

How to  
*stretch* and  
**challenge**  
students at  
home





# How can you use this booklet?

This document is designed to **support** parents in stretching and challenging their children at home. This is particularly aimed at students in KS3, with some elements suitable for KS4.

The aim is to provide challenges, ideas for visits and reading lists to support students in enhancing their knowledge at home. The idea is to improve the depth in knowledge and work on the skills developed in lessons.

We don't recommend you use this booklet daily. This should be used **weekly or fortnightly** through an academic year.

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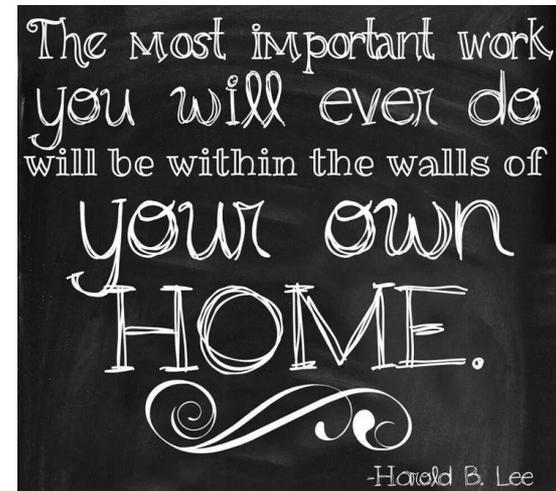
# Why is this booklet aimed at parents?

A modern study found that parents' impact on student attainment is five times more powerful than the influence of a pupils' schooling (Dr. Chevalier, Royal Holloway University, 2012). Beyond this particular study, many prove the **direct influence** parents can have on a child's examination **success**.

We believe that, with the support of parents, we will be able to fulfil the school **mission statement**:

- *We nurture independent, resilient, inquisitive and motivated lifelong learners*
- *By being compassionate and generous in spirit, we aim to be a community whose every member feels uniquely valued. We strive to enable all to be courageous individuals, having the integrity and the spiritual strength to make a positive difference in the world.*

The activities in this booklet should give students an opportunity to particularly practise the qualities of being **resilient, motivated and courageous** in their approach to becoming a well-rounded individual.



# Using the mastery approach at home



You should be aiming to support your child in **mastering** the basic skills underpinning each subject. You can find information about the skills being mastered in each subject on SharePoint or the curriculum pages of the school website.

Once a student has mastered these skills, rather than moving them on to new content, students should focus on **deepening** their understanding and their ability to apply their knowledge to a given skill/topic. This could be done by using the questions to the right.





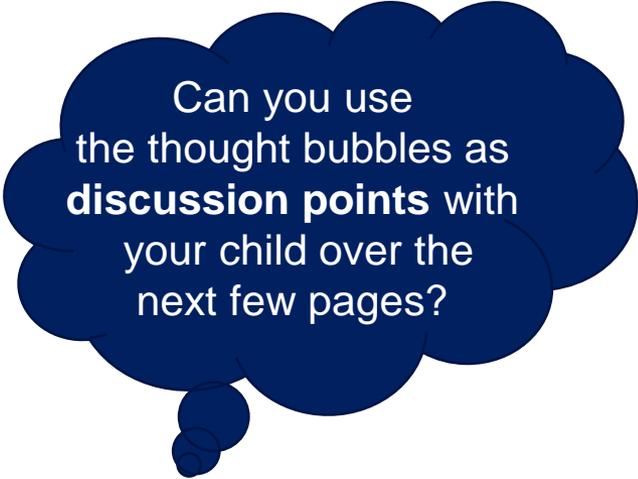
# Suggested reading and activities

Each department has compiled an extra reading list/set of activities for students. If there is ever a topic your child is particularly interested in, or they would like to prepare for an upcoming topic, this reading list should be the first port of call.

The books included are cross referenced with the school library, therefore many of these books should be readily available, or will become available through the school year.

These books/activities need not only be for extra learning. They can also be a useful tool for homework that requires research.

“The more you **read**  
the more **things** you know.  
The more that you **learn**  
the more **places** you’ll go.”  
-Dr. Seuss



Can you use  
the thought bubbles as  
**discussion points** with  
your child over the  
next few pages?

# Art and Design

The Art Department have a list of challenges that KS3 students should aim to complete by the end of Year 9.

1. Visit an exhibition
2. Watch a TV programme about Art
3. Listen to a Radio programme/podcast about Art
4. Buy an Art magazine and read it
5. Research a local Artist
6. Produce a piece of artwork on your own
7. Follow the ART department on Twitter and Instagram
8. Follow a gallery/artist on Twitter
9. Follow a blog on Instagram
10. Follow Mr Hartley, Miss Cox and Mrs Jones on Pinterest



Which artists inspire you?  
Why?

# Business Studies

As Business is not studied in KS3, these texts/articles are designed to help prepare for KS4.

## Journalism/Text:

- Financial Times
- Business Review

## Online:

- BBC Business
- Business Studies Online
- Financial Times
- Guardian
- HM Treasury
- Institute of Fiscal Studies
- Iplayer: Dragon's Den
- New York Times
- Office for National Statistics
- UNDP
- World Bank
- BBC Bitesize/Business
- BusinessEd



What is the biggest challenge facing business owners right now?



# Citizenship

Current affairs reading will be recommended during lessons. Deepening understanding of society can be achieved through fiction:

## Politics

- Animal Farm by George Orwell
- Lord of the Flies by William Golding
- Out of Bounds by Beverley Naidoo

## Human rights

- Trash by Andy Mulligan
- My Sister's Keeper by Jodi Picoult
- Lies We Tell Ourselves by Robin Talley

## Education

- Kill All Enemies by Melvin Burgess
- My Name is Mina by David Almond

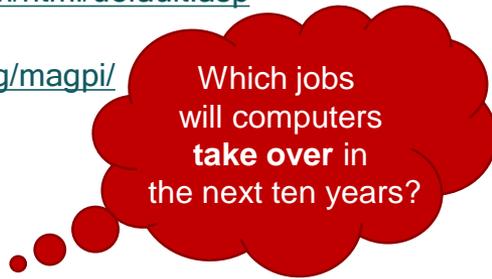


Is  
First Past the Post  
the fairest  
Voting system?

# Computing

## Key Stage 3:

- Hour of Code: <https://hourofcode.com/uk>
- Scratch (Year 7): <https://scratch.mit.edu/>
- GCF Global: <https://edu.gcfglobal.org/en/>
- Small Basic (Year 8): <https://smallbasic-publicwebsite.azurewebsites.net/>
- W3 Schools HTML Tutorial: <https://www.w3schools.com/html/default.asp>
- The MagPi (Magazine): <https://www.raspberrypi.org/magpi/>



Which jobs  
will computers  
take over in  
the next ten years?

## Key Stage 4:

- GCF Global: <https://edu.gcfglobal.org/en/>
- Computer Hope: <https://www.computerhope.com/>
- Khan Academy - Computing: <https://www.khanacademy.org/computing>
- W3 Schools Python Tutorial (Comp Sci): <https://www.w3schools.com/python/default.asp>
- Adobe CC Tutorials (BTEC IT): <https://www.adobe.com/uk/creativecloud.html>

# Design and Technology

## Textiles:

- Sew today, Sewing world
- Vogue magazine
- The Sunday times, Style magazine
- [www.isew.co.uk](http://www.isew.co.uk) is a useful online resource for tips, techniques and ideas.

## Resistant Materials:

- Materials for Design : Chris Lefteri
- Making It, Manufacturing Techniques for Product Design : Chris Lefteri
- Drawing for Product Designers : Kevin Henry
- IsoSketch Design Pad : Mark Wemyss-Holden
- [www.youtube.com](http://www.youtube.com) - channel DT IS MR SANDERS (follow project playlists)
- [www.technologystudent.com](http://www.technologystudent.com)

## Food:

- Inside the Factory, Eat Well for Less, The Great British Bake Off, Jamie Oliver - any tv or radio show cooking related.
- Helping with food preparation at home.
- Trying new foods whenever possible

# Drama

What's your favourite play?  
Why?

## Key Stage 3 Drama:

- National Theatre *All About Theatre*.
- *London's Theatres* by Zoe Wanamaker and Mike Kilburn.
- One of the most effective ways to extend your child's knowledge and understanding of Drama is to take them to the theatre. We recommend the National Theatre's £15 Travelex tickets, standing as a groundling at the Globe for £5, the £10 tickets for under-25s at the Young Vic, £18 youth concessions at the Yvonne Arnaud for £18, or seeing local amateur groups.

## Key Stage 4 Drama:

- *The Time Traveller's Guide to Elizabethan England*
- [www.theatrecraft.com](http://www.theatrecraft.com)
- [www.theatretrust.org.uk](http://www.theatretrust.org.uk)
- The National theatre's videos on backstage elements on YouTube (search National Theatre Backstage)
- [www.westendwhingers.wordpress.com](http://www.westendwhingers.wordpress.com)

# English

The English Department have a detailed list of suggested extra reading for Years 7-11. If you do not have access to these, please check the school website or contact your son/daughter's English teacher.

Alongside these reading lists that are already distributed you might think about:

- Read the Junior The Week Newspaper <https://theweekjunior.co.uk>
- Attend a theatre production produced by Guildford Shakespeare Company <https://www.guildford-shakespeare-company.co.uk/>
- Visit the Imperial War Museum <https://www.iwm.org.uk/>
- Magazine <https://literaryreview.co.uk/>
- Attend a theatre production at The Globe Theatre <https://www.shakespearesglobe.com/>



***Shakespeare is the greatest Briton ever. Discuss.***

# French

- Mary Glasgow magazine subscription- Take out a yearly subscription to a current affairs magazine aimed at KS3/4/5 students. A choice of 4 tiers of difficulty pitched to your own level. Students receive 5 magazines over the year. Each magazine contains listening, reading, writing tasks based on the students' comprehension of the content.
- Watch a show with French subtitles or watch in French with English subtitles.
- Download a languages app that will expand your vocabulary
- <https://www.1jour1actu.com/> - news articles in French written for those learning French.
- Find out about a controversial issue in France currently. Write an article in French summarising and hand it in to your teacher to check.



**Quel est ton mot français préféré?**

# Geography

Which person has had the greatest Impact in history?

# History

## KS3:

- Horrible Geography book series
- National Geographic magazine
- Documentary series - Blue Planet/Planet Earth/ Frozen Planet, Dynasties, Climate change, Mediterranean/ Indian Ocean/Russia with Simon Reeves, Equator from the Air

## KS4:

- 'Prisoners of Geography' by Tim Marshall
- 'Factfulness' by Hans Rosling
- 'The Almighty Dollar' by Dharshini David
- 'Divided' by Tim Marshall
- The Inquiry - BBC podcast channel.
- Today Podcast

Can you turn your house carbon neutral?

## Magazines and textbooks:

- BBC History magazine and website - subscriptions available or can be borrowed from school.
- Second hand GCSE textbooks on a topic are widely available online and can provide extra detail for KS3 students.
- Historytoday.com - articles about History and linking events today to the past
- There is extra reading available, including the works of historians, to borrow from the History department at school.

## Podcasts/documentaries:

- Dan Snow History HIT podcasts
- Versus History podcast
- Documentaries by: Andrew Marr, David Starkey, Susannah Lipscomb or Dan Snow.
- Radio 4 debates on historical topics

Another idea is to ask a relative about their perspective on a historical event.

# Mathematics

## Reading books

- Can you solve my problems? - Alex Bellos
- Things to Make and Do in the Fourth Dimension - Matt Parker
- Hello World - Hannah Fry (about AI)
- Maths on the Back of an Envelope - Rob Eastaway (rough calculations)
- The Code Book: The Secret History of Codes and Code-breaking

## Puzzle book

100 Maddening Mind-bending Puzzles - Rob Eastaway

## Websites

Nrich, UKMT, Numberfile video channel

## Apps

Flow, two dots, 2048 and Fill



What if we didn't count money using numbers?

# Music



What is your favourite piece of music? Why?

- Listen to Radio 3 - Composer of the week. Also, explore their podcasts.
- Concerts - attend any concerts; e.g Classical, Pop, Jazz, other - every musical experience is a growth experience.
- Look at the G-Live programme for the Royal Philharmonic Orchestra and book early!

## **Books:**

- The Music Lesson: A Spiritual Search for Growth Through Music by Victor L. Wooten
- Beyond Talent: Creating a Successful Career in Music by Angela Myles Beeching
- Wixen Randall D Plain & Simple Guide to Music by Randall D. Wixen
- The Art of Practicing: A Guide to Making Music from the Heart by Madeline Bruser
- The Rest Is Noise: Listening to the Twentieth Century by Alex Ross
- Basic Harmonic Progressions by John and Joyce Clough
- Shostakovich: A Life by Laurel E. Fay

# Physical Education

- Extra-Curricular Clubs: take part in a variety of extra-curricular school clubs and activities
- Sports Teams: join a club outside of school. This is a great way to make new friends and play at a high level, whilst gaining valuable life skills.
- Observation and analysis: while at a sports match/watching a sibling play/watching televised or live sport, analyse the performance suggesting areas of strengths and weaknesses.
- Lead a physically active family life: try to limit screen time and enjoy activities outside with your friends and family e.g. walks/bike rides/park run etc
- Follow sports news & relevant social media sites: e.g. learn about the importance of sport to your physical, mental and social well-being.
- Write a match report or coaching summary



Which key **characteristics** do successful athletes share?

# Religious Education

## Books:

1. Sage Train by Nicky Hansell
2. Sophie's World/ The Christmas Mystery by Jostein Gaarder
3. Life of Pi by Gann Mattel
4. Brave New World by A Huxley
5. 1984 by George Orwell
6. The Philosophy Files by Stephen Law

## Podcasts:

- Radiolab
- BBC Radio 4: In Our Time
- BBC Radio 4: Philosopher's Arms
- The Panpsycast Philosophy Podcast



Is war ever **justified**?

# Science

Alongside school textbooks, suggested reading content alongside homework, you may want to think about purchasing some of these books that cover the disciplines of Chemistry, Biology and Physics aptly:

- It's Elementary!: Putting the Crackle into Chemistry (Big Questions) by Robert Winston  
<https://www.amazon.co.uk/Its-Elementary-Putting-chemistry-Questions/dp/1405358041>
- Can you Feel the Force by Richard Hammond  
<https://www.amazon.co.uk/Can-You-Feel-Force-Questions/dp/1465439048>
- What Makes Me Me? By Robert Winston
- Horrible Science series by Nick Arnold
- Uncle Albert Series by Russell Stannard



Can science and religion co-exist?

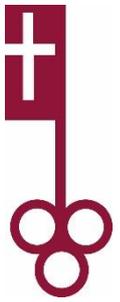
# Spanish

- Mary Glasgow magazine subscription- Take out a yearly subscription to a current affairs magazine aimed at KS3/4/5 students. A choice of 4 tiers of difficulty pitched to your own level. Students receive 5 magazines over the year. Each magazine contains listening, reading, writing tasks based on the students' comprehension of the content.
- Watch a show with Spanish subtitles or watch in Spanish with English subtitles.
- Practise translating simple articles you find online about areas that interest you.
- [www.Newsinslowspanish.com](http://www.Newsinslowspanish.com) allows you to listen to information about current affairs in Spanish tailored to those learning Spanish as a second language.
- Find out about a controversial issue in Spain currently. Write an article summarising in Spanish and hand it in to your teacher to check.



¿Cuál es tu palabra favorita en español?

# What else?



Reading quality news sources can be useful for developing critical thinking. It is suggested that students read beyond the 'Meanwhile Elsewhere' activities in tutor time at school and read:

- Broadsheets: The Guardian, The Times, The Independent, Daily Telegraph
- BBC News
- The Economist (subscription optional)
- Al Jazeera
- CNN

A large selection of newspapers are freely available at school.

- If you want to know what it is your child has been reading, it is a good idea to get them to prepare a short article review for you to discuss.



# Problem solving activities

It is important that pupils are exposed to a variety of complex questions. Confusing questions can be how a child develops problem solving and reasoning skills. Visiting an Escape Room could be an activity as a family that helps to develop a child's problem solving. For example, [Guildford Escape Rooms](#) is run by two business partners who used to deliver Maths workshops in schools - it is challenging and great fun.

Examples of short brain teasers you may discuss are below. All answers are easily found online after the discussion:

1. What makes this number unique - 8,549,176,320?
2. What is unusual about these words: revive, banana, grammar, voodoo, assess?
3. In 1990, a person is 15 years old. In 1995, that same person is 10 years old. How can this be?
4. A man takes his car to a hotel. Upon reaching the hotel, he is immediately declared bankrupt. Why?
5. You are in a cabin and it is pitch black. You have one match. Which do you light first: the newspaper, the lamp, the candle or the fire?

Longer brainteasers:

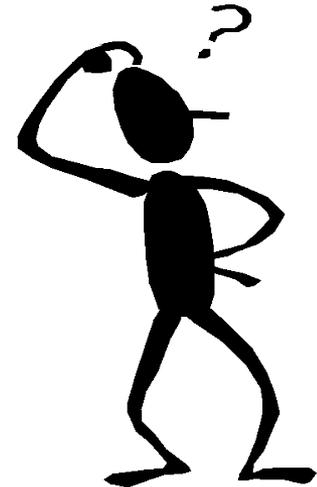
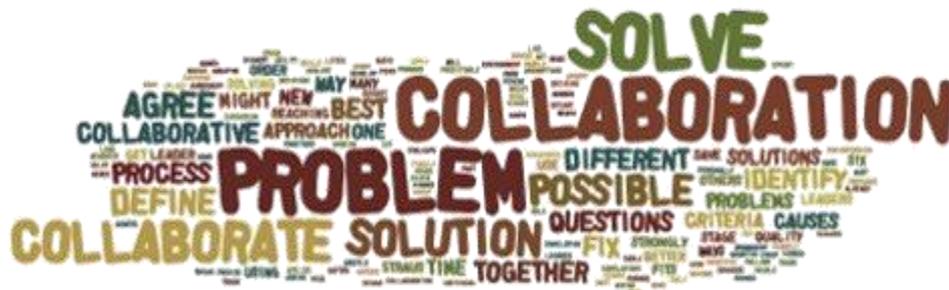
1. A lift is on the ground floor. There are four people in the lift including me. When the lift reaches the first floor, one person gets out and three people get in. The lift goes up to the second floor, 2 people get out 6 people get in. It then goes up to the next floor up, no one gets out but 12 people get in. Halfway up to the next floor up and the cable snaps, the lift crashes to the floor. Everyone else dies in the lift. How did I survive?
2. 14 of the kids in a class are girls. 8 of the kids wear blue shirts. 2 of the kids are neither girls or wear a blue shirt. If 5 of the kids are girls who wear blue shirts, how many kids are in the class?
3. Start with the number 524127. Use mathematical signs between all or some of the digits to create a mathematical equation that will be 100.



# Problem solving activities

Longer brainteasers (continued):

4. Turn me on my side and I am everything. Cut me in half and I am nothing. What am I?
5. If you have a 7 minute hourglass and an 11 minute hourglass, how can you boil an egg in exactly 15 minutes?
6. You are walking down a road and come to a fork. One path leads to a certain death; the other leads to eternal happiness. You don't know which is which. In the middle of the fork, you come across two brothers who know which road is which. One brother always tells the truth and the other always lies. You can only ask them one question. How do you determine which road to take?
7. During a recent census, a man told the census taker that he had 3 children. When asked their ages, he replied, "the product of their ages is 72. The sum of their ages is the same as my house number". The census taker ran to the man's front door and looked at the house number. "I still can't tell" she complained. The man replied "Oh right I forgot to tell you that my oldest one likes chocolate pudding". She now knows the answer. How?









# Further activities

- You may encourage your child to use **Podcasts** (Apple/Android app), or browse podcasts online, to search factual podcasts on an area of interest. For example, [Versus History](#) is a fantastic podcast for students hoping to improve their understanding of debates between historians on important historical issues.
- The school receives copies of some **major newspapers**, including with a financial focus. Students can ask their teachers/tutors about how to get hold of these. Papers with a financial focus should be requested via the Business Department. The Financial Times is a free subscription online if you use a school email address.
- Students are also encouraged to **join clubs of interest**, for example, joining a local Young Archaeologists group or volunteering at a National Trust property to improve local geographical or historical understanding. This should be purposeful, rather than with the purpose of filling a university application.
- Subscriptions to **academic societies** can be an easy way to seek challenge. Usually, these memberships come with a magazine subscription and free events. Examples are the Royal Horticultural Society, Historical Association, Political Studies Association, the Royal Academy of Music or Royal Academy of Engineering.
- For further recommendations and preparatory reading lists aimed at A Level students, please follow [this link](#) to a useful document from Cambridge University.

For Key Stage Four upwards, there are **free online courses** available to students to expand their skillset, whilst receiving an informal qualification.

- [Future Learn](#) - this website allows you to complete basic courses about areas that interest you. There is something for every student from Literature to Languages.
- [Open Learn](#) - this website provides more academic courses to give a deeper understanding on an area of interest.

# Local educational visits/events



Surrey is home to many opportunities to extend learning through educational visits. The aim of this section is to present visits/events to you you may not already be aware of in the local area:

- [University of Surrey lecture series](#): there are often weekly lectures by experts in their field at the University of Surrey Campus in Park Barn. These are **free** and mostly based on the STEM subjects.
- IMAG partnership of local schools - a partnership founded by the Royal Grammar School of local schools holding free events for the students of Surrey. Whilst the calendar has not been finalised for 2019-2020, it is likely the event at St Peter's will be a political literacy workshop in collaboration with a national charity. Students from all schools are welcome to attend any event. The website for this partnership is pending.
- [Historical Association](#): **free** lectures on History and Politics held in the town centre.
- [SATRO](#): A local charity that runs events through the year to support students interested in the STEM subjects.
- Duke of Edinburgh Award - It might be that you encourage your child to sign up for the Duke of Edinburgh Award at the school. There will be informative assemblies in the relevant years about this.
- Surreyvolunteering.com - Provides opportunities for children and adults to volunteer in communication, creativity, empathy, teamwork and adaptability.
- Guildford Book Festival 6-13 October 2019 - this includes a readers day where authors of well known books will discuss their work.
- It is also worth searching the [Eventbrite](#) website for upcoming lectures or educational events in the local area.

# How can you promote mindfulness at home?



Mindfulness refers to a person's ability to focus awareness on the present moment and being able to accept their thoughts and feelings. This is important in modern society where people can obsess with what is to come rather than focus on the here and now. Children are not immune to these anxieties. There are many resources out there to help you practise mindfulness at home. To work alongside this booklet, there are some activities that may promote mindfulness after an intense debate, but can easily be applied to KS3 test week also.

## Here are 20 ways to help cope with stress and promote mindfulness:

- Schedule relaxed time into every day
- Learn to whistle a new tune
- Prepare the next day the night before
- Ask for help with homework you find hard
- Break larger tasks you have coming up into smaller portions
- Read a poem
- Learn one type of origami using a YouTube tutorial
- Stretch for 5 minutes
- Go to bed earlier
- Make a list of everything positive you've experienced in the last week
- Read a short story
- Declutter your life – clean your room
- Practice breathing slowly using an app
- Keep a journal that you write in each night that is focused on the positives of your day and the goals for your future
- Write a note to a far away friend
- Learn the words to a new song you like
- Have a 3 second hug with a family member
- Read a 'long story' article
- Look at upcoming problems as challenges – write down how you will see them now
- Learn a new doodle



# Reflections

The next few pages will allow space for you to reflect on these activities for your child. The idea is for you to reflect termly. As stated previously in this booklet, it is not to be referred to daily. Weekly, or fortnightly, is more suitable.

Term 1:

List three things you have completed as a result of this booklet:

- 1.
- 2.
- 3.

What has been your proudest moment of this term outside of lessons?

What would you like to complete next term?

# Reflections



Term 2:

List three things you have completed as a result of this booklet:

- 1.
- 2.
- 3.

What has been your proudest moment of this term outside of school time?

What would you like to complete next term?

# Reflections



Term 3:

List three things you have completed as a result of this booklet:

- 1.
- 2.
- 3.

What has been your proudest moment of this term outside of lessons?

What new challenges would you like to take on over the summer?



**Want further support? Have feedback on how any of these activities worked?**

**Please contact Miss N Rana ([nrana@st-peters.surrey.sch.uk](mailto:nrana@st-peters.surrey.sch.uk))**