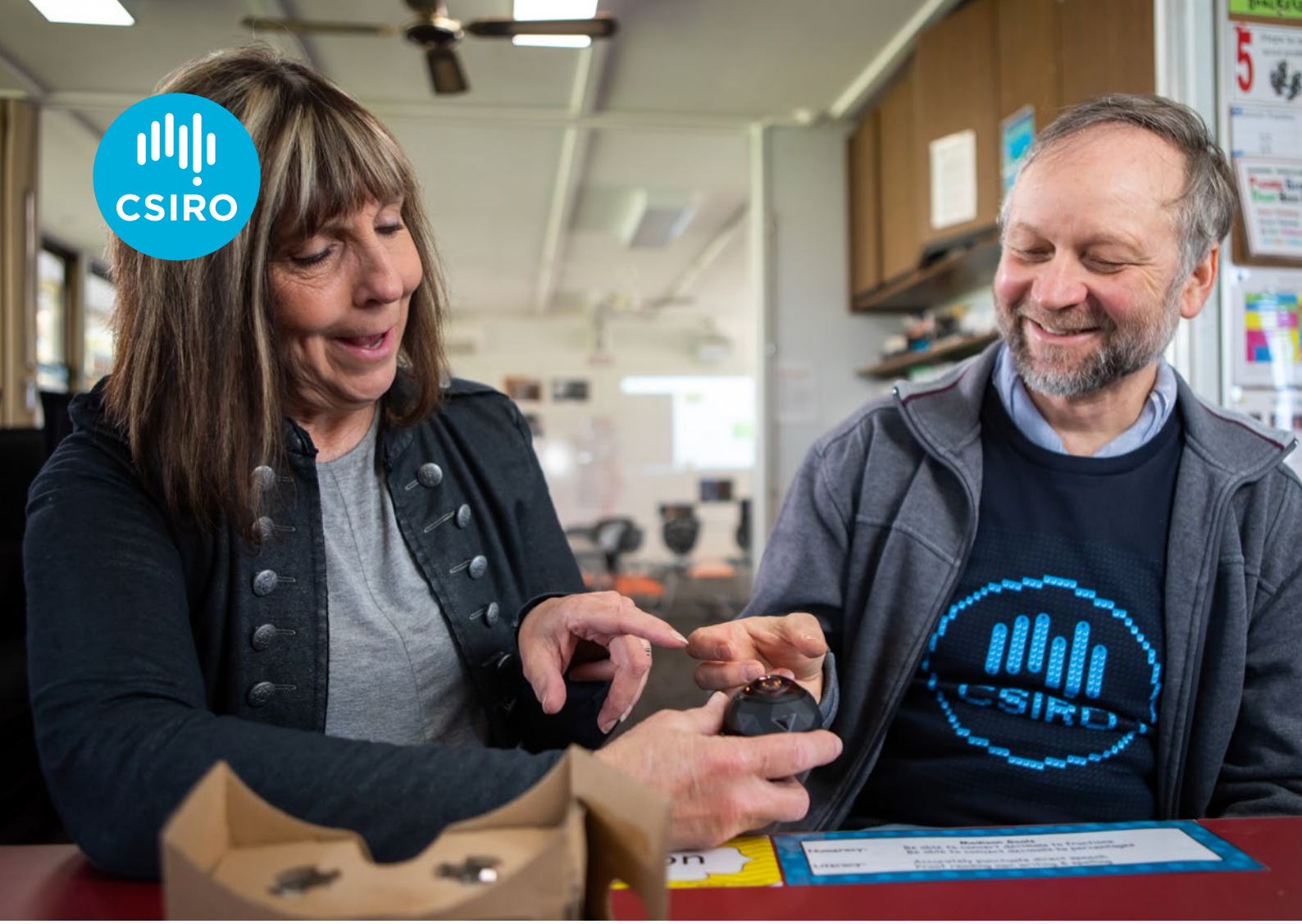


How to...
Plan a learning activity

Work together with your partner to bring STEM to life in the classroom and inspire the next generation of problem solvers and innovators.

This guide will support you to plan and execute ideas as part of your partnership.

To ensure you are both confident in running an activity together, decide on what sort of activity will work best for both of you to meet your mutual goals within the time available.

Teachers will be able to assist STEM professionals when running the activity. Teachers have expertise in understanding their student cohort and aligning teaching and learning to the curriculum.

STEM professionals will be able to share their experience, help teachers build confidence in STEM disciplines and provide mentoring.

The Australian Curriculum

The Australian Curriculum sets the expectations for what school students should be taught, regardless of where they live in Australia. It outlines the quality of learning expected of young people as they progress through school.

Partnerships support the delivery of the curriculum. Work together with your partner to align activities around the teaching plan. It's not essential that your STEM Professionals in Schools partnership activity aligns to the Australian Curriculum but it is beneficial to have an understanding of what the curriculum is, the learning areas, general capabilities and cross-curriculum priorities, and how your activity will support learning outcomes.

STEM Professionals in Schools is funded by the Australian Government Department of Education

"Because the learning is so authentic, it's hands on, the children recall it, and it's meaningful to them. And they're making connections in the learning across the curriculum."

Cheryl Torpey
Principal, Tempy Primary School (VIC)

Understanding the school environment

For STEM professionals, it's important to note that:

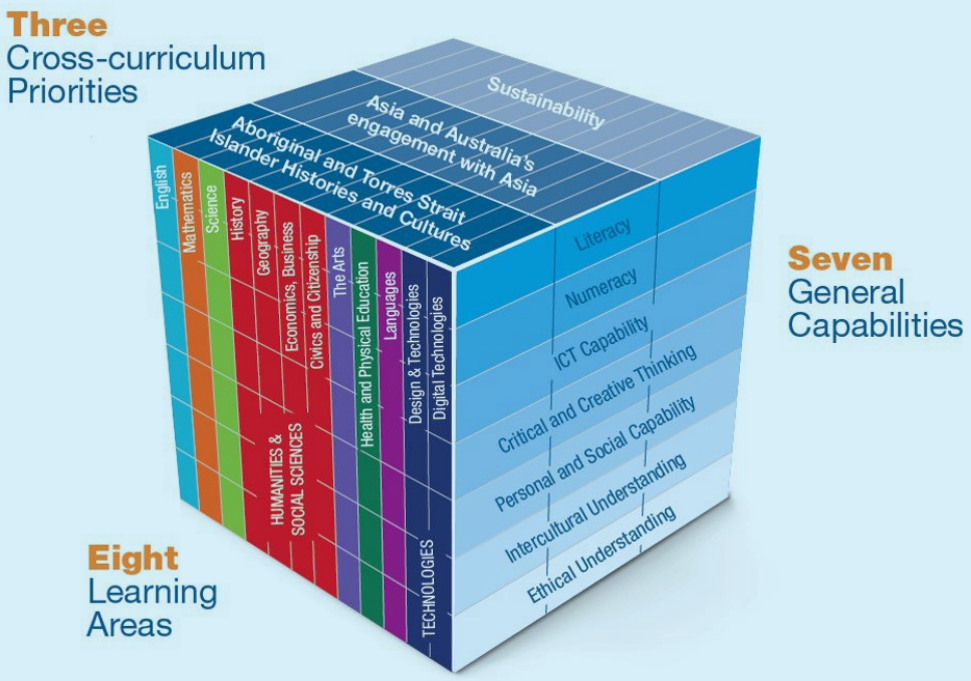
- most schools have a calendar of four terms per year, commencing late January and concluding in December. Check term times when planning activities to avoid school holidays and assessment periods
- in most primary schools, teachers are allocated to a year level and are responsible for teaching most subjects. Some primary schools have a specialist STEM teacher
- in most high schools, teachers specialise in subject areas and are responsible for teaching those subjects to students across multiple year levels. Some high schools integrate STEM across a range of subject areas.

Partnership activities

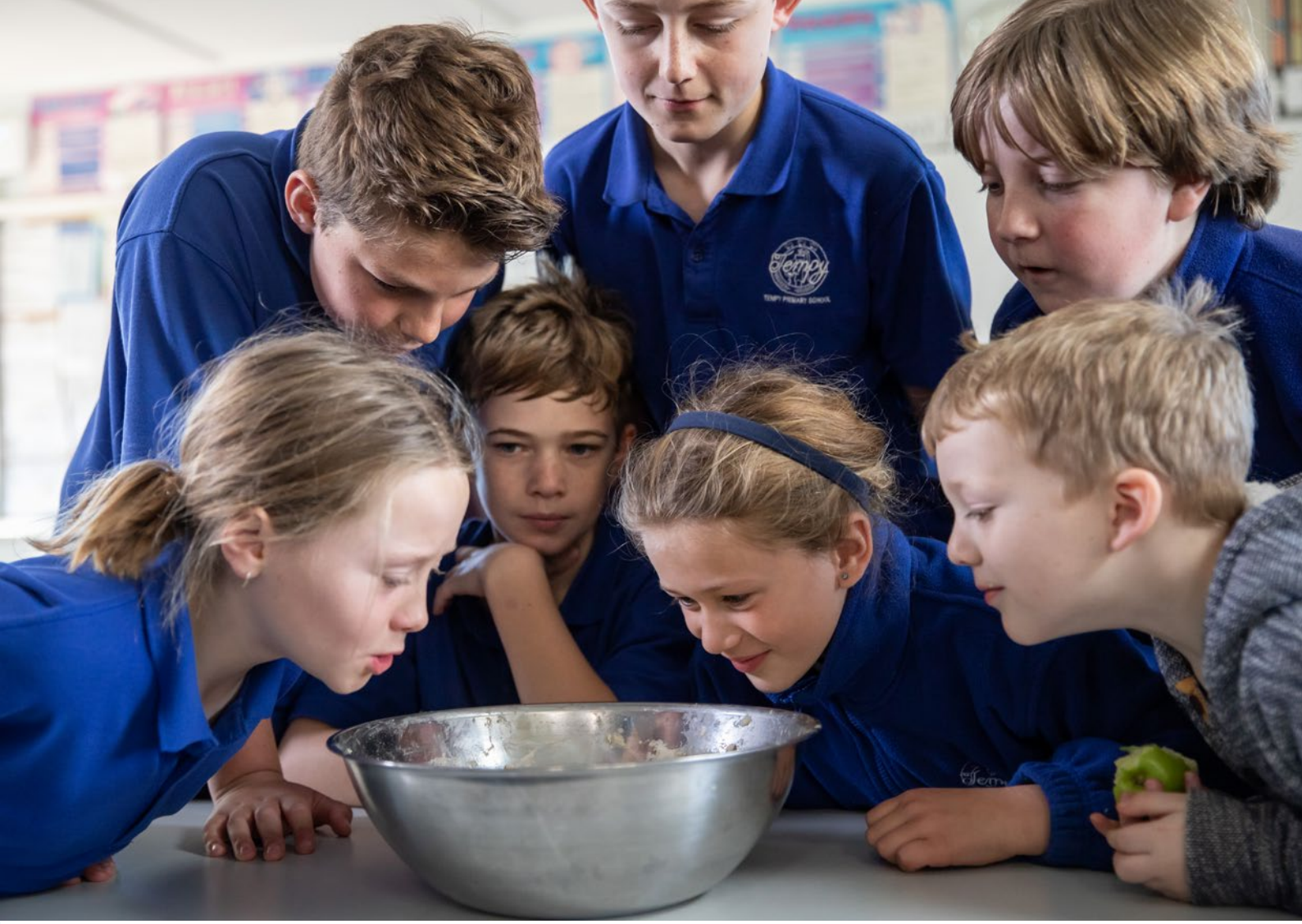
There are a range of ideas to deliver engaging STEM activities – remember it's about what works for you and your partner.

Talk to each other about what style will work best for you, and the students, and what you will feel confident in delivering in the time you have available.

Our guide to *Getting started in your partnership* includes ideas on partnership models that may work for you.



The three dimensions of the Australian Curriculum
Source: Australian Curriculum, Assessment and Reporting Authority (ACARA)



Student engagement

There's a range of ways STEM professionals can work with teachers to increase knowledge in STEM and to increase student engagement. Here are some suggestions to build confidence when running activities:

- Try different formats to see what suits your partnership best e.g. experiments, presentations or mentoring. You may try one style but then find a different format works better for you and your partner.
- The STEM professional can share with the teacher and students their own journey, their workplace and what they do there.
- STEM professionals should try to avoid jargon – it's fine to use correct terms but try to break it down and explain what it means to increase learning and understanding for the teacher and students.
- Allocate some time for students to ask questions or digest new information during an activity.
- Using visuals, props and artefacts can help bring an activity to life and help students remember what they have learnt.
- Work together with your partner to lead a hands-on activity so you can use both your strengths.

Activity planning

There's plenty of scope and flexibility around the activities you can do, both in and outside of the classroom. Discuss what the STEM professional is doing at work, what the needs of the curriculum might be, or if there's an opportunity to work on an integrated project. Refer to the *Learning activity planning template* to help you and your partner make your activity a success!

Some important yet simple things to consider:

- school term dates and daily schedules
- where your partnership can add value to the teaching plan and curriculum
- the age and ability of the students, and how many will be participating
- school visitor policy
- time available for the activity
- work commitment of the STEM professional
- health, safety and environment requirements
- whether student/parent consent forms are required
- logistical arrangements, such as parking and classroom location.

Learning activity planning template

This template will help you and your partner to plan your activity to make sure you are prepared for the fun that lies ahead!

Curriculum learning area and key learning intention	
Age/year level of students Number of students	
How much time is required? (preparation and contact time)	
What's the role of students in this learning activity?	
Health, safety and environment consideration (including risks)	
Facilities required e.g. video conferencing	
Materials required	
Student/parent consent required (yes/no)	
How will the learning activity be evaluated? **Will there be opportunities for student feedback and reflection?**	
Is there help or support the CSIRO STEM Professionals in Schools team could provide to enhance the learning activity?	

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