EXPERIENCE DISCOVER CREATE

LIFELAB®

IMPACT REPORT 2024

FOREWORD

As we reflect on a decade of LifeLab's journey, we are filled with immense pride and gratitude for the incredible impact it has had and continues to have on children, young people, teachers, parents and communities both locally and internationally. What began as a vision to empower young minds through scientific discovery has flourished into a comprehensive and transformative programme that continues to shape healthier, brighter futures.

In 2024, we celebrated 10 years of our bespoke LifeLab facility at University Hospital Southampton, which has reached over 16,000 students with its hands-on, curriculum-linked science programmes. This year alone, we expanded our reach through initiatives such as the Early LifeLab programme and through our global partnerships, proving that science and education know no boundaries. Together with teachers, researchers, and young voices, we are challenging inequalities, fostering a love for STEM, and equipping the next generation with the tools to thrive in an ever-changing world.

Thank you to everyone who has supported LifeLab over the years – from funders, educators, policymakers and scientists to our brilliant young people and their families. This report celebrates our shared achievements and sets the stage for an exciting future as we continue to innovate, inspire, and empower. Here's to the next 10 years of discovery and impact!

Lisa Bagust
LifeLab Secondary School Lead

Prof Kathryn Woods-Townsend
LifeLab Programme Director

Donna Lovelock
LifeLab Primary School Lead

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WELCOME

OUR MISSION

Change the beginning and you change the whole story

Our mission is to empower children and young people through scientific discovery to make positive lifestyle choices for their physical and mental health, wellbeing and resilience - now and in the future and for their future children. Through our activities, we want to:

- reverse the trend of rising unhealthy behaviours and lifestyles for children and young people in the UK.
- address the link between health behaviours, disadvantaged backgrounds and underachievement to reduce social and health disparities.
- co-create with children and young people an environment to allow their voices to be heard, to advocate for change and to enable them to flourish, building resilience for a changing world.
- build the evidence base for ways of enabling behaviour change in children and young people.
- support and empower teachers to encourage behaviour change with their students.
- increase awareness and interest in STEM (and related) careers.

Experience

Experience-led **EDUCATION** with emphasis on hands-on self-discovery, access to inspiring STEM practioners and exploration events

Discover

Leading innovative **RESEARCH** at the interface of Education and Public Health

Create

Working in partnership with children, young people and stakeholders to **EXCHANGE** and **TRANSFER** expertise to co-create brighter futures

10 YEARS OF LIFELAB

EXPERIENCE DISCOVER CREATE

This impact report has something extra special about it.

2024 was the 10th anniversary of our dedicated LifeLab facility set in the heart of University Hospital Southampton. Over the past 10 years, this bespoke space has enabled more than **16,000 young people** from nearly **100 schools** to gain a better understanding of the science behind the health messages they see every day. Students can take part in scientific experiments about their bodies. From seeing their DNA, to studying carotid artery blood flow using ultrasound, to assessing body composition, to performing lung function tests and measuring grip strength and hamstring flexibility, our students get a first-hand experience of what makes their body tick and what they can do to ensure they look after it.

More than **750 teachers** have been trained in LifeLab resources, and hundreds more students have attended our summer schools.

But it's more than just a school trip. The LifeLab programme is a curriculum-linked, fully resourced 'Science for Health Literacy' module, which includes **professional development for teachers**, giving them an understanding of the programme and skills needed to support students in making lifestyle changes and a series of lessons to be delivered in school before and after their visit to us

The facility has enabled our team to **expand the programme** to primary schools, develop training programmes for young people and train even more scientists on how to engage with different audiences.

Before the LifeLab space was opened in 2014 by HRH the Duchess of Edinburgh, the programme was held in 'pop-up' labs, either at the University of Southampton's Highfield Campus (the Maths and Science Learning Centre), in the NIHR Clinical Research Facility at University Hospital Southampton, in the Institute of Developmental Sciences labs and at the Princess Anne Hospital. One of the pupils who experienced LifeLab was Gemma Clarke.

MY TIME AT LIFELAB –15 YEARS AGO!

In 2009, as a year 9 student at Redbridge Community School, Gemma was one of the very first students to attend a LifeLab session. It was a pilot session to establish whether the concept would be beneficial to young people and feasible in a laboratory setting. Alongside a group of her classmates, Gemma took part in various experiments looking at the body including grip strength and DNA sequencing.

Fifteen years later, a chance meeting with LifeLab manager Professor Kath Woods-Townsend brought her back to LifeLab.

Gemma now works at Health Innovation Wessex, a regional organisation established by NHS England to spread innovation in health and care. One of the projects she is currently supporting is looking at ways to improve the health of younger people. It was at a workshop event for Children and Young People's Healthy Weight, where she met Kath and found out what had been happening at LifeLab. Gemma remembers her LifeLab trip and how it continues to play a role in her life now.

"I remember the students chosen to do LifeLab thought it was pretty cool to be able to go to the University/Hospital and take part in the programme," Gemma explained.

"Only a small group of students were chosen to attend, so we thought being part of the select few was pretty special. We were excited to be part of something that the University ran and to be in a different place, on a university campus, was very fun compared to our usual school lessons. But that's what's so good about the programme now – all young people get to attend. Everyone has the opportunity to benefit from what it is trying to achieve."

Gemma has spent time working in the NHS and in her last role supported an NHS England initiative setting up and overseeing clinics for Children with Complications Related to Excess Weight (CEW). "LifeLab has the power to help so many people. Of course, the students who attend the sessions and experience the curriculum are the first people to benefit but more broadly, their family and friends will also benefit from the messages they take away from the experience. It empowers them to make real changes in their life."

"When I was in school, I probably didn't fully appreciate what I was taking in, but now I am a mother and have my own family, I use those lessons now and want my daughter to benefit too. I don't want her to grow up and face the same challenges we did.

"I'm so grateful LifeLab is still going, it's fantastic to see how it's expanded into primary schools and is connecting with older teenagers through the Young Researcher Training Programme. **Long may it continue."**

2024 IN NUMBERS

1,818
LifeLab secondary school students from 29 schools

65
students took part in school holiday opportunities

36
researchers and scientists trained in engagement activities

27
Young Researcher Training Programme participants

4,060
Early LifeLab students from 23 schools

111
people took part in virtual work experience sessions

234
teachers trained in LifeLab programmes

18
Young Health Activists

20
Youth Panel members

EMPOWERING YOUNG MINDS THROUGH SCIENCE

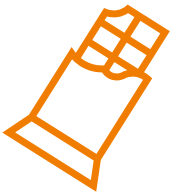
Our **Early LifeLab** programme has gone from strength to strength. More than 4,000 children took part this year, taking the total so far to nearly 6,000. We've increased the number of schools taking part, from eight in the first year to 18 this year, and now nearly 300 teachers have been trained to deliver the programme.

Our aim is to provide primary school teachers with comprehensive, hands-on learning resources to engage children with the science behind why it is important to make healthy life choices. We want to encourage children to use their understanding of themselves and their bodies to support their decisions related to nutrition, exercise and sleep. From experience, we know that children of this age are very keen to learn about these things, although existing facilities and opportunities are often limited.

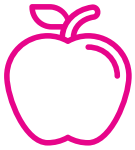
We're delighted that now more than 25 schools have delivered the **Health Warrior modules**, covering all aspects of healthy living, introduced with lively videos linking to the fun learning activities.

This year the children have:

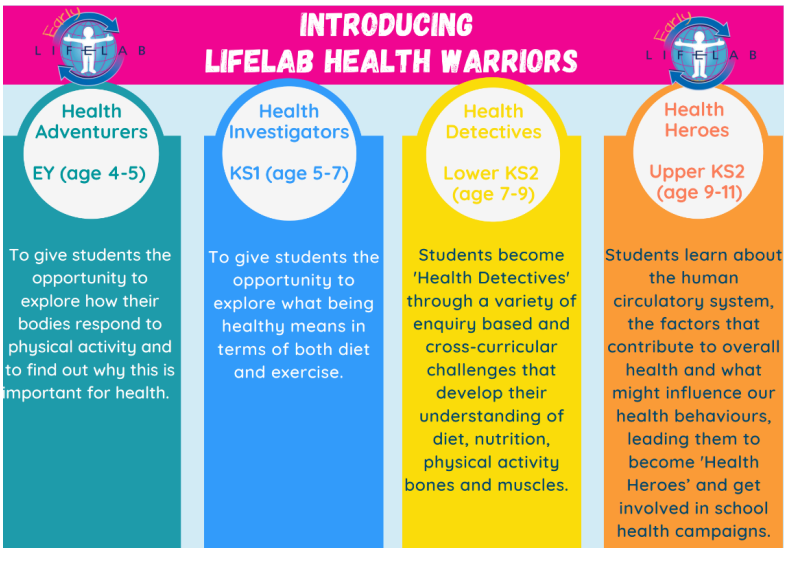
used stethoscopes to compare heart rates before and after exercise



explored bone strength using chocolate bars



used role play to set up a healthy cafe



This year, we've developed two new mini modules for other year groups, ensuring LifeLab interventions are reaching more primary children.

The first is for Year 4 and is all about digestion, and the second is for Year 5 and about teeth.

It's exciting that young children and their teachers are helping us to develop this programme.

AN AWARD-WINNING PROGRAMME

We are incredibly proud that our LifeLab programme continues to educate and support young people across Southampton and the surrounding areas to make better and more informed choices about their diet, lifestyle and wellbeing.

LifeLab has been nationally recognised for its innovative work to improve the health and wellbeing of young people by winning the Health at Every Age category at this year's Health & Wellbeing Awards organised by the Royal Society for Public Health.

The category celebrates initiatives that improve the health of a specific age group in the here and now and makes efforts to protect their future health.

Assessors said: "This is an excellent programme which seeks to aid decision-making about health and wellbeing through engagement in scientific discovery. The importance of this programme cannot be underestimated in terms of its impact on lifelong learning and opportunity – health and wellbeing is the foundation of a vibrant community and productive workforce and economy.
This preventative approach provides far-reaching Public Health benefits on an ongoing and enduring basis."

A GLOBAL PRESENCE

LifeLab started in Southampton, but we are now making an impact around the world! LifeLab is working with partners across the world to deliver similar interventions in Australia, Ireland and South Africa, with new sites being discussed in Ghana and Nepal. We all came together for the inaugural LifeLab Global Community of Practice Workshop, an initiative designed to share best practices and enable research, advocacy and education.

During the workshop, LifeLab and University staff and our global partners discussed the different contexts of education and outreach needed in each location, local health needs, teacher training, common goals, and potential areas for funding. It was a great success, and colleagues left with a commitment to work together to bring these opportunities to more young people, both in existing settings but also for our new partners in Ghana and Nepal. Since the meeting, we have published a paper in the Health Expectations Journal describing the feasibility of the South Africa intervention, and we are preparing a new paper exploring the principles and shared vision from across all the international sites.

INSPIRING THE NEXT GENERATION

Our work extends beyond academic learning. We want to support and encourage young people to become inspired and ambitious about their futures and develop the skills they need to live their lives to their full potential. We provide various opportunities throughout the year to ensure teenagers are equipped with the tools and experience to support their further education and employment journeys and beyond. These include the Young Researcher Training Programme, the LifeLab Youth Panel, the 'Experience Medicine with LifeLab Summer School' and new RSPH qualification, to name a few.

THE YOUNG RESEARCHER TRAINING PROGRAMME

This year, over 25 young people took on some of the biggest health challenges facing their age group. From menstrual health to vaccine uptake to mental health, our young people carried out research and then presented their findings.

The YRTP enables the young researchers to learn and use different research techniques including focus groups, surveys, and secondary data analysis, to explore issues which they have identified as important to young people. They work with community groups, charities, NGOs and health and social scientists to expand their evidence base before working as a group to refine the project's outcomes.

For one group on the YRTP, this led to developing a set of policy recommendations to improve young people's health and wellbeing, which they presented to Hampshire and Isle of Wight health leaders at a special Youth Assembly. Another group took part in the Pathways to Health project and created research posters which they presented at the LifeLab Showcase event.

Watch this video where the young researchers talk about the importance of involving young people in policy: **https://bit.ly/LifeLabYRTPRebootingDemocracy**

CELEBRATING OUR YOUNG RESEARCHERS

The achievements of our young researchers took centre stage at a special glittering film première and awards ceremony.

Hosted by local radio star Zoe Hanson, the red-carpet event held at Winchester Science Centre and Planetarium shone a spotlight on the resources about vaping created by the Youth Panel and short films made by the 2023 Young Researcher Training Programme.

THE YOUTH PANEL

Established in 2022, the Youth Panel recognises and celebrates the contribution of young people in identifying, discussing and solving the challenges facing their generation. Members take part in creating and implementing solutions that could improve their own lives and those of their peers. Being part of a Youth Panel provides young people with the opportunity to contribute their ideas, perspectives and experiences of issues within our society, work in a team, communicate effectively and maintain confidentiality.

This year, one of the topics the Youth Panel tackled was **vaping**.

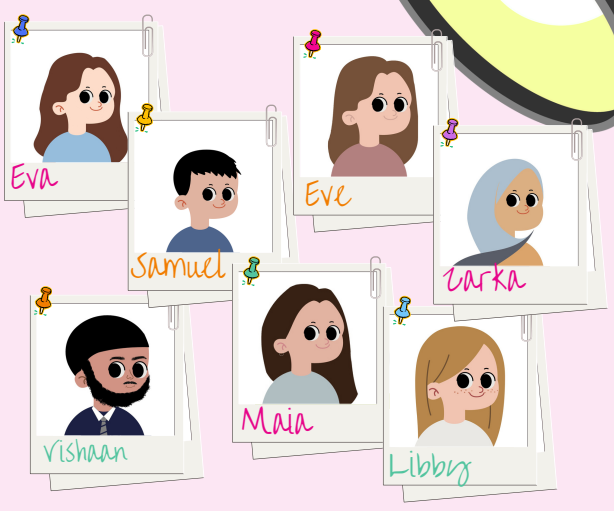
The topic has never been too far away from the headlines, especially as the Tobacco and Vapes Bill was introduced in 2024, aiming to prevent the selling of disposable vapes targeted at young people.

Members of the panel focused on understanding the role vaping plays in the lives of young people. Supporting a University of Southampton Masters student to conduct research into teenage views on vaping, they then developed evidence-based resources to help young people understand its consequences. It included a targeted toolkit of teaching materials and lesson plans for use in the classroom, along with a virtual reality (VR) experience that emphasises the peer pressure teens feel regarding vaping and the health dangers of the habit. The work also informed LifeLab's response to the government's call for evidence and took centre stage at the Sense about Science Evidence Week in Parliament in January 2025.

IN THE SPOTLIGHT

We believe that being able to express yourself in front of the people who make decisions that affect our daily lives is a valuable experience for our young people and the policymakers themselves.

Over the year, several of our talented young people have had other opportunities to speak publicly about their work and what it means to them. For example, our students spoke at the NIHR Southampton Biomedical Research Centre Open Day, ran the Citizens' Assembly for Hampshire and Isle of Wight Integrated Care Partnership, and also presented alongside Professor Kath Woods-Townsend, LifeLab Programme Director, at the Paediatric Innovation, Education & Research (PIER) Network Conference.



MEET MADDIE AND VISHAAN

Both Madeleine Harris and Vishaan Vohra have been involved in various activities with LifeLab, including the Youth Panel and the Young Researcher Training Programme, and they pitched the idea that, if we wanted to reach out to young people on social media, then young people should be the ones creating the content. So, with funding from the University's Public Engagement with Research fund, began the inaugural LifeLab Young Person's Social Media Team. Here, they describe what it's like to be part of LifeLab.

"We've had the pleasure to take part in several engagement activities through LifeLab, which have helped us develop important skills that we will need during university and beyond, for example, speaking in front of large audiences, data collection and research development skills, as well as things like timekeeping, teamwork and independent working. All this has given us the confidence to hit the ground running when we go to university."

"The projects and panels we've been involved with have provided authorities with useful information and insight to make changes in the way they provide certain services and are being used by young people to change their habits. Knowing that these are making a difference in people's lives and that they've come from a university, has shown us the impact that universities can have."

"We feel very fortunate that we've been able to take part. More young people should have these opportunities too. Creating immersive opportunities that help break down any perceived barriers and enable young people to see how the institution works from the inside will empower them to be involved with the work that's taking place there, which has real consequences."

YOUNG HEALTH ACTIVISTS

> "Very well done on the effort learners have put into their work, such a wide range of activities and evidence. Evidence was very detailed and demonstrates the application of knowledge, there are some very insightful answers given."
>
> – Assessor for Young Health Activist qualification

We worked with the Royal Society for Public Health to develop a new qualifcation - the Young Health Activist Level 2 qualification.

The qualification is designed for young people interested in supporting their peers' health and wellbeing. It helps learners develop the skills needed to be a young health activist, focusing on understanding factors that influence youth health and the resources available for improvement. Learners also gain tools and skills needed for effectively communicating health improvement messages. We ran a pilot of this qualification in the summer holidays, where **nearly 20 people** attended a one-day course, held at LifeLab, where they completed Unit 1 - a range of engaging and interactive activities focused on understanding young people's health and wellbeing. To complete Unit 2, students had to deliver a health message to young people and collect evidence of its impact.

We were delighted that every student successfully completed the course and received their Level 2 certificates. Feedback from the assessor was very positive and we are looking forward to helping more young people gain this qualification.

THE NEXT GENERATION

Throughout the year, young people from around the UK take part in our interactive sessions to experience life as doctors.

Whether it's through summer schools or virtual work experience, these events encourage a new generation of healthcare professionals. Attendees experience anatomy teaching in labs, tour the busy wards of University Hospital Southampton and quiz current medical students about what it's like to study medicine.

The experience is so informative that some return as University of Southampton students – like Ria Hill. Ria attended a summer school in 2017 and has since completed a BSc Biomedical Science and is now a Post Graduate Medicine student at the University of Southampton. She said: "The clinical work was amazing to talk about in my personal statement and to reassure me this was the path for me. LifeLab allowed me to have a deeper insight into the clinical side of practising artificial limbs skills such as cannulation that I wouldn't have been able to practise in years otherwise. It reassured me this was what my future would look like and gave me plenty of experiences to reflect upon."

This year, **65 students from 25 schools** took part in the Easter and summer schools and more than 100 people from around the UK took part in the virtual work experience.

SUPPORTING OUR COMMUNITY

The Southampton Fringe Festival was one of the most exciting events in the city's 2024 calendar and LifeLab was delighted to be a (small!) part of it.

SO: FRINGE showcases the rich culture of Southampton with a programme of performances spanning comedy, dance, live music, poetry and theatre.

For the past four years, we've been working with Theatre for Life to combine arts, theatre and science to shine a light on health and wellbeing issues, particularly for young people.

This latest project, "The feeling of knowing something is wrong, but it isn't", began as a 'Public Engagement with Research' project and was performed by the Theatre for Life company as part of the festival. It explored female hormonal health and gender identity. Focus groups were held with diverse groups of women at different stages of their hormonal lifecourse, (puberty, infertility, motherhood, and menopause) to discuss their experiences and how it's shaped their life and identity. These powerful and emotional stories are often shrouded in silence and shame, and were brought to life to shape this production, through live theatre and music.

'The Feeling' is an on-going cross-faculty project at the University of Southampton, funded through the Public Engagement with Research fund, the Interdisciplinary fund, and going into 2025 the Southampton Institute of Arts and Humanities.

This was the latest in a series of projects between LifeLab and Theatre for Life. We have also worked together and with young people to explore the impact of climate change in our communities 'Generation Anthropocene' - this has developed into a new production 'Bringing the outside in' and a project exploring brain health 'Your Brain Explained' which has recently received follow-on funding from Alzheimer's UK.

Theatre for Life Artistic Director: Michelle Smith

"Our four-year collaboration with LifeLab has integrated science and health messaging into our theatre performances. This partnership has given us a remarkable chance to utilise the arts as a platform for discussing accessible healthcare, encouraging open dialogue, and advocating for a fairer society for future generations. We are incredibly grateful for this partnership and are excited about our upcoming 2025 projects that will explore brain health through a neurodiverse perspective, as well as continue addressing female reproductive health and LGBTQ+ health disparities."

Director of Public Health in Southampton: Debbie Chase

"It's really important for people to find ways to work through difficult times in their lives. By using creative outlets such as drama or art, it can make it easier to share difficult experiences and find ways forward. These theatre pieces were important opportunities for individuals to share their stories, helping them work through issues and guiding members of the audience to think through and potentially build confidence to share their stories too, helping with understanding and healing.."

SPREADING OUR MESSAGE

This year, we're proud to have published the following academic papers:

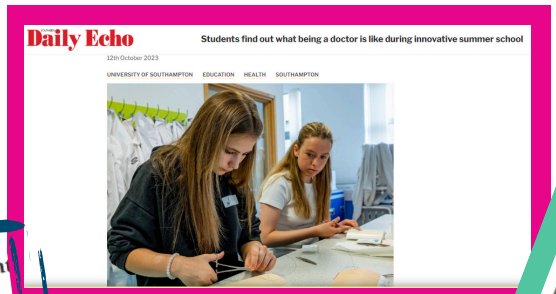
Ware LJ, Kubheka D, Mdladlamba T, Mabetha K, Hanson M, Godfrey KM, Woods-Townsend K, Norris S.
Feasibility Testing of a Health Literacy Intervention With Adolescents and Young Adults in South Africa: The LifeLab Soweto Programme. Health Expect. 2024 Dec;27(6):e70121. doi: 10.1111/hex.70121. PMID: 39663593; PMCID: PMC11634816. https://pubmed.ncbi.nlm.nih.gov/39663593/

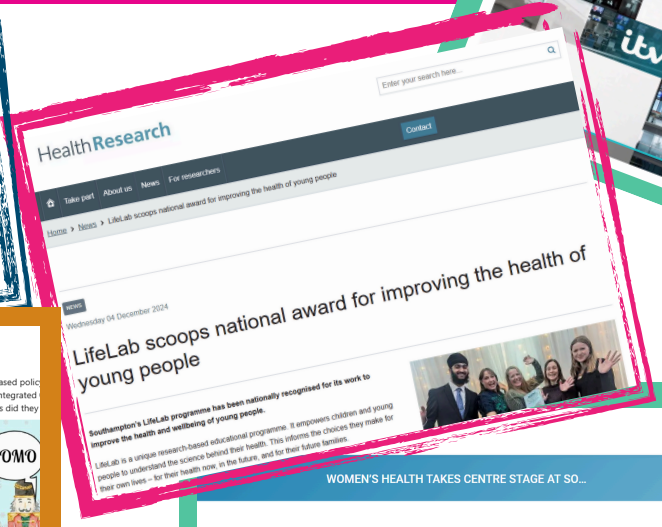
Taheem R, Woods-Townsend K, Lawrence W, Baird J, Godfrey KM, Chase D, Hanson MA. The Role of the Public Health Workforce in Securing Political Commitment for Tackling Childhood Obesity in Local Government. Health Promot Pract. 2024 Nov 18:15248399241294231. doi: 10.1177/15248399241294231. Epub ahead of print. PMID: 39556031. https://pubmed.ncbi.nlm.nih.gov/39556031/

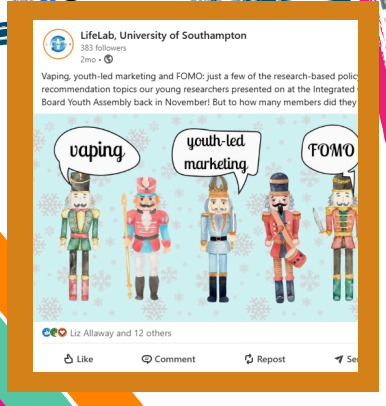
Barrett M, Shaw, S, Jenner S, Hardy-Johnson P, Stanescu S, Woods-Townsend K, Strommer S, Barker M. Creating meaningful knowledge exchange between young people and public health practitioners: what role can researchers play? Perspect Public Health. 2024 Jul;144(4):212-214. doi: 10.1177/17579139241230852. PMID: 39108129; PMCID: PMC11308321. https://pubmed.ncbi.nlm.nih.gov/39108129/

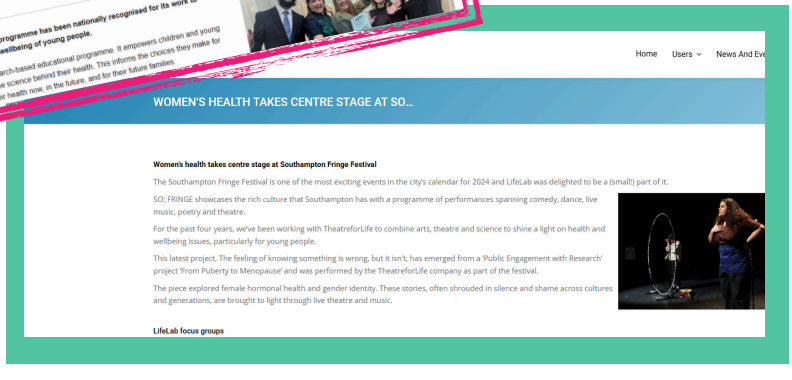
Ochoa-Moreno I, Taheem R, Woods-Townsend K, Chase D, Godfrey KM, Modi N, Hanson M. Projected health and economic effects of the increase in childhood obesity during the COVID-19 pandemic in England: The potential cost of inaction. PLoS One. 2024 Jan 24;19(1):e0296013. doi: 10.1371/journal.pone.0296013. PMID: 38265978; PMCID: PMC10807834. https://pubmed.ncbi.nlm.nih.gov/38265978/

IN THE NEWS









PEOPLE OF LIFELAB

Our staff and young people work collectively to make LifeLab what it is today.

Kathryn Woods-Townsend
Programme Director

Rachel Gagen
Early LifeLab Teaching Fellow

Lisa Bagust
Secondary LifeLab Programme Manager

Bethany White
LifeLab Teaching Fellow

Donna Lovelock
Early LifeLab Programme Manager

Claire Colbain
LifeLab Technical Lead

Natasha Green
Early LifeLab Teaching Fellow

Kate Bartlett
Developing Talent Lead

Morgan Mason
Early LifeLab PhD Student

OUR DIRECTORS

Professor Mary Barker

Professor Chris Downey

Professor Keith Godfrey

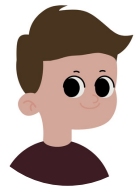
Professor Mark Hanson

Professor Hazel Inskip

Professor Kathryn Woods-Townsend

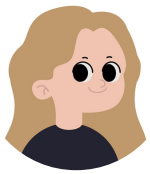
Gayathri

Emily



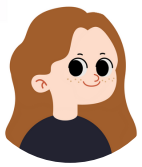
Asher

Jayden

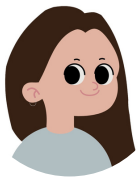


Sophie

Oscar

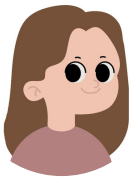


Rhiannon



Maia

Chelsea



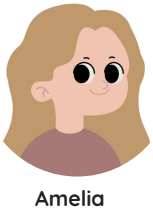
Eve

Uya

Esme

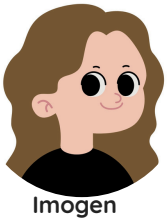
Bethany

Vishaan



Amelia

Jayden

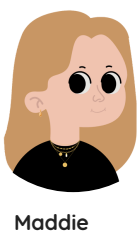


Imogen

Aananya

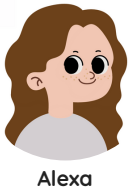
Hettie

Abi



Maddie

Evan



Alexa

And not forgetting: Scott, Miles, Thomas and Seth.

LIFELAB®

EXPERIENCE DISCOVER CREATE

OUR VALUED PARTNERS AND SUPPORTERS:

University of Southampton

NHS University Hospital Southampton NHS Foundation Trust

NIHR | Southampton Biomedical Research Centre

FUNDED BY NIHR | National Institute for Health and Care Research

NIHR | Applied Research Collaboration Wessex

RSPH ROYAL SOCIETY FOR PUBLIC HEALTH VISION, VOICE AND PRACTICE

SOUTHAMPTON CITY COUNCIL

UKRI UK Research and Innovation

Keep in touch...

LifeLab, University of Southampton

@LifelabSoton

@Lifelabsoton.bsky.social

@lifelabsouthampton

@lifelab_soton

@lifelab

www.lifelabonline.org

lifelab@soton.ac.uk

023 8120 8979