

# Challenge for All



## Vision and rationale

The overarching aim of Hawthorn High School is to improve educational outcomes for all learners and the outcomes for vulnerable learners fastest. The success of our schools in this region is the key to the future economic and social success of Wales.

Our ambition is that:

- Challenge **For All** is evident in our approach to Learning and Teaching and is underpinned by the key principles of Donaldson's Successful Futures Curriculum
- our learners will have opportunities to develop the best educational outcomes and are encouraged to be ambitious creative learners who are ready to learn, in line with 'Curriculum Wales' pedagogical practice
- the poverty-related attainment gap is reduced by making challenge provision accessible to all

- to develop a range of school-led professional learning opportunities which have an impact on outcomes

Hawthorn High School works collectively with its cluster schools, RCT MAT/Oxbridge, Seren networks and a range of other providers to produce lifelong learners who will be well prepared for life both academically and socially; who will be resilient and able to face the challenges that lie ahead.

All learners including more able and talented learners should develop themselves as ambitious and capable learners, equipped with skills as lifelong learners. As identified in Successful Futures (2015), we believe that children and young people should develop the four core purposes:

- ambitious, capable learners, ready to learn throughout their lives
- enterprising, creative contributors, ready to play a full part in life and work
- ethical, informed citizens of Wales and the world
- healthy, confident individuals, ready to lead fulfilling lives as valued members of society.

Our vision is to provide all learners at Hawthorn High School with the opportunities and skills to achieve their potential and beyond, to have high ambitions so that our children and young people in are high achievers and aspirational learners, able to compete with the best in the world.

There are three main elements within all lessons that pupils achieve their potential:

- Challenge
- Independence
- Higher Order Thinking Skills

There are two key aspects that underpin our Challenge **For All** (CFA) approach to teaching and learning. Firstly, ensuring challenge, independence and creative, higher-order thinking skills are applied to all teaching and learning, significantly improving pupil outcomes.

Secondly, pupils are offered a wide range of rich experiences and opportunities which enhance the curriculum and enable all pupils to develop potential talents and experience success.

## Enrichment Activities:

Our school plays an active role in developing provision for challenge across the local area and is therefore at the forefront of developments in challenge provision.



### For example: The recent Year 8 and 9 RCT MAT Conferences

This event provides the opportunity for learners to network with learners across all of the RCT secondary schools and engage with a range of leading practitioners and experts challenge and develop their thinking.

Learners engage in a range of learning opportunities organised with active partners. Such as: 'The Big Bang' STEM workshop and the Technocamps workshop which allowed students to explore specific aspects of Maths, Technology and Science, through

practical challenges. Students are introduced to the topic in a presenter-led discussion, and then encouraged to develop teamwork and co-operation skills through discussion and debate. Learners actively engage in a series of real-life questions with 'The philosophy Man' such as 'Does God exist?', 'Is it fair to expect the rich to pay for the poor?', 'What is happiness?'. This workshop aims to challenge their thinking and engage them in developing and expressing opinions by considering real life ethical situations. 'Maths Feast' provides learners with the opportunity to work with Swansea University to develop their higher level mathematical skills. Deepening thinking is high on the agenda with workshops from the Brilliant Club on 'Developing an Argument' and Nathan Keeble on 'Higher order Literacy skills in History'. The National Museum are keen supporters of and this year engaged Year 9 in a fascinating workshop on 'Tim Peakes', space and immersed Year 8 in discovering the key factors that create the conditions for 'Volcanoes and Earthquakes'. Techniquest bring another dimension to these conferences engaging learners in practical workshops that link Maths, Science and Engineering.



The collaboration with other schools and other partners is a key factor in the success of these conferences which take place at the University of South Wales. Indeed, choosing to host the event at a University is key to our ambition of raising aspirations and enabling our learners to recognise that they have the potential to attend and be successful at University.

There are many opportunities to engage in STEM activities specifically targeted at challenging our More able students in addition to the challenging activities planned in lessons:

## STEM

We have an active STEM club run by the Science Department and pupils are encouraged to take part in a variety of challenges and competitions. Our Year 7 have been successful in winning 'The Salters' Festival of Chemistry Challenge for two consecutive years and our two of our Year 8 pupils were finalists in the National Engineering and Sustainability Challenge. Further up the school a number of our learners have gained successful places at The Sutton Trust Summer School and The Nuffield Summer School. Additionally, we have provided a range of enrichment activities to stimulate and develop ambitious, creative enquiry based learning such as: Forensic Science Workshops, a STEM Careers Fare, Science and Photography Competitions and our Lead Creative Schools project which has developed interconnected thinking between Art and Science. Furthermore, there are a range of opportunities to engage in Mathematics challenges such as The UK Mathematics Trust Team Challenge, Maths outreach programmes at USW and our increasingly popular 'Chess Club'.

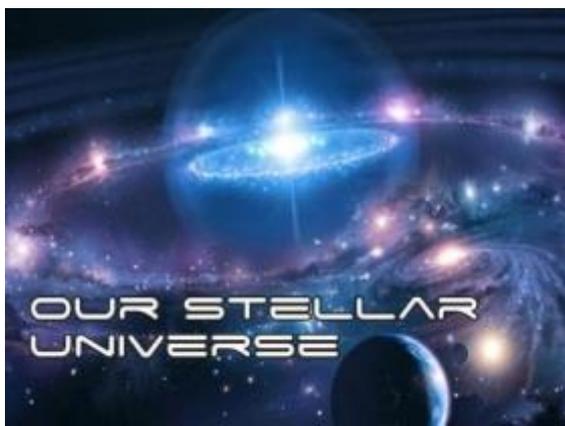
We are active partners with Techniquest whose challenge workshops allow students to explore specific aspects of Applied Engineering, Maths, Technology and Science, through practical challenges set by Techniquest presenters. Students are introduced to the topic in a presenter-led discussion, and then encouraged to develop teamwork and co-operation skills through discussion and debate. After the completion of each challenge, students regroup in order to reflect on what they have learnt during the session, evaluating reasons for successes and failures, as well as suggesting improvements. Each session is designed to increase students' awareness of the broad range of careers available within Science, Technology, Engineering and Maths. Year 7 and 8 have also had the opportunity to engage in trips to Techniquest for Mathmagic— a unique experience, exploring practical mathematics or to visit the Planetarium.

### CHALLENGE WORKSHOPS YEAR 7, 8 & 9

Back Stage Challenge  
Making Tracks  
Theme Park Challenge

### YEAR 10 AND 11 CHALLENGE WORKSHOPS

- Fordthorne
- GE



- Office for National Statistics
- Solving Problems with Physics
- Cardiff Harbour Authority
- Welsh Water
- Our Stellar Universe

Is the universe truly reflected in the peaceful, calm and unchanging sight that you see on a cloudless night?

Experience an approximately 13.8 billion year history of the universe from the Big Bang to the formation and evolution of the solar system, including the earth.

Our journey will finish billion years from now, posing the question: could our dying sun form a brand new chapter in the continuing story of our ever changing universe?



## The Brilliant Club

### The Scholars Programme

Hawthorn High School values the importance of developing aspiration for young people and to this aim has actively engaged in working with the Brilliant Club Scholars Programme. Teachers identify those pupils who have the potential to make a successful application to one of the most selective universities. Although university may not be for everyone, The Scholars Programme aims to give children an experience of university learning to help them make an informed decision.

- It is a programme that places university researchers (PhD Tutors) in schools.
- The PhD tutors teach university-style tutorials to groups of six pupils. Many of these researchers are lecturers to students at university level, so it is a unique opportunity for your child to experience university-style teaching.
- Pupils visit two leading universities.
- At the end of the programme pupils complete a final assignment ranging from 1000 to 2,500 words, depending on their Key Stage.

***“Brilliant Club has offered me many opportunities to expand my knowledge - Harvey Roderick”.***

***“It was fun to visit one of the best Universities in the world - Jessica Shepherd”.***

***“The Brilliant Club has shown students that anything is possible if you are willing to work hard”. - E O'Brien”***

**There are a range of creative opportunities to challenge our learners such as:**

- Filming opportunities in collaboration with ‘Our School CBBC Production ‘and Digichemistry
- Performing in School Productions

- The School Shakespeare Festival in collaboration with our cluster schools
- Cluster concerts and productions
- The Cory Brass Band
- Our Cross phase Expressive Arts Successful Futures project
- Lead Creative Schools
- Film Club
- Philosophy Club
- History WW1 project
- The Cluster Sports Festival, where our Sports Leaders have the opportunity to lead and plan the event
- WRU Rugby Hub
- Sports Teams and Competitions

## University

### Hawthorn High School are active participants in the Seren Network

In Year 10,11,12 and 13 we engage with a range of University's and are actively part of the Seren Network. Learners are afforded 1:1 support with application processes and are invited to engage in:

- University Speakers Visiting School – Applying for Competitive Universities
- Open Days and Work Experience
- Oxbridge Conferences and Taster Days

Seren is a network of regional hubs designed to support Wales' brightest sixth formers achieve their academic potential and gain access to leading universities.

The Seren Network 'Inspires students about future career aspirations – nurturing Wales' talented students to give them the best possible education and training and make the most of the opportunities available to them

The network links students with leading UK universities, providing information on university courses and advice on how to choose between them. The network also provides support and information on university summer schools, workshops and other activities taking place across the UK which might be of interest. There are also opportunities to interact directly with university staff and tutors and current undergraduates. For more information see Seren section at [rctmat.co.uk](http://rctmat.co.uk)

There are so many more opportunities and challenges available at each key stage than those outlined above, however, there simply isn't room for all of them to be outlined on our website. Please see our newsletter for further examples.

### Websites to support More Able and Talented Students and their Parents

NACE <http://www.nace.co.uk/>

London Gifted and Talented <http://londongt.org/>

MENSA <http://www.mensa.org.uk/gifted-talented>

Aspire <http://aspire-ma.com/>

How stuff works <http://www.howstuffworks.com/>

Excellence East <http://www.excellenceeast.org.uk/>

Hoagies <http://www.hoagiesgifted.org/>

Learning Wales <http://learning.gov.wales/>

### Keeping up with Current Affairs

We recognize the importance of encouraging in all our students an awareness of current affairs. Below is a list of organisations who can keep you up to date with current news and opinions as well as links to political institutions.

<http://www.ukyouthparliament.org.uk/>

<https://www.gov.uk/government/organisations/prime-ministers-office-10-downing-street>

<http://www.thetimes.co.uk/tto/news/>

<http://www.bbc.co.uk/>

<http://www.theguardian.com/uk>

## **Challenge links and opportunities**

### **Mathematics:**

There are different ways in which teachers can meet the needs of their most able mathematicians. The most prevalent in UK schools is through **acceleration** - pupils move through the school

curriculum faster than others, often taking assessments or examinations early. For *some* highly able students this is fine, so long as these three conditions can be satisfied:

- the pupil should have absolute mastery of the content so far - i.e. they would be expected to get a really high score on any assessment
- they should be emotionally and socially secure enough to be working at a higher content level (this is less important in maths than, say, in English, but does matter if students are to be working with older pupils)
- there should be a clear pathway through to the next stage of mathematical education - ensuring continuity and progression and not a 'stop-start' or repetitive experience.

## Nrich Supporting Highly Able Mathematicians - Teachers

Age 5 to 18

<https://nrich.maths.org/7741>

- Mathematical Challenges for Able Pupils in Key Stages 1 & 2

- [Mathematical Challenges for Year 1 and Year 2](#)
- [Mathematical Challenges for Year 3 and Year 4](#)
- [Mathematical Challenges for Year 5 and Year 6](#)
- [Puzzle Solutions](#)

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[http://www.lancsngfl.ac.uk/curriculum/primarymaths/index.php?category\\_id=608](http://www.lancsngfl.ac.uk/curriculum/primarymaths/index.php?category_id=608)

Mathematical Challenges for able pupils KS1 & 2

<https://www.egfl.org.uk/sites/default/files/maths%20puzzles%20all.pdf>

## Challenge links and opportunities

### English:

Good literacy skills underpin effective learning for all learners, whatever they are studying. These skills support effective communication, and equip learners for achievement and success within

education, life in the wider community and the world of work. Developing higher order literacy skills for our learners is therefore a priority for all schools.

<http://learning.gov.wales/docs/learningwales/publications/100426higherorderliten.pdf>

<https://www.teachhub.com/teaching-strategies-enhance-higher-order-thinking>

<http://www.readingrockets.org/article/how-increase-higher-order-thinking>

<https://www.teachingchannel.org/video/developing-better-questions>

## **Challenge links and opportunities**

### **Humanities:**

Through the study of Humanities (History, Geography and Religious Education), children make sense of their world and enrich their understanding of it. We believe it is a tool of learning and communication and that skills developed through the study of Humanities are applicable in everyday life. It fires curiosity and sparks a sense of belonging to the bigger picture through time and space.

Through the cross-curricular teaching of Humanities we also promote pupils' higher order skills in Literacy, Numeracy and ICT as well as developing their thinking skills.

### **Cross-curricular links**

#### **Literacy**

Humanities contribute significantly to the teaching of literacy by actively promoting the skills of reading, writing, speaking and listening. Children develop these skills in many ways including through writing and reading reports, letters, and explanatory texts.

#### **Numeracy**

Humanities contribute to numeracy in a variety of ways. Pupils use numbers and analytical skills, e.g. statistics, timelines. They also have the opportunity to use and apply skills needed to interpret and handle data in the form of graphs, maps and diagrams, e.g. census information, map skills.

Humanities can be linked to work in other curriculum areas including: art, DT, Food Technology, Science, Music.

<https://www.nace.co.uk/blog/4-big-questions-stretch-more-able-learners-humanities>

<https://www.thephilosophyman.com/>

<https://p4c.com/>

<http://www.philosophy4children.co.uk/>

## **Challenge links and opportunities**

### **Art and Design:**

Gifted and talented pupils in art and design are those who: show distinctive skills in their ability to make, record and manipulate in visual and/or tactile form; have a very good knowledge and understanding of the subject area; are able to interpret, critically appraise, problem solve, take risks and develop information, materials, thoughts and ideas; and show the tenacity and ability to imagine, create and express in visual and/or tactile form in order to make a unique and original contribution to art and design.

[http://www.nsead.org/downloads/Art\\_Making\\_the\\_most.pdf](http://www.nsead.org/downloads/Art_Making_the_most.pdf)

<https://www.tate.org.uk/artist-rooms/artists>

<https://www.royalacademy.org.uk/>

<https://museum.wales/>

<https://www.moma.org/>

<https://www.guggenheim.org/>

[https://resources.hwb.wales.gov.uk/VTC/ngfl/guidance/more\\_able\\_talented/eng/links\\_agencies.html](https://resources.hwb.wales.gov.uk/VTC/ngfl/guidance/more_able_talented/eng/links_agencies.html)

[https://thebigdraw.org/venue/Wales\\_Millennium\\_Centre/701](https://thebigdraw.org/venue/Wales_Millennium_Centre/701)

<https://newportphotomathon.com/>

## **Challenge links and opportunities**

### **Music:**

Pupils who have a talent for music may demonstrate confident instrumental skills or may show a high level of intuition when responding to a variety of music. They will generally possess a high level of skill in 1 or more of the 3 strands of Listening, Composing and Performing. This will be evident at key stage 3 and those pupils deemed gifted and talented may choose to keep the subject for GCSE level and beyond

- Gifted and talented pupils should be encouraged to critically evaluate their own work, identify their strengths and weaknesses, and improve their own learning

- Gifted and talented pupils are encouraged to show leadership and to share their musical expertise with lesser experienced students, particular during ensemble work.

Pupils who are identified as gifted talented in music may, for example, display the following skills across the 3 subject strands of ***Listening, Composing and Performing***:

Listening:

- be captivated by sound and engage fully with music
- listen actively and respond intuitively to a wide range of music
- show a high level of musical awareness in written responses to music excerpts
- manage simple aural dictation exercises
- be able to accurately sing or play back musical motifs as played by the teacher

or recorded source

Performing

- demonstrate a high level of proficiency on an orchestral or classroom instrument
- memorise music quickly without any apparent effort, be able to repeat more complex rhythmical and melodic phrases given by the teacher and repeat melodies (sometimes after one hearing)
- demonstrate the ability to communicate through music, for example to sing or play with musical expression and with confidence
- perform with a degree of confidence in front of peers and engage fully in the performance evaluation process

Composing:

- Show strong preferences, single-mindedness and a sustained inner drive to make music.
- Demonstrate a flair for making up original ideas as well as drawing on other musical influences to compose their own music.
- Show an ability to manipulate or develop a short musical idea into a longer work
- Show an ability to write down or record their original musical ideas

<https://www.rctcbc.gov.uk/EN/Resident/SchoolsandLearning/Musicalinstrumentandvocaltuition.aspx>

<https://www.btmbrassband.com>

<http://www.nyaw.org.uk/national-youth-orchestra-of-wales/>

Links:

<https://www.nace.co.uk/>

<https://www.suttontrust.com/>

<https://www.southwales.ac.uk/about/schools-and-colleges/outreach/>

<https://www.cardiff.ac.uk/study/undergraduate/teachers-and-careers-advisers/schools-colleges-outreach/school-and-college-outreach-visits>

<https://www.cam.ac.uk/subjects/outreach>

<http://www.ox.ac.uk/about/oxford-access/outreach>

<https://museum.wales/>