



AWARDEE REPORT FORM

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UNIVERSITY	University of Oxford
NAME OF AWARD	Public Engagement and Outreach Grant
PURPOSE OF AWARD	<i>conference/event attended/organised (full name) with city and dates.</i>
	'Anatomy unveiled: A hands-on journey through the human body', Oxford. Thursday 31 st October 2024.
REPORT: What were your anticipated benefits?	
	<i>Minimum number of words between 200-400. Please write in coherent paragraphs.</i>
	<p>This workshop was aimed at A Level students studying at schools across the Oxfordshire region, particularly those who are interested in studying Medicine, Biology or an Anatomy-related subject at University. For accessibility, we promoted the event via our social media channels and through the Museum of Natural History, Oxford, to local Oxfordshire schools. Students were also able to sign up to the event by the online ticket provider, Eventbrite, and it was a free event so as not to exclude those who could not afford it. With this, we were able to offer the workshop to a diverse range of students from all backgrounds. This is with the hope of breaking down barriers and encouraging students.</p> <p>The workshop offered students opportunities by mimicking aspects of medical education, to help spark deeper interest in the field. Through the activities that we have organised, students will be able to know more about anatomy and learn how these concepts differ between higher education and their relevant A-levels.</p> <p>We have brought together a diverse team to encourage conversation between medical students, technicians, researchers and educators. These conversations will allow attendees to ask a range of questions, clarify any doubts they may have to receive guidance on the application process for university. This provides a unique experience to foster greater appreciation for the subject of anatomy and help inspire and motivate them for further study and potential future careers.</p>

COMMENTS: Describe your experience at the conference / lab visit / course / seminar/ event.

Minimum number of words between 200-400. Please write in coherent paragraphs.

As members of both DPAG's Anatomy team and Outreach & Public Engagement Working Group, we felt extremely fortunate to be co-leading the second annual World Anatomy Day event at the Natural History Museum. We were excited to share our passion for anatomy with what could eventually be the next generation of scientists/medical professionals.

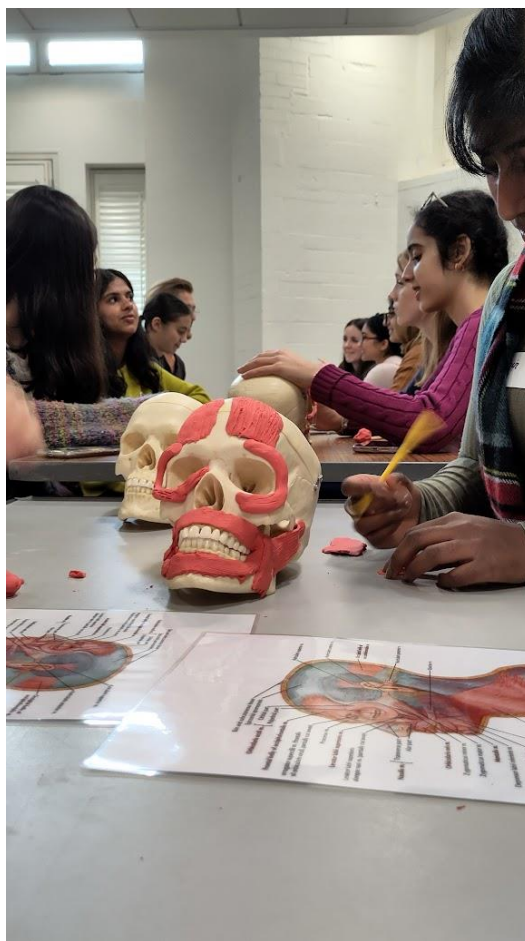


The afternoon welcomed sixth form students from local Oxfordshire schools who are considering applying to university to study medicine, or anatomy-related disciplines. The workshop was hands-on and highly interactive, with four different activities run to help inspire curiosity and intrigue whilst also making learning fun! Attendees were fortunate to have many expert researchers and educators at hand to deliver the teaching and to answer any questions they had.

Activities and highlights

I. Anatomy of facial expression

The event began by exploring facial expression and the neural and evolutionary mechanisms that shape this vital part of human communication. We guided students through an exploration of the intricacies of facial muscles, eliciting and feeling the movements in their own faces as they learnt how different muscles contributed to different expressions such as surprise, disgust, interest, etc. It was great to see their enthusiasm with getting creative and the enjoyment on their faces as they learnt and were able to sculpt delicate muscles like the zygomaticus major, and how it is one of the muscles responsible for smiling.



II. The brain and sensory mapping

The second activity followed sensory pathways from the body to the brain. Attendees were able to measure their sensory receptor density across different parts of the body and then record these to map their somatosensory homunculi. They were then able to visualise what their homunculi would look like digitally on iPads and traced sensory pathways on a 3D model of the spinal cord and cerebral cortex using coloured wires. There was a lot of excitement in the room as they compared their results with fellow attendees.

III. Digital anatomy

After a short break, attendees then got to immerse themselves into digital anatomy using some of the innovative technology that the department has been adopting in recent years – virtual reality headsets which show a human body. This allowed students to explore the human body in a fully immersive environment, creating new perspectives on anatomy. One of the attendees expressed that they couldn't believe how much they were able to see during the virtual reality, and were amazed at how it felt like they were actually inside the human body.

IV. Microscopy

The final activity put anatomy under the lens and allowed attendees to learn about the microscopic anatomy and how cellular structure of the skin & gut tube are essential for normal functioning in the human body.

It was incredibly rewarding to see all of the attendees have such enthusiasm and curiosity towards the workshop. They had all come from different schools in the area so did not know each other, yet they all worked really well together with some interesting questions and discussions being had.

The success of this event was a team effort, and I am incredibly grateful to all of the volunteers, and to members of our Outreach and Public Engagement Working Group, Louise Cotterell, Kiri Walden, Hannah Simm and Hadas Sloin. Special thanks are also extended to the Anatomical Society and the Natural History Museum for their invaluable contributions. We are already looking forward to next year's World Anatomy Day celebrations where we hope to inspire even more students.



REPORT: In relation to skills, what were the most important things you gained? *(does not apply to equipment grant. For public engagement/outreach awards what did your audience gain and how did you evaluate success?)*

Minimum number of words between 200-400. Please write in coherent paragraphs.

On the day of the workshop, we had a diverse team of expert educators, clinicians, technicians, researchers and medical students from across the department, each contributing their individual yet diverse expertise. Through this collaborative effort, they were able to share their knowledge in anatomy as well as providing attendees with insights into medical education and the teaching methods and resources typically unavailable in school settings.

The afternoon included active involvement from everyone, including the attendees, who were able to engage in conversations with members of faculty and current medical students and ask a variety of questions. By interacting with educators, attendees were able to get insight into current methods of teaching in medical education whilst also developing a deeper knowledge of subjects relevant to their learning at A Level. The presence of current medical students offered attendees with a firsthand look into life as a medical student, including the application process and admissions for medical school. This ensured a diverse and enriching experience for all involved.

We evaluated success by requesting anonymous feedback from participants at the end of the workshop. This included a mixture of Likert-scale ratings and open-ended questions to identify how the workshop had an impact on their knowledge as well as their engagement and enjoyment of the activities. The feedback we received was overwhelmingly positive but here is a breakdown:

- Engagement – All attendees found the activities engaging and kept them interested throughout the event, while 91% felt that the workshop had increased their interest in studying anatomy, biology or medicine. Students particularly found the section on facial muscles and neural pathways interesting, noting how it contributed to their understanding behind facial expressions and how sensations are processed by the nervous system. They also noted how they gained a broader understanding of these topics, demonstrating how effective the workshop was at describing complex topics.
- Content and learning – All attendees found the learning clear and easy to understand, that it was relevant and aligned to their academic and career aspirations and that it deepened their understanding of the human body.

“I found all of the activities engaging”

“I learnt about the involuntary facial expressions compared to voluntary and the evolutionary purpose of our fascial muscles. I also learnt about the human central nervous system in a much greater depth where the modelling activity help to facilitate my understanding of the structure of our spinal cords.”

“I learnt a lot about the brain and different parts of it. Also, about different muscles and bones and how they interact”

- Technology & resources – Digital resources were highly valued with 91% agreeing that augmented and virtual reality (AR/VR) helped to enhance their learning whilst all agreed that the digital resources and models, we had available helped them visualise anatomical structures better. Many attendees

also highlighted the VR as their favourite part, noting how it provided an immersive experience of the anatomical structures through virtual dissection.

“My favourite part was the virtual reality section; it enabled me to take part in an electronic dissection. I also really liked the microscopy as it gave us an opportunity to see things we can’t in school.”

“I enjoyed the augmented and virtual reality. It was fun to see the organs right in front of you.”

- Organisation – All attendees thought it was well organised, that those facilitating with the teaching were helpful and approachable and that instructions for activities were clear and easy to follow.

“A highlight was talking to the instructors and learning from them.”

- Satisfaction – 91% of attendees were strongly satisfied with the workshop whilst 9% agreed and all of them would recommend workshops to other students. This final note demonstrates how positively the attendees valued the experience.

When asked what they would wish to improve:

One requested for more opportunities to ask questions, and another said *“I loved everything here 😊”*

Overall, the workshop had a strong impact on attendees who found the workshop engaging and found the activities enjoyable. They expressed enthusiasm with words such as *“I loved the experience”* and *“Thank you for this wonderful experience.”* Beyond the benefits to the attendees, the event also helped volunteers strengthen communication skills by sharing their knowledge to young people in an accessible way and developed collaborative skills by designing and delivering a cohesive programme to engage 16-18 year olds.

REPORT: How do you think you will put this learning experience into practice in the future? For public engagement/outreach awards how with the materials/knowledge generated by this activity be used in the future?

Minimum number of words between 200-400. Please write in coherent paragraphs.

This event was facilitated by the department's dedicated Outreach and Public Engagement Working Group which is well established and has a strong track record of delivering multiple high-quality events across the year. The feedback we have received from the attendees will be considered by the group to see how we can refine our activities to ensure that future workshops achieve the same level (if not higher) of impact. We are excited to explore ways in which we can enhance our activities and make them more interactive, such as for our facial muscle sculpting.

Whilst we look to constantly develop new activities, we have been able to demonstrate that these activities themselves can be reused and adapted across the range of events the group are involved with as we know that they provide a high-quality experience to attendees. This will reduce the need to develop new activities in future. With our collaboration with the Natural History Museum and their outreach program, we can further develop partnerships with local Oxfordshire schools for any future workshops we may run. It could potentially lead to joint events or the development of new activities that incorporates their collections and exhibits.

We had a substantial increase in numbers on our waiting list, from 5 in 2023 to 37 this year, which demonstrates the growing interest in our workshops and the positive impact they are having within the local Oxfordshire area.

We will share our experiences, including both the successes and challenges, with other educators in order to promote best practices in outreach, as well encouraging the use of innovative teaching methods. We will share these outcomes and evaluation data at local and national conferences, such as Oxford's Teaching and Learning Symposium and The Anatomical Society conferences. This would allow us to contribute to the growing knowledgebase in public engagement. By developing these toolkits and developing partnerships, we could potentially scale up outreach efforts to reach a wider audience, even if the team or contexts change.

Data Protection/GDPR: I consent to the data included in this submission being collected, processed and stored by the Anatomical Society. **Answer YES or NO in the Box below**

Yes

Graphical Images: If you include graphical images you must obtain consent from people appearing in any photos and confirm that you have consent. A consent statement from you must accompany each report if relevant. A short narrative should accompany the image. **Answer N/A not applicable, YES or NO in the box below**

Yes

Copyright: If you submit images you must either own the copyright to the image or have gained the explicit permission of the copyright holder for the image to be submitted as part of the report for upload to the Society's website, Newsletter, social media and so forth. A copyright statement must accompany each report if relevant. **Answer N/A not applicable, YES or NO in the box below**

Yes

SIGNATURE	S. Snowdon & S. Rajendran	DATE	12/11/2024
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If submitted electronically, a type-written name is acceptable in place of a hand-written signature
 File: AS-Award-Report-Form-171023 – International Conference