



Introduction to Industry – Program Overview Years 9 & 10 Whyalla

The programme is all about self-discovery and how you can use this knowledge to better understand how you fit into the world of industry in Whyalla. Through looking at industrial innovation in your community, you will get an understanding of how the world is moving towards a more sustainable future.

We believe that experiencing things firsthand is the best way to learn, so we will be taking you on two excursions, one to the cuttlefish breeding grounds at Point Lowly and the other to the Southern Middleback Ranges to see the SIMEC iron ore mine. You will see how the mineral is mined and learn about how this rock becomes the key ingredient in the production of steel, which is an infinitely recyclable material

The reason for visiting the cuttlefish breeding grounds is to understand the importance of water quality, especially where industry meets nature, as in Whyalla. Your enquiry project is all about how water used in the production of steel is processed so that it can be returned to the environment without causing harm. This will involve learning how to test the pH, turbidity and dissolved oxygen content of water. You will also actually be constructing a filtration system to treat contaminated water, resulting in clean water that is safe to return to the environment.

Sessions 1-4	<p>Students will be introduced to the program and their industry mentors. They will use the “Who I am” program, part of King’s Trust Australia Achieve framework to explore their identities. The students will also assess their strengths via a quiz that will determine their competency with key Enterprise Skills (eg problem solving, critical thinking, self-management, etc). This process will assist them in choosing the role that they will be taking on for their group over the course of the inquiry project.</p> <p>Other highlights of this set of sessions will include a speed networking session with several professionals from the local community as well as multiple hands-on mini engineering challenges.</p>
Sessions 5-8	<p>In this block of sessions students will begin the first half of an inquiry project. The project will enable students to understand the many uses of water in the processes of mining and steel production. They will also learn how this water is processed so that it can be returned to the environment without causing harm. This will involve students learning how to test the pH, turbidity and dissolved oxygen content of water. They will also be constructing filtration systems to treat contaminated water.</p> <p>In this block of 4 sessions, students will be collecting and testing the quality of water from a number of different locations as well as go on an excursion to the cuttlefish breeding grounds at Point Lowly</p>

Sessions 9-12	Students have been tackling issues at the individual business level, but now it is time for them to understand the impact that they can make at the community and even the global level. Hearing from industry experts and top CSIRO scientists, they will gain an understanding the global benefits of reducing carbon emissions.
Sessions 13-16	<p>Students will design complex filtrations systems and work to improve the quality of their provided contaminated water sample. They will compete with other groups to bring the pH, turbidity and dissolved oxygen to as close as possible to optimal levels</p> <p>There will also be another excursion during this block of sessions to the Southern Middleback Ranges Simec mine site.</p>
Sessions 17-20	<p>The students have had the opportunity to gain insights into how their involvement in some local industries could not only help them personally, but also the local community, and even the world. This is an opportunity to reflect on these learnings as well as the incredible experiences they have had in the program.</p> <p>The showcase will provide them with the opportunity to use their recently acquired confidence and presentation skills to display the inquiry projects, into which they have put so much hard work.</p>