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## Schools Engagement at Cardiff School of Medicine

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This report highlights an overview of  
schools' engagement initiatives run  
during academic year 2021-22



## Introduction

At the School of Medicine, there is an enormous amount of engagement work aimed at inspiring school children across Wales, to excite them about science and the wide range of healthcare career opportunities available.

Our flagship Science in Health programme involves a team of professional engagement staff and academic staff from all levels of seniority from PhD to Professorial level. Other engagement initiatives of members of staff and students are supported, including the hugely successful Widening Access to Medicine Mentoring Scheme (WAMMS).

During this academic period, the coronavirus pandemic continued to disrupt society, including schools. As a result, all Science in Health activities were delivered digitally.

At the end of this report a table of the total number of schools and colleges that participated in engagement activities facilitated by the School of Medicine in academic year 2021/22 is provided. This table indicates the Secondary Schools located in areas with the highest levels of deprivation according to the Welsh Index of Multiple Deprivation (WIMD) and the activity they have engaged with.

In total, the School of Medicine engaged with 8 colleges, 69 secondary schools (9% located in areas of highest deprivation), in Wales. Over 37% of all schools and colleges that engaged with the School of Medicine in this academic year participated in more than one engagement activity.

## Science in Health (SiH)

Throughout 2021/22 academic year the following Science in Health activity took place online:

- Public lecture series (October 2021 – March 2022)
- Life Sciences Challenge quiz (February 2022 – September 2022)
- Science in Health Live Online (March 2022)



### Science in Health Public Lectures

The Science in Health Public Lecture series continues to attract large audiences of interested individuals. The 2021-22 series was delivered digitally via Zoom and successfully drew audiences from across the UK and beyond.

The lectures have three main aims - to explore areas of concern in health care, to present new research on health issues to the public and to inspire the next generation of life science researchers.

The lectures, held monthly on Thursday evenings from October to April, are recorded and available on the [Cardiff University Science in Health website pages](http://Cardiff University Science in Health website pages)

**Reach:**

- Up to 100 members of the public, secondary school pupils and professionals joined each online lecture.

**Impact:**

- Provides information on public health and current medical research and opportunities to engage with experts and ask questions.
- Provides a broad perspective for students considering a career in a variety of areas of healthcare and biomedicine.



**Descriptors of the lectures are shown in this word cloud:**

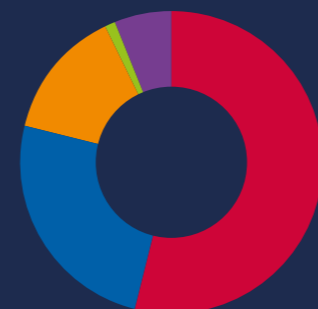


**Attendees joined from:**



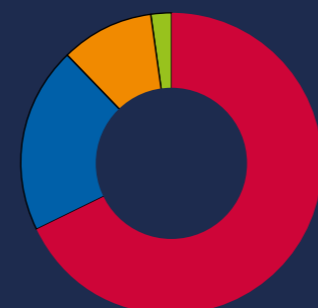
Cardiff	37%
England	7%
Rest of Wales	47%
Scotland	3%
Rest of World	6%

**The reason for attending was:**



To be informed	54%
To be inspired	25%
To take part in a webinar	14%
To put their questions to an expert	1%
Other	6%

**As a result of attending, attendees:**



Felt their knowledge of the subject had improved	68%
Would like to find out more about the subject	20%
Would undertake further research	10%
Would take no further action	2%

## Science in Health - Life Sciences Challenge/Her Gwyddorau Bywyd

The Life Sciences Challenge/Her Gwyddorau Bywyd is a national inter-school quiz competition, delivered in Welsh and English, aimed at Year 10/11 pupils.

Every year, a new quiz is designed and delivered by PhD students, early career researchers and staff. The competition is run in both English and Welsh, giving schools the choice of medium they wish to enter.

The event gives pupils the opportunity to meet young scientists working locally, and tests pupils' ability to analyse data and apply logic and learned knowledge to unfamiliar concepts, helping them to understand the living world.

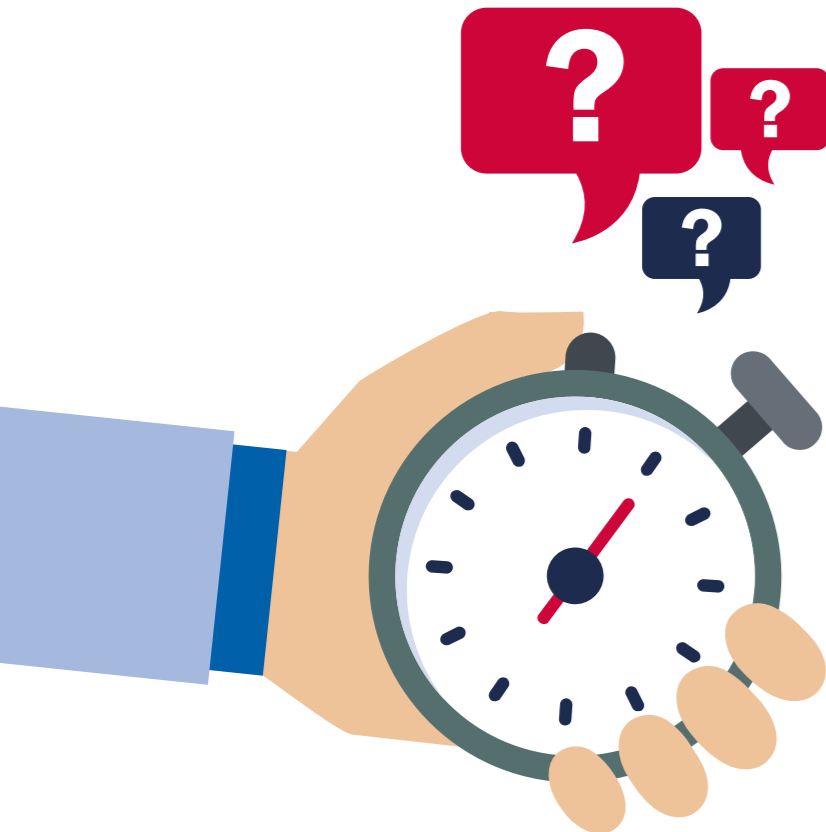
The online preliminary round took place in February 2022. The quarter finals and semi-finals took place online via Zoom in June and July 2022. The English and Welsh finals took place in the School of Medicine, Heath Park Campus in September 2022.

### Reach:

- 161 teams (644 pupils) from 36 schools across Wales entered the online quiz.

### Impact:

- Raising awareness and inspiring pupils to consider the possibilities of careers in science and medicine
- Increasing understanding of the role of science in health
- Promoting the work and research of the University in the science and healthcare disciplines
- School pupils networking with other Schools
- Recognises and awards achievement in maths and science



St Martin's winning team 2022



Ysgol Glantaf winning team 2022

## Science in Health Live Online

Science in Health Live! continues to provide year 12 pupils with opportunities to discover more about the latest internationally recognised science discoveries taking place at the School of Medicine, and how they are having a real impact on medical and clinical practice worldwide.

This unique event also demonstrates the wide range of careers available in science and health and inspires its attendees to consider following a career path in those areas.

The 2022 event took place virtually, offering a combination of over 25 pre-recorded resources and five live online sessions over two days in March 2022. A total number of 65 pupils registered and received the interactive programme with links to all resources. Attendance at the live sessions averaged around 20, which was low in relation to the number who registered for the event. There could be a number of reasons for this including 'zoom fatigue'.

The opportunities offered to participants included:

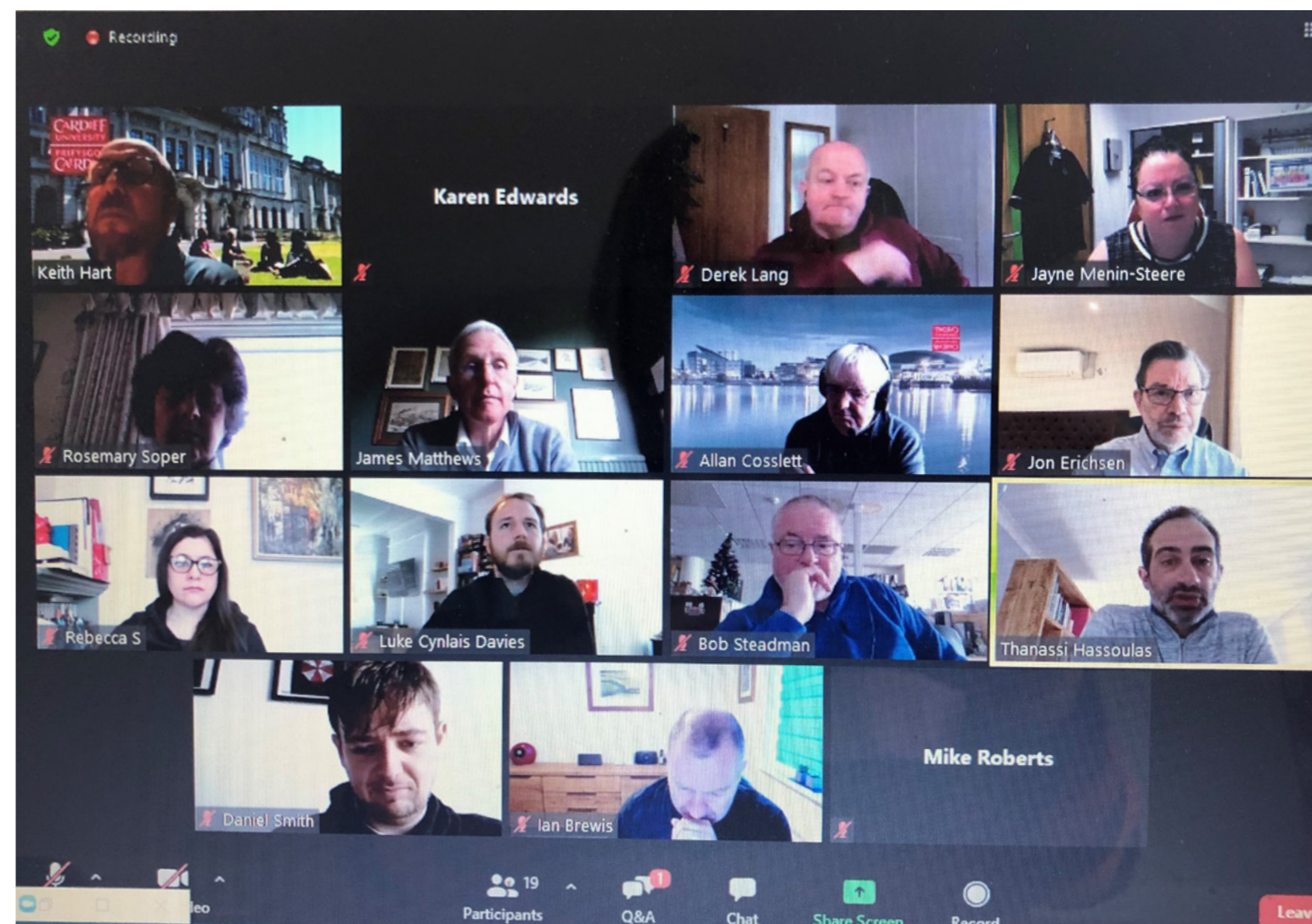
- Meeting a range of our researchers and lecturers.
- Taking part in our 'Guess the Healthcare Professional' session to gain an understanding of some of the wide range of careers available.
- Questioning our panel of scientists working on COVID 19.
- Seeing inside some of our labs and hearing about the latest ongoing research.
- Asking questions of an Expert Panel (to include medical undergraduates, PhD Students, Early Career Researchers, Admissions staff).
- Participating in an online science quiz with voucher prizes.

### Reach:

- Over 60 pupils from 22 Welsh schools

### Impact:

- 86% stated that they were more likely to study at Cardiff University after attending the event
- 100% strongly agreed that the event had inspired them towards a career in science in health
- 100% felt the event had helped them to further their future career goals
- 100% thought that participation in the live sessions will help them complete their UCAS applications



## Widening Access to Medicine Mentoring Scheme (WAMMS)

WAMMS is a medical student-led mentoring scheme, designed to raise aspirations of Welsh state-school pupils to study Medicine, assist these students with the application process, and increase the number of successful applicants.

Predominantly, WAMMS run sessions in schools, ranging from ‘what is medicine?’ to the various aspects of the UCAS application. Since the COVID-19 pandemic, they have branched out to run mock interview sessions, and a yearly Welsh National Medical School Applicants Conference.

WAMMS also run Twitter, Instagram and Facebook social media pages, where they post daily content covering the different aspects of applying to medical school, alongside trying to inspire careers in medicine.

This year, WAMMS launched the Professor David Wilson Essay Prize. Professor Wilson was Director of Admissions at Cardiff University School of Medicine and sadly passed away in 2022. Professor Wilson’s desire to help others, and strong sense of social justice, was evident in everything that he did. He wanted to support those from more disadvantaged backgrounds, to reach their full potential, to be able to study medicine, and hence Professor Wilson was heavily involved in WAMMS’ inception and provided continued support and encouragement for the scheme.

### Pupils comments included:

“Diolch yn fawr am redeg y sesiwn! I really liked hearing the perspective of current students on studying medicine at university.”

“Was a very useful session and the student running the session was very friendly and guided us through very well.”

“Fantastic session! Thank you.”

WAMMS hope that this competition will be an annual event, forming part of Professor Wilson’s lasting legacy within Cardiff University’s School of Medicine.

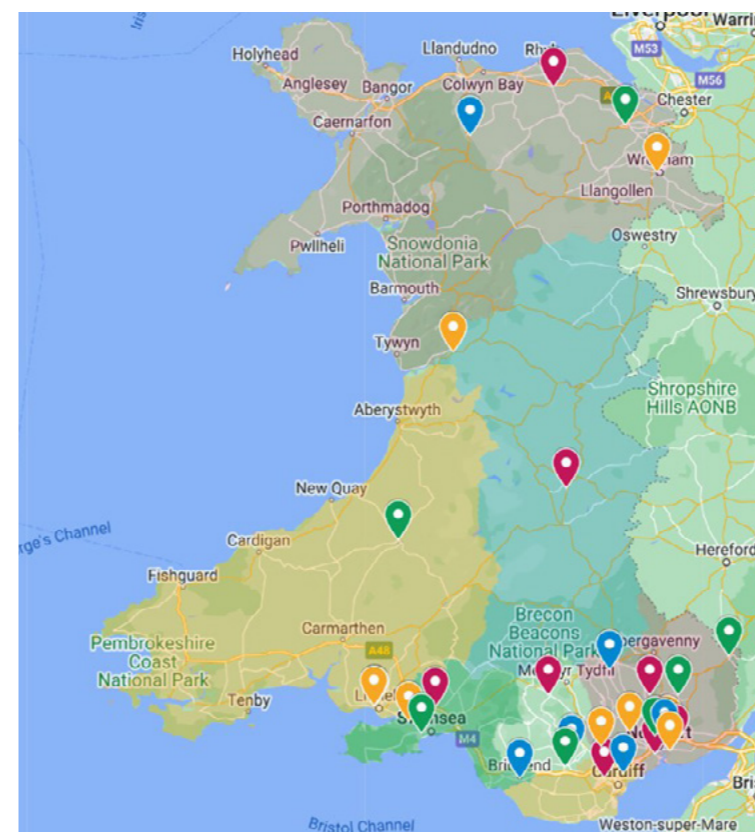
### Reach:

- 30 schools engaged (10 priority schools in the top two most deprived quintiles)
- School visits: 269+
- Mock MMIs: 114
- Conference Attendees: 124
- Essay Competition: 35
- Studying in Welsh Night: 11

### Feedback/evaluation:

#### Visits 2021/22

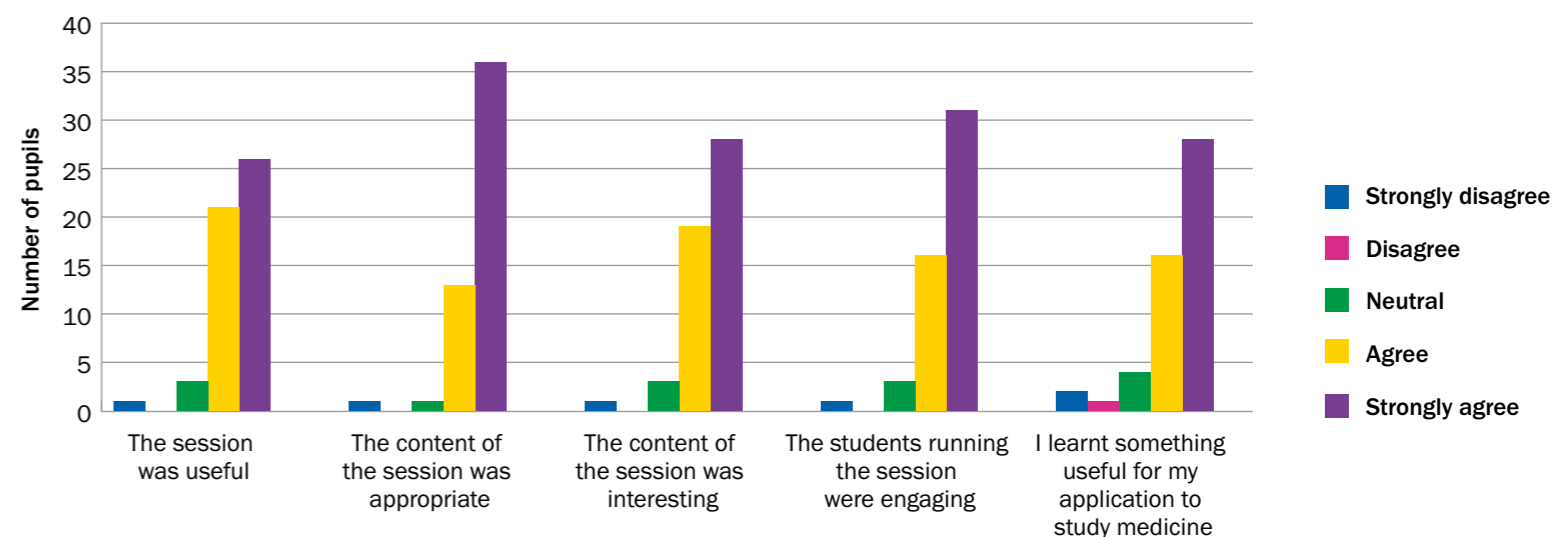
- Pupils found the sessions useful, interesting and engaging, feeling they gained a better understanding of life as a medical student, and how to get into medical school.
- A lot of feedback stated that the students running the sessions were confident, helpful and engaging.



Map of schools engaged 2021-22

### Conference 2021/22

- Excellent range of inspirational speakers over 2 days.
- The medical ethics and virtual CBL session was very well received.



### Mock MMIs 2021/22

- Sessions were oversubscribed, despite expanding the number of places offered from 56 to 140.
- Some evidence that the target population were reached - those from lower socioeconomic status groups.
- Further work, including targeting pupils earlier in their career decision making process (around Year 10) to reach the target population.

### Feedback included:

- Evidence of improvement in knowledge, confidence and preparedness for MMIs.
- Most pupils wanted MORE practice sessions and would recommend the sessions to others!
- Anecdotally, this is the most useful and well-received session WAMMS offers.
- “Very good opportunity for those who cannot afford to pay for private interview tutoring.”

### Social Media

- Good interaction on social media and good feedback from the BMA Cymru.

## Wales Gene Park

### Cutting Edge Biology: Genetics & Genomics Continuing Professional Development (CPD) Event for Teachers

Wales Gene Park collaborated with Cardiff Metropolitan University and Techniquest, with funding from STEM Learning, to hold a Genetics & Genomics CPD event for secondary teachers. The event provided an opportunity for educators to learn more about the latest advances in the fast-moving field of genetics and genomics and take this back to their teaching. The programme included:

- Talks from expert speakers on topics such as *Nutrigenomics & Epigenomics* and *Analysing the Covid-19 Genome in Wales*.
- A hands-on Bioinformatics Workshop: Identifying genetic variations associated with the genetics of taste.
- A session on *Tremolo*, a brand new podcast drama about genetics for post-16 students.
- Study opportunities in Healthcare and Biomedical Sciences at Cardiff Metropolitan University.
- A lab session on identifying genetic variations associated with the genetics of taste (with stations including microscopes, measuring DNA, gel electrophoresis & interpreting results) and discussion on genetics & ethics, including areas such as sequencing genomes and consent.

#### Reach:

- 37 teachers from 23 secondary schools and further education colleges across North, Mid and South Wales.

#### Impact:

- Impact has included follow-up talks and requests from teachers for further teaching sessions and work experience.



“What an excellent event! Useful for both GCSE and A-level. Some really interesting, knowledgeable speakers. Thank you!”

“Really good lectures- just right for us as A-level teachers to learn enough to pass onto students.”

“Really interesting to hear latest developments in genomics/genetics.”

“Thank you so much again for the CPD event you organised for teachers - it was very helpful and inspiring.”

## Superbugs

Superbugs website launched in English and Welsh in October 2021, with translation to Gaelic over spring/summer of 2022.

The website is listed on Hwb as an educational resource, promoted by Microbiology Society, British Society for Immunology and Federation of European Microbiological Societies as well as by Stòrlann Nàiseanta na Gàidhlig (organisation co-ordinating production and distribution of Gaelic educational resources throughout Scotland).

The Superbugs project was presented at the 2021 Congress of the British Society for Immunology, the 2021 NCCPE Engage Conference, at Cardiff University's Infection & Immunity Annual Meeting 2022 and at the FEMS Summer School on Microbiology Education 2022. Invited seminars were given to the BSI South Wales Immunology Group (2021) and the BSI Edinburgh Immunology Group (2021).

Superbugs has a network of teachers who give input and constructive criticism on the Superbugs website, and regular contact with all teachers is maintained.

### Reach:

- 2021: Superbugs workshop (virtual), Merthyr Science Festival
- 2022: Superbugs workshop (virtual), Zaporizhzhia Polytechnic National University's 'Night of Science'
- 2022: Superbugs workshop (virtual), Cardiff University's 'Science in Health Live'

### Impact:

- >7,700 visitors on the website to date since the launch (62% of which are from the UK).
- >900 followers on Twitter, >350,000 impressions in total.





## Table of Schools Engagement Activity Across Wales 2021-22

School Name	Local Authority	Sector	SIHL	LSC	HGB	WAMMS	WGP
Coleg Menai	Gwynedd	College					X
Ysgol Brynrefail	Gwynedd	Secondary		X			
Ysgol Dyffryn Ogwen	Gwynedd	Secondary		X			
Ysgol Godre'r Berwyn	Gwynedd	Secondary			X		
Ysgol Tryfan	Gwynedd	Secondary			X		
Ysgol Glan Y Mor	Gwynedd	Secondary			X		
Ysgol Dyffryn Conwy	Conwy	Secondary		X	X	X	X
Ysgol Uwchradd Glan Clwyd	Denbighshire	Secondary			X	X	
Coleg Cambria	Flintshire	College				X	
Alun School	Wrexham	Secondary				X	
St Joseph's Catholic And Anglican High	Wrexham	Secondary		X			
Ysgol Calon Cymru	Powys	Secondary		X		X	
Ysgol Bro Hyddgen	Powys	Secondary				X	
Ysgol Bro Pedr ●	Ceredigion	Secondary				X	
Ysgol Penglais	Ceredigion	Secondary		X			X
Ysgol Gyfun Penweddig	Ceredigion	Secondary		X	X		
Pembrokeshire College	Pembrokeshire	College	X				X
Ysgol y Preseli	Pembrokeshire	Secondary	X				
Coleg Sir Gâr	Carmarthenshire	College				X	X
Ysgol Gyfun Emlyn ●	Carmarthenshire	Secondary	X				
Ysgol Gyfun Y Strade	Carmarthenshire	Secondary	X	X	X	X	X
Queen Elizabeth High School	Carmarthenshire	Secondary					X
Ysgol Maes y Gwendraeth	Carmarthenshire	Secondary					X
Ysgol Bro Myrddin	Carmarthenshire	Secondary			X		X
Gower college	Swansea	College	X				
Ysgol Gyfun Gwyr	Swansea	Secondary	X	X	X	X	
Bishop Gore School ●	Swansea	Secondary				X	X
Morrison High School	Swansea	Secondary				X	X
Brynteg School	Bridgend	Secondary	X	X		X	
Porthcawl Comprehensive	Bridgend	Secondary	X				
Archbishop McGrath Catholic High School	Bridgend	Secondary	X				
Ysgol Bro Morgannwg	The Vale of Glamorgan	Secondary	X		X		
Cowbridge Comprehensive School	The Vale of Glamorgan	Secondary	X				
Pencoedtre High School ●	The Vale of Glamorgan	Secondary		X			
Stanwell School ●	The Vale of Glamorgan	Secondary	X				X
St Cyres Comprehensive School	The Vale of Glamorgan	Secondary		X			X
Bryncelynnog Comprehensive School	Rhondda Cynon Taf	Secondary				X	
Ysgol Gyfun Garth Olwg	Rhondda Cynon Taf	Secondary			X		
Porth County Community ●	Rhondda Cynon Taf	Secondary		X			
St John the Baptist CIW High School ●	Rhondda Cynon Taf	Secondary	X			X	
Y Pant Comprehensive	Rhondda Cynon Taf	Secondary		X		X	
Ysgol Gyfun Rhydywaun ●	Rhondda Cynon Taf	Secondary			X		
Ysgol Llanhari	Rhondda Cynon Taf	Secondary			X		
Coleg y Cymoedd	Caerphilly	College	X				X
St Cenydd School ●	Caerphilly	Secondary				X	
Bedwas High School ●	Caerphilly	Secondary					X
St Martin's	Caerphilly	Secondary		X			
Lewis Girls School	Caerphilly	Secondary		X			X
Islwyn High School	Caerphilly	Secondary		X			
West Monmouth Comprehensive School	Torfaen	Secondary		X			
Ysgol Gyfun Gwynllyw	Torfaen	Secondary				X	
St Alban's	Torfaen	Secondary		X			
Monmouth Comprehensive School	Monmouthshire	Secondary				X	

School Name	Local Authority	Sector	SiHL	LSC	HGB	WAMMS	WGP
Coleg Gwent	Newport	College	X			X	
Bassaleg	Newport	Secondary	X				
Caerleon Comprehensive School	Newport	Secondary	X			X	
Newport High School	Newport	Secondary				X	
Ysgol Gyfun Gwent Is Coed	Newport	Secondary				X	X
Llanwern High School ●	Newport	Secondary				X	
Lliswerry High School ●	Newport	Secondary				X	
St Joseph's RC High School ●	Newport	Secondary					X
St. Julian's High School ●	Newport	Secondary				X	
St David's Catholic Sixth Form College	Cardiff	College					X
Cardiff High School	Cardiff	Secondary	X	X			
Fitzalan High School ●	Cardiff	Secondary					X
Cathays High School ●	Cardiff	Secondary		X			
Corpus Christi	Cardiff	Secondary		X			
Radyr Comprehensive School	Cardiff	Secondary	X				
Ysgol Gyfun Gymraeg Glantaf	Cardiff	Secondary			X	X	
St Teilo's C-In-W High School ●	Cardiff	Secondary					X
Whitchurch High School	Cardiff	Secondary		X			

### Independent Schools/Colleges

School Name	Local Authority	Sector	SiHL	LSC	HGB	WAMMS	WGP
Cathedral School, Llandaff	Cardiff	Secondary		X			
Westbourne School	The Vale of Glamorgan	Secondary					X
Howells's School, Llandaff	Cardiff	Secondary					X
St John's College	Cardiff	Secondary	X	X			
(Haberdashers) Monmouth School for Girls	Monmouthshire	Secondary		X			
Cardiff sixth form	Cardiff	Secondary	X				

#### Key:

**SiHL** Science in Health Live Online

**LSC** Life Sciences Challenge

**HGB** Her Gwyddorau Bywyd

**WAMMS** Widening Access to Medicine Mentoring Scheme

**WGP** Wales Gene Park

n= 77

8	College
63	Secondary - Wales
6	Independent

#### Welsh Index of Multiple Deprivation (WIMD) (% pupils in 50% most deprived areas)

● WIMD (80-100%)

● WIMD (60-80%)