day was brimming with laughter, creativity, and a true celebration of the beloved Harry Potter universe. We're proud of our children for embracing the magic and showcasing their imaginative spirits during this spellbinding event.



VALUES DAY

Our values are...



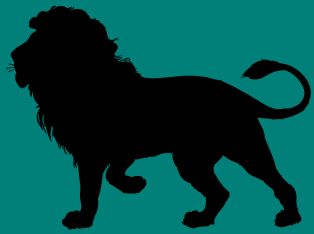
COURAGE

PEACE

RESPECT



Children at the
infants created
butterflies and
made biscuits.



VALUES DAY

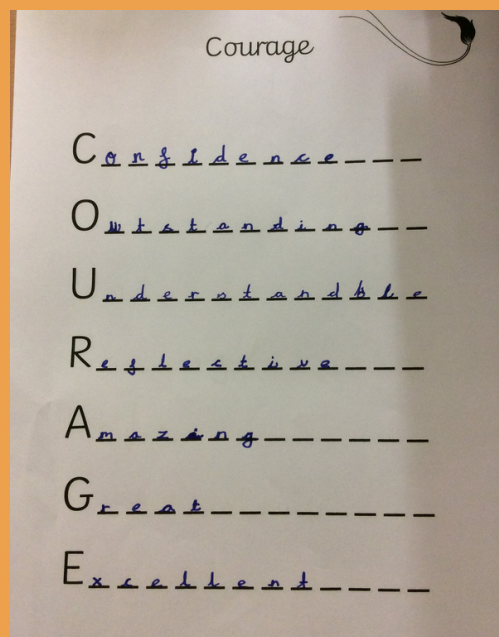


COURAGE



RESPECT

PEACE



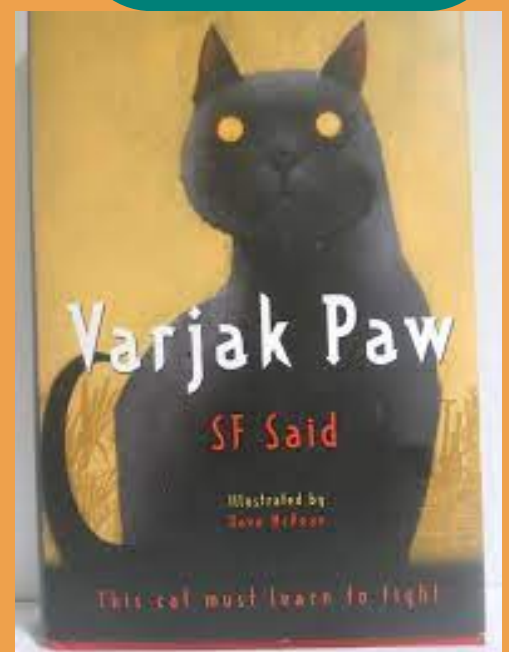
CAT DAY IN YEARS 3 AND 4



Year 3 and 4 kicked off their new English unit with a cat day! The children are very excited to be studying the book 'Varjak Paw.'

"I liked drawing pictures of cats and dressing up! Zac.

"I liked it when we were learning about martial arts and we started our new book - Varjak Paw" Jack



AMAZING ART IN YEAR 5 AND 6

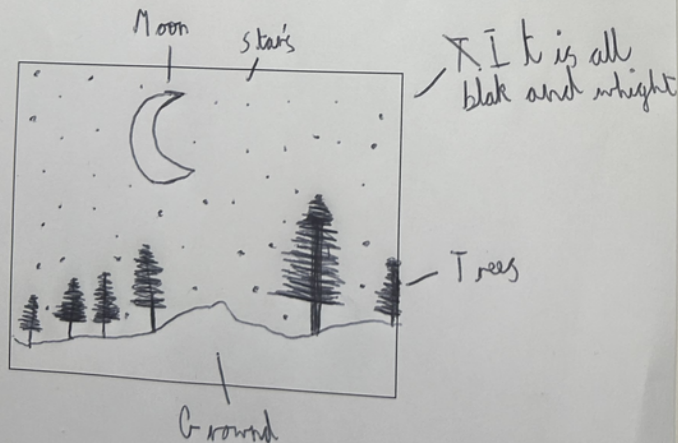


Hokusai

Hokusai's style of work *ukiyo-e*, 浮世絵 translates as "pictures of the floating world".

Most of his work was based on the beautiful nature found in Japan.

Styrofoam Printing in the style of Hokusai



Hokusai, was a Japanese ukiyo-e artist of the Edo period, active as a painter and printmaker. He is best known for the woodblock print series Thirty-Six Views of Mount Fuji, which includes the iconic print The Great Wave off Kanagawa.



Year 5 and 6 ended their week with an art day. Look at Seb's AMAZING relief print.

Do you want to become a Primary School Teacher?

Then come along to our free open event we are hosting with



Find out about their **OUTSTANDING** one year training programme

Have your questions answered by the SCITT Director

Get advice on how to apply, prepare & what to expect

TUESDAY 16TH JANUARY
5PM– 6PM
HIGHFIELD CE PRIMARY SCHOOL

Address: Hawthorn Road, Southampton, SO17 1PX. To register for this event or find out more details, please visit our website; www.farehamandgosportprimaryscitt.co.uk

Next week at Re:Minds

8th - 12 January 2024

Evening Support Group Shirley
Monday 8th January 6.30pm

A chance to talk to other parents/carers and get advice and support. You can also access the book & sensory library on request

St James Road Methodist Church, St James Road, Shirley, SO15 5HE

Find us via the car park to the rear of the church, through the double doors, down stairs in Room 3

Autism Advice Clinic

Wednesday 10th January 10.30am

You can book a private 10 minute virtual appointment to speak with a clinician about any issues related to Autism via Zoom

The clinic is led by the Southampton Autism Assessment Service and is open to all members of Re:Minds

Please contact Info@reminds.org.uk to book

Please note they are unable to give advice about CAMHS services outside of Southampton

NEW Sholing Support Group
Friday 12th January 10am

A chance to talk to other parents/carers and get advice and support.

You can also access our Sensory and Book library on request.

Children Welcome

Our new venue:
St Mary's Church, St Monica Road, Sholing, Southampton, SO19 8ES

Limited parking on site. Street parking also available.

Please email Info@reminds.org.uk to book your space at one of the clinics.

You will have at least 10 minutes in a private session, held virtually via Zoom.

You do not need to book to attend the Support Groups - Just turn up!



with thanks to

Autism Coffee Morning



Re:Minds



Re:Minds is a Southampton based organisation supporting families whose children/young people have Autism, ADHD or other neurodiverse needs and/or mental health needs - with or without a diagnosis.

We have arranged a chance for parents to come and talk to Re:Minds about your views around autism and to see if there is any other support they can offer you.

★ Monday 8th January 2024
★ 9:30am-10:30am
★ Junior Department Hall

Tea, coffee and biscuits provided



We are now taking referrals for our next programme:

ACES Recovery Toolkit

for Adults, Children and Young People

A 10 week programme for Mothers/carers who have experienced unhealthy relationships.

•Covering impact of trauma, building resilience, attachment and parenting, support networks, managing stress, child development, emotions and healthy relationships.

•A separate 8 week programme for their children (10-16 years) delivered by a trained practitioner.

•Covering keeping safe, managing stress and emotions, support networks, coping strategies, self-esteem, self-care and setting goals.

Where: 30 Brookvale Road, SO17 1QR

Dates: Wednesdays from February 2024 (excluding school holidays)

Time: 10am - 12pm

Drinks and snacks provided

Referrals can be made via Yellow Door -
email info@yellowdoor.org.uk or call 02380 636312



Southampton Mental Health in
Schools Team (MHST)



Managing Challenging Behaviour

A Workshop for Parents & Care Givers



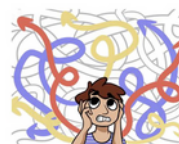
Does your child show challenging behaviours at home?

Do you want to learn tools to manage these behaviours?

All children show behaviours which can be difficult to understand and manage at times, we all use behaviour as a way to communicate.

It can be difficult for parents/care givers to know how best to support children during these times of challenge.

This workshop is for parents and caregivers to understand more about why children show challenging behaviours and learn some tools which help with managing behaviour at home.



Who: All Parents and Care Givers are welcome

Where: Highfield Primary School
(Junior Department)

When: Thursday 18th January 2024

Time: 9am-10am

What do I need to bring: Just yourself! However, you are welcome to bring note paper and a pen if you would like.



Are you dealing with child to parent violence?

Get help at

Building Respectful Families

Where: 30 Brookvale Road, SO17 1QR

When: Tuesdays from 20th February 2024 until
23rd April 2024 (excluding school holidays)

Time: 10am - 12pm

Drinks and biscuits provided

Referrals via Yellow Door

Email info@yellowdoor.org.uk or

Tel 02380 636312



For parents/carers of children
aged 10-14 years

An eight week group programme

Breaking behaviour patterns such as:

- physical violence
- damage within the home environment
- stealing from family members
- threatening behaviour in the home
- attempting to control



Citywide What's On Spring Term 2024

From 2 January – 29 March 2024

For more details, please email familyhub@southampton.gov.uk.

KEY: AN = Additional needs or SEND - Special educational needs and disabilities.

Monday AM	Stay and Play	Bumps and Babies	Bumps and Babies	Bumps and Babies	Soft Play	Soft Play
	Seashell: 9.30am - 11	Cutbush: 9.30 - 11.30	Northam: 9.30 - 11.30	The Ashby Centre: 9.30 - 11.30	All Saints Church: 9.30 - 10.15 (Under 5s)	All Saints Church: 10.30-11.15 (Under 5s)
Monday PM	Tots and Tunes	Stay and Play	Breastfeeding Support	Tots and Tunes	Time 4 Play	Edge+ Parent Community Group
	Seashell: 1.15 - 2	Clovelly: 1 - 2.30	Cutbush: 1 - 2.30	Northam: 1 - 2	Pickles Coppice: 1 - 2.30 (AN)	Cutbush: 1.30- 3
Tuesday AM	Bumps and Babies					
	Honeysuckle: 9.30 - 11.30					
Tuesday PM	Time 4 Play	Stay and Play				
	Clovelly: 1 - 2.30 (AN)	Blackberry: 1 - 2.30				
Wednesday AM	Stay and Play	Bumps and Babies	Chatter Matters			
	Cutbush: 9.30 - 11	Seashell: 9.30 - 11.30	Honeysuckle: 9.30 - 11.30			
Wednesday PM	Tots and Tunes	Chatter Matters				
	Pickles Coppice: 1.30 - 2.15	Cutbush: 1 - 2.30				



LOCATIONS



Children
& Learning
Making a difference



Family
Hub

Citywide What's On Spring Term 2024

From 2 January – 29 March 2024

For more details, please email familyhub@southampton.gov.uk.

KEY: AN = Additional needs or SEND - Special educational needs and disabilities.

Thursday AM	Stay and Play Pickles Coppice: 9.30 - 11	Breastfeeding Support The Ashby Centre: 9.45 - 11.15	Bumps and Babies Clovelly: 9.30 - 11.30	Bumps and Babies Pickles Coppice: 9.30 - 11.30		
Thursday PM	Let's Shake Up Clovelly: 1 - 2.30	Time 4 Play Blackberry: 1 - 2.30 (AN)	Chatter Matters and Stay and Play Pickles Coppice: 1 - 2.30	Family Fun Pickles Coppice: 3.30 - 5 (4 - 11 yrs)		
Friday AM	Tots and Tunes Cutbush: 9.30 - 10.15 1 - 5 years	Tots and Tunes Cutbush: 10.30 - 11.15 Under 12 months	Bumps and Babies Blackberry: 9.30 - 11.30	Stay and Play and Breastfeeding Support Honeysuckle: 10 - 11.30		
Friday PM	Soft Play Northam: 1 - 2 (under 2s)	Tots and Tunes The Ashby Centre 1 - 1.45				
Saturday AM	Dadzclub Blackberry: 10 - 11.30	Dadzclub Clovelly: 10 - 11.30	Dadzclub Pickles Coppice: 10 - 11.30			

All Family Hubs are open Monday to Friday, 8.30am – 4.30pm (not including bank holidays) for advice and support for families.



LOCATIONS



Children & Learning
Making a difference



SOUTHAMPTON
CITY COUNCIL

Family Hub

Family Hub Parenting Offer Spring 2024

From 4 January to 29 March

For more information and support, please email:

familyhub@southampton.gov.uk

Monday	Project You The Ashby Centre: 12.30 - 2.30pm 8 Jan - 5 Feb Creche available	Infant Massage Blackberry: 1 - 2.30pm 8 Jan - 5 Feb	Infant Massage Northam: 1 - 2.30pm 8 Jan - 5 Feb	Infant Massage Pickles Coppice: 1 - 2.30pm 8 Jan - 5 Feb	NFPP* Honeysuckle: 12.30 - 2.30pm 19 Feb - 25 March	Understanding Behaviour Bitterne Park Primary: 9.30 - 11.30am 22 - 29 Jan Creche available	
Tuesday	Incredible Years Seashell: 9.30 - 11.30am 9 Jan - 30 April	Infant Massage Clovelly: 10 - 11.30am 9 Jan - 6 Feb	Cook and Eat Clovelly: 3.15 - 5.15pm 9 Jan - 6 Feb	Being a Parent The Ashby Centre: 12.30 - 2.30pm 16 Jan - 19 March Creche available	Cook and Eat Clovelly: 10 - 12pm 20 Feb - 19 March	Infant Massage Clovelly: 1 - 2.30pm 20 Feb - 19 March	Understanding Behaviour Pickles Coppice: 12.30 - 2.30pm 12 - 19 March Creche available
Wednesday	NFPP* Clovelly: 9.30 - 11.30am 10 Jan - 21 Feb Creche available	Being a Parent Clovelly: 12.30 - 2.30pm 17 Jan - 20 March Creche available	Infant Massage Seashell: 12.30 - 2pm 28 Feb - 27 March	Infant Massage The Ashby Centre: 1 - 2.30pm 28 Feb - 27 March	Incredible Years Clovelly: 9.30 - 11.30am 20 March - 17 July Creche available		

*KEY: BAPT – Being a Parent Together, LWT – Living with Teenagers, NFPP – New Forest Parenting Programme



Children & Learning
Making a difference



SOUTHAMPTON
CITY COUNCIL

Family Hub Parenting Offer Spring 2024

F

For more information and support, please email:

familyhub@southampton.gov.uk

Thursday	NFPP* Cutbush: 9.30 - 11.30am 4 Jan - 8 Feb Creche available	Project You Honeysuckle: 9.30 - 11.30am 22 Feb - 21 March Creche available	LWT* Weston Secondary: 10 - 12pm 18 Jan - 21 March	BAPT* Online with Zoom: 7.30 - 9.30pm 29 Feb - 14 March			
Friday	NFPP* Sinclair School: 9.30 - 11.30am 5 Jan - 9 Feb Creche available	Infant Massage Blackberry: 1 - 2.30pm 9 Feb - 8 March	Understanding Behaviour Maytree Primary: 9.30 - 11.30am 23 Feb and 1 March Creche available	Incredible Years Pickles Coppice: 9.30 - 11.30am 1 March - 28 June Creche available			

*KEY: BAPT – Being a Parent Together, LWT – Living with Teenagers, NFPP – New Forest Parenting Programme

Locations

Family Hub Cutbush Cutbush Lane, Southampton, SO18 2GF 023 8091 5480	Family Hub The Ashby Centre Stratton Road, Southampton, SO15 5QZ 023 8054 0135	Family Hub Seashell Foxcott Close Southampton, SO19 9JQ 023 8043 7866	Family Hub Pickles Coppice 65 Windermere Avenue Southampton, SO16 9QX 023 8054 0135	Family Hub Clovelly 60-68 Clovelly Road Southampton, SO14 0AU 023 8033 1635	Family Hub Honeysuckle Honeysuckle Road Southampton, SO16 3BZ 023 8093 3552	Family Hub Blackberry Byron Road Southampton, SO19 6FH 023 8091 7633	Northam Community Centre, Kent Street, Northam, Southampton SO14 5SP 023 8033 1635
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Children & Learning
Making a difference



SOUTHAMPTON
CITY COUNCIL



Family Hub

Being a Parent

6-week course for parents and carers of children aged between 2-11 years.

Supporting parents to learn practical communication skills to enable our children to be confident, happy and co-operative.

The Ashby Centre Family Hub

Date: 16 Jan – 19 March

Time: 12.30 – 2.30pm

Creche Available

Stratton Road, Southampton, SO15 5QZ

023 8054 0135

To book your place visit:

soton.cc/familyhub-parentingreferral

For more information please contact:

Familyhub@southampton.gov.uk



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Family Hub

Living with Teenagers

9-week course For parents and carers of young people aged 11 - 16 years

Bring up happy and self-confident young people. The course content includes exploring what it is like to be a teenager today, parental wellbeing, listening and communication, expressing and acknowledging feelings, and discipline.

Weston Secondary

Date: 18 Jan – 21 March

Time: 10 – 12pm

Tickleford Drive, Weston, Southampton SO19 9QP

To book your place visit:

soton.cc/familyhub-parentingreferral

For more information please contact:

Familyhub@southampton.gov.uk



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Happiness jars



A heartfelt thank you to all the parents who have contributed to our Happiness Jars stationed in both school reception areas. Your thoughtful messages have been an incredible source of joy and encouragement for our school staff. It's been truly fantastic to witness the power of positivity as we've shared these heart-warming comments with individuals and teams. Your words have not only lifted spirits but have also strengthened our bonds as a community. We encourage everyone to continue participating in this wonderful initiative by adding your messages of happiness or appreciation. Your contributions make an immeasurable difference, fostering a culture of happiness and kindness that resonates throughout our school. Let's keep spreading kindness and appreciation, one heartfelt note at a time!



well
done!

School Council Update

We asked our school council members how we could improve our Friday afternoon celebration worships, and they came up with lots of fantastic ideas! One suggestion was to celebrate all the staff working in the school. So, during the last worship of the Autumn Term, the members of our School Council took the stage to honour our amazing staff, presenting each staff member with a personalised certificate as a token of gratitude for their invaluable contributions to our school community.

Watch this space—there are more improvements to our celebration worships to come!

Top Tips for...

MANAGING SCREEN TIME

According to the latest stats, people aged between 8 and 17 spend four hours on digital devices during an average day. Obviously, a new year is ideal for fresh starts and renewed efforts – so lots of families are trying to cut down their combined screen time right now, creating more moments to connect with each other and relying less on gadgets to have fun. Our top tips on reducing screen time are for everyone, so you can get your whole family involved in turning over a new leaf this year!

GET OUT AND ABOUT

If the weather's decent, spend some time in the garden or go for a walk. Even a stroll to the local shop would do: the main thing is getting some fresh air and a break from your screen.

TRY A TIMED TRIAL

When you're taking a screen break to do a different activity or a chore, turn it into a game by setting yourself a timer. Can you complete your task before the alarm goes off?

GO DIGITAL DETOX

Challenge yourself and your family to take time off from screens, finding other things to do. You could start off with half a day, then build up to a full day or even an entire weekend.

LEAD BY EXAMPLE

Let your family see you successfully managing your own screen time. You'll be showing them the way, and it might stop some of those grumbles when you do want to go online.

AGREE TECH-FREE ZONES

Nominate some spots at home where devices aren't allowed. Anywhere your family gathers together, like at the table or in the living room, could become a 'no phone zone'.

HOLD A SCREEN TIME AMNESTY

As a family, agree specific windows when it's OK to use devices. This should help everyone to balance time on phones or gaming with enjoying quality moments together.

BE MINDFUL OF TIME

Stay aware of how long you've been on your device for. Controlling how much time you spend in potentially stressful areas of the internet – like social media platforms – can also boost your wellbeing.

'PARK' PHONES OVERNIGHT

Set up an overnight charging station for everyone's devices – preferably away from bedrooms. That means less temptation for late-night scrolling.

SWITCH ON DND

Research shows that micro-distractions like message alerts and push notifications can chip away at our concentration levels. Put devices on 'do not disturb' until you're less busy.

TAKE A FAMILY TECH BREAK

Set aside certain times when the whole family puts their gadgets away and enjoys an activity together: playing a board game, going for a walk or just having a chat.

SOCIALISE WITHOUT SCREENS

When you're with friends, try not to automatically involve phones, TVs or other tech. Having company can be loads more fun if your attention isn't being split.

WIND DOWN PROPERLY

Try staying off phones, consoles, tablets and so on just before you go to sleep. Reading or just getting comfy in bed for a while can give you a much more restful night.

Meet Our Expert

Minds Ahead design and deliver the UK's only specialist postgraduate mental health qualifications. They also provide training and support to education organisations and local authorities – empowering school leaders and staff with the knowledge and tools to shape their settings into inclusive communities where the mental health of pupils and personnel is prioritised.



DEVICE BOX

The National College



National Online Safety
#WakeUpWednesday



Well Done Eléonore!!!!



HOW TO MAKE AN AIR FRESHENER

For this activity you need a gelling agent, which is what cooks use to make jelly. Gelling agents that work well include carrageenan and gelatine. Whatever you use, check the instructions on the packet as you make it correctly. You'll also need an essential oil. Any kind will work, but choose one you like the smell of!

Time 10 minutes

Difficulty Easy

Warning Hot water! Adult supervision required

WHAT YOU NEED

- 1 Teaspoon of gelling agent
- 1 Teaspoon of salt
- 1 Jug of hot water
- 1 Glass jar
- 1 Food colouring
- 1 Essential oil

- Add one level teaspoon of gelling agent to the glass jar.
- Add hot water until the jar is two-thirds full. Stir with the teaspoon until the gelling agent dissolves. Take care to avoid splashing as you stir.
- Add a few drops of food colouring to give your mixture a bit of colour. Mix it in with the teaspoon.

- Now for the smelly bit. Add a few drops of an essential oil and stir the mixture again.
- Add a teaspoon of salt and stir well until it completely dissolves.

TEST AND TWEAK

The rate at which substances evaporate depends on the temperature. To investigate, place your air freshener in warm and cold places - where is the smell strongest? Add flowers, marbles or polished pebbles before the gel sets to make the air freshener look nice. If you use flowers, dispose of your air freshener after about a week before they get mouldy.

HOW IT WORKS

Gelling agents contain long, chain-like molecules called polymers. When they dissolve in hot water and then cool down, they form crosslinks with each other, creating a three-dimensional scaffold that holds water in place and keeps its shape - a gel. The essential oil also gets trapped in the gel. As a result, it evaporates into the air more slowly, keeping your room smelling fresh for weeks.

REAL WORLD: SCIENCE CONTACT LENSES

Soft contact lenses are made from a gel containing water and plastic. As well as making them comfortable, the gel allows oxygen to pass through to the eye's surface. That's important because the eye has no blood vessels and gets all its oxygen from the air.



Well done to Eléonore (y2 Ash base) for being a super scientist. She told school she really loves doing the science experiments and has even been to the library to borrow a book for young scientists. She would recommend this air freshener experiment above and bubble tower experiment below.



ACID AND BASE REACTION BUBBLE TOWER

Turn your kitchen into a chemistry lab! At the heart of this activity is a chemical reaction between two substances: one called an acid (you'll use vinegar) and one called a base (in this case, bicarbonate of soda). The reaction produces amazing bubbles that rise through a tower of oil and then fall back down. So that the effect is even more impressive, you'll also make an indicator - a colour-changing solution that turns red in acids and blue-green in bases - using some red cabbage.

HOW TO MAKE A BUBBLE TOWER

The first thing you'll need to do is to make the pH indicator. This involves soaking pieces of red cabbage in warm water. Once you've done this, you'll add vinegar, which is an acid. Then you'll carry out the reaction in a vase, which makes it easy to watch the colourful bubbles rise and fall. When you've finished, put the oil in the bin, not down the sink.

Time 10 minutes

Difficulty Easy

WHAT YOU NEED

- 1 Measuring jug
- 1 Red cabbage
- 1 Glass jar
- 1 Small bowl
- 1 Spoon
- 1 Bicarbonate of soda
- 1 Double vinegar
- 1 Vegetable or sunflower oil
- 1 Warm or hot water
- 1 Large bowl
- 1 Sieve

- Heat all the small bowl with warm water. Cut thin strips off the red cabbage, letting them fall into the water. Leave to stand for 10 minutes until the water turns a deep purple colour.
- Pour the mixture through the sieve into the large bowl. Put the cabbage leaves into the food recycling bin or compost.
- Pour 50 ml (1/4 cup) of the purple solution into the measuring jug. This solution is your pH indicator.

LIQUIDS AND REACTIONS

- Now add 50 ml (1/4 cup) of vinegar to your pH indicator. Don't take your eyes off the jug - the solution will turn bright pink almost instantly! It turns pink because of the vinegar's acidity.
- Pour oil over the bicarbonate of soda. You need to add enough oil to fill the vase about two-thirds full.
- Stir the pink vinegar into the vase. As soon as the vinegar meets the bicarbonate of soda, you'll see red bubbles rise up through the oil. Watch what happens over the next few minutes. As the reaction continues, the bubbles will change colour as the acidity of the liquid inside them changes.

REAL WORLD: TECHNOLOGY BAKING CAKES

You might have used baking powder to make a cake. Baking powder is bicarbonate of soda mixed with a powdered acid. When it's added to cake mixtures it gets wet, and the chemicals dissolve and begin to react. Heat speeds up the reaction, producing large bubbles of carbon dioxide that make the cake rise to its height.

TEST AND TWEAK

Scientists use indicators to measure how acidic or basic a solution is on a scale from 0 to 14. This is called the pH scale. Acids have a pH of less than 7, and bases have a pH of more than 7. Water, which is neither acidic nor basic, is called "neutral" and has a pH of 7. Cabbage-water indicator is red in acids, purple in neutral solutions, and turns blue-green or even green in strong bases.

HOW IT WORKS

The vinegar solution is acidic. It is also more dense than the oil, so it falls when you pour it into the vase. The acid reacts with the bicarbonate of soda, producing bubbles of carbon dioxide gas (mixed with vinegar solution), which are less dense than the oil and rise up. At the surface, the bubbles burst and any vinegar solution inside them drops down. The purple pigment in red cabbage is an indicator, a chemical that changes colour depending on how acidic a solution is. At first it is pink, but it turns blue-green as the acid is used up in the reaction.

RED-CABBAGE pH SCALE

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