



There are many ways that industry can partner with schools, including:

- showing students what real-world business facilities look like
- providing examples of authentic problems that young people would be inspired to solve
- connecting with students as role models, and
- supporting teachers to build contemporary STEM knowledge and practices.

## STEM. . . . a . . . .

Building skills and aspiration for STEM learning starts in the early years. Young children are natural scientists as they make observations, test their ideas and share discoveries through a sense of wonder and play.

Partnerships between preschools and local organisations offer a wealth of authentic learning contexts for young children.

During the primary and secondary years, industry partnerships can bring STEM learning to life by connecting concepts taught in the classroom to everyday industry, social and environmental challenges.

### Working on real-world problems motivates students of all ages.

A successful example is when an industry partner works with a classroom teacher to develop a genuine STEM challenge. Students are guided through a problem-solving process to develop a solution, which they present as ideas and findings to the class group and industry partner.

For more ideas, refer to the [Guidelines for STEM S.E.A.L.](#) on the Department for Education website.

## Guidelines for STEM

Although more women than ever before are entering STEM careers, they are still underrepresented at 29% of the workforce.

Research shows that girls perform just as well as boys in STEM subjects if they are interested, engaged and motivated. In year 12, however, boys outnumber girls 4 to 1 in physics and almost 2 to 1 in advanced mathematics.

While digital technology is sweeping every aspect of our lives, boys outnumber girls more than 10 to 1 in year 12 Digital Technologies.

Authentic industry engagement connects girls with relatable female role-models and to the broad range of STEM career opportunities.

There are many inspiring female scientists, technicians and tradespeople, engineers and mathematicians working in all sorts of sectors, solving problems and designing products that are improving our lives.

## WORKFORCE NEEDS OF THE FUTURE

Adapted from Australian Academy of Science 2019, p.11

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For further information please visit the Department for Education website – [www.education.sa.gov.au/stemindustry](http://www.education.sa.gov.au/stemindustry)

### Sources:

- Office of the Chief Scientist (2020) Australia's STEM Workforce, Australian Government, Canberra
- Australian Academy of Science (2019) Women in STEM Decadal Plan

