

SOCIAL MOBILITY AND THE SCIENCES

Can your research help young people see their future in STEAMM?

We think it can.



DR MHAIRI CRAWFORD

Development Director
at WISE (Women into Science
and Engineering), UK

DR ANDREA HOLMES

Professor of Chemistry
at Doane University,
USA

NIALL ROGERS

Studying Computer Systems
Integration at the University of
the West of England, UK



BE PART OF A SCIENCE EDUCATION COMMUNITY

Want more articles like these from researchers, students and science-related organisations?

By signing up to Futurum Careers, you are subscribing to a community of scientists, educators, employers, students – people like you – who want to show the world just how fascinating and rewarding a career in the sciences can be.

WHAT'S IN IT FOR YOU?

As a member of Futurum Careers, you'll receive:

- The latest articles from academics, scientists and science-related organisations
- Teaching and classroom resources relating to specific topics in the sciences
- Careers resources, including 'How to' guides, information on apprenticeship schemes, and interviews with employers and young people studying degree courses
- All of the above sent to you 4 times a year for free. We won't swamp your inbox, and there's no cost involved

To sign up for free, visit: www.futurumcareers.com/sign-up



A NOTE ABOUT YOUR PRIVACY

Your privacy is very important to us. We will not share, sell, reveal, publicise or market your details in any way, shape or form.

Our full privacy policy can be found on the Futurum Careers website: www.futurumcareers.com/privacy

WHAT DID YOU WANT TO BE WHEN YOU WERE GROWING UP?

If you're a scientist – and you always thought you'd be one –, chances are you had high levels of science capital as a child. This meant that, from an early age, you had access to science-related knowledge and experiences, recognised the relevance of science, and knew scientists or people working in similar professions.

ASPIRES, a ten-year longitudinal study of young people's science and career aspirations, has come up with eight dimensions of science capital. And, the researchers on the project have established that the more science capital young people have, the more likely they are to study science in the future.

Worryingly, a survey of 3,658 young people in the UK aged between 11 and 15 found that only 5% had high levels of science capital (Archer et al., 2015).

Whether we embrace the idea of science capital or not, we all understand the implications of a society that shuns

scientific knowledge: national economic competitiveness is reliant on a strong STEM skills base; science literacy has an impact on citizens' ability to participate in and understand important societal issues; effective science communication counteracts fake news and the propagation of distrust in experts. These are but a few of the many reasons for increasing and broadening participation in science, research, engineering and technology – occupations that are facing skills shortages in the UK and elsewhere.

The aims of this magazine, then, are manifold. With your contribution, we can offer children and young people – regardless of their gender, race or background – the knowledge and confidence to study science – and, in turn, social mobility; we can provide educators with appropriate resources to inspire the next generation to pursue science; and we can help you communicate your work to a global, captivated audience. All you need to do is get in touch.

We look forward to hearing from you.

KAREN LINDSAY
Editorial Director

BRETT LANGENBERG
Founder and Director

T: +44 117 909 9150

E: info@scicomconsult.com

@FUTURUMCareers

CONTENTS

-
- 3** **WISE UP TO A CAREER IN STEM:** Dr Mhairi Crawford shares a unique resource designed to inspire girls to take up careers in science, technology, engineering and maths
-
- 6** **FIND. IDENTIFY. ACT:** Dr Andrea Holmes describes how the DETECHIP can help those working in law enforcement – and many other sectors – identify a range of unknown and potentially dangerous substances
-
- 9** **“HE SAID I COULD BE THE NEXT Q IN JAMES BOND”:** Niall Rogers, a student at the University of the West of England, explains why he is studying Computer Systems Integration
-

CALLING ALL GIRLS AND YOUNG WOMEN: WISE UP TO A CAREER IN STEM*

WHETHER YOU'RE IMAGINATIVE, CONFIDENT, LOGICAL, CREATIVE, ORGANISED – OR SHY, EVEN – THERE ARE SO MANY WELL PAID AND REWARDING JOBS IN THE SCIENCES FOR YOUNG WOMEN. BUT GIRLS AND YOUNG WOMEN IN THE UK AREN'T CHOOSING CAREERS IN SCIENCE, TECHNOLOGY, ENGINEERING OR MATHS. WHY NOT? WE ASK DR MHAIRI CRAWFORD, DEVELOPMENT DIRECTOR AT WISE



WHAT'S THE PROBLEM?

THERE ARE THREE MAIN AREAS OF CONCERN:

* SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS

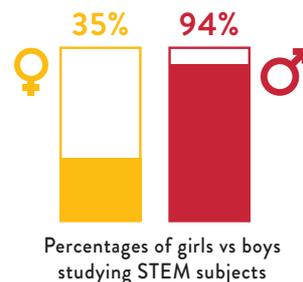
1.

According to research by Social Market Foundation and EDF, 640,000 STEM jobs will need to be filled by 2023. That's in less than five years' time. But there aren't enough people studying STEM, meaning that employers won't be able to find the skilled employees they need, and the UK economy will suffer.

640,000
STEM JOBS NEED TO BE
FILLED BY **2023**

2.

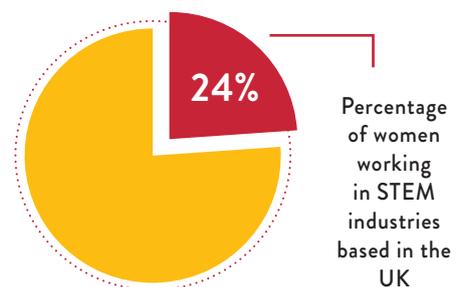
Even though girls tend to get better grades in science subjects at school (averaging 66% A-C at GCSE versus 62% A-C for boys), only 35% of girls choose to study maths, physics, computing or a technical vocations qualification after the age of 16. Whereas, 94% of boys go on to study these subjects. This means girls are avoiding subjects they are good at – and will probably be very happy doing – because they feel STEM is not for them.



3.

In the UK, only 24% of people working in STEM industries – science, manufacturing, energy, computing, for example – are women. This means that women are missing out on jobs that make a difference to people's lives, are well paid and are incredibly important for the future.

And businesses aren't getting the skills they need, such as imagination, creativity, people skills and much, much more. Men have these skills, too, but without more women in STEM, there aren't enough people to fill the skills shortage.





GE Aviation, Wales 2017 © WISE



ABOUT

MHAIRI CRAWFORD

“I’m responsible for all the different offerings that WISE has, including People Like Me – which engages girls with careers in STEM (science, technology, engineering and maths) – and Ten Steps – which helps industry to make STEM more attractive to women. I’m also responsible for research and statistics analysis, and I get to think about what we need to do to change things in the future for girls and women.”

.....

ABOUT WISE

WISE stands for Women into Science and Engineering. It was set up in 1984 after a government committee, led by Sir Monty Finniston, found that there weren’t enough skilled engineers in the UK.

WHAT'S THE SOLUTION? WISE UP TO A CAREER IN STEM

MHAIRI TALKS TO US ABOUT WISE, AND WHY IT'S IMPORTANT FOR GIRLS AND YOUNG WOMEN TO STOP SEEING STEM AS A CAREER CHOICE FOR MEN WHO WEAR HARD HATS OR SIT IN THEIR BEDROOMS WRITING COMPUTER PROGRAMS

1) WHAT IS WISE AND WHAT DOES IT AIM TO DO?

Our goal is to support more women into STEM careers. We work from classroom to boardroom, and we do this by engaging young women to consider jobs in STEM, and by working with employers to help make the workplace a place where women are happy, successful and want to stay. Our immediate target is to have 1 million women working in core STEM careers (not medical STEM professions) by 2020. We're at over 850,000 at the moment, so we're on track!

2) WHY IS AN ORGANISATION LIKE WISE IMPORTANT?

WISE is unique. We work with employers to engage women, which means there's a real potential for change. As more companies become involved, the more incentives they'll introduce, i.e. something that encourages women to join their business – and this makes it easier for women to enter and stay in STEM careers.

3) WHY DO GIRLS AND YOUNG WOMEN AVOID STEM SUBJECTS AND CAREERS?

There are a number of reasons, but I think a lot of it comes down to perceptions. People often think of stereotypes of engineers wearing hard hats and high vis vests, or computer programmers sitting in their bedroom in their underwear. These images don't help girls identify with roles like these – they probably don't see themselves like that – and they don't help parents or carers to identify these roles for their daughters. There's also the incorrect perception that girls aren't as good at STEM as boys, or that they shouldn't be doing hands-on, practical subjects. UK exam statistics show that this is wrong – girls are good at STEM – but it's taking years to address this.

4) WHY SHOULD GIRLS AND YOUNG WOMEN TAKE AN INTEREST IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS?

Just think of the difference you could make. It's not just that there are so many roles out there that are fun, varied and interesting. Or that there are opportunities for travel or doing some really amazing things. You could make a huge difference to people's lives while doing something you enjoy. Not only that, over the 40-50 years you'll be working, a career in STEM pays around £250k more than a non-STEM career. Imagine what you could do with that.



WHAT'S THE SOLUTION? PEOPLE LIKE YOU

MHAIRI TALKS TO US ABOUT THE PEOPLE LIKE ME PROJECT, AND HOW IT'S HELPING GIRLS AND YOUNG WOMEN SEE THAT JOBS IN STEM ARE FOR PEOPLE LIKE THEM – AND YOU

1) WHAT IS PEOPLE LIKE ME?

Think how many years you're going to be working? Probably nearly 50 years. Wouldn't it be good to find something that will make you happy and successful? People Like Me uses research to help you find out which jobs in science, technology, engineering and maths might suit your personality type. It takes you through a quiz to identify your personality strengths, then matches you to a personality type in the workplace. You might be a manager, a policy maker, an entrepreneur or a supporter; once you understand where you could fit then you can explore careers that suit your strengths, helping you find a pathway to somewhere you could be happy and successful.

2) WHO'S IT FOR?

Anyone, but it was designed for 11-14-year-old girls to encourage them to choose STEM subjects at GCSE and post GCSE. Our new online People Like Me platform is aimed at the 11-18 age group, and will be available in September – but, really, it works for any age group!

3) CAN BOYS AND YOUNG MEN USE PEOPLE LIKE ME, TOO?

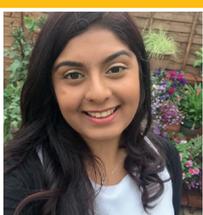
Yes, but the research behind People Like Me highlighted that women and men (or girls and boys) tend to think slightly differently. Girls tend to use adjectives to self-identify, i.e. using words such as 'artistic, friendly, intuitive' to understand the type of person they are. Boys like to use verbs to self-identify, i.e. using words such as 'good at building, drawing, leading' to describe themselves. What this means is that while People Like Me works for boys and young men (and it does work), they may not feel comfortable using the adjectives in the quiz.

4) HOW DO YOU ACCESS IT?

From September, the quiz will be available online. For now, you can print out the quiz and supporting materials from the WISE website. On the website you'll find:

- The Personality Type quiz
- A glossary to help you with words you might not know
- A Job Analysis sheet to help you find jobs that suit your personality type
- Role models (see examples below)

ARE YOU LIKE THESE TWO ROLE MODELS?



IROSHA GUNATUNGA

Irosha is a practical person who works methodically to solve tricky construction and engineering problems. She relies on her patience and organisational skills in her job as a site engineer.



ANNABEL SUNNUCKS

Annabel is very friendly, outgoing and enjoys working with others. She's an efficient worker and a good problem-solver – all great skills to have in her job as an intern for CA Technologies.



DR ANDREA HOLMES

Professor of Chemistry
Doane University, Nebraska, USA
Field of research: Nanotechnology

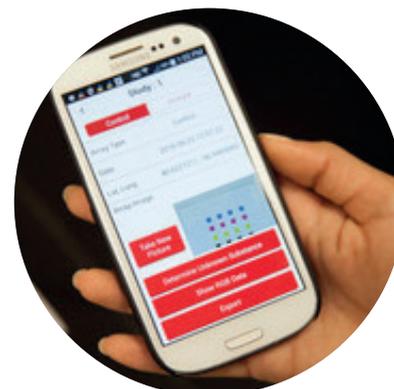
CURRICULUM VITAE

Postdoctorate degree,
Columbia University
Doctorate degree in organic chemistry,
New York University
Undergraduate degree in biology and
chemistry, University of North Florida

RESEARCH PROJECT

DETECHIP®, a small, portable
detection chip that can be used by the
police, doctors, the military and the
general public, even, to identify drugs,
pesticides, explosives, microbes that
cause bacterial infections, and much,
much more.

The next step, then, is to supply people working in the emergency services, such as police officers, with DETECHIP and the smartphone app so that they can detect potentially dangerous substances like explosives. All they would need to do is place a sample on the DETECHIP, take a photo of the colour change, and let the app tell them exactly what the substance is.



The smartphone app analyses colour changes from a photo

FIND. IDENTIFY. ACT.

SCIENTISTS AT DOANE UNIVERSITY HAVE DEVELOPED NANOPRINTED SENSORS THAT CAN IDENTIFY UNKNOWN SUBSTANCES, BUT WHY IS THIS IMPORTANT?

Imagine these two scenarios:



1) Soldiers come across an unknown substance whilst on patrol. This substance could be an explosive or nerve gas, but they have no way of knowing just by looking at it.



2) Environmental scientists are told that fish are dying in a stream, miles away from their workplace, but they can't tell which pollutant or microbe is causing this without taking samples of the water back to their lab.

Being able to identify unknown substances on the spot and outside of the lab is incredibly important, but, currently, it isn't easy to do this without sending samples to a laboratory for testing. Dr Andrea Holmes and her team have developed a nanoprinted sensor called DETECHIP, which she hopes can be used in all sorts of situations and environments to immediately detect unknown substances.

WHAT IS A NANOPRINTED SENSOR?

Short for 'detection chip', the DETECHIP is made up of coloured inks printed onto a paper-like surface. These coloured inks are called nanoprinted sensors, which work in a similar way to the urine test strips doctors or nurses use to test for

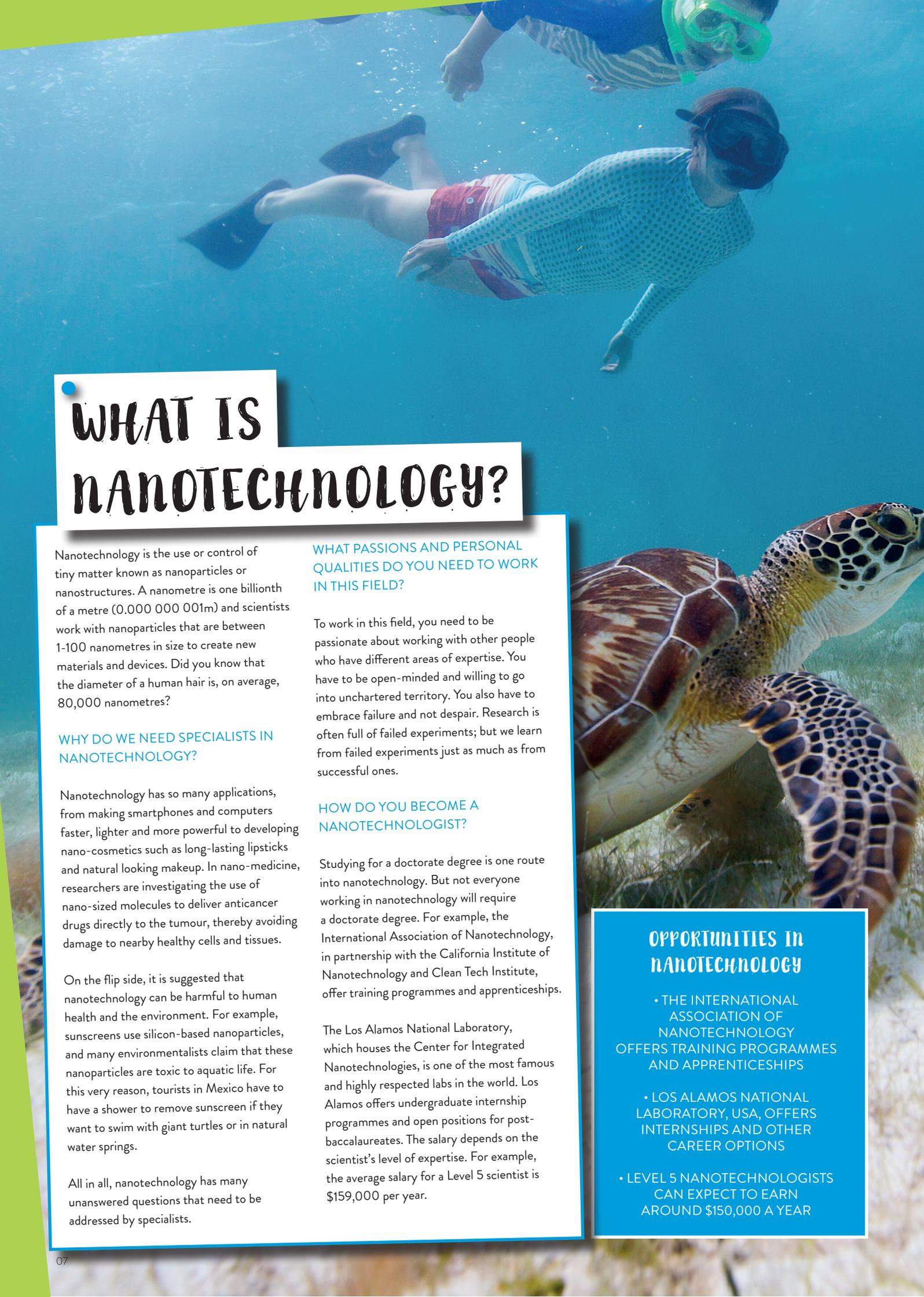
infections. When the inks come into contact with a drug or other substance, they change colour. And, by analysing the colour changes, it is possible to identify the substance.

The paper-like surface is almost like a sponge, in that it has tiny pores that soak up the inks or sensors. The inks are called nanoprinted sensors because the miniscule pores are only 1 nanometre in size, and a special printer known as a Dip Pen Nanolithography or DPN printer can place minute or nanosized amounts of ink onto the surface.

Incredibly, larger nanoprinted sensors can also be printed using a standard ink jet printer available in any office supply retailer. Police officers, for example, might want to use these bigger sensors so that they can test for substances such as cocaine. A larger sensor would enable the policeman or woman to see the colour changes immediately. Nanosized sensors can only be seen under a microscope, but this is very useful when thousands of experiments need to be performed, or if there is only a small amount of the substance to identify.

CAN THE DETECHIP BE USED NOW?

At the moment, DETECHIP can identify over 100 substances, from drugs of abuse to pharmaceutical drugs, pesticides, warfare agents such as nerve gas, and many more, but it isn't being used outside of Andrea's lab – yet! The researchers are developing a smartphone app that can analyse colour changes from a photo.



WHAT IS NANOTECHNOLOGY?

Nanotechnology is the use or control of tiny matter known as nanoparticles or nanostructures. A nanometre is one billionth of a metre (0.000 000 001m) and scientists work with nanoparticles that are between 1-100 nanometres in size to create new materials and devices. Did you know that the diameter of a human hair is, on average, 80,000 nanometres?

WHY DO WE NEED SPECIALISTS IN NANOTECHNOLOGY?

Nanotechnology has so many applications, from making smartphones and computers faster, lighter and more powerful to developing nano-cosmetics such as long-lasting lipsticks and natural looking makeup. In nano-medicine, researchers are investigating the use of nano-sized molecules to deliver anticancer drugs directly to the tumour, thereby avoiding damage to nearby healthy cells and tissues.

On the flip side, it is suggested that nanotechnology can be harmful to human health and the environment. For example, sunscreens use silicon-based nanoparticles, and many environmentalists claim that these nanoparticles are toxic to aquatic life. For this very reason, tourists in Mexico have to have a shower to remove sunscreen if they want to swim with giant turtles or in natural water springs.

All in all, nanotechnology has many unanswered questions that need to be addressed by specialists.

WHAT PASSIONS AND PERSONAL QUALITIES DO YOU NEED TO WORK IN THIS FIELD?

To work in this field, you need to be passionate about working with other people who have different areas of expertise. You have to be open-minded and willing to go into uncharted territory. You also have to embrace failure and not despair. Research is often full of failed experiments; but we learn from failed experiments just as much as from successful ones.

HOW DO YOU BECOME A NANOTECHNOLOGIST?

Studying for a doctorate degree is one route into nanotechnology. But not everyone working in nanotechnology will require a doctorate degree. For example, the International Association of Nanotechnology, in partnership with the California Institute of Nanotechnology and Clean Tech Institute, offer training programmes and apprenticeships.

The Los Alamos National Laboratory, which houses the Center for Integrated Nanotechnologies, is one of the most famous and highly respected labs in the world. Los Alamos offers undergraduate internship programmes and open positions for post-baccalaureates. The salary depends on the scientist's level of expertise. For example, the average salary for a Level 5 scientist is \$159,000 per year.



OPPORTUNITIES In NANOTECHNOLOGY

- THE INTERNATIONAL ASSOCIATION OF NANOTECHNOLOGY OFFERS TRAINING PROGRAMMES AND APPRENTICESHIPS
- LOS ALAMOS NATIONAL LABORATORY, USA, OFFERS INTERNSHIPS AND OTHER CAREER OPTIONS
- LEVEL 5 NANOTECHNOLOGISTS CAN EXPECT TO EARN AROUND \$150,000 A YEAR

ASK DR ANDREA HOLMES

WHAT DID YOU WANT TO BE WHEN YOU WERE YOUNGER?

I always wanted to be a teacher. As a kid, when I role-played with my little sister, I insisted on being the teacher, and she had to be the student! After a while, she didn't like that anymore because I kept reprimanding her for not doing her homework! I realised then that I had to change my teaching style and explore new ways of getting her excited about "my class". From an early age, I had this innate feeling that I would be a great teacher and mentor.

As I grew older, and during adulthood, I connected best with students between 18-25 years of age, which is why I decided to pursue an academic career at a university.

WHO OR WHAT INSPIRED YOU TO STUDY CHEMISTRY?

I was definitely not inspired by my high school grades. In fact, I hardly passed high school; I was almost kicked out for disorderly conduct and received mostly C or D grades in my courses. I was a rebel teenager with little desire to do anything in STEM.

At one point, however, I realised that I needed to take care of myself and make a living. So, I decided to become an X-ray technician. After a while, I got bored with that, and I didn't have enough patience to work with sick patients. I decided to attend college to get a Bachelor of Science degree. It was during my undergraduate education, that I became hooked on chemistry and nanotechnology.

During my undergraduate degree, I struggled in chemistry, and even though I studied and studied, I

still wasn't very good at it. But I wanted to conquer this incredible mountain, and that kept me on top of my game. Since then, I have never been bored again. I still find nanotechnology fascinating even though it can be hard to understand. Sometimes, I'm surprised by significant contributions I have made to nanotechnology.

YOU STUDIED BIOLOGY, CHEMISTRY AND MATHS AT UNIVERSITY. IS THIS A 'STANDARD' ROUTE TO WORKING IN NANOTECHNOLOGY?

To be a professor at a university you have to have a doctorate. A doctoral degree involves completing independent research and a thesis, a long essay or dissertation that supports the research. During my doctoral education, I took organic chemistry courses but mostly conducted organic chemistry research for my thesis. There is no standard route for working in the field of nanotechnology. This field is so interdisciplinary [involving many subjects and areas of knowledge], that nanotechnology researchers might have backgrounds in physics, engineering, biology, materials science or computation, for example.

IF YOU COULD GO BACK IN TIME WHAT ADVICE WOULD YOU GIVE YOURSELF WHEN YOU WERE STARTING OUT ON YOUR CAREER PATH?

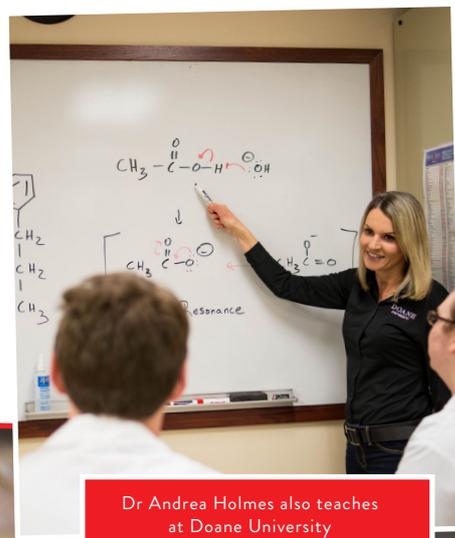
I would tell myself not to be intimidated and ask questions. When I started in graduate school, I was very insecure about my qualifications and abilities, and I was really shy when I went to conferences or symposia where scientific research was presented. I felt that all these famous professors and researchers would think my questions were stupid. Now, having been in this field for so long, I realise

“ I was definitely not inspired by my high school grades. I hardly passed high school, and received mostly C or D grades in my courses. ”

this was a big mistake. I should have told myself back then that the only stupid question is the one not asked!

DO YOU HAVE A TOP TIP FOR YOUNG PEOPLE HOPING TO FOLLOW IN YOUR FOOTSTEPS?

Many young people don't know about careers that exist in chemistry or nanotechnology. My students usually want to become physicians [doctors] or to work in other, similar healthcare professions. I like telling my students that they have enough years in their lifetime to pursue at least three professions. They don't have to decide on a career for life. In fact, they have enough time to explore and work in several professions until they find the right fit.



Dr Andrea Holmes also teaches at Doane University

ANDREA'S FIVE TOP TIPS FOR STUDENTS

1. NO BARRIERS! EXPLORE, EXPLORE, EXPLORE!
2. OPEN YOUR MIND! THERE IS SO MUCH OUT THERE
3. TRY IT ALL UNTIL YOU FIND WHAT'S RIGHT FOR YOU
4. DO NOT BE AFRAID AND ASK QUESTIONS
5. DO NOT BE DISCOURAGED BY BAD GRADES. GRADES DO NOT REFLECT YOUR CAPABILITIES

To ask Andrea a question, visit
www.futurumcareers.com



MIALL ROGERS

BSc (Hons) Computer Systems
Integration

University of the West of England
(UWE), UK

CURRICULUM VITAE

7 GCSEs Grade C and above
(Maths retake C; Double Science C C)

BTEC Level 2
Information Technology (IT)

BTEC Level 3 IT Extended Diploma

WHAT IS COMPUTER SYSTEMS INTEGRATION?

There are many different types of computer systems. PCs, games consoles and smartphones are just some examples of a computer system, and all of them rely on different software applications to work properly.

together so that they work as one computer system. For example, smartphones, PCs and games consoles need access to the internet and WiFi.

System integration involves linking these different computing systems and software applications

Take a look at BBC Bitesize Introducing Computers for more info.

"THE GOOD THING ABOUT A CAREER IN COMPUTING IS THAT YOU CAN LIVE IN YOUR DREAM LOCATION - EVEN IF IT'S YOUR HOMETOWN - AND STILL WORK FOR ANYONE IN THE WORLD."

SMART STUDENTS MAKE SMART THINGS

Students in their final year at UWE use the knowledge they have learned to make smart technologies. Here are two examples:



1) An alarm clock that automatically changes the time it wakes people up if the traffic is bad.



2) A device that uses Xbox Kinect to help people who are visually impaired to navigate around a room.

UNSTABLE GRAVITATION

ENGINE CONTROL

SPEED 235 K

ACCELERATION 54 %

PRESSURE 63 MPH

FUEL LEVEL 175 MSU/H

LISTEN TO THE INTERVIEW. CHECK OUT THE PODCAST ON:
<http://futurumcareers.com/>

"HE SAID I COULD BE THE NEXT Q IN JAMES BOND"

NIALL DIDN'T THINK HE WAS PARTICULARLY GOOD AT ICT, AND HE WASN'T KEEN ON GOING TO UNIVERSITY. NOW IN HIS SECOND YEAR AT THE UNIVERSITY OF THE WEST OF ENGLAND, WE ASK HIM HOW HE ENDED UP STUDYING COMPUTER SYSTEMS INTEGRATION

SCHOOL YEARS

WHEN YOU WERE IN YEAR 9 AT SCHOOL, YOU DECIDED TO TAKE THE BTEC IN INFORMATION TECHNOLOGY. WHY DIDN'T YOU TAKE THE GCSE IN COMPUTER SCIENCE?

At the Year 9 parents' evening, my IT teacher told me I should do IT GCSE because the grades I'd achieved throughout the year were really good, but the GCSE comes with an exam. I didn't want to take the exam because I'm not very good at them. I liked the idea of doing the coursework while learning IT at the same time.

THAT ONE PARENTS' EVENING HAS LED YOU TO STUDYING COMPUTER SCIENCE AT COLLEGE AND UNIVERSITY. WERE YOU INTERESTED IN IT AT THE TIME?

I had an interest – like everyone does at that age – in video games, consoles, stuff like that, but I didn't own a computer or laptop until Year 10.

YOU ENDED UP WITH A MERIT. HOW DIFFICULT DID YOU FIND THE BTEC?

The BTEC wasn't that difficult. I was a bit shocked with the merit result because it

involved a lot of writing, which was kinda boring – and there wasn't any programming. The GCSE might have been better for me, but this course hasn't stopped me from getting where I am today, so I don't regret it.

WHAT SUBJECTS DID YOU TAKE AT COLLEGE?

I retook English Language and did the Level 3 IT Extended Diploma. For the Diploma, I came out with triple distinction star, which filled me with a lot of confidence.

LEAVING HOME

WHY DID YOU CHOOSE TO GO TO UNIVERSITY?

I wasn't going to go to university. The college workload was pretty heavy, so I wanted to take a break. I knew university was going to be expensive; it meant moving away; and I didn't feel quite ready for it. But mum was having none of that.

My tutor at college said: 'You might as well strike while the iron's hot. If you've got the motivation for it you should try and go for it.' It was a bit after the UCAS deadline to sign up for the course when we [Niall and his tutor] started scouting around for degree courses that were actually

going to push me – because the ones I'd taken previously hadn't. When we got in contact with Martin, the course leader at UWE, he was keen to take on more people, so I decided to go for it. It seemed like the right choice.

WHAT DO YOU LIKE MOST ABOUT THE COURSE?

I like how it's not just focused on one area. Some days you'll be working on web design, and on other days you're programming a robot to follow a line. I went to uni with very little programming experience and now I'm basically learning entire new computer programming languages – not just one but five or six.

IS THERE ANYTHING YOU DON'T LIKE?

In the first year, they give you information brick by brick, and build on it. Now, in the second year, they're not giving us bricks, they're giving us walls and houses to put up. I suppose I should be taking more notes. I guess that's what more committed students do.

DO YOU HAVE TO BE A CERTAIN TYPE OF PERSON TO STUDY THIS COURSE?

No, as long as you're dedicated and happy with it, you can be any type of person. You can be the laziest person in the world, and sit in your bed, and you'll still make something good out of it.

LIFE AFTER UNI

WHAT DO YOU WANT TO DO WHEN YOU LEAVE UNIVERSITY?

I want to do something I'm going to enjoy. Something that pays OK so I'm not scraping around for the rent each month. If MI5 or GCHQ have departments that need computer security, or embedded systems, that's something I'd like to look

into in the future. My dad is really passionate about that. He said I could be the next Q in James Bond.

ARE YOU SAYING THE WORLD IS YOUR OYSTER?

That's the picture that has been painted for us at uni – that there aren't really many limitations. I

think the tutor said that 98 per cent of students he had last year were employed as soon as they left university because of their placement year [in the third year, students can choose to work in a company]. The good thing about a career in computing is that you can live in your dream location and still work for anyone in the world.

"Imagine For Schools is an inspirational programme for both children and staff. It is thought provoking and provides a great platform to develop a Growth Mindset approach to learning."

Lynne Ryder (Headteacher, Parish CE Primary School)



We deliver workshops and training for pupils, staff and families on Resilience, Identity and Growth Mindset. We inspire and equip schools to:

- ✓ **Redefine struggle, challenge and failure.**
- ✓ **Build self-esteem and confidence.**
- ✓ **Bring Growth Mindset theory to life.**
- ✓ **Create a culture of resilience in school and the wider community.**

We offer tailor made packages to suit your school's budget and requirements. For more information contact us on;

Tel: 01684 310425

Email: info@imagineforschools.co.uk

**A Growth Mindset.
Approach to Resilience & Identity -
Empowering pupils, staff and families.**