

BEBRAS

Australia

Computational
Thinking Challenge
Handbook

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About Bebras Australia

Bebras Australia is an international student challenge run by CSIRO Education and Outreach through the Digital Careers program. The goal is to promote Computational Thinking to students in a way that highlights student ability beyond Science or Mathematic skills.

The Bebras Australia Challenge is for Year 3 to Year 12 students, it's free and online.

Bebras is not a competition, it's a challenge!

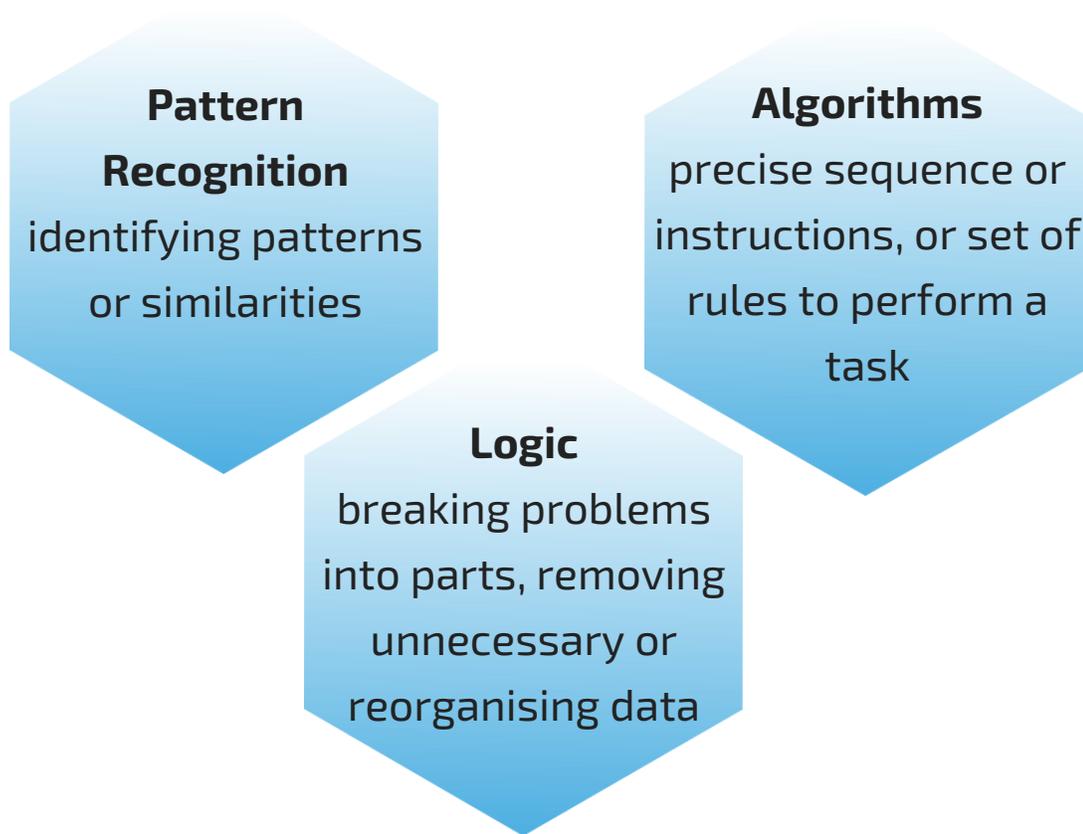
Bebras is Lithuanian for *Beaver!*

Over 48,000 students complete the Bebras Challenge each year in Australia

Bebras began in Lithuania in 2004. It has grown so much that more than 1,527,000 students from around the world completed the challenge in 2016!

What is Computational Thinking

Using Computational Thinking skills doesn't mean thinking like a computer – it is a way of thinking that promotes problem-solving and it can be used in every aspect of our lives. It uses a number of skills that help us to do this, these skills include:



We use problem-solving in everything that we do – and future jobs will require this even more. Teaching Computational Thinking is not about how to use technology to solve the problem but rather how to understand the problems and identify the tools needed to solve them.

Bebras Challenge Information

Bebras Australia is designed to be accessible and easy for teachers to use as a classroom resource and is linked to the Australian Curriculum.

This challenge is available at no cost within a two week window in March and September. The challenge uses the same questions in both sessions and provides teachers with an opportunity to measure student learning by engaging in both challenges.

It can be completed without any prior knowledge about computational thinking or digital technologies.

Students can work independently or in groups of up to four.

Bebras Challenge Information

Made up of 15 questions, each ranging in difficulty, and broken into Year Groups (Year 3-4, Year 5-6, Year 7-8, Year 9-10, Year 11-12) your students will have 45 minutes to complete the Challenge. (We give a little extra time to the Year 3-4 students who have 60 minutes)

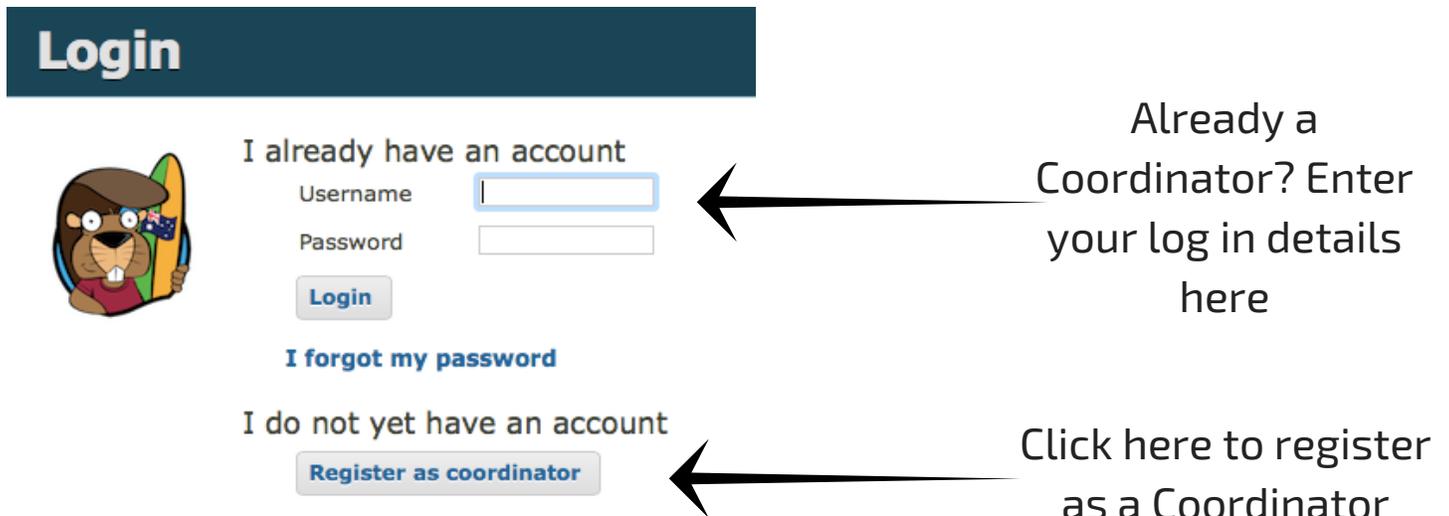
At the end of the two week challenge period, all students from around Australia are graded. Teachers are able to download detailed information on how each student performed.

Personalised certificates are available to download.

Post Challenge, students are able to log back on to see how they went. They can reattempt any questions and receive immediate feedback.

Register & Log in as a Coordinator

Head to Bebras.edu.au and click on Register & Log In



The screenshot shows the Bebras login interface. At the top left is a dark blue header with the word "Login" in white. Below this is a cartoon koala mascot holding a surfboard. The main content area is divided into two sections. The top section is titled "I already have an account" and contains a "Username" field (highlighted with a blue border), a "Password" field, and a "Login" button. A blue link "I forgot my password" is located below the password field. The bottom section is titled "I do not yet have an account" and contains a "Register as coordinator" button. Two black arrows point from external text to the "Login" button and the "Register as coordinator" button respectively.

Login

I already have an account

Username

Password

[Login](#)

[I forgot my password](#)

I do not yet have an account

[Register as coordinator](#)

Already a Coordinator? Enter your log in details here

Click here to register as a Coordinator

When registering for the first time, start typing your school name and if a Coordinator from your school has already registered, the school name will appear. This ensures you have the one Bebras account for your school.

There are no password parameters, create a username and password that you will remember.

All Coordinators must be approved by Bebras Australia, this can take up to 48 hours.

Navigating Bebras

Students

A list of students you have imported

Coordinators

Find a list of Coordinators at your school

Import

Where you can import your student details

Digital Careers

Name Digital Careers
School type Secondary School
Address 1 CSIRO
Address 2 Julius Av
Zip code
City North Ryde
State New South Wales
Students

I confirm that a parental consent form will be obtained for each student whose No information I upload to this system.

[Edit](#)

[Students](#)
[Coordinators](#)
[Import Files](#)
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Students

Name
Username
Class

Name	Username	Class	Grade	Gender	Bebras Australia 2017	
Kara Smith	Kara123		5	unknown	Participated	Delete

[New](#) [Export CSV](#) [Export XLS](#)

Export

Where you can export student log ins, results and certificates

Documents

Important documents for the Bebras Challenge

Creating Student Logins

Creating student logins is easy! It can be done individually or if you have a whole class or school, using Excel.

One student at a time

Digital Careers

Name Digital Careers
School type Secondary School
Address 1 CSIRO
Address 2 Julius Av
Zip code
City North Ryde
State New South Wales
Students

I confirm that a parental consent form will be obtained for each student whose No information I upload to this system.

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Students

Name
Username
Class

Name	Username	Class	Grade	Gender	Bebras Australia 2017	
Kara Smith	Kara123		5	unknown	Participated	Delete

[New](#) [Export CSV](#) [Export XLS](#)

1. Select "Students" and then click "New"
2. Complete the students details
3. Click "Save"

Creating Student Logins

Multiple students

1. Create an Excel Spreadsheet with your students details
Ensure you have the correct order of Class, Year, First name, Surname and Gender - like in the examples below.

	A	B	C	D	E
1	Class	Year	First Name	Surname	Gender
2	3A	3	Betty	Smith	Female
3	3A	3	Adam	Apple	Male
4	3A	3	Albert	Gregory	Unknown
5	3A	3	Samantha	Joy	Female
6					

You do have an option to create your students username and password.
Please note: if another student within Australia has the same username, you will receive an error when uploading the document. We recommend letting the system generate these.

Digital Careers

Name Digital Careers
School type Secondary School
Address 1 CSIRO
Address 2 Julius Av
Zip code
City North Ryde
State New South Wales
Students

I confirm that a parental consent form will be obtained for each student whose No information I upload to this system.

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Import Files

[Upload](#)

2. Select "Import Files" and then click "Upload"

Creating Student Logins

3. Select the headings that you have used in your Excel Spreadsheet and click browse to find your document.
4. Once your document has been selected, click "Save"

Digital Careers

Name Digital Careers
School type Secondary School
Address 1 CSIRO
Address 2 Julius Av
Zip code
City North Ryde
State New South Wales
Students
I confirm that a parental consent form will be obtained for each student whose information I upload to this system. No

Edit

Students
Coordinators
Import Files
Export Files
Documents

Insert CSV or Excel File

Please tick the checkboxes of the fields in your CSV file.

- Class
- Grade
- Firstname
- Lastname
- Username
- Password
- Date of birth
- Gender
- Email

File

Save Cancel

Browse

5. You now have the option to upload another excel spreadsheet (if you have another class) or to just click "Import" for this one.
You can come back later and use the same process to upload more students.

Import Files

Name	Uploaded By	Uploaded	Imported
Workbook2.csv	Katie Rowe	27-07-2017	Import Now Delete

Upload

Creating Student Logins

6. The system will show you an example of your upload. If you have used heading, here you have the option NOT to upload this row.

Import CSV or Excel File

The first 5 rows of your CSV File are displayed below. Please verify that your data is correctly parsed before importing.

Row #	Class	Grade	Firstname	Lastname	Gender
1	Class	Year	First Name	Surname	Gender
2	3A	3	Betty	Smith	Female
3	3A	3	Adam	Apple	Male
4	3A	3	Albert	Gregory	Unknown
5	3A	3	Samantha	Joy	Female

Do not import the first row of this file, it contains headers

Import **Cancel**



7. Select "Import" and you're done!

Downloading your students Log In details

Select "Students" and "Export XLS"

Digital Careers

Name: Digital Careers
School type: Secondary School
Address 1: CSIRO
Address 2: Julius Av
Zip code:
City: North Ryde
State: New South Wales
Students: No

I confirm that a parental consent form will be obtained for each student whose information I upload to this system.

Edit

Students

- Students
- Coordinators
- Import Files
- Export Files
- Documents

Name	Username	Class	Grade	Gender	Bebras Australia 2017	Delete
Adam Apple	aapple0090	3A	3	male	Not_participated	Delete
Albert Gregory	agregory	3A	3	unknown	Not_participated	Delete
Samantha Joy	sjoy	3A	3	female	Not_participated	Delete
Betty Smith	bsmith0079	3A	3	female	Not_participated	Delete
Kara Smith	Kara123	5	5	unknown	Participated	Delete

New **Export CSV** **Export XLS**



Pre Bebras Challenge Checklist

- Use Bebras 365 to ensure the challenge works on your schools computers.
- Print out the Excel document with student logins and cut the document into slips so that you can hand these to students.
- Ensure you have the full 45 minutes free (or 60 minutes for Year 3 & 4) students cannot complete the challenge in two sittings.
- Allow additional time for students to set up and log in.
- Ensure your students have a valid parental consent form signed and returned to Bebras Australia.
- Our FAQ page has hints and tips but if you need any assistance contact digitalcareers@csiro.au

Post Bebras Challenge

Once your students have completed the Bebras Challenge, sit back and relax. Over the final weekend of the Challenge all the questions will be graded.

The following Monday you can log back in as a Coordinator and download your student result, download personalised certificates and your students are able to log back on. In doing this, students are able to see their result and can re-attempt questions. As the challenge has now been placed in review mode, students will receive immediate feedback on if their selected answer is correct or incorrect.

How to download certificates

Digital Careers

Name	Digital Careers
School type	Secondary School
Address 1	CSIRO
Address 2	Julius Av
Zip code	
City	North Ryde
State	New South Wales
Students	

I confirm that a parental consent form will be obtained for each student whose No information I upload to this system.

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Export Files

 Students
 Results Bebras Australia 2017

[Export CSV](#) [Export XLS](#)

[Export CSV](#) [Export XLS](#) [Certificates](#) [Certificates DIY](#)

1. Click into the "Export" section and select 'Certificates' - this option generates certificates for your students.
2. For those students who had a pseudonym, please head to the "Documents" section where you will find a blank certificate for your use.