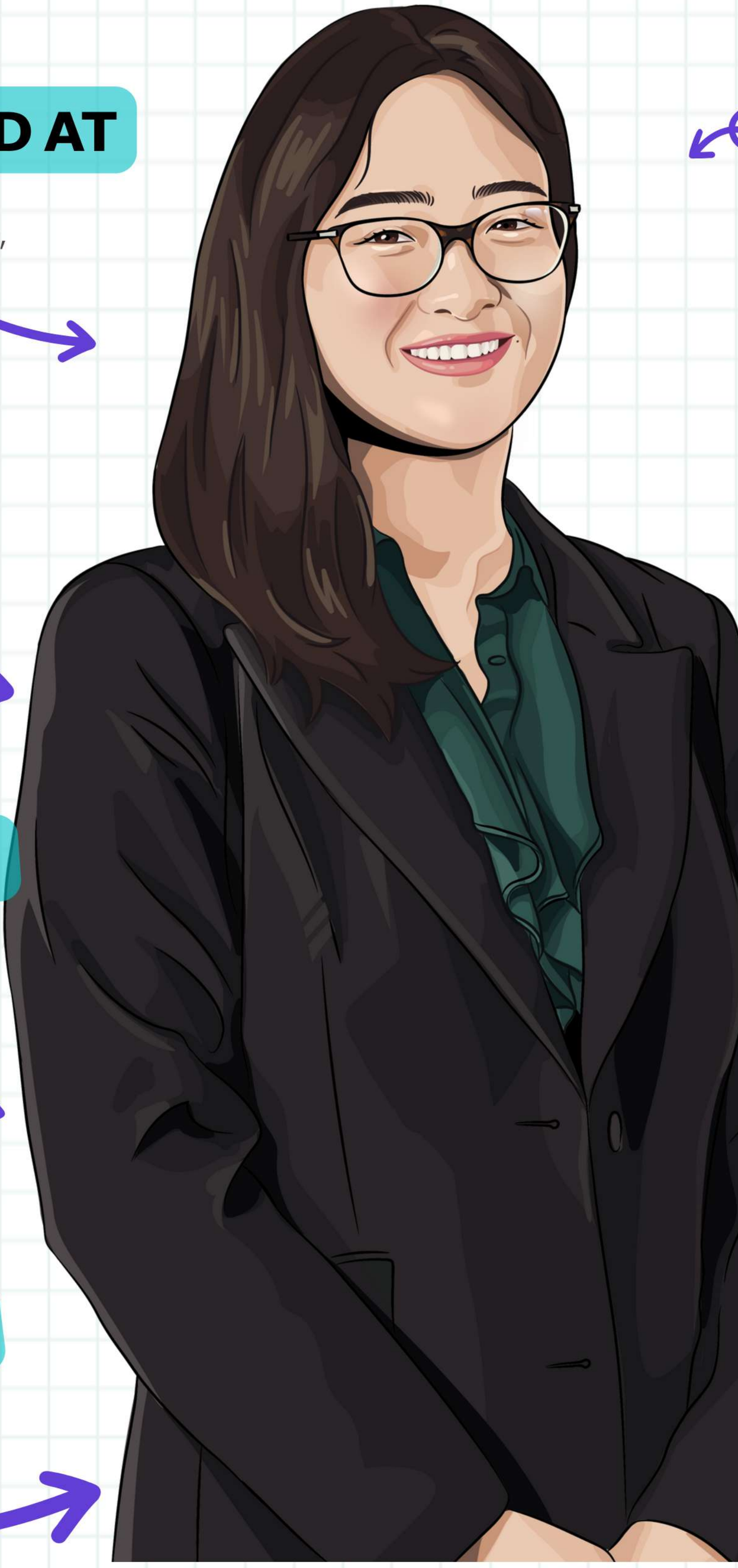
# Daisy is an optometrist



## NOT GOOD AT

doing coding or admin tasks (aka, paperwork)

## LOVES

doing yoga and baking delicious cookies

## CAREER

academic research scientist and optometrist

## STUDIED

Bachelor of Optometry and Vision Science and a PhD on cataract research

## EXPERT ON

understanding and treating eye diseases

## WANTS TO

improve vision for millions of people

## GOOD AT

solving complex problems and communication

## GETS TO

explores the mysteries of the human eye

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www.futureyouaustralia.com.au/pathfinders/daisy

# Meet Daisy Shu

**What do you do?**
I'm an academic research scientist and optometrist. I lead a laboratory at UNSW, exploring how we can better understand and treat eye diseases such as age-related macular degeneration, a leading cause of blindness worldwide. My work involves both seeing patients in the clinic and conducting cutting-edge research in the lab to develop new therapies that could one day improve vision for millions of people.

**How did you get into that job?**
After high school, I pursued a combined Bachelor of Optometry and Vision Science degree at UNSW, which ignited my passion for eye research. Upon graduating, I spent a couple of years working as a clinical optometrist in Sydney, gaining invaluable hands-on clinical experience. During this time, I encountered many patients suffering from age-related eye diseases like cataract and macular degeneration, who weren't responding well to existing treatments. This experience fuelled my determination to pursue a research career, aiming to develop better therapies to treat these challenging eye conditions.

I completed my PhD at the University of Sydney, focusing on cataract research under the mentorship of Prof. Frank Lovicu. With my PhD in hand, I embarked on an exciting journey to Boston, USA, where I completed a postdoctoral fellowship at Harvard in the Saint-Geniez laboratory, focusing on developing novel therapies to treat age-related macular degeneration. After completing my postdoc, I returned to Sydney to establish my own independent laboratory at UNSW's School of Optometry and Vision Science—the very place where my journey began. Now, as a Scientia Senior Lecturer, I blend research, teaching, and clinical practice to advance our understanding of eye diseases.

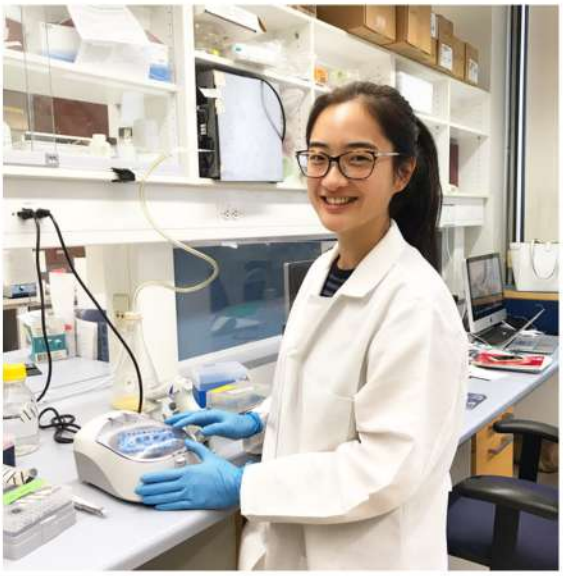
**What do you love about your job?**
I love that my job is a perfect blend of science and patient care. Not only do I get to explore the mysteries of the human eye in the lab, but I also translate that knowledge into helping people see better. It's incredibly rewarding to know that the work we're doing today could change lives tomorrow.

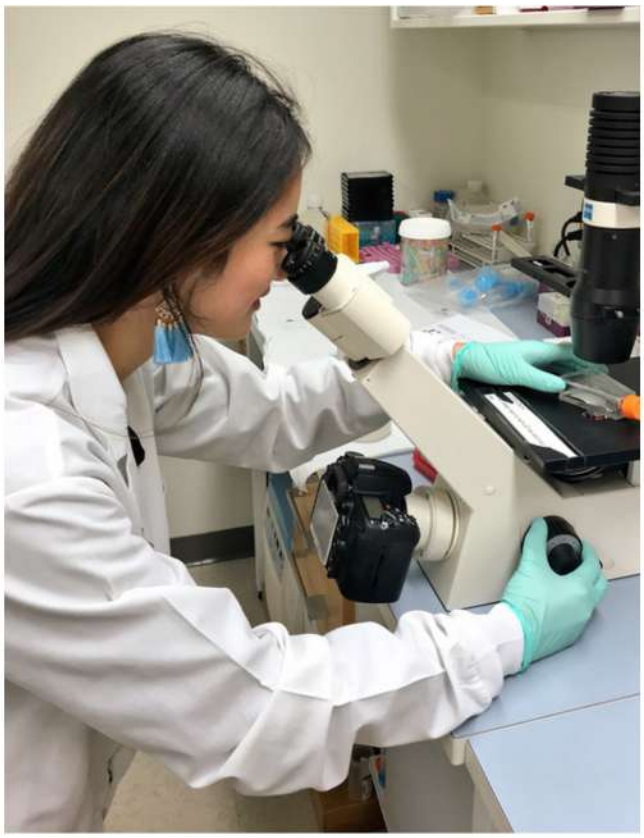
My career allows me to travel the world for conferences, where I get to meet inspiring people from different cultures. For example, I've been to Belfast in Northern Ireland (where I met my now-husband) and I'm looking forward to traveling to Buenos Aires in Argentina soon for another conference. These experiences enrich my work and bring a global perspective to my research.

**How does your job help people/the community/the world?**

My job helps by pushing the boundaries of what we know about eye diseases, particularly those that affect older adults. Our research could lead to new treatments that not only improve quality of life but also reduce the burden of blindness worldwide.

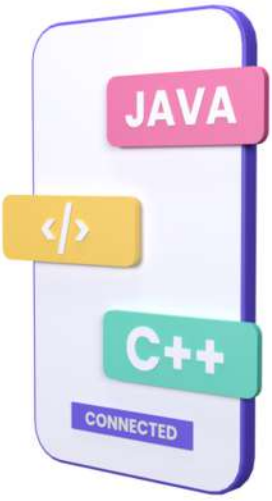
Another part of my job that I love is that I get to mentor and train the next generation of scientists, helping to inspire and guide future leaders in vision research. I'm part of the UNSW STEMM Champions program, where I get to inspire girls to dive into the exciting world of STEMM. It's all about showing them how amazing a career in science can be and giving them the tools, confidence, and connections to succeed. We're not just teaching skills—we're building a community of future women leaders who will rock the world of STEMM!





**What are two things you're not good at?**

I'm not particularly skilled at coding, so I prefer to collaborate with experts who can handle that side of things.




As for paperwork and administrative tasks, I find they aren't my strong suit, so I like to delegate those responsibilities when possible, allowing me to focus more on research and patient care.

**What are two things you are good at?**

I'm good at seeing the big picture and understanding how all the pieces of a problem fit together.


*Daisy and her co-hosts, Roberto Mota and Vik Meadows*

I'm also skilled at breaking down complex science into easily understandable concepts, whether I'm talking to students, patients, or the public. I even host a podcast called "Behind Our Science," where I bring these ideas to life for a broader audience. I love sharing my career journey on social media, actively engaging with the public through my "@EyeDaisyShu" handle.

**What makes you happy (outside of work)?**

Yoga and baking cookies bring me a sense of calm and balance. Yoga helps me stay centred and grounded, allowing me to clear my mind and find inner peace. Meanwhile, baking cookies is a simple pleasure that brings warmth and joy to my day, reminding me to appreciate the little things in life. I just love the smell of fresh cookies coming out of the oven.

**Where do you want your career to take you?**

I want to become an internationally renowned researcher, leading a large team dedicated to discovering new treatments for eye diseases. My ultimate goal is to contribute to curing blindness, so that as we age, we can still appreciate the beauty of the world with clear vision and enjoy a high quality of life. I hope my work will make a lasting impact on both the scientific community and the lives of patients around the world, allowing them to continue experiencing the world visually for years to come.

Enjoys maths and science at high school

Finish Year 12

Bachelor of Vision Science

After graduating, works as clinical optometrist

Connecting with patients inspires further study

Does a PhD in cataract resarch

Goes on to do a postdoctoral fellowship at Harvard

Becomes a Scientia Senior Lecturer at UNSW

Joins biology club at school

Finish Year 12

Studies Diploma of Allied Health Assitance

Works casually in local optometry shop to gain hands-on experience

Graduates and gets job as Occupational Therapist Assistant at local school

Misses helping improve people's vision

Bachelor of Vision Science (part-time)

Delivers outreach services to underserviced communities

Opens own optometry business in the outback

Love dancing and performing

Finishes Year 10

Certificate III in Beauty Services

Gets role as Beautician at local spa

On-the-job training and learning = more qualifications

Develops an interest in eye health after learning about cosmetic eye infection rates

Bachelor of Vision Science (part-time)

Graduates and gets promoted to optometrist

Works at local optometry shop part-time.

# Optometrist career pathways

Find out more at www.futureyouaustralia.com.au/resources/#other/

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The educational qualifications and levels outlined in these pathways are intended as general guidelines. To obtain accurate and up-to-date information, explore resources specific to your state or territory, available through websites like *myfuture.edu.au*, *YourCareer.gov.au* and *australianapprenticeships.gov.au*.

There is also a range of financial support available for students doing apprenticeships or going to university, visit *www.servicesaustralia.gov.au/education* to see what's available.

- Bachelor of Vision Science: https://www.courseseeker.edu.au/



- Certificate IV in Allied Health Assistance: https://beta.training.gov.au

- Certificate III in Beauty Services: https://beta.training.gov.au
- Bachelor of Vision Science: https://www.courseseeker.edu.au

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**Remember, there are countless pathways to the same career. Each child's unique skills, interests, and strengths will guide them on their personal journey to success.**

# Comprehension Questions

**Australian Curriculum V9.0 links for Years 3 to 7**

**English**
- Literacy

**General Capabilities:**
- Literacy

## Learning outcomes:

All students will be able to:
- Identify that all people have strengths and weaknesses
- Actively think about what is happening in various texts as they read them
- Apply comprehension strategies to different media formats

In addition, some students will be able to:
- Identify different reasons for doing different jobs

## Instructions:

- Format/print the students' question sheets (or load them onto school LMS) and direct students to a copy.
- Read the questions as a class to start, discussing any meanings
- Discuss with the class strategies for being able to answer the questions as they read about Daisy
- Read about Daisy as a class, encouraging students to answer questions as you go

Adaptation note: Questions can be modified on the PDF to meet students' needs or learning focus areas in your classroom

## Comprehension questions

1. What two jobs does Daisy have?
2. What does Daisy's work involve?
3. What made Daisy want to pursue a career in research?
4. What does Daisy love about her job?
5. How does attending conferences enrich Daisy's work?
6. Name two things Daisy is not good at.
7. Name two things Daisy is good at.
8. What is Daisy helping to build?
9. What brings Daisy a sense of calm and balance?
10. What is Daisy's ultimate goal?

**Scan this QR code to visit my page**

Answers:
1. She's an academic research scientist and an optometrist
2. Seeing patients in the clinic and conducting cutting-edge research in the lab.
3. Meeting patients during her clinical experience who weren't responding well to existing treatments
4. It's a perfect blend of science and patient care.
5. They bring a global perspective to my research.
6. Coding and admin work.
7. Seeing the big picture and communication.
8. A community of future women leaders who will rock the world of STEMM!
9. Yoga and baking cookies
10. To cure blindness.

# Daisy

Student name:

## Comprehension Questions

What does Daisy's work involve?

What two jobs does Daisy have?

1.

2.

What made Daisy want to pursue a career in research?

Name two things Daisy is not good at.

1.

2.

Name two things Daisy is good at.

1.

2.

What does Daisy love about her job?

What is Daisy helping to build?

What is Daisy's ultimate goal?

What brings Daisy a sense of calm and balance?

1.

2.

How does attending conferences enrich Daisy's work?

# Capability Convos

**Australian Curriculum V9.0 links for Years 3 to 7**

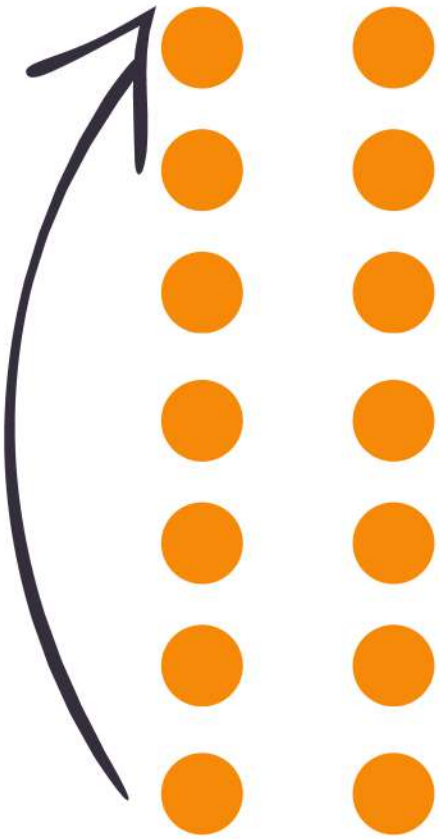
**English**
- Language
- Literacy

**General Capabilities:**
- Critical and Creative Thinking
- Personal and Social Capability
- Ethical Understanding
- Literacy

**Learning outcomes:**

All students will be able to:
- identify some likes, dislikes, strengths, abilities and/or interests when showing a personal preference
- acknowledge that people have different needs, emotions and abilities

In addition, some students will be able to:
- describe the ways they are connected and can contribute to their community groups



**Format**
- Interactive game with 10 questions
- Easy to play
- Read about Daisy's job and journey with the class
- Print the questions
- Play the game
- Modify or include new questions based on students' needs

**Scan this QR code to find out more about me.**

SCAN ME

**Instructions for students**

Line the class up in two lines facing each other to form pairs. Ask the first question. Once each pair has discussed it, get one line to move one person to their right. The person at the end runs around to the other end of the line. Then you ask the next question and repeat the process until all the questions have been asked.

# Daisy

## Optomestrist/Research Scientist

### Question 1

What do you think is interesting about Daisy's career?

### Question 2

What skills does Daisy have that you also have, and does she have any skills you don't have that you would like to have?

### Question 3

Why do you think it's important to find a career that suits your skills and personality?

### Question 4

How are your interests and hobbies similar or different to Daisy's career?

### Question 5

How do you think Daisy's career contributes to society?

### Question 6

How important do you think it might be for Daisy to be able to do this job in a rural or remote location?

### Question 7

How important are mathematics and technology in Daisy's job? Can you think of some examples?

### Question 8

What tools or technology do you think Daisy needs to do her job?

### Question 9

How do you think AI might change Daisy's job in the future? Can you think of some examples?

### Question 10

What do you think would be the biggest challenge pursuing a career as a optometrist?

# Optometrist / Research Scientist

## STEM Meter

How much Science, Technology, Engineering and Mathematics (STEM) does this job use?


Source: jobsandskills.gov.au

**Daisy** is an optometrist and a research scientist. She uses cutting edge technology to explore the mysteries of the human eye. She hopes her work will find a cure for blindness and improve life for millions around the world. Find out more at:

**futureyouaustralia.com.au/pathfinders/daisy**

***"It's incredibly rewarding to know that the work we're doing today could change lives tomorrow"***

## Job stats and facts

**Future job growth:** Over the next five years jobs in this field are expected to grow very strongly.

**Location:** 21% of optometrists live outside capital cities.

**Employment pathways:**
A bachelor degree is required, but there are many pathways you can take to get an undergraduate degree.

| 3 STEM skills required for this job | Subjects to develop these skills | 3 other jobs that value this skill |
|---|---|---|
| Research | Science, Humanities and Social Science | Business Analyst, Psychologist, Economist |
| Complex problem solving | Design and Technologies, Digital Technology | Video Game Developer, Air Traffic Controller, Social Worker |
| Biology | Science | Physiotherapist, Forensic Scientist, Dentist |

# Other careers related to this line of work

## Environment

Environmental Health Scientist
Wildlife Biologist
Ecologist
Landscape Architect
Conservation Scientist

## Education

Optometry Educator
Vision Science Instructor
Special Education Teacher
Health Educator
School Counselor

## Animals

Veterinary Ophthalmologist
Veterinary Technician
Animal Behaviorist
Wildlife Rehabilitation Specialist
Zoologist

## People

Ophthalmologist
Optical Dispenser
Vision Therapist
Clinical Psychologist
Speech Pathologist

## Technology

Vision Science Researcher
Biomedical Engineer
Augmented Reality Developer
Optical Engineer
Health Informatics Specialist

The world is changing rapidly, and this means the career possibilities available to our kids are wide-ranging and exciting (and probably don't exist yet!).

From traditional vocations to emerging fields, there are countless pathways to be explored.

Parents and teachers can create environments that encourage kids to discover and investigate possible careers that match their skills and interests.

We've included some links to other valuable resources that can help guide career conversations and explorations. Find out more at:

**www.futureyouaustralia.com.au/resources/#other**

# Optometrist / Research Scientist

**Daisy** is an optometrist and a research scientist. She uses cutting edge technology to explore the mysteries of the human eye. She hopes her work will find a cure for blindness and improve life for millions around the world. Find out more at:

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***"It's incredibly rewarding to know that the work we're doing today could change lives tomorrow"***

## STEM Meter

How much Science, Technology, Engineering and Mathematics (STEM) does this job use?


Source: jobsandskills.gov.au

## 5 reasons why you should do this job

1. Improve the lives of lots of people
2. Work with really cool technology
3. Travel the world to share your work
4. Work in a team with interesting people
5. Solve puzzles

| 3 STEM skills required for this job | Subjects to develop these skills |
|---|---|
| Research | Science, Humanities and Social Science |
| Complex problem solving | Design and Technologies, Digital Technology |
| Biology | Science |

# A day in the life of a research scientist/optometrist

**7.30am** I wake up around 7:30 am and start my day with a slow, peaceful routine. I spend some time doing yoga and meditation, which helps me centre myself and set a calm tone for the day ahead. Afterwards, I enjoy a light breakfast while I mentally prepare for the day's tasks.

**9.00am** My day typically begins with a virtual meeting with my research collaborators in the Northern Hemisphere. It's their late afternoon, so it's the perfect time to sync up and discuss our latest findings and ongoing projects. It's always so great to be able to collaborate with people around the world, although it does require some careful time zone management. I'm fortunate to have many collaborators and friends from my Harvard days, which keeps our research dynamic and internationally connected.

**10.00am** After the meeting, I grab a coffee and have a chat with one of my mentees. This is a time where I provide advice and support for their career, helping them navigate their path in research and offering insights from my own experiences. It's fulfilling to see them grow and develop as scientists.

**10.30am** I dive into running our clinical study. We're currently testing participants as part of a project aimed at developing new therapies for age-related macular degeneration. I oversee the testing process, ensuring everything runs smoothly, and check in with my team on the progress.

**11.30am** I dedicate time to writing. Whether it's working on a grant proposal or drafting a manuscript, this part of the day is crucial for pushing our research forward and securing the funding we need to keep our projects going.

**1.00pm** I meet one-on-one with a student to discuss their research progress and any challenges they're facing. Mentoring is one of the most rewarding parts of my job, and I enjoy guiding the next generation of scientists.

**2.00pm** Every fortnight, we have a lab meeting where the entire group comes together to discuss our latest updates and brainstorm ideas. It's a collaborative and energising session where we share progress, troubleshoot issues, and plan the next steps in our projects.

**3.30pm** I attend a virtual seminar presentation from my department, where the latest research in our field is showcased. It's a fantastic opportunity to learn from colleagues and stay up-to-date with cutting-edge science at UNSW.

**4.00pm** I spend the late afternoon working on data analysis and preparing for upcoming presentations. We've got a big international conference coming up in Buenos Aires, Argentina, where I'll be sharing our latest findings, so I'm making sure everything is in order.

**5.00pm** I wrap up the workday by organising tasks for tomorrow and making sure everything is set for another productive day. I then head home to unwind.

**7.00pm** After dinner with my family, I might spend some time reading or working on plans for the next episode of my podcast, "Behind Our Science." It's a relaxing way to wind down while still engaging with my passion for science communication.

**9.00pm** As the day comes to a close, I do some evening yoga and meditation to help me relax and clear my mind. This routine helps me transition into a restful night.

**10.00pm** I hop into bed around 10 pm, feeling content with the day's accomplishments and ready to recharge for tomorrow. And who knows, maybe tonight I'll dream up the next big breakthrough, or at least a brilliant idea for my next podcast episode.

# Pathfinder Workwords

## Optometrist

H Y G R I D G I T C U E J J Q X A H A T K Y G
V Y H Y W F B B V B E W X E Q G Q E N T B I C
H G V G V E N Y E R N T V F R S A A A J O S D
Q O M O K D M E P O C V H W G C Q L T I R D G
E L Y L T A E I I T O I J G C P Z T O R O J L
C O E O S E F S E Y N R Y B I L G H M U Q B Y
X N C M I O I R I M T I G N Q S I L Y L B Z Z
S H X L R V A G V E A G O R F N G N A L N U V
C C B A T C A D B L C I N Y X E Y E I S Q P P
C E X H E P Z N O I T P I R C S E R P C S A B
W T G T M V H V S C Y R A N O I S I V X T E W
J T B H O E B Y A X N R E S E A R C H I O G S
O Y M P T Z F R S I X T C K E J A P E N X X A
Y B A O P U F S N I C M N E K P K N T T Y K D
E X A P O E Q B C W C F G Y T G T O F U K F E
J P A C R D I A G N O S I S V C W O P B J E C

**Find 20 words Daisy needs to do her job.**

1. OPTOMETRIST
2. VISION
3. EYE
4. GLASSES
5. CONTACT
6. LENS
7. PRESCRIPTION
8. SIGHT
9. OPHTHALMOLOGY
10. REFRACTION
11. DIAGNOSIS
12. CLINIC
13. HEALTH
14. PATIENT
15. VISIONARY
16. TECHNOLOGY
17. CARE
18. RESEARCH
19. PHYSICS
20. ANATOMY

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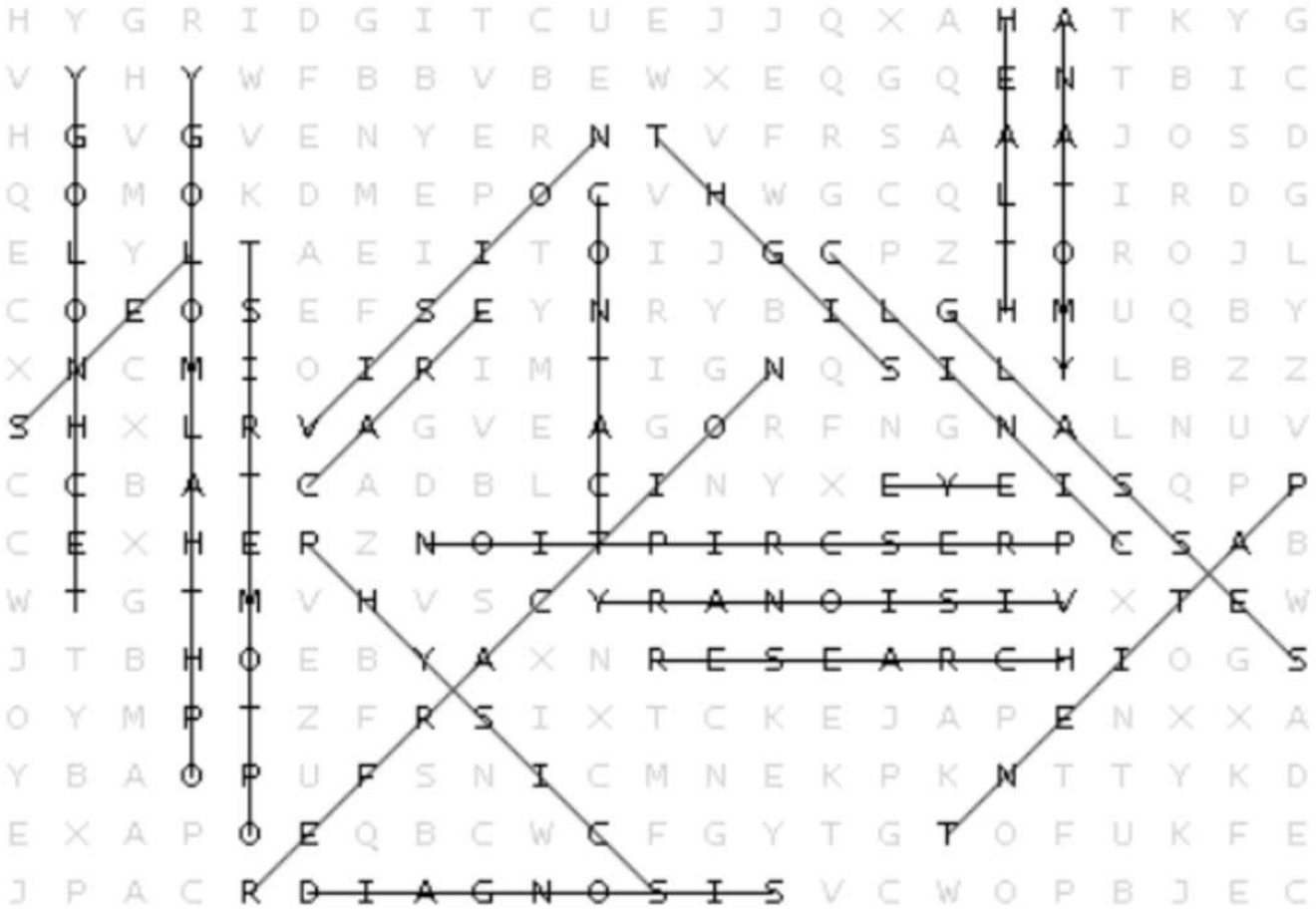
# Pathfinder Workwords

## Answers




### Let's reflect

Were any of these words new to you? Look them up and find out what they mean.

Which of these skills do you think you are best at, or would like to get better at?

1._____

2._____

3._____

Can you think of anything else Daisy might need to do her job?

_____

Meet Daisy. She's an optometrist who wants to cure blindness and improve the lives of millions around the world. Fill in the bubbles with 5 STEM (Science, Technology, Engineering and Mathematics) skills she uses in her job. Which of these skills do you think is most important? Which do you think would be the hardest to develop? When you've thought of the skills, colour in the rest of the image.