

Skye is
a Harvester

CAN'T

skate or rock climb

LOVES

teaching people about food sustainability

CAREER

Founded an edible bug shop

STUDIED

Bachelor of Food Science at university

EXPERT ON

more sustainable sources of nutritious food

WANTS TO

build a better future for her kids and grandkids

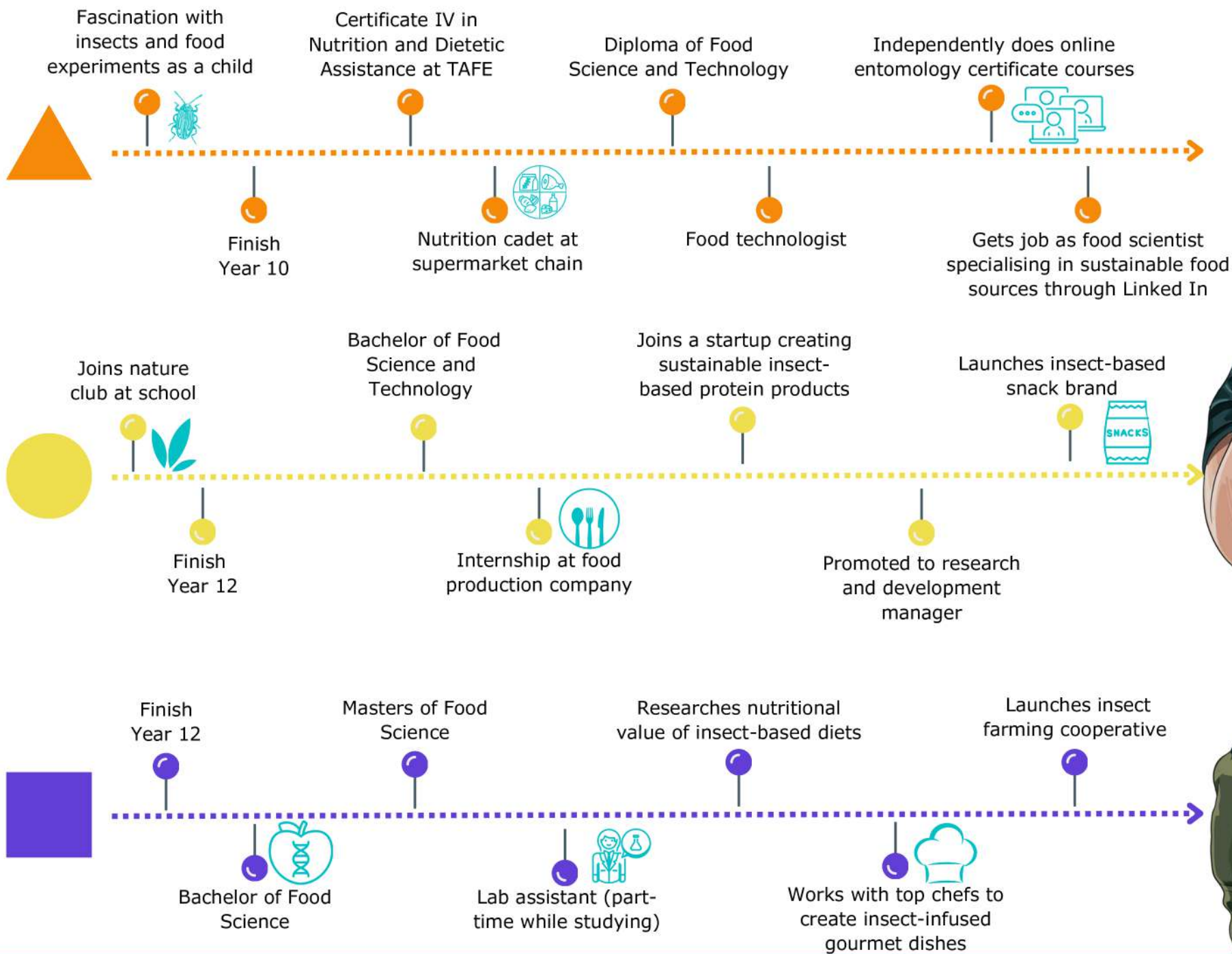
CAN

do experiments, catch bugs, and teach people

WORKS WITH

robotics, AI, farmers, bugs, technology





Food scientist/entomologist career pathways

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



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.



- Certificate IV in Nutrition and Dietetic Assistance: <https://www.tafecourses.com.au/course/certificate-iv-in-allied-health-assistance-specialising-in-nutrition-and-dietetics/>
- Diploma of Food Science and Technology, Entomology courses: <https://www.courseseeker.edu.au>



- Bachelor of Food Science and Technology: <https://www.courseseeker.edu.au/>
- Internship opportunities: <https://womeninstem-careershub.prosple.com/>



- Bachelor of Food Science, Masters of Food Science: <https://www.courseseeker.edu.au/>



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.

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:

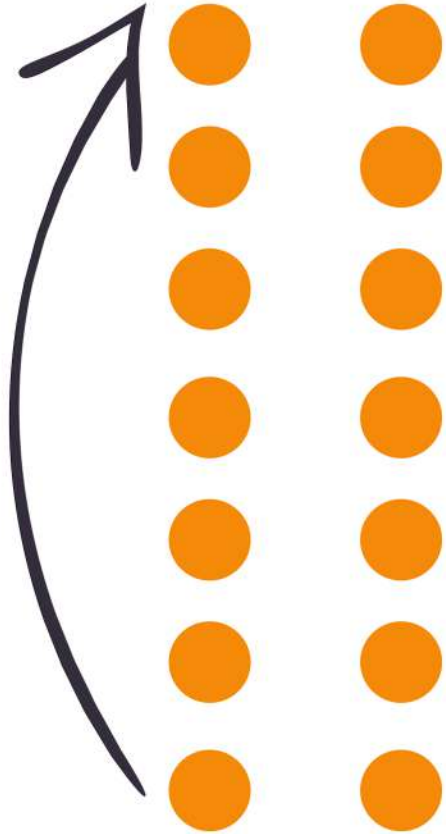
- identify some likes, dislikes, strengths, abilities and/or interests when showing a personal preference
- acknowledge that people have different needs, emotions and abilities

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
- Watch Skye's film with the class
- Print the questions
- Play the game
- Modify or include new questions based on students' needs



Scan this QR code to watch my film.



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.

Skye Food Scientist

Question 1

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

Question 2

What skills does Skye 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 current interests and hobbies similar to Skye's career?

Question 5

What kinds of tools or technologies do you think Skye would use on the job?

Question 6

How could this career be done in a rural or remote setting?

Question 7

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

Question 8

How important to Skye's work is teamwork with other researchers, farmers, or food companies? Think of an example.

Question 9

What types of bugs do you think might be edible, and how would you eat them?

Question 10

What do you think would be the biggest challenge in pursuing a career as an edible-bug expert?

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 a video while they are watching it
- 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 the film plays
- Watch Skye's film with the 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. Name FOUR things Skye can do.
2. And two things Skye CAN'T do.
3. What university degrees does Skye have?
4. Why did Skye get a Food Science degree?
5. Who is Skye known as?
6. What sort of food does Skye say her children and grandchildren will be eating?
7. Who help Skye embrace her passion, and how?
8. What does Skye do, day to day?

Scan this QR code to watch my film.



Answers:

1. Experiment, catch bugs, teach, develop new foods.
2. Rock climb, skate.
3. Entomology and Food Science.
4. Not a lot of jobs in entomology so she did a degree in Food Science so she would have a job when she finished university,
5. The Bug Girl or the Bug Lady
6. A more plant-based diet, more alternative proteins like insects, cellular based agriculture. Even algae and seaweed.
7. Her teachers with articles or books they thought would be interesting.
8. On the farm, robotics, AI, creating new food, teaching.

Comprehension Questions

Name **FOUR** things Skye can do.

- 1.
- 2.
- 3.
- 4.

Why did Skye get a Food Science degree?

What sort of food does Skye say her children and grandchildren will be eating?

Name **TWO** things Skye can't do.

- 1.
- 2.

Who help Skye embrace her passion, and how?

What university degrees does Skye have?

- 1.
- 2.

Who is Skye known as?

What does Skye do, day to day?

Entomologist/ Food Scientist

Skye is an entomologist and food scientist who is passionate about sustainable food processes. She educates people about the amazing health, nutritional and environmental benefits of using insect proteins as a source of food. Find out more:

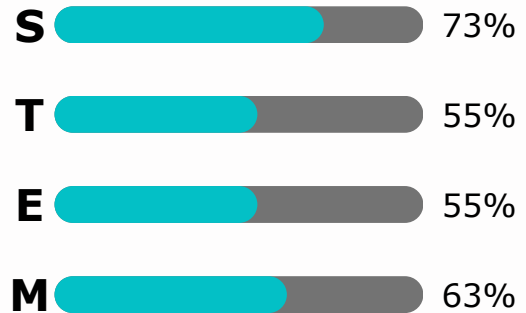
futureyouaustralia.com.au/pathfinders/skye



'I'm in a position where I can actually make a difference.'

STEM Meter

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



Source: jobsandskills.gov.au

Job stats and facts

Location: 34% of food scientists live outside capital cities.

Employment pathways: A bachelor degree in a relevant field, but there are many pathways you can take to get an undergraduate degree. Discover them at myfuture.edu.au

3 STEM skills required for this job	Subjects to develop these skills	3 other jobs that value this skill
Chemistry	Science	Biotechnologist, Forensic Scientist, Medicinal Chemist
Critical thinking	Science, Mathematics, Digital Technology	Analyst, Criminologist, Doctor
Data analysis	Science, Mathematics	Data Engineer, Marketing, Quantitative Analyst

Other careers related to this line of work

Nature

Beekeeper
Zookeeper
Naturalist
Environmental Engineer
Natural Resource Technician

Food

Food Consultant
Food Safety Officer
Food Toxicologist
Packaging Technologist

Health

Nutritionist
Public Health Official
Quality Assurance Manager
Pathology Associate

Education

Higher Education Lecturer
Museum Curator

Sustainability

Urban Farmer
Sustainability Consultant
Ecologist
Environmental Scientist

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

Entomologist/ Food Scientist

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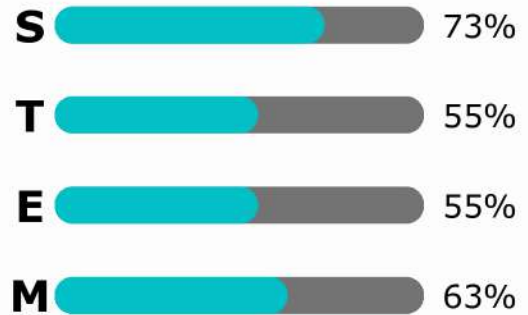
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'I'm in a position where I can actually make a difference.'

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** Teach people about new nutritious food
- 2** Preserve our planet's resources
- 3** Discover new sources of food
- 4** Secure food production
- 5** Protect the ecological balance

3 STEM skills required for this job

Chemistry

Critical thinking

Data analysis

Subjects to develop these skills

Science

Science, Mathematics, Digital Technology

Science, Mathematics

A day in the life of an entomologist / food scientist

- 2.00am** I wake up, have a quick breakfast (normally some cricket protein granola) and a shower and hop over to our insect farm and food manufacturing facility.
- 2.30am** Early morning is the best time for us to check on our insects. When I arrive at the farm, I check the data loggers from last night to make sure nothing unusual happened that might need my attention. This could include breakdown of equipment or changes in temperature or humidity in our farm. Our fruit and vegetable waste arrives in a huge truck. I give our early morning shift staff a 10-minute brief about what to expect for the day and they get started on sorting and processing the waste into feed for our insects.
- 3.00am** Our food production manager and technical manager arrives on site. We are running a cricket protein corn chip production today and are doing a small trial of a new flavour right at the end of production to see how well the flavour powder sticks to the chips. We spend about 30 minutes running through the schedule for the day and we talk about issues they had during the previous day and how we can fix them.
- 3.30am** It's time to check my emails and my schedule for the rest of the day. Every day is very different for me, so I find keeping a written schedule to follow helps me keep on track. One of our education staff has had a family emergency and can't do her virtual incursion booking for today, so I adjust my schedule slightly so that I can run the incursion in her place. I quickly familiarise myself with the booking, so I know which information is most relevant to the students I will be speaking to.
- 4.30am** I drive home because my husband is leaving for work, I will be getting our kids ready for school today. My kids are early risers too and they are all normally awake by 5am. I make them breakfast, pack their school lunches and help them with their homework. I can run the virtual incursion from home, so I set up my computer and have the presentation ready to run when I get back from school drop off.
- 8.30am** I take my kids to school and then it's back home to run the incursion.
- 9.00am** I log into the Zoom link so we can start our virtual Future Food incursion. Today I am speaking with some year 11 food science students, and they are interested in food security, nutrition, farming of insect proteins and retail food products containing insect proteins. My favourite part of our incursions is when the students get to taste test some insect protein food products. Today they taste some BBQ Cricket Protein Corn Chips and some whole flavoured mealworms. I have a fantastic discussion with the students about the psychology behind trying new foods and why this is important when developing new food products.
- 10.30am** After a great incursion I buzz back over to our food manufacturing facility to complete some new product development. At our facility, we have a small test kitchen so we can test out new products in smaller batches and try out new ideas or flavour combinations without needing to go through the expense of running our commercial equipment. We have been working on some high protein cookies made using cricket protein powder. We are trying to get the texture of the cookies just right. The cookies we are developing are grain free, which means we won't use flour as an ingredient. I am currently experimenting with different ingredients we can use in the cookies to give them a yummy texture. This includes different types of nut pastes and butters, rice flour, chickpea flour.
- 12.30pm** After experimenting with different ingredients today unfortunately I didn't manage to find a recipe I was happy with. The texture was too crumbly, and the cookies didn't hold together when they were baked. That's OK though, because by testing a few different recipes today, I am getting closer to developing the best recipe for this product. I write down my notes in the New Product Development folder, so we have a record of what I have already tried, and I schedule some time for the following week to work on this again. While I am writing my notes, I have a super quick lunch (left over vegetable stir fry from last night), because I am running a bit late for my next meeting.
- 1.00pm** I fly over to our corn chip production line because our production manager has finished our regular production of Cricket Protein Corn Chips and is about to try out the new flavour powder on the chips. As the new flavour is fed through the tumbler (it's like a big washing machine that rolls the chips into the flavouring), I check that it is not getting stuck in the part that sprinkles the flavour on the chips. After the plain chips roll through the flavour, I take some to test. I inspect the amount of flavour stuck to the outside of the chip, as well as the evenness of the coating (e.g., it's not clumpy or not sticking to some parts of the chip). Then is the best part, the taste test. Our production manager, technical manager and I taste test some of the chips. We all think that there is too much flavouring. We run another batch of chips through, this time reducing the amount of the flavour powder being added to the tumbler. This time they are perfect.
- 3.00pm** It's time to pick up the kids from school and take them to swimming lessons. While they are swimming, I use my iPad to work on a submission presentation document for a retail buyer meeting I have in a few days. I've almost finished it, so I'm mainly formatting and changing the pictures around to see what tells our story best.
- 4.00pm** When we arrive home my online shopping delivery has arrived and it's time to make dinner. Tonight we are having Lemon Myrtle Cricket Protein Fusilli Pasta with baby tomatoes and spinach.
- 6.00pm** Everyone is fed, so I pop into my home office to send an email to our food product photographer with a brief for a product photo shoot we have in a few days.
- 7.00pm** It's time for bed! Waking up early means it's early to bed. I tuck in my kids and then get ready for bed myself. The early bird catches the worm...or cricket!

Meet Skye. She's a food scientist. Think of five STEM (Science, Technology, Engineering, Mathematics) skills she uses in her job.



Pathfinder Workwords

Food Scientist/Entomologist

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

Find 20 words Skye needs to do her job.

1. BUGS
2. CHEMISTRY
3. MATHS
4. PERSUASION
5. SPEAKING
6. COOKING
7. INDOORS
8. ACCURACY
9. TESTING
10. EATING
11. NUTRITION
12. OVEN
13. READING
14. ELECTRONICS
15. BIOLOGY
16. CATEGORISING
17. JUDGEMENT
18. TEACHING
19. PSYCHOLOGY
20. SORTING

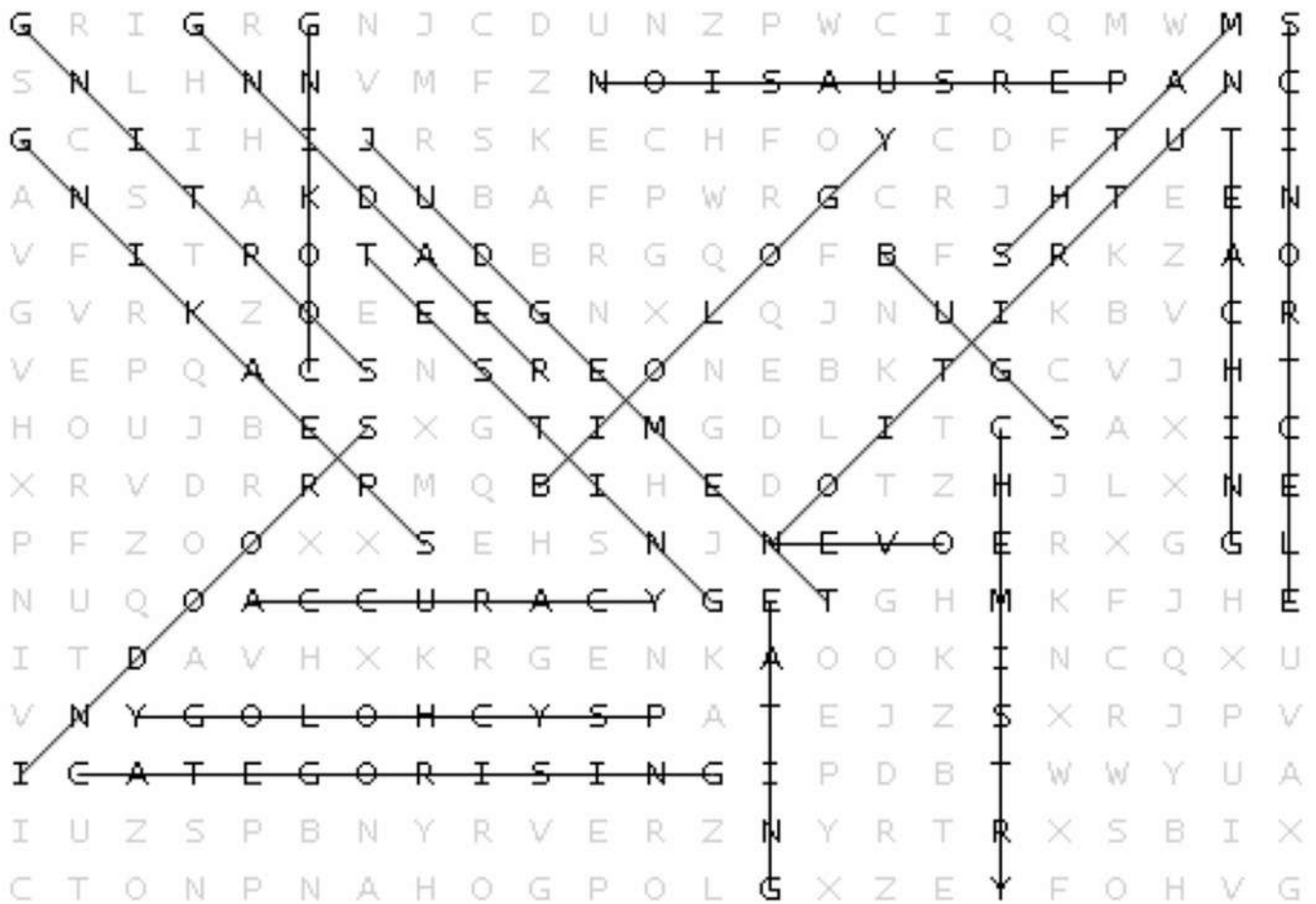


Scan this QR code to find out more about Skye.



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 Skye might need to do her job?

