SCARISBRICK HALL SCHOOL

Scarisbrick Hall News

Winter 2018/19

GIFTED AND TALENTED DAY - HELD BY MANCHESTER UNIVERSITY AND SCARISBRICK HALL SCHOOL

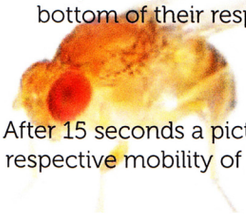
As part of the ongoing partnership between Scarisbrick Hall School and Manchester University, Wednesday 4th July 2018 saw 160 students from Scarisbrick Hall - and 8 local schools - taking part in four hands-on activities aimed at developing knowledge and understanding of neuroscience, ageing, enzymes and genetics. A huge thank you must go to Professor Andreas Prokop and his team for running this event.

We were fortunate enough to have all the sessions led by academics from the university. During each 30 minute session, topics students had touched on in lessons were developed to a much higher level; showing how these biological concepts are being used in current research. They were introduced to the Drosophila fly (fruit fly) which was used in each session to promote awareness and acknowledgement of this organism - an essential pillar in the discovery process of the biomedical sciences.

Lesson 1 – Students discussed Punnet squares to predict what traits offspring will inherit from two different parents. Fruit flies, with their short lifespan and quick generation time (offspring are available in only two weeks!), are perfect for a hands-on version of this experiment.

Flies with different traits (such as red eyes and white eyes, or curly wings and straight wings) can be mated to explore the results of gene expression. Students had the opportunity to look at the different traits of drosophila under the microscope and predict possible phenotypes (physical characteristics) from crossing the various fly types.

Lesson 2 - Students examined the relationship between ageing and mobility using Drosophila. Old and young flies are knocked to the bottom of their respective tubes in front of a climbing wall.



After 15 seconds a picture is taken allowing students to score the respective mobility of each aged fly by looking at how high they climb.

Lesson 3 –

A presentation was given on the growth of axons - the thin cable-like extensions of nerve cells that wire the brain. It was explained that, if axons don't develop properly, this can lead to birth disorders, mental and physical impairments and the gradual decay of brain capacity during ageing. The flies were used to investigate the effect of temperature on nerve transmission.

Lesson 4 -

Students dissected normal and alcohol dehydrogenase deficient fly maggots and used a colour reaction to assess the maggots' ability to metabolise alcohol. They observed the effects of alcohol consumption on normal and mutant flies. This was used to explain why women have a lower tolerance to alcohol.

A thought provoking and informative day was had by all and staff from the other local schools thanked Scarisbrick Hall School for organising this fantastic event. In their own words;

'My pupils genuinely loved the event – they got to experience hands on what it's like to "be a scientist" and the opportunity to work with living organisms in a hands-on way; performing their own 'mini-experiments', was extremely engaging for them. I have already had pupils asking about the different "types" of scientist (they keep forgetting there are many, many different branches and areas of research) and they loved seeing the bigger picture as to how laboratory research can impact human quality of life. It linked brilliantly with practical-based questions in the new GCSE specification, and I really think it has inspired pupils to take a Science A Level. Please run more events!'