

# Heckler

Week 28 Published 06/05/2022



**HECKMONDWIKE**  
GRAMMAR SCHOOL

You will have read in a previous edition of the Heckler, that a group of HGS students, supported by Mr Snowden, signed up for the surfers Against Sewage Initiative "Plastic Free Schools". The scheme empowers students with a passion for environmental changes to stand up for their beliefs and challenge the powers that be in industry and politics to take action on single-use plastic.



This week we received the following email:

I'm delighted to announce that Heckmondwike grammar have officially achieved Plastic Free Schools Status!

**WELL DONE!**

Your collective actions are creating waves of positive environmental change, achieving Plastic Free Schools Status is just the beginning, the hardest part is maintaining this level of pupils and staff commitment to keeping the school free of unnecessary single-use plastic.

Thanks again for the time, energy and enthusiasm you have put into this project.

We are really proud to have worked with you during this programme and look forward to working together again soon.

Great news – you can now share the news by clicking the link below which will take you to a public share page to celebrate completing becoming an accredited school! There is an option to share the page to Facebook or Twitter so you share the news on your socials too! [Share Your Work](#)

Best wishes,

Emily, Laura & Annie (Surfers Against Sewage Education Team)

**WELL DONE TO 08C1!**

Your commitment has helped to create a positive environmental change, in school which has successfully resulted in you achieving Plastic Free Schools Status the work really starts now.

All our Social Media communications will soon proudly bear the Plastic Free Schools logo as well as our school website.

Thanks again for the time, energy and enthusiasm 08C1 and the school at large have put into this project.

**Mr Snowden**



**Lucy Chapman, seen here with Mr Snowden managed the process, all 5 objectives, from start to finish**

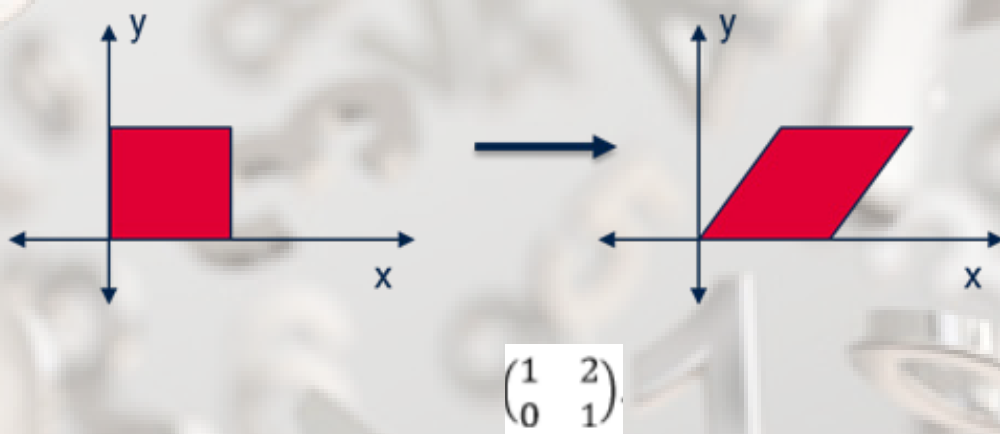
# Subject Focus: Mathematics

At present, we are busy preparing for external examinations. In fact, there are sixteen external mathematics examinations taking place this summer – starting with the year 12 AS Further Mathematicians with their first exam on the 16 May.

AT HGS, we offer students the opportunity of studying an AS in Further Mathematics in year 12. Some of these students will carry on and complete both the A level in Mathematics and Further Mathematics in year 13 and some will decide to just complete the single A level in Mathematics in year 13.

The Further Mathematics AS/A course is designed to stretch and challenge mathematic students and prepare them for University courses in mathematics and related quantitative and scientific subjects. Two examples of important Further pure topics are below:

## Matrices



Matrices are arrays of numbers such as  $\begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}$ . They can be used to solve sets of simultaneous equations and to represent transformations such as the shear shown above.

## Complex Numbers

$$\sqrt{-1} = i$$

$$a + bi$$

Real part      Imaginary part

Complex numbers are based on the 'imaginary' number  $\sqrt{-1}$ . They lead to the study of lots of new areas of mathematics.

Here are some of our year 12 students' responses to studying Further Maths:

Further Maths is an excellent experience so far. In comparison to GCSE, it is much harder obviously, and the pace is far quicker than GCSE. However, as someone who did Maths for interest, it has certainly delivered with the pure topics ranging from matrices to conics and hyperbolics to complex numbers. FM is also highly sought-after, if not required, by many top universities for maths, science, computing, and engineering courses, so looking ahead might prove useful.

Zain

## Subject Focus: Mathematics continued

In Year 11, I loved Level 2 Further Maths but was so undecided on whether I wanted to take it for A-Level. In fact, it took me all the way to GCSE results day to decide to add it as a 4th a level. Further Maths is obviously tough and at times, it can feel easier to give up than carry on. The content is heavier, there is a lot of it and the pace is ridiculously quick. However, I also find it the most rewarding out of all my subjects and the one that I want to explore and develop outside of the curriculum. To any current Year 11s, if you have a passion and drive for Maths, Science and Engineering, or thrive under pressure and enjoy new challenges, further maths is the subject for you.

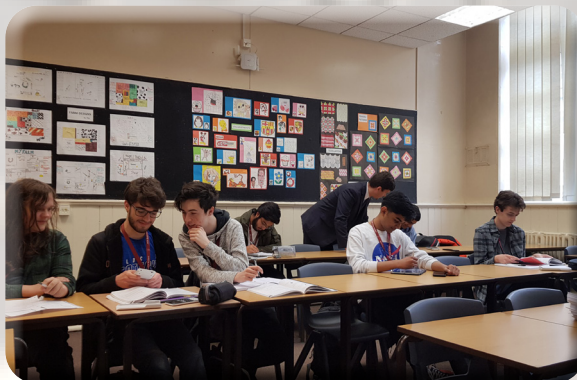
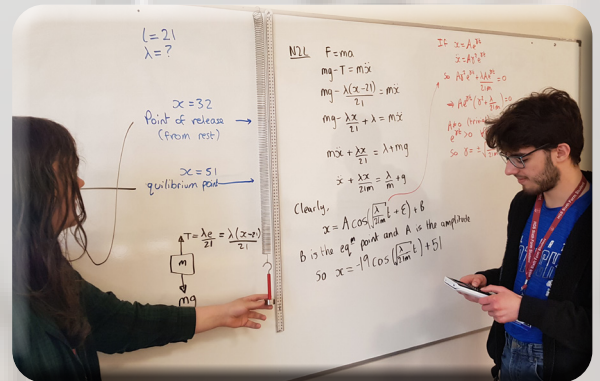
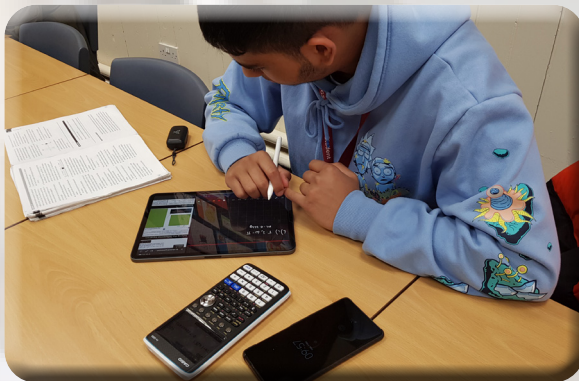
Izzy

I chose Maths and Further Maths alongside Physics and Computer science for my A level subjects. I'm naturally good at maths and thought FM would complement my Maths A level. It is a big jump from GCSE to Year 12 Maths, however it is manageable and definitely worth considering if you enjoy the subject. Outside of lessons, extra time is needed to keep up and I am undecided whether I will carry on to year 2 Further Maths. My advice would be to take Further Maths if you have a real passion for the subject and your predicted GCSE grades are good.

Sam

Further Maths is an interesting subject because you get to build on pre-existing knowledge and algebra skills when looking at some topics like conics, but you also learn about new bits of maths such as complex numbers and matrices. I intend to continue the subject in Y13.

Here are some photos of our year 13 Further Mathematicians in their lessons



We are also really proud of Reuben Price and Ellis Speight who both are holding offers to study Mathematics at Cambridge. Alongside their A-level examinations, they also have an extra two tests (known as STEP) in June. These consist of two 3-hour paper-based papers.

## February Half term Maths Challenge successes!

The charity Mathematical Education on Merseyside has been running Challenge and Senior Challenge take-home maths competitions in February half term since the late 1970s. The Challenge is aimed at students in Years 7 and 8, and Senior Challenge is aimed at those in Years 9 and 10. A third competition, Open Challenge, organised by the Liverpool Mathematical Society and aimed at students aged 18 and under, runs at the same time.

This year around 25 HGS students in total submitted entries to these challenges and last week we got the results, which exceeded our success last year! There were a fabulous FOUR prize and/or certificate winners for the Challenge and a stupendous SEVEN for the Senior Challenge. This is a fantastic result given that there were over 1600 entries for the Challenge and over 1100 for the Senior Challenge, with entries coming from 129 different schools. There were also two winners from our year 12 entries to the Open Challenge.

The names of those HGS students who submitted winning entries are given below:

### Open Challenge (Under 18s)

Rohit Kamath 12SCE Highly Commended  
Zain Alkhalidi 12KSM Certificate of Merit

### Challenge (Y8 and under)

Tahmeed Bhuiyan 7JMG Second Prize  
Bhoomi Marathe 7ZBR Highly Commended  
Vishaka Vijayaruban 8GSN Certificate of Merit  
Anshu Avasarala 8TBM Certificate of Merit

### Senior Challenge (Y10 and under)

Ayan Gupta 10EGL Third Prize  
Tao Li 10RES Third Prize  
Zaynah Hussain 9RAB Highly Commended  
Abdul Rehman Aziz 9JJS Certificate of Merit  
Suchir Gupta 10PRM Certificate of Merit  
Samiksha Iyer 10JDR Certificate of Merit  
Yawei Li 10AHH Certificate of Merit

The theme of the Challenges this year may have been Famous Artists but the focus was very much on the mathematics, as you can see from these sample questions!

### **Whistler's Mother**

Anna Whistler was asked how old she was when her son painted her. She replied in the form of a riddle:

If to my age there added be,  
Half of it, a third of it and three times three,  
Six score and ten, the sum you'll see,  
So tell me, please, what age I be?



### **Girl with a Pearl Earring**

To match her pearl earring Griet also has a string of thirty three pearls. The middle pearl is the largest and most valuable and the others are selected and arranged so that, starting from one end, each successive pearl is worth £100 more than the preceding one, right up to the big pearl. From the other end the pearls increase in value by £150 up to the large pearl. The whole string is worth £65,000. What is the value of that large pearl?

### **Johannes Vermeer (1665)**



(Solutions to these challenge questions are available on request from Ms Jarvis)



## Headteacher's Breakfast



**Year 11 Recipients**

**Last term's top performers  
having had breakfast with the  
Headteacher**



**Year 10 Recipients**



**Year 7 Recipients**

**Performance is calculated on  
attendance, attitude, behaviour  
and achievements**

**Well done to all!!**



**Year 11 Recipients**



Heckmondwike Grammar School  
Youth Theatre Presents:

# TREASURE ISLAND

Tuesday 24th May

7:30pm

Tickets: £5

HGS Drama Studio



HECKMONDWIKE GRAMMAR SCHOOL

*Presents a*

# Spring Concert

Featuring our bands, choirs and ensembles

🎵 THURSDAY 12 MAY - 7pm 🎵

Tickets £5



# Parent Notices

**Thursday 12 May**

Year 9 HPV Vaccination (2nd dose)  
Spring Concert – tickets available at a cost of  
£5.00

Book your tickets [here](#)

**Friday 13 May**

Year 11 Geek Day & Leavers' Barbecue

**Thursday 19 May**

Year 12 Virtual Parents Evening  
Details to be issued w/c 9 May

**Friday 20 - Saturday 21 May**

Bronze DofE Expedition

**Tuesday 24 May**

Youth Theatre presents  
Treasure Island

Book your tickets [here](#)

**Please Note : school is closed to students on  
Friday 25 June due to a staff training day**





# Be Exam Ready

Studying and preparing is vital to success in exam

It is difficult to know how best to manage your preparation until you have some experience. There is no right or wrong formula to prepare it is down to the individual to work out which strategies, processes and techniques best suits their learning ethos. By trying different methods and by monitoring yourself it will be easy to find out which techniques are useful and will help to identify where there are still difficulties, doubts or motivation problems.

Over the coming weeks we will be sharing coping and revision strategies, links to revision techniques and tools, resources that will be useful to students in preparation for the summer exams.

## Phrontifugic Webinar

1 - The link below allows parents/students to register for a phrontifugic webinar from eedi family all about reducing anxiety and exam stress.

[https://us02web.zoom.us/webinar/register/WN\\_2IAGm\\_ALRxKGMcxnM7cQLQ](https://us02web.zoom.us/webinar/register/WN_2IAGm_ALRxKGMcxnM7cQLQ)

2 - Challenge - can you help get the word phrontifugic accepted as a word in collins dictionary?! Visit the link and use the word whenever you get a chance!

<https://www.collinsdictionary.com/submission/24530/Phrontifugic+>

## Subject Help



### Geography

#### GCSE

- Tutor2U GCSE Geography Revision Blast - <https://tinyurl.com/bd3setyj>
- Tutor2U Daily Revision Question on Instagram - <https://tinyurl.com/mustv6j7>
- Internet Geography Quizzes - <https://tinyurl.com/3hva52tb>

#### A Level

- Tutor2U A'Level Geography Revision Blast - <https://tinyurl.com/yckhxc7e>
- Coventry University Webinar Revision Series - <https://tinyurl.com/ycy5hn68>



### Business

#### GCSE - Edexcel

- Attempt past papers <https://qualifications.pearson.com/en/qualifications/edexcel-gcses/business->
- Seneca learning
- GCSE Bitesize
- Course companion (in teams)
- Assessment mats - knowledge questions that you can practice over time
- Create revision resources to test yourself and share with friends e.g. create a cross word to test definitions

#### A Level Business - AQA

- Attempt past papers <https://tinyurl.com/2p84exax>
- Seneca Learning
- Use the course companion (in teams)
- Use tutor2u
- Create revision resources you can test yourself with repeatedly over time
- Remember you need to have real world knowledge of businesses to apply

# Be Exam Ready



## Mathematics

KS3 - Use your exercise book to make a revision list of topics you have covered and new formulae that you have come across.

Part of your revision should be learning those new formulae by heart.

Most of your revision should be practising techniques and doing questions where you have access to the answers/worked solutions so that you can check them.

Good sources of materials are:

- your exercise book - the examples from class and your classwork where you have marked/annotated in green pen
- Hegarty <https://hegartymaths.com/login/learner>
- Drfrost maths <https://www.drfrostmaths.com/login.php>
- Corbett Maths <https://corbettmaths.com/>

KS4/5 - In addition to the above you need to make sure that you do further work practising exam style questions. We do AQA and you can find past exam paper questions here as well as model solutions.

- GCSE - <https://mathsmadeeasy.co.uk/gcse-maths-revision/aqa-gcse-maths-past-papers/>
- A level: <https://mathsmadeeasy.co.uk/a-level-maths-revision/aqa-past-papers/>

Past paper questions broken down by topic:

GCSE: <https://www.mathsgenie.co.uk/gcse.html>

A level: <https://www.mathsgenie.co.uk/newalevel.html>

Note these are Edexcel rather than Aqa but the model solutions and videos are particularly useful



## Economics

Here are some links to new resources designed to support A-Level Economists from Tutor2u.net

[Update on the UK Economy | Five Short Videos on the Key Stats](#)

This series of five short videos provides an overview of many of the key stats on the UK economy to help students add contextual application into their 2022 exam paper answers!

[Labour market economics - topical issues explained with diagrams](#)

In this new series of six short videos, we look at building labour demand and supply analysis to support answers on a range of topical labour market issues.

[Daily Economics revision on Instagram](#)

Revision Link for GCSE Physics

<https://www.physicsandmathstutor.com/physics-revision/gcse-aqa/>



## Physics

# HGS

trips

