



# CONNECTING PRIMARY SCHOOL STUDENTS WITH YOUR INDUSTRY THROUGH PROBLEM-BASED LEARNING

## What is Problem-Based Learning?

Problem-Based Learning (PBL) is a teaching approach which engages students to solve a genuine and complex problem from industry. It is student-centred learning, which provides opportunities for intellectual stretch and productive struggle as students develop and apply content knowledge and skills in their search for an effective solution to the problem. PBL puts the emphasis on the process and thinking rather than a single, correct solution.

## How industry partners can get involved with Problem-Based Learning

Industry partners can provide a current, authentic, multifaceted problem for students to investigate. By applying the processes of PBL, students develop critical and creative thinking skills, while drawing on and developing curriculum knowledge to develop solutions to the problem. Industry partner problems also provide opportunities to introduce students to a variety of industries and future careers, inspiring them early in their schooling.

The Department for Education is inviting industry partners to participate in PBL initiatives for primary schools, targeting year 4 to year 6 classes.

## What other industry partners say about Problem-Based Learning



View YouTube video:  
Problem-Based Learning for industry partners

**Student Pathways**



Government of South Australia  
Department for Education

## Structure of a Problem-Based Learning project

PBL projects take place over a full school term (10 weeks) in term 2 or 3. One or 2 lessons per week are allocated for the students to work on the PBL project. Students work in groups, following an engineering design process, facilitated by their teacher.

## Time commitment for an industry partner

The minimum time commitment that an industry partner has in a PBL project consists of 3 face-to-face sessions totalling roughly 5 hours, including:

- A short 10-minute **presentation** of the problem by the industry partner (week 1 of the school term). The industry partner may provide some supporting materials such as maps or plans, photographs, etc.
- **Critique Panel (week 7)** to view the initial solutions proposed by the students and offer feedback and advice to improve their final solution (min. 2 hours depending on number of students).
- **Student Group Presentations (week 10)** to view the final solution from each of the student groups (min. 2 hours depending on number of students).
- Additional (optional) time commitment may include emails, phone calls or online meetings to answer questions from the students and their teachers. An industry site visit by the students should be included if applicable and feasible. Industry partners attending a student research session during the PBL project is optional and highly beneficial.

## What makes a suitable problem to present to students?

The problem that an industry partner will provide needs to be:

- genuine
- current and unsolved
- complex, even multifaceted
- non-googleable!

It is critical that the industry partner 'owns' the problem they are presenting to the students. This motivates the students more effectively to engage in the problem-solving activity. It is also essential that, at the time of presentation to the students, the industry partner has not determined how they intend to solve the problem.

Support can be provided to industry partners, by the Department for Education, to develop a suitable problem and to engage effectively with primary school students.

## Examples of past problems from the Problem-Based Learning pilot program:

- How to reduce the amount of textile waste in landfill.
- How to replace a water mains pipe currently located on a heritage bridge crossing the Murray River.
- How to reduce the impact of animals entering facultative ponds.
- How to increase or develop the wildlife corridors in a local council area.
- How to reduce the impact of bats landing on power lines.

## Contact

For more information, contact Student Pathways and Careers at [education.pathways@sa.edu.au](mailto:education.pathways@sa.edu.au)