

Welcome to Future You



Future You is an initiative from the Australian Government's Women in STEM Ambassador, funded and supported by the Commonwealth Department of Industry, Science and Resources.

Future You addresses stereotypes, misconceptions and biases about science, technology, engineering and mathematics (STEM). It's a free program designed to increase participation in STEM by inspiring children aged 8 to 12 to explore STEM themes.

What do we offer?

- Free classroom resources aligned with the Australian Curriculum V9.0.
- Five STEM-fiction stories to excite imaginations and inspire exploration.
- First-hand accounts from people using their STEM skills to make the world a better place.
- Information and practical tools for parents and kids about STEM skills and careers.

Here are two sets of resources we think you'll love using in your classroom:

Pathfinders

Introduce your students to interesting people working with STEM skills to make the world a better place. We know how important role models are for inspiring young people's career choices, and you can't be what you can't see, which is why we have interviewed fascinating people who come from various backgrounds to ensure every child can see themselves working in STEM.

Imagining the Future

Take your class on an incredible journey into the world of space exploration with Imagining the Future. Set in the vastness of space, these five stories delve into different sectors of STEM, offering a captivating exploration of robotics, AI, climate change, resource management and more. These stories will inspire your students to envision their own STEM space careers.

Classroom activities

We've developed practical activities you can use in your lessons to make learning experiences socially relevant. Did we mention they're aligned to the Australian Curriculum V9.0?

See you in the future

We have developed a wide range of free resources to support teachers, parents and kids to discover the amazing world of STEM. Discover them all at www.futureyouaustralia.com.au

FUTUREyou

What's in this pack

This pack includes activities that are all related to Ajay's career. Each Pathfinder has its own Teacher's Pack. You can find them on their individual pages or on the resources page under the *Pathfinders* or *Teach* tabs.

Our Imagining the Future short-fiction series also includes fantastic resources you can use in the classroom. The Bloom's Taxonomy and Gardner's Multiples Intelligences activity matrix includes a wide range of activities for your lesson plans that cover multiple areas and year levels in the Australian Curriculum V9.0.



Capability Convos

A short starter activity that can be adapted to other uses to get students thinking about the General Capabilities statements in the National Curriculum V9.0

Comprehension questions

Read about Ajay's career journey as a class or individually, and then your students can practise their comprehension skills by answering these questions (answers included).

Career information sheet - for adults

This document provides practical advice for adults who are looking for ways to support students in understanding the different pathways they can take into specific career roles. This information sheet can also be passed on to parents if a student demonstrates an interest in a particular career area.

Classroom wall poster

An attractive poster that can be printed out and placed on a wall to highlight some of the skills required in Ajay's career so students can see themselves reflected in those skills.

Student skills brain break

Students can undertake this activity for mindfulness while thinking about their own skills and talents.

Word-search answers

The student's pack includes a word search with words relevant to Ajay's career. Find the answers here.

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

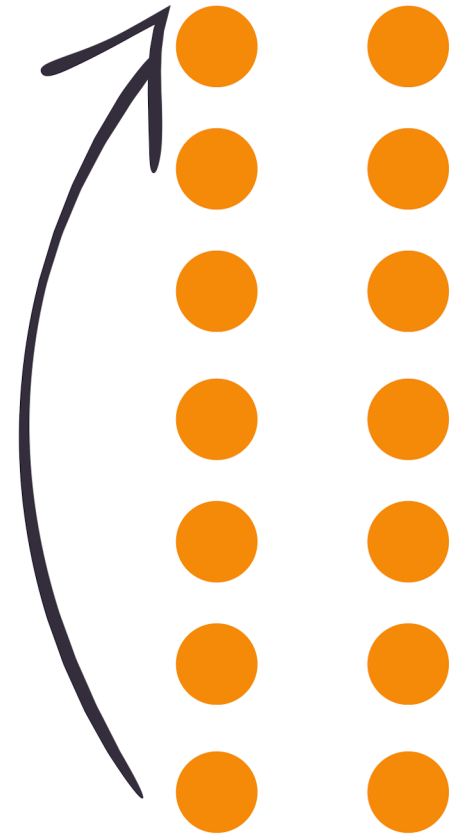
In addition, some students will be able to:

- describe the ways they are connected and can contribute to their community groups

Format

- Interactive game with 10 questions
- Easy to play
- Read about Ajay'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.



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.

Ajay

Visualisation Programmer

Question 1

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

Question 2

What skills does Ajay have that you also have, and does he 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 Ajay's career?

Question 5

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

Question 6

What sort of problems do you think Ajay might have doing this job in a rural or remote location?

Question 7

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

Question 8

What tools or technology do you think Ajay needs to do his job?

Question 9

How do you think AI might change Ajay'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 visualisation programmer?

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 Ajay
- Read about Ajay 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

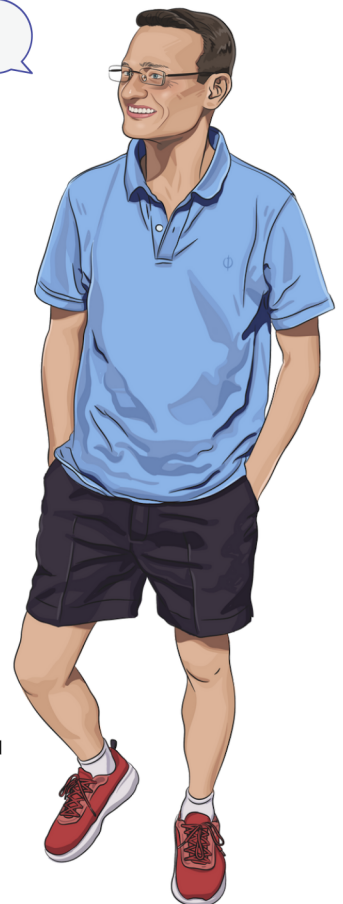
1. What does Ajay do and where does he work?
2. What did Ajay want to study during school and college?
3. How did Ajay incorporate visualisation into his thesis?
4. When did Ajay move to Australia?
5. What two things is Ajay not good at?
6. Name two things Ajay is good at.
7. What does Drishti mean?
8. What does Ajay's work allow him to do?

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Answers:

1. He's a visualisation programmer at the National Computational Infrastructure, situated in the Australian National University.
2. Medicine
3. By developing visualisation software to visualise chemical structure and properties
4. In 1997
5. Languages (aside from programming) and poetry
6. Employing and adapting things, and running a local radio show
7. Cognition/insight/vision
8. To work and collaborate with researchers from wide variety of disciplines



Comprehension Questions

What does Ajay do and where does he work?

What two things is Ajay not good at?

1.

2.

Name two things Ajay is good at.

1.

2.

What did Ajay want to study during school and college?

What does Drishti mean?

How did Ajay incorporate visualisation into his thesis?

What does Ajay's work allow him to do?

When did Ajay move to Australia?

Visualisation Programmer

Ajay is a visualisation programmer who developed a software program that makes complex data easy to understand. It turns huge amounts of complicated information into a clear story. Ajay also hosts a local radio show for his community where he delves into science-related topics. Find out more:

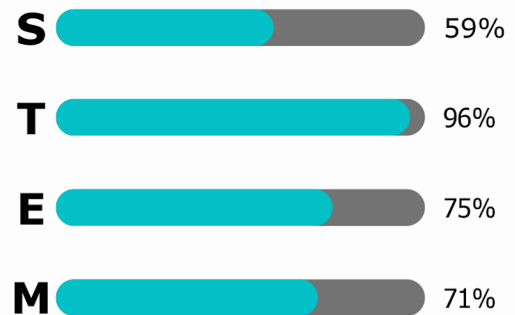
futureyouaustralia.com.au/pathfinders/ajay



"I have always been a visual person, attracted towards visual arts"

STEM Meter

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



Source: jobsandskills.gov.au

Job stats and facts

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

Location: 11% of visualisation programmers live outside capital cities.

Employment pathways: A bachelor degree or a VET qualification in a related field is required.

3 STEM skills required for this job	Subjects to develop these skills	3 other jobs that value this skill
Programming	Digital Technology, Mathematics	App developer, Database administrator, Systems analyst
Complex Problem Solving	Design and Technologies, Digital Technology	Police officer, Chemist, Geologist
Mathematics	Mathematics	Accountant, Teacher, Animator

Other careers related to this line of work

Health

Healthcare Data Analyst
Medical Informatics Specialist
Epidemiologist
Biostatistician
Health IT Project Manager

Education

Data Science Educator
Educational Technology Specialist
Data Literacy Trainer
Online Course Developer
Visualisation Curriculum Designer

Leadership

Data Science Manager
Chief Data Officer
Analytics Director
Business Intelligence Manager
Technology Director

People

User Experience Designer
Customer Insights Analyst
Market Research Analyst
Social Media Analyst
Human Resources Analytics Specialist

Environment

Geospatial Analyst
Environmental Data Scientist
Geographic Information System Specialist
Climate Data Analyst
Sustainability Analyst

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

Ajay is a visualisation programmer

Ajay is

NOT GOOD AT

learning new languages or understanding poetry

LOVES

singing, outdoor sports, bushwalking, camping

CAREER

visualisation programmer

STUDIED

Bachelor in Computer Science
Masters in Mathematics
Ph.D in High Performance Computing

DEVELOPED

an open-source visualisation software named Drishti

EXPERT AT

helping researchers to visualise their scientific data.

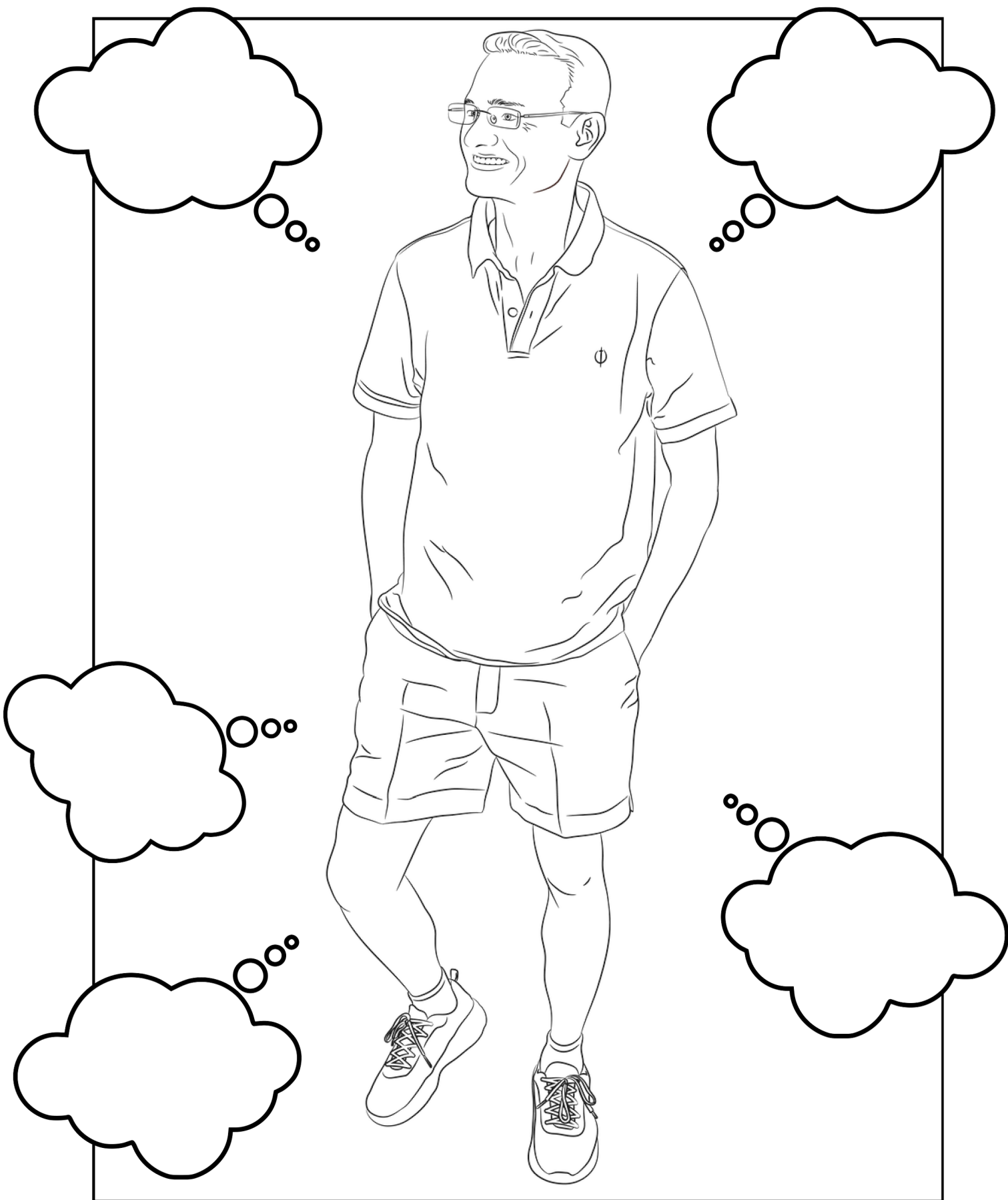
GOOD AT

adapting things and running a local radio show

SUPPORTS

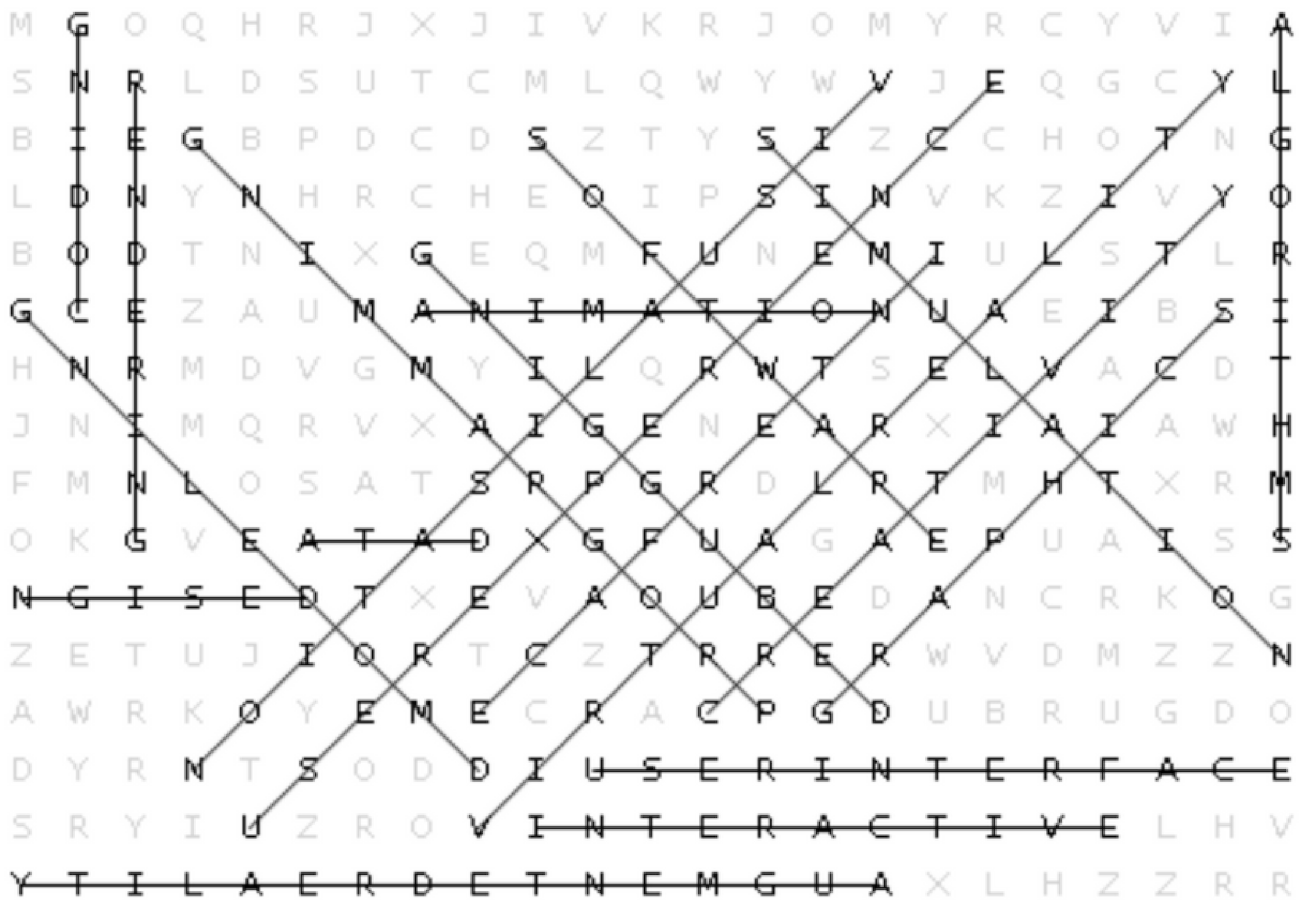
effective communication by helping people understand complex data

Meet Ajay. He's a visualisation programmer who takes complex data and turns it into easy-to-understand visuals. Fill in the bubbles with 5 STEM (Science, Technology, Engineering and Mathematics) skills he 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.



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 Ajay might need to do his job?
